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UNMIXING THE INTELLECT

Aristotle on Cognitive Powers and Bodily Organs

Joseph M. Magee

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To Maria, for her love, support and patience.

CHAPTER 5

The Difference between Αἴσθησις and Νοῦς

INTRODUCTION

Having examined the assumptions necessary for Aristotle's proofs that the intellect acts apart from the body, we can now evaluate the effectiveness of these proofs. It is clear that Aristotle wants to show that the intellect acts without the body and that it and the senses are alike in receiving form (without matter), becoming like and becoming identical with their respective objects. Moreover, it is also now clear that the activity of sensation is realized in physical organs without itself being an ordinary process of alteration. We can now summarize the general nature of perception and then draw some conclusions about the relation of the activity of the senses to their organs. Finally, we will be in a position to examine the differences between the senses and the intellect, which Aristotle cites in *DA* 3.4, and determine if these differences warrant his conclusion that νοῦς is separate, and what this separation amounts to.

THE NATURE OF PERCEPTION

In *DA* 2.5, after noting that perception is a case of being acted upon, Aristotle reaches his first conclusion that perception is a potency. The

fact that the senses do not produce sensations of themselves, but that perception comes about only through the influence of external objects, shows that they are potencies in a unique way. "It is clear from this that the faculty of sensation has no actual but only potential existence" (417a7–8). Later in the chapter, he elaborates on the singular manner in which perception is a potency.

> Even the term "being acted upon" is not used in a single sense, but sometimes it means a kind of destruction by a thing's contrary, and sometimes rather a preservation of that which is potential by something actual which is like it, as potency is related to actuality. (417b2–5)[1]

Like other potencies, perception is a capacity for a certain kind of activity, and, in line with Aristotle's general principles, this capacity is defined in terms of its proper act. For example, the ability to see is defined in terms of the act of seeing, and this, in turn, is defined in terms of its proper object, color. More than being merely a capacity or ability for a certain type of activity, the potency of perception is characterized by the fact that the ability to perceive is not exhausted in being actualized. One's ability to see, for example, and to see the same thing, even when already engaged in an act of seeing, is never lost. The potency characteristic of perception, then, is essential to and distinctive of that activity. Thus, being essentially a potency defines the activity of perception. This means that the actualization of this potency is not of such a sort as to preclude actualization with respect to the same object. Hence, Aristotle says that the potency of perception is a preservation (σωτηρία) (417b4).

The fact that the essential potency of perception is preserved in its operation distinguishes it from ordinary processes involving a transition from potency to act, that is, alteration. In contrast to the actualization of perceptual potency, the actualization of a potency in ordinary alteration precludes any further alteration with respect to the same quality. Such cases of "being acted upon" are "a form of destruction of something by its contrary" (417b2–3) for not only is the previous quality destroyed, but even the ability to be acted upon in the same respect is eliminated insofar as it is destroyed. In ripening and changing from green to red, not only is the green color that an apple previously had lost or destroyed, but so is its ability to become red. Being red now, it no longer can *become* red. Clearly, then, the potency an organ has for

perception differs from the potency a thing has for ordinary change. For this reason, Aristotle calls the process of perceiving an activity. Perception is either not an alteration or is one that should have its own name (417b6–7); it is an activity insofar as it corresponds to the exercise of knowledge (417b18–19).

As thus presented, a view of perception emerges with potency as essential to and characteristic of it and as thereby distinguished from ordinary alteration. That Aristotle intended to express this view of perception is confirmed by his claim that perception is the reception of form without matter. As wax receives the impression of a gold ring without the gold and not as gold, so the eye receives the color of an object without the object and not as the object. The manner in which a sense organ, for example, the eye, receives its proper sensible object, for example, color, is not as that quality exists in the object. The eye, therefore, does not become literally as red as the apple it sees. Instead, it takes on or receives the form red, both without matter and not as matter—that is, the eye comes to have the form red in a manner different from the way in which the apple has the form red. Furthermore, as the reception of form without matter is Aristotle's general principle for understanding all the senses, not just vision, so all the senses come to possess their objects in a nonliteral way.

Thus, perception is understood fundamentally in negative terms. Perception is the reception of proper sensibles (color, sound, etc.), or sensible form, ***without*** matter in the sense that what receives the form comes to have it in a *non*-matter-like way. Given the misleading and negative connotations of the terms "immaterial" and "spiritual" reception, it seems best to refer to this non-matter-like reception by the term "anahylic reception." Anahylic reception, then, characterizes both the senses and the intellect since they both become like their object and receive its form in a manner that is not like ordinary alterations. They each are anahylic receptions since each is ***essentially*** a potency, and the potency is not lost in being realized in either the actuality of perception or intellection. Just as the reception is understood negatively, so is its passivity. To the extent that the activity of perception comes about from an external object, Aristotle says that it is a kind of being acted upon, just as it is a kind of reception (418a1–3). Aristotle, however, says that perception is a non-passive (impassive) reception because it is not matter-like. Thus, he says both perception and thinking are impassive (429a15–18, 30–32).

Although perception is an activity, and immaterial in the sense that has been explained, it is still realized in material things. Aristotle is able to maintain that physical things (sense organs) can be the subjects of anahylic receptions since he believes that other purely physical processes are also activities. Such processes are in fact crucial to his explanation of senses and their organs. The change that the transparent medium undergoes as a result of the causal efficacy of light (and, by extension, also of color) is described as not being a motion and so is not an alteration. The effect of light and color is instead an activity, but one that is realized in unequivocally material things, that is, air and water. Because sight itself is an activity of receiving color, the medium for sight and the matter in which the perceptual ability is realized (i.e., the eye) must be composed of one of these two material substances that are capable of being the subject of the activity of color and light. Likewise, since all the senses require a medium, so all of them are activities realized in material things, that is, their organs. It is in fact this constraint that the material medium places on sense powers that allows one to draw further implications about the nature of senses and sense organs.

CONSEQUENCES AND LIMITATIONS OF PERCEPTION

The first constraint that the nature of perception places on each of its five species is the limitation of the range of each. Each sense is a potency for receiving one class of proper objects, one class of sense qualities. This limitation necessarily results from the fact that perception is an activity and an anahylic reception. If the physical process of perception were an ordinary alteration or a material reception, there would be no way that a given sense object could determine the physical constitution of the organ necessary for that object, since all types of material would be affected materially to the same extent. Yet, it is clear that Aristotle believes that the matter that is appropriate to a given sense organ is, in fact, necessitated by the function that the organ performs, that is, by the sense object the organ is ordered toward grasping. If perception were an ordinary case of alteration, this fact would block this necessitation since everything, not just sense organs, is materially affected by all of the tangible qualities (except pure elements, of course). Thus, if touch were a case of being affected in this way, everything would feel. Likewise, given

that Aristotle believes that smells affect even non-perceptive things like air, if something is to smell, it must be able to be affected in a way unlike non-perceptive things (424b15–20). Presumably color and color, too, affect everything materially. Thus, in order for there to be a kind of affectation by color and sound that is of a different sort than the manner in which everything is affected, the matter in which this sort of affection takes place must be of such a kind that it is affected in this diffferent way. Thus, the organ for the perception of color must be made of a material that can be affected by color in a non-alterational (i.e., anahylic) manner as an activity. Since seeing and hearing are anahylic changes, they require some matter that can be affected anahylically. The eye, then, must be made of some matter that has the transparent, that is, water or air. Again, because the medium of hearing, air, receives sound anahylically, the organ of hearing, the ear, must be made of air. Thus, it is because perception is an anahylic reception of form that the proper object of sense constrains which matter can be suitable for which sense.

The fact that organs must be made out of matter that can be the subject of an anahylic reception at once allows the possibility of perception and limits the range of each organ. Since each organ needs to be made out of matter that is the subject of an appropriate activity and this sort of matter is the subject of just one activity, each sense is limited to that one sort of activity, the activity of receiving its objects anahylically. Although the eye must be made of something transparent in order to receive anahylically the activity of color, the transparent is receptive of ***only*** the activity of color. This entails, then, that the eye can only receive, that is, know, colors as its proper object. The same principle applies to each of the other senses. The medium of touch, which is in flesh, receives more than one set of contraries because it happens to be anahylically subject to them. It is nevertheless limited to these and no others. It is a consequence of the fact that the senses need to be made out of their appropriate matter, that they are restricted in the range of objects that they each may know. Given that the matter of each is in fact the subject of the activity of only one kind of sensible quality, and this is what constrains the sense to be made of this kind of material, each sense is restricted to knowing only this one kind of quality.

The next limitation imposed on perception by the fact that it is realized in organs is the limitation in the intensity of the objects it can receive, as shown by the fact that perceptual potency can be over-

whelmed by intense sensibles. Aristotle explains the fact that sense powers are dazzled by claiming that each is the result of a mixture of material types that together constitute a "mean." The mean that is constitutive of each sense, then, allows each to be the subject of an activity (424a6–11). It is a consequence of this theory, however, that this mean can become upset by intense sensibles (424a29–34). When this occurs, the ability to perceive is lost. Thus, the fact that each organ must have a balance or mean of different material components in order to function entails that that balance can be lost and the sense power thereby overwhelmed. Taken generally, Aristotle's theory claims that whatever cognitive faculty is composed as a mean is subject to being overwhelmed. It is unclear why Aristotle believes that intense sensibles should upset the mean. Apparently, any matter that is the subject of an activity can receive only so much of that activity. The transparent, for example, can only receive light, and only to a limited degree of intensity.[2] Thus, given that each is a mean, Aristotle believes that sense organs set limits on the perceptual capacity, not only with respect to the range of objects that each sense can receive, but also on the intensity of those objects.

The final limitation to which the senses are subject concerns the content or objects of perception. For Aristotle, the objects of the senses are certain qualities of bodies that define the sense power of which they are the object. For instance, color is the quality possessed by bodies that animals are able to see, and so vision is defined in terms of color. However, color is more than that quality that an object possesses in virtue of which it is visible. Color, and all the sensible qualities, are said to belong to bodies independently of any capacity to produce perception (418a28–b2). Moreover, Aristotle believes that such qualities belong to bodies in virtue of the elements of which bodies are composed. Thus, because bodies are made of certain elements, they are endowed with certain corresponding properties that, in the presence of appropriate perceivers, produce the activity of sensation. Perceptual potency, then, is limited to being affected by objects having sensible qualities. Since an object has such qualities only in virtue of being material and composed of elements, perception can only be affected by what is so composed, and only in virtue of the material of which it is composed. It is not in virtue of every fact about an object that it can be perceived by one of the five senses, but only in virtue of the qualities belonging to bodies as bodies. The shape of an object, for instance, does not produce a perception of it, but one of the other sensible qualities does, and it is in virtue of these other sense qualities that shape is perceived. Thus, it is a consequence of Aristotle's account that perception of whatever is perceived comes about in virtue of the material of which the object is composed.

Each of these three limitations characteristic of perception results from the fact that perceptual potencies are realized in bodily, material organs. Each sense has only one class of objects because it is composed of matter subject to the anahylic activity of only that one class. The senses are dazzled because, as a mean of material components, an intensity of sensible objects upsets that mean. Finally, the senses are affected only by the qualities essential to bodies composed of elements. These three limitations of the senses indicate that they are necessarily bodily powers. They are also aspects that distinguish the senses from the mind. As will become clear, Aristotle believes that νοῦς has none of the limitations characteristic of the senses. From this fact, he concludes that νοῦς is a non-bodily power whose acts are not realized in any organ.

DE ANIMA 3.4 ON Αἴσθησις AND Νοῦς

At the beginning of *DA* 3.4, Aristotle declares his intention to delineate the features distinctive of νοῦς. "Concerning that part of the soul with which the soul knows and thinks (whether it is spatially separate, or only in its account), we have to consider what is its distinguishing characteristic, and how thinking comes about" (429a10–12). He is initially uncommitted concerning the question of the ontological status (i.e., the separation) of the faculty of thinking, for he apparently believes that such a question will be decided in the course of the ensuing discussion. So, rather than supposing that νοῦς is probably separate in a strong sense (which he does in other places of the *DA*) he leaves the question open.

The ontological question, however, is central to the project of delineating what is distinctive of νοῦς. At several points in the *DA*, Aristotle questions whether the mind is part of the sensitive faculty, being a kind of imagination. The sensitive faculty taken as a whole, that is, the αἰσθητικόν, includes all the particular sense faculties, even φαντασία, and is necessarily realized in bodily organs. If, however, νοῦς is not part of the sensitive faculty, it seems it would not be realized in any organ. While the chapter does present some discussion of the nature of the

functioning of νοῦς, it does so by highlighting the fact that it is distinct from sensation. The distinctive characteristics of the mind's activity, then, give Aristotle the opportunity to draw the conclusion that it is ontologically distinct from the sense faculty, as well, and so is without any organ.

In addition to discovering what is distinctive of νοῦς, Aristotle also intends to show *how* thinking comes about. Moreover, it is clear that *DA* 3.5 provides his most detailed discussion of the mechanics of thinking, wherein he analyzes this activity in terms of his theoretical apparatus of act and potency. It is as a result of this analysis that he distinguishes the powers of the intellect as creative or active (ποιητικόν—430a12) and as potential (what becomes all things [πάντα γίνεσθαι—430a15]) or passive (παθητικὸς—430a24). Thus, it seems that Wedin is correct that the discussion of the intellect in *DA* 3.4 applies to the intellect as a whole. While Aristotle in Chapter 5 explains how thinking comes about, Chapter 4 is concerned primarily with discovering what is distinctive about the whole faculty of thought. The conclusions in Chapter 4 that νοῦς is separate or unmixed, then, are prior both textually and logically to the pronouncements in Chapter 5 that the mind, which makes all things, is "separate, impassive, unmixed" (430a18) and that it "alone is immortal and everlasting" (430a23). The conclusions reached in 3.4, then, are independent of any precision Aristotle will give them in 3.5.

Initially, Aristotle outlines the similarities between αἴσθησις and νοῦς in order to establish a basis of comparison from which he will conclude that the activity of the latter is not realized in the body.

> If thinking is like perceiving, it must be either a process of being acted upon by what is knowable, or something else of a similar kind. This part, then, must (although impassive) be receptive of the form of an object, and must be potentially such as its object, although not identical with it: as the sensitive is to the sensible, so must mind be to the knowable. (429a12–18)[3]

While he begins by making a conditional claim that they are similar, throughout this part of the chapter, and indeed the whole rest of the chapter, Aristotle assumes that they are similar. Indeed, Aristotle believes that νοῦς and αἴσθησις are similar on all these points, not only here, but also in other significant passages where he explains the nature of each. Here in *DA* 3.4, he says that νοῦς is a case of being acted upon, yet insofar as it is a cognitive faculty like αἴσθησις, it is not a strict case

of this; neither thinking nor sensing is a case of alteration. Here, as he did for perception in *DA* 2.5, Aristotle claims that thinking is a case of being acted upon only in a loose sense. Similarly, mind, like sense, is at once impassive, in the sense just given, and is receptive of form. Mind, like sense, is also potentially like its object. In all of these points of similarity with αἴσθησις, Aristotle highlights features of νοῦς that, as we have seen, mark it as distinct from ordinary material processes, that is, alteration. νοῦς, like αἴσθησις, is an anahylic process, but as such it is not necessarily non-bodily since αἴσθησις is clearly a bodily process. Since both capacities are anahylic, however, differences between them according to those features characteristic of anahylic processes do distinguish αἴσθησις alone as realized in bodily organs and demonstrate that νοῦς is not so realized.

The Distinction According to Range of Objects

While the similarity between νοῦς and αἴσθησις inclined earlier thinkers toward the belief that they are two functions of the same faculty, Aristotle in his analysis tries to show that they are different. The first manner in which Aristotle says that νοῦς differs from αἴσθησις is according to their respective ranges. This difference, then, provides the basis on which to conclude that νοῦς is not realized in an organ. Having argued that both νοῦς and αἴσθησις are anahylic activities, Aristotle now shows that νοῦς is distinct by the fact that its range is unlimited.

> It is necessary then, since mind thinks all things, that it should be "unmixed" (ἀμιγῆ), as Anaxagoras says, in order that it may be "in control," that is, that it may know; for anything appearing inwardly hinders and obstructs what is foreign. Hence the mind, too, can have no characteristic except its capacity to receive. (429a18–22)[4]

Aristotle asserts that νοῦς knows all things and apparently accepts the universality of its scope without argument. It is clear, however, that knowing all things means that νοῦς can receive the forms of all things. Given this universality, Aristotle believes this shows that mind is, in the words of Anaxagoras, unmixed (ἀμιγῆ). Aristotle thinks this conclusion is warranted because "anything appearing inwardly hinders and obstructs what is foreign." The argument runs thus:

What appears inwardly to a power hinders and blocks the reception of what is foreign.

Νοῦς knows all things, that is, no intellect is hindered in its reception.

Therefore, νοῦς is unmixed.

By saying that νοῦς is "unmixed," Aristotle means that the intellect is separate from the body in a strong sense. As a consequence, this argument of *DA* 3.4 depends on the assumption that cognitive powers that are not separate have a limited range of objects.

In order to successfully prove his conclusion, Aristotle needs to have a basis on which to relate the inwardly appearing (παρεμφαινόμενον) with being mixed. As we have seen, the fact that sensation requires a suitable material implies that each of the senses is limited to the reception of only one class of sensible object. Thus, if the senses are mixed (i.e., bodily) and they are hindered from receiving the forms of objects other than their proper objects, the link that inward appearance is supposed to provide between being mixed and being hindered should be found in the senses—that is, the principle "whatever has something appear inwardly is hindered and obstructed in receiving something foreign" generates the conclusion that "something which is not hindered is unmixed" *only if* "all mixed or bodily powers have something appearing inwardly that limits their range of receptivity." Unfortunately, Aristotle does not describe an organ's ability to sense in terms of lacking the inward appearance of something that would block the reception of its object, but such a description is implied by what he says about the material requirements for certain sense organs. "It is the colorless which is receptive of color, as the soundless is of sound. The transparent is colorless, and so is the visible or barely visible, such as the dark is held to be" (418b27–29). As has been shown, Aristotle attributes the suitability of organs for sensation to their having a material that is subject to an activity, but not subject to a material alteration. Here, he claims that it is the colorless and the soundless that are able to serve as the matter in which such activities are realized. The implication, then, is that having a color or sound would prevent each respective material from being able to receive either color or sound. Being colored or having color appear inwardly would prevent some matter from being the subject of the activity of anahylic reception of the forms of color. This is also confirmed when Aristotle asserts that "that which is to perceive white

and black must be actually neither (and similarly with the other senses)" (424a8–11). It seems, then, that Aristotle makes a close connection between something undergoing anahylic reception and its lacking the form so received.[5] It remains to be seen whether it is necessary for his argument that he maintain this connection.

Thus, the nature of mind is such that it is completely cognitive in the sense that there is no limit to its receptivity. Since cognitively receptive things do not undergo material changes insofar as they are receptive (for a nature subject to such material changes prevents cognitive reception), so mind has a nature that is not subject to any material change whatsoever. This feature of νοῦς is in opposition to sense faculties (e.g., sight), which must be realized in some matter (e.g., water, which contains the transparent) that is of such a nature so as not to be susceptible to literal changes with respect to its object (e.g., coloration). Sense powers, however, are limited in their range insofar as their matter is subject to only one kind of anahylic reception, for example, the transparent only receives color. Sense organs are subject to literal and material alterations with respect to other sense qualities of which their matter is not the subject of anahylic reception. Eyes are affected by the tangible qualities: hard, dry and hot. The claim that mind knows all things means that it is materially affected by no sensible quality, and since every material thing is materially affected in some way, mind must not be realized in any material thing, as in an organ.

That this is probably Aristotle's intention is confirmed by what immediately follows this argument. The mind's only characteristic is its capacity to receive, for sense powers have other characteristics just to the extent that they are not receptive of certain qualities of objects.

> That part of the soul, then, which we call mind (by mind I mean that part by which the soul thinks and forms judgements) is nothing actual until it thinks. So it is unreasonable to suppose that it is mixed with the body; for in that case it would become somehow qualitative, e.g., hot or cold, or would even have some organ, as the sensitive faculty has; but in fact it has none. It has been well said that the soul is the place of forms except that this does not apply to the soul as whole, but only in its thinking capacity, and the forms occupy it not actually but only potentially. (429a22–30)

Νοῦς has no actual existence until it thinks insofar as it is a cognitive faculty. The essential potency of cognition applies to it without restric-

tion, and its only actuality comes from its exercising its cognitive potency in an act of knowing.

Thomas Russman, in *A Prospectus for the Triumph of Realism*, agrees that Aristotle's first argument from *DA* 3.4 proceeds according to the analogy with perception outlined above.[6] Russman argues, however, that what we know about the nature of perception invalidates the assumptions that Aristotle makes about sensation, and so the conclusion that the mind acts separately from the body is unwarranted. "(Aristotle) claims to know the nature of 'body,' the nature of 'thought,' and that the latter cannot be a property of the former. To arrive at this conclusion he makes assumptions about the nature of body and the nature of thought which seem highly questionable."[7] Russman believes that it is an assumption of Aristotle's that "having a form in such a way as to *be* something (of that form)" interferes with "having a form in such a way as to know something (of that form)," an assumption that has been seen to be false in the light of contemporary biology and neurophysiology.[8] According to Russman, one can agree that seeing green, for instance, does consist in receiving the form of green, but that this reception is unimpeded by the fact that what receives it has a color of its own.

To receive the form of green necessary to see something green is only to be in the sensory/neurological state that corresponds with seeing green. But if this is all that is meant by "receiving the form of green," then already being a certain color does not interfere with or distort it. The colors of the retina, optic nerve, brain, and so on are, as such, irrelevant to what goes on when one sees a green object. They do not distort the green color that one sees.[9]

Thus, Russman reasons, just as the pink retina can receive the form of green without any hindrance or distortion, so a material intellect can receive the forms of all material things without any hindrance or distortion.

Aristotle has said that the intellect must have no material form whatever of its own because this would interfere with reception of the forms needed for knowledge of all material things. He concludes that the intellect must operate independent of the body. But once we properly distinguish between the two ways of "having form," illustrated by color perception, we see that the intellect might very well have its own material form without this form distorting the forms by which it knows. Operation independent of the body is therefore not required to explain how the intellect can be open to the knowledge of all of nature. The Aristotelian argument for residual dualism is completely deflected.[10]

Since contemporary science has discredited the assumptions about sensation upon which Aristotle builds his argument in *DA* 3.4, his conclusion that the intellect is unmixed with, and separate from, the body does not follow.

Russman seems to have been unduly influenced by Aquinas in his reading of Aristotle's argument. Aquinas believes that Aristotle argues as follows: Since the intellect receives the forms of all bodies, it must lack the form of any body.[11] They seem to hold this interpretation despite the fact that Aristotle's text merely says that νοῦς knows all things (πάντα νοεῖ), not that it knows all bodies. Accordingly, Aquinas and Russman believe that the intellect exactly parallels the senses in the relation between receptivity and its own nature: Since the eye receives all colors, it must lack the form of any color.[12] Aristotle himself in texts other than *DA* 3.4 also seems to endorse this connection between receiving forms and not possessing them; the transparent receives color and the soundless sound.[13] It is not, however, necessary that this serve as a basis of his argument that νοῦς is separate from the body. The fact that he does not say that the intellect receives the forms of all bodies, but instead says that it knows all things, indicates that the analogy with the transparent is not what he bases his argument on.

Aristotle, in fact, makes two different claims with regard to the senses receiving the forms of their proper objects. On the one hand, as Aquinas and Russman have made apparent, he says that only matter that lacks a certain class of sensible object is capable of receiving such forms in sensation. For example, the transparent receives color and the soundless receives sound. On the other hand, only that which receives sensible form without matter is capable of sensing. For example, plants and other insensate things do not sense because they do not receive forms in this way, that is, anahylically.[14] The senses are thereby limited to one class of object—that is, what receives the form of color anahylically, not as an ordinary alteration, receives only such forms, but it is still subject to receiving other forms materially. It is only the second claim that is crucial to his argument, for only this second claim (and the sense power's implied limitation with regard to objects) generates the conclusion that νοῦς is non-bodily when coupled with the claim that νοῦς knows all

things (as opposed to the claim that the intellect receives all bodily forms).

Thus, the discoveries of contemporary science about sense organs and the brain do not necessarily vitiate Aristotle's argument that the mind acts apart from the body. Aristotle can concede Russman's point that pink things (retinas) can receive the forms of colors. He can insist, however, that they do so only by receiving such forms anahylically, that is, as forms without matter and not as matter. He can also insist that receiving forms in this way entails that they receive only such form (i.e., the retina receives only the forms of colors). This being so, and because they are still bodily organs, Aristotle can insist that they are still subject to being affected by other forms (e.g., heat or hardness) in a material way. Thus, by claiming that νοῦς receives *all* forms, Aristotle is claiming that νοῦς is not at all affected materially, and so it is unmixed—that is, it is in no sense bodily, but separate in a strong sense. As long as retinas and other physiological apparatus of sensation still can be said to undergo anahylic reception of form (and nothing in Russman's argument suggests that they cannot), one is still led to the conclusion that the intellect is immaterial, given that it knows all things.

The Distinction According to Types of Impassivity

Another point of difference between the mind and the senses concerns their susceptibility to being dazzled. As νοῦς differs from αἴσθησις with regard to the range of objects each receives, so they differ according to the effect that intense objects have on their abilities to function.

> But that the perceptive and thinking faculties are not alike in their impassivity is obvious if we consider the sense organ and sensation. For the sense faculty is not able to sense after an excessive sensible object; *e.g.*, of sound immediately after loud sounds, and neither seeing nor smelling is possible just after strong colours and scents; but when mind thinks the exceedingly knowable, it is not less able to think of slighter things, but even more able; for the faculty of sense is not apart from the body, whereas the mind is separate. (429a30–b6)[15]

Senses cannot sense after receiving intense sensible objects. Νοῦς, on the other hand, is able to think after thinking highly intelligible objects (νοήσῃ σφόδρα νοητόν) and, in fact, thinks better because of it. The

reason, Aristotle says, is that αἰσθητικὸν is not apart from the body, while νοῦς is separate, which means separate enough in a strong sense that its activity is not realized in the body. Apparently, Aristotle reasons that the fact that αἴσθησις is realized in the body is the reason that perception can be overwhelmed by intense sensibles. He elaborates this connection when he says that the senses are a mean, and that this mean or balance becomes upset by intense sensibles (424a8–11; 424a29–34). From this analysis, one gathers that Aristotle assumes the general principle that whatever cognitive power is realized in the body is able to be dazzled by an intensity of its proper object. With this principle now explicit, one can summarize Aristotle's reasoning.

All bodily powers can be dazzled.
No intellect can be dazzled.
Therefore, no intellect is a bodily power.

This argument is primarily negative; it makes no claim about the nature of the intellect's objects. It merely points to the fact that the intellect is not dazzled as an indication that it is not a bodily power.[16]

Immediately after this conclusion, however, Aristotle does mention objects of the intellect as analogous to intense sensibles. Although the cogency of this argument does not depend on intense objects of the mind actually facilitating thinking, such objects help to confirm Aristotle's conclusion. One finds these intellectual objects of "greater intensity" in *Posterior Analytics* 1.2, where Aristotle describes the premises of a syllogism as more knowable than, and causing the knowledge of, the conclusion. While not described as excessive (σφόδρα), they are better known and are causative by being better known. "Hence if the primary premises are the cause of our knowledge and conviction, we know and are convinced of them also in a higher degree, since they cause our knowledge of all that follows from them" (72a31–33). If the conclusion is less clear than the premise, then it is more able to be known on account of the premises in the sense that the conclusion is knowable only when the premises are known. Clearly, when one considers the intensely intelligible, the analogy with the intensely sensible breaks down; an argument's premise is not "seen" in the way light is, and so it cannot overwhelm what "sees" it. This, however, is just Aristotle's point: light is seen because of a material organ, and thus that organ can be

dazzled. The fact that premises do not have the same effect indicates that what "sees" premises, that is, νοῦς, does not have a material organ.

The Distinction According to the Materiality of Objects

The final argument of *DA* 3.4 is perhaps the most frustrating, for in it Aristotle seems the least committed, and least clear, as to how he draws his conclusion. Upon careful analysis, it seems that Aristotle argues for the distinction between νοῦς and αἴσθησις on the basis of the distinction between the content of each characterized quite generally.

> Since magnitude is not the same as what it is to be magnitude, nor water the same as what it is to be water (and so too in many other cases, but not in all, because in some cases there is no difference), one judges flesh and what it is to be flesh either by different faculties, or by the same faculty in different relations; for flesh is not found without its matter, but like "snub-nosed" it is a this in this. Now it is by the sensitive faculty that one judges hot and cold, and all qualities whose ratio constitutes flesh; but it is by a different faculty, either separate (χωριστῷ), or related to it in the same way as a bent line is related to itself when pulled out straight, that one judges what it is to be flesh. Again, among abstract objects "straight" is like "snub-nosed," for it is always combined with extension; but its essence (what it is to be what it was—τὸ δὲ τί ἦν εἶναι), if straight and what it is to be straight are not the same, is something different; let us call it duality. Therefore, we judge it by another faculty, or by the same faculty in a different relation. And speaking generally, as objects are separate for their matter so also are the corresponding faculties of the mind. (429b11–23)[17]

All that is clear from an initial reading of the passage is that the sense faculty knows the sensible qualities, and that at least two faculties (presumably sense and intellect) are employed either alone or together to judge sensible bodies like water and flesh, on the one hand, and what it is to be such things (i.e., their essences), on the other. Which faculty knows which object, however, is frustratingly obscure.[18]

Charles Kahn offers an interpretation of Aristotle's intention in this section of *DA* 3.4 according to which Aristotle is specifying which faculty, if any, νοῦς employs in its work of discrimination. According to Kahn, Aristotle is not interested in determining whether νοῦς is the faculty by which what it is to be flesh and what it is to be water are known or whether νοῦς is separate from the body. Aristotle is instead

trying to determine whether νοῦς operates alone in judging flesh, without the sense faculty, or whether it uses the sense faculty in its work of making such judgments.[19] Kahn presupposes that Aristotle believes that νοῦς is what knows the essences of water and flesh, and so for him, the question really revolves around what knows these things (water and flesh) themselves. For Kahn, the answer is νοῦς plus the sense faculty.

> Difficulties begin when we ask what contrast or contrasts Aristotle means to draw in regard to faculties. Clearly *nous* is the faculty which discerns the essences. But what faculty discerns the sensible bodies? Most (perhaps all) commentators seem inclined to suppose that it is by the sense-faculty that we apprehend water and flesh. But that is not what Aristotle says. He says that it is by sense that we discern hot and cold and other qualities that make up the matter of flesh; he does not say—and how could he say?—that it is sense which discerns the *logos* that is the form of flesh. In fact, it is not clear that this *logos* is distinct from the essence of flesh.[20]

According to Kahn, the sense faculty alone does not discern sensible bodies like flesh and water. The sense faculty alone can only discern sensible *qualities* like hot and cold. When these qualities are combined in a given proportion, that is, a *logos*, the sensible body results and νοῦς is required (either alone or in cooperation with sense) in order to know it. Since νοῦς judges "what it is to be flesh" and flesh is what it is due to the *logos* of its composition, νοῦς must be involved in judging even flesh.

Aristotle, then, is laying out two possible ways νοῦς operates in its knowledge of sensible bodies, according to Kahn:

> The only interpretation that is both coherent with the context and compatible with Aristotle's general view is the following: since it is by *nous* that we discern the essence of flesh, then it is "by a different faculty (namely sense) or by the same faculty (i.e., *nous*) differently disposed" that we discern the matter-form compound of flesh (429b12–13). "For flesh is not without matter, but it is like the snub, this (form) in this (matter)." (429b14)[21]

Either we judge the material substances like water and flesh by νοῦς alone (but differently disposed) or we make such judgments by νοῦς plus a different faculty (sense). These two alternatives turn out not to be really opposed, but to be two ways of describing the one way νοῦς is employed in the discernment of sensible bodies.

So the question which Aristotle leaves open is whether we discern the concrete compound flesh by a different faculty, namely sense, or by *nous* "otherwise disposed," in its union with sense in perceptual judgement. And both alternatives are correct depending upon whether we take *aisthesis* narrowly, in which case it cannot perceive flesh as such but only the hot and the cold, or whether we take it broadly to include incidental sensibles in conjunction with *nous*. Now the second alternative is really equivalent to "*nous* otherwise disposed."[22]

Νοῦς operates separately if one considers sense to operate alone in its judgment of sense qualities. It must be said, however, that νοῦς is "differently disposed" if this is how one is looking at the situation. On the other hand, we judge bodies by another faculty in conjunction with νοῦς if we consider that the substances known are sensible bodies, and as sensible, the senses must be involved. Nevertheless, these are merely two ways of looking at the same cognitive process.

There are several reasons for resisting this reading of the text. First, Kahn's interpretation relies on a rather impoverished sense of αἴσθησις since, in his view, sense faculties only know proper sensibles. Because the senses can only know their own proper sensibles, that is, sensible qualities, they are unable to grasp the material things to which these qualities belong. Some use of νοῦς, either alone or with sense, is required to know sensible bodies. Aristotle, however, also uses αἰσθητικόν to refer to the sense faculty as a whole, which includes the central or common sense, and this seems to be the faculty that knows concrete particular things, not just their sensible qualities. Moreover, nonhuman animals have no share of νοῦς, but they are nevertheless able to sense particular sensible substances as substances. After all, the wolf also must be able to judge flesh, that is, what is a sheep and what is not, in order to eat, and to judge water in order to drink. There is no warrant, then, for Kahn's assumption that only some kind of employment of νοῦς would be able to judge water or flesh.

Another difficulty that one finds with Kahn's interpretation is that it requires that Aristotle be inconsistent in his reference to faculties. Aristotle's first use of "different" faculty and the "same faculty in a different relation" does not make it clear what the object of each is. "One judges flesh and what it is to be flesh either by different faculties, or by the same faculty in different relations" (429b12).[23] It is therefore plausible that they match up to objects in the way Kahn says they do: what it is to be flesh is judged by νοῦς, but flesh is judged by "a different faculty"

(in conjunction with νοῦς) or the "same faculty (νοῦς) in a different relation." Aristotle's second use of "different faculty" refers to the one that judges what it is to be flesh, and moreover, it may be separate (χωριστῷ). "But it is by a different faculty, either separate, or related to it in the same way as a bent line is related to itself when pulled out straight, that one judges what it is to be flesh" (429b16–17).[24] This incongruity is reflected even in Kahn's own translation of the relevant lines. "But one discerns the being-of-flesh by a different faculty [i.e., different from sense], either one that is (entirely) separate [from sense] or by one related as a bent line is related to itself when straightened out" (parentheses and brackets Kahn's).[25] Thus, what is "different" in the first passage (1.12) is sense; it is different from what judges the essence of flesh. In the second passage (1.16–17), what is different is νοῦς; it is different from αἴσθησις, which judges hot and cold. Kahn, then, has Aristotle saying first that a different faculty (in addition to νοῦς) judges flesh, and later that a different faculty (from sense) judges the essence of flesh, while first the same faculty (νοῦς) differently related judges flesh and later a faculty (νοῦς) related to sense (as a bent line is related to itself straightened) judges the essence of flesh. While this sort of shift in reference may be required of Kahn's interpretation, there is nothing in the text to suggest that Aristotle intended it. It seems, then, that the text has to be twisted to fit Kahn's reading of it.

Furthermore, on Kahn's interpretation, there ends up being no distinction between objects or the faculties by which they are known. But if this is the case, then Aristotle will not have succeeded in showing anything beyond the assumptions that Kahn claims he starts with. For, according to Kahn, Aristotle shows only that νοῦς knows both flesh and what it is to be flesh (the *logos*) because knowing flesh really amounts to knowing its essence, and so νοῦς by itself, or differently disposed by acting in conjunction with sense, knows both. But it certainly seems that, although he expresses it as a conditional, Aristotle believes that flesh is in fact different from what it is to be flesh. The faculties that know each, it seems, should not be the same. In addition, if it is true both that νοῦς alone knows essences and that νοῦς in conjunction with αἴσθησις knows flesh (which implies knowing its essence), then things pertaining to the mind really are not as separate as their objects. Their objects turn out to be the same, according to Kahn, and so νοῦς alone and νοῦς with αἴσθησις turn out to be the same. If the passage shows

anything on Kahn's reading, it is only that sense does not really know sensible things (only sensible qualities) since νοῦς is the faculty responsible for such knowledge. This conclusion, however, is one of the unspoken assumptions Kahn believes Aristotle has in mind in saying that sense knows hot and cold and other sensible qualities. On Kahn's reading, then, the passage does not provide any new knowledge.

Although Kahn's interpretation does not seem to conform to the text, a positive account of the distinction between sense and intellect is still not readily apparent from this part of the *DA* 3.4. The first difficulty in providing such an account lies in determining how many faculties Aristotle is referring to. In order to decide that question, one must first decide how many kinds of objects he is giving examples of. First, he says that "we judge flesh and the essence of flesh either by different faculties or by the same faculty in different relations." He also says that we judge flesh by αἴσθησις and the essence of flesh by a faculty that is quite distinct (presumably from αἴσθησις) or related to it as a bent line is related to itself when pulled out straight. Finally, among abstract objects, we judge "straight" by one faculty, and "straightness" by another faculty or by the same faculty in a different relation. From these three cases, it seems that there are four kinds of objects about which we judge: flesh, the essence of flesh, the straight, and the essence of straight that is the same as duality. However, the essence of flesh and the straight are both somewhat abstract items, being mathematical. Like the ratio or proportion of the hot and cold that constitute flesh, the essence of flesh is a certain number realized in matter. In the same way, Aristotle says that the straight (as a property of geometrical figures) is always found with magnitude. Moreover, since apparently the same relation does or might obtain between the straight and the essence of straight as does obtain between flesh and the essence of flesh, it seems reasonable that the straight would include a necessary reference to matter, as the essence of flesh does. This is confirmed by the fact that Aristotle likens both flesh and the straight to the snub-nosed as having a necessary relation to matter. The four kinds of objects fit rather nicely into a three-tiered hierarchy of progressive abstraction: (1) the entirely material object of sense (flesh); (2) the somewhat abstract object that, nevertheless, has a necessary relation to matter (the essence of flesh and the straight); and (3) the most abstract objects (the essence of straight or duality). Aristotle seems to have had this ultimate in cognitive objects in mind when, at

the beginning of the passage, he hints that there are some objects for which there is no difference between themselves and what it is to be themselves; there does not seem to be a difference between duality and what it is to be duality.

In order that the hierarchy of objects may illumine the nature of νοῦς, one must divine the import of the analogy that what judges flesh is related to that which judges the essence of flesh as a bent line is related to itself when pulled out straight. If it can be assumed, as seems reasonable, that we always and only judge flesh by αἴσθησις, then the question remains as to how we judge the essence of flesh. If the analogy with the bent line related to itself can provide a clue to his meaning, as it seems it must, then it appears that when we judge the essence of flesh, we do so by means of a faculty that is related to αἴσθησις as a bent line is related to itself when pulled out straight. In this analogy, the line is a common element on both sides of the relation; the difference is that on one side the line is bent, and so is the line in a different relation. This would seem to provide the key to understanding the cryptic phrase, "or the same faculty in a different relation." The faculty that judges the essence of flesh, then, is like the bent line in its relation to the αισθητικον, which is like the line when pulled out straight. The faculty that judges the essence of flesh is either quite distinct from perception or is perception with something analogous to a bend in it. It is worth noting that the bend is not another substance added to the line, but rather is a form and so is in a sense immaterial. In the latter case, what judges the essence of flesh is αἴσθησις with something added, and since it is Aristotle's stated intention in 3.4 to find what is distinctive of νοῦς, it seems that νοῦς is that which is added.

The dizzying number of possibilities that result from Aristotle's various disjunctions injects a further element of confusion into an already confusing argument. The only sure element is that we judge flesh by αἴσθησις; the faculties by which we judge the other objects may be as many as three. On the one hand, sense (α) judges flesh, but another quite separate faculty (F_2) may judge the essence of flesh, while a third (F_3) faculty judges the straight, and yet another one (F_4) judges duality. Then again, it may be that α judges flesh, α in another relation (α*) the essence of flesh, but F_3 still judges the straight and F_4 duality. On another hand, α may judge flesh, F_1 the essence of flesh, F_3 the straight, while F_3 in another relation (F_3*) judges duality. If, however, there is reason to

identify what judges the essence of flesh and what judges magnitude, as it seems there is, then the faculties form an orderly gradation: α judges flesh, α* judges the essence of flesh and magnitude, and another faculty, the addition of which to αἴσθησις puts it in another relation and allows for such judgments, judges duality.

Thus, if we judge the more abstract essence of straight (duality) by a faculty that is either separate from the faculty that judges the straight, or by that faculty in another relation, and straight is judged by αἴσθησις placed in another relation by the addition of νοῦς, then what judges the essence of straight is either completely separate or it is the faculty that judges both the essence of flesh and magnitude in another relation. Given that this faculty may itself be αἴσθησις in another relation, it is difficult to understand what Aristotle would mean by a faculty defined as {αἴσθησις-in-another-relation}-in-another-relation. Thus, the hierarchy of αἴσθησις, αἴσθησις bent into another relation by the addition of νοῦς and νοῦς as separate is certainly the simplest and most intelligible, given the confusion of Aristotle's text, and its very simplicity is the only thing that makes it more likely than its rivals. It seems most probable, then, that what judges duality is completely separate, what judges magnitude and the essence of flesh is the sense faculty differently related by the addition of something analogous to a form, and what judges flesh itself is the sense faculty. The conclusion that the faculty by which we judge the essence of straight is completely separate (if this is Aristotle's intent), then, depends on the prior argument that the faculty by which we judge the essence of flesh is either a separate faculty or the same faculty in a different relation. Fortunately, this argument is given in a modicum of detail and forms the core of this part of the chapter.

At the end of the day, it seems that Aristotle is simply none too committal in this, the third argument of *DA* 3.4, about the ontological status of νοῦς in relation to αἴσθησις. νοῦς alone may judge the essences of things, and it may be quite separate from αἴσθησις. On the other hand, it may be the case that that which is able to know the essence of flesh is αἴσθησις in another relation (which is like having a bend added to it), while αἴσθησις alone knows only flesh. If αἴσθησις is involved in the grasping of the essence of flesh, however, it is not able to do so in virtue of itself, but in virtue of being in another relation by the addition of something analogous to a bend. This something additional may still be worthy of being called separate in the strong sense, even though it involves αἴσθησις, if its activity is not realized in αἴσθησις and its organic nature. This accords with what Aristotle says elsewhere—that thought thinks its objects in images, which pertains to the αἰσθητικόν.[26] That which renders the αἰσθητικόν to be in a different relation, presumably νοῦς, would also count as being separate in a strong sense without being a separate substance. It is just the distinction in objects that shows that such a grasp is not so realized. Thus, while that by which we judge the essence of flesh may or may not be totally separate from matter, it is Aristotle's overall intention that what does grasp essences is separate just to the extent that its objects are. He does this on the basis that essences are not grasped by the sensitive faculty that grasps whatever it does in virtue of its organs.

The core argument, then, first establishes the connection between the ability of αἴσθησις to judge and the qualities of bodies. First, Aristotle asserts as an assumption that the objects of αἴσθησις are material. "Flesh cannot exist without matter." Further, he explains that flesh is constituted from the hot and the cold and other qualities, and we judge hot and cold and other qualities by αἴσθησις. More than listing mere facts about sense cognition, Aristotle is clarifying the connection between the objects of sense (proper sense qualities) and the fact that they belong to material things. Given that sense grasps material things and that material things are constituted by sense qualities, we judge flesh by αἴσθησις in virtue of sensible qualities proper to bodies—that is, in order that sense receive its proper objects, both sense and its objects must be realized in subjects composed of the elements. Since an object has the sensible qualities it does only in virtue of being material and composed of elements, the perceptual capacity can only be affected by what is so composed. Moreover, the sensitive faculty is affected by these elementally grounded qualities only in virtue of the materially constituted organ in which it is realized. For the eye is affected by color in virtue of having some matter, that is, water, that is subject to the anahylic activity of receiving form without matter, and all the senses are able to sense just insofar as their organs are appropriately composed (as a mean) of various elemental constituents (424a6–11). Thus, in order that the activity of perception take place, both the object perceived and the organ of the perceiving animal must be material objects composed of elements. Aristotle, then, seems to be making the quite strong claim that sensible qualities are perceived if and only if they are perceived by a sensitive

power that is realized in a material organ—that is, he seems to be claiming, for example, that if color is perceived, only an appropriately material organ (i.e., the eye) can do so, and if an eye perceives something, then its object is a material thing composed of elements.

With the connection between sensation and the qualities of bodies thus established, the rest of the core argument draws what conclusion it can from the difference between flesh and the essence of flesh. The argument begins with the assumption, reasonable enough, that flesh is other than the essence of flesh. It follows that if flesh is constituted by the proper proportion of the sensible qualities, the essence of flesh is not so constituted. Furthermore, αἴσθησις is the faculty that judges flesh, and clearly there is a strong connection between αἴσθησις and both what is required for its realization (a mean of the elements in its organ) and its object (something having sensible qualities as a result of its elemental composition). This premise may be taken to instantiate the universal claim that if a cognitive power is essentially dependent on a material organ, then its objects are elementally composed. What follows from these premises is that if the essence of flesh is known, this does not take place through a cognitive faculty that is materially realized, that is, not by αἴσθησις. The argument, then, may be summarized as follows:

No material things are its essence.
All material things are composed of elements.[27]
(Therefore, no essence is composed of elements.)
Every material cognitive power (sense) has objects composed of elements.
Therefore, the power that knows essences is not (entirely) a material power.

This argument, like the two that preceded it, is primarily a negative one. All that the argument proves is that, because of differences between itself and sense, mind is not realized in any material organ.

Given the confusing text of this argument, Aristotle expresses the argument's conclusion with a certain amount of ambiguity. Either another faculty than sense judges the essence of flesh, or sense judges it by being in another relation (having the addition of something like a bend). What judges the essence does so precisely because it is either other than, or an addition to, sense and thus does not do so by the action of sense

qualities. Therefore, either the faculty that judges the essence of flesh (1) is not constituted from the elements and so is separate (χωριστός), or (2) is αἴσθησις in another relation. Either way, it cannot be solely αἴσθησις as composed of the elements and in contact with something so composed that judges the essence of flesh. Thus, it is something either absolutely non-elemental (i.e., nonphysical) or it occurs through the addition of something differing from sense in being nonphysical. Aristotle generalizes his point by restating the conclusion in the claim that the physicality of a cognitive power corresponds to that of its objects. "And speaking generally, as objects are separable from their matter so also are the corresponding faculties of the mind" (429b11–23).

CONCLUSION

Having examined both Aristotle's understanding of perception and of its inherent limitations due to the fact that it is necessarily realized in material organs, one can understand the cogency of his reasoning in *DA* 3.4 that mind is separate from matter and the body. While the essential nature of perception as a potency indicates that it is not a case of ordinary alteration, nevertheless, it is still an essentially material activity. All sense powers require organs, and the organs must be of a definite and determinate material constitution, in order that they may receive sensible qualities of material things in an anahylic manner. For, were organs not so constituted, they would be subject only to the material alteration to which every other material thing is subject, and so would not serve their function of receiving form without matter and not as matter. Being material, then, is essential for sense organs to be able to grasp their objects. Being material, however, entails certain limitations characteristic of perception. Aristotle capitalizes on these limitations in his arguments in *DA* 3.4 for the separation of νοῦς. Each sense power is limited to receiving just one class of sense quality that its matter makes it fit to receive, while νοῦς is able to know, that is, receive, all things. This difference indicates that νοῦς is not material. Likewise, being material, every sense power is overwhelmed by intense sensibles, while νοῦς is never overwhelmed. This difference, too, indicates that νοῦς is not material. Finally, because there is an essential connection between being a mean of elemental components and perceiving sensible qualities, sense alone knows things composed of elements, while νοῦς knows essences

that are not so composed. This difference, like those preceding it, indicates that νοῦς is not a material power.

In all of these arguments, Aristotle at once acknowledges certain similarities between the intellect and the senses, while noting that νοῦς is free from the limitations to which the senses are essentially subject on account of their organs. In order to see the cogency of his reasoning, however, it was first necessary to establish that the senses were essentially material despite the fact that they received form without matter. Prior to this, it was necessary to establish that νοῦς and the senses were similar in relevant respects, that is, that they both received form and did so anahylically, that they both became actually such as their object is from having only been potentially so, and that they both became one with their object. In order to see these similarities, however, it was necessary first to establish that Aristotle did have it in mind to prove that the intellect is separate in a strong sense, even though his commitment to hylomorphism prevented him from claiming that νοῦς is a separate substance. Despite apparent incongruities, obscurities and discontinuities of discussion, one can see that the doctrine of Aristotle throughout the *De Anima* enjoys remarkable consistency, subtlety and depth in its discussion of the nature of νοῦς as compared with the sense powers.

NOTES

1. οὐκ ἔστι δ'ἁπλοῦν οὐδὲ τὸ πάσχειν, ἀλλὰ τὸ μὲν φθορά τις ὑπὸ τοῦ ἐναντίου, τὸ δὲ σωτηρία μᾶλλον τοῦ δυνάμει ὄντος ὑπὸ τοῦ ἐντελεχείᾳ ὄντος καὶ ὁμοίου οὕτως ὡς δύναμις ἔχει πρὸς ἐντελέχειαν·

2. Cf. *Gen An* 5.1, 780a7–15.

3. εἰ δή ἐστι τὸ νοεῖν ὥσπερ τὸ αἰσθάνεσθαι, ἢ πάσχειν τι ἂν εἴη ὑπὸ τοῦ νοητοῦ ἢ τι τοιοῦτον ἕτερον. ἀπαθὲς ἄρα δεῖ εἶναι, δεκτικὸν δὲ τοῦ εἴδους καὶ δυνάμει τοιοῦτον ἀλλὰ μὴ τοῦτο, καὶ ὁμοίως ἔχειν, ὥσπερ τὸ αἰθητικὸν πρὸς τὰ αἰσθητά, οὕτω τὸν νοῦν πρὸς τὰ νοητά.

4. ἀνάγκη ἄρα, ἐπεὶ πάντα νοεῖ, ἀμιγῆ εἶναι, ὥσπερ φησὶν Ἀναξαγόρας, ἵνα κρατῇ, τοῦτο δ'ἐστὶν ἵνα γνωρίζῃ· παρεμφαινόμενον γὰρ κωλύει τὸ ἀλλότριον καὶ ἀντιφράττει, ὥστε μηδ'αὐτοῦ εἶναι φύσιν μηδεμίαν ἀλλ'ἢ ταύτην, ὅτι δυνατόν.

5. Jonathan Barnes, "Aristotle's Concept of Mind," *Proceedings of the Aristotelian Society* 72 (1971–1972): 101–10. Barnes has essentially the same reading of the text as mine. Howard Robinson in "Aristotelian Dualism," in *Oxford Studies in Ancient Philosophy*, vol. 1 (Oxford: Oxford University Press, 1983), pp. 123–44, also thinks that, for Aristotle, the limitless range of the intellect shows that it could not be a material power. "A faculty which had the capacity to receive forms from all the basic types of matter (and the intellect can certainly do that) would have itself not to possess matter, otherwise its range would be limited in just the sort of way the particular senses are limited" (p. 126). He goes on to explain that the forms that the intellect receives are of such heterogenous sorts that nothing material could receive all of them. "The combining of forms which could not be present together in the same matter shows that, in thought, they are not in matter at all" (ibid.).

6. Thomas Russman, *A Prospectus for the Triumph of Realism* (Macon, GA: Mercer University Press, 1987), pp. 24–25.

7. Ibid., p. 25.

8. Ibid., pp. 25–26.

9. Ibid., p. 26.

10. Ibid., pp. 26–27.

11. Thomas Aquinas, *Sentencia Libri De Anima*, Lib. III, lect. 7, n. 680 in *Opera Omnia* Iussu Leonis XIII P.M. edita. Cura et studio Fratrem Predicatorem (Romae: Ex Typographia Polyglotta S.C. de Propoganda Fide, 1889).

12. John F. X. Knasas in "Defense of a Thomistic Argument for Subsistent Soul," in *Aquinas on Mind and Intellect: New Essays*, ed. Jeremiah Hackett (Oakdale, NY: Dowling College Press, 1996), pp. 159–174, opposes Russman by also following Aquinas in the latter's belief that the colorlessness of the eye's pupil indicates that the eye receives color in a non-material way (pp. 163–167). Knasas, however, believes that the immaterial/spiritual reception occurs only in the form of the hylomorphic compound, which is the eye. He thus calls it the "reception of form by form" (p. 165). In order to maintain Aristotle's (and Aquinas's) contention that by the reception of intense sensibles (a contention instrumental in the next argument of *DA* 3.4), it seems best to maintain that some composite material substances can receive sensible forms in a non-standard material (anahylic) way. Thus, a given sense (power and organ together) is the subject of an immaterial activity only in a certain respect, that is, with respect to the proper object it receives. In this way the claim that mind is unmixed follows (more or less) directly from the claim that mind knows all things.

13. 418b27; 424a8–11.

14. *DA* 2.12, 424a32–b20.

15. ὅτι δ'οὐχ ὁμοία ἡ ἀπάθεια τοῦ αἰσθητικοῦ καὶ τοῦ νοητικοῦ, φανερὸν ἐπὶ τῶν αἰσθητηρίων καὶ τῆς αἰσθήσεως. ἡ μὲν γὰρ αἴσθησις οὐ δύναται αἰσθάνεσθαι ἐκ τοῦ σφόδρα αἰσθητοῦ, οἷον ψόφου ἐκ τῶν μεγάλων ψόφων, οὐδ'ἐκ τῶν ἰσχυρῶν χρωμάτων καὶ ὀσμῶν οὔτε ὁρᾶν οὔτε ὀσμᾶσθαι· ἀλλ'ὁ νοῦς ὅταν τι νοήσῃ σφόδρα νοητόν, οὐχ ἧττον νοεῖ τὰ ὑποδεέστερα, ἀλλὰ καὶ μᾶλλον· τὸ μὲν γὰρ αἰσθητικὸν οὐκ ἄνευ σώματος, ὁ δὲ χωριστός.

16. See Johnathan Lear, *Aristotle and the Desire to Understand* (Cambridge: Cambridge University Press, 1988), pp. 114–115.

17. Ἐπει δ᾽ἄλλο ἐστὶ τὸ μέγεθος καὶ τὸ μεγέθει εἶναι καὶ ὕδωρ καὶ ὕδατι εἶναι (οὕτω δὲ καὶ ἐφ᾽ἑτέρων πολλῶν, ἀλλ᾽οὐκ ἐπὶ πάντων· ἐπ᾽ἐνίων γὰρ τοὐτόν ἐστι), τὸ σαρκὶ εἶναι καὶ σάρκα ἢ ἄλλῳ ἢ ἄλλως ἔχοντι κρίνει· ἡ γὰρ σάρξ οὐκ ἄνευ τῆς ὕλης, ἀλλ᾽ὥσπερ τὸ σιμὸν, τόδε ἐν τῷδε. τῷ μὲν οὖν αἰσθητικῷ τὸ θερμὸν καὶ τὸ ψυχρὸν κρίνει, καὶ ὧν λόγος τις ἡ σάρξ· ἄλλῳ δὲ, ἤτοι χωριστῷ ἢ ὡς ἡ κεκλασμένη ἔχει πρὸς αὐτὴν ὅταν ἐκταθῇ, τὸ σαρκὶ εἶναι κρίνει. πάλιν δ᾽ ἐπί τῶν ἐν ἀφαιρέσει ὄντων τὸ εὐθύ ὡς τὸ σιμόν· μετά συνεχοῦς γάρ· τὸ δὲ τί ἦν εἶναι, εἰ ἔστιν ἕτερον τὸ εὐθεῖ εἶναι καὶ τὸ εὐθύ, ἄλλο· ἔστω γὰρ δυάς. ἑτέρῳ ἄρα ἢ ἑτέρως ἔχοντι κρίνει. ὅλως ἄρα ὡς χωριστὰ τὰ πράγματα τῆς ὕλης, οὕτω καὶ τα περὶ τὸν νοῦν.

18. Few commentators offer much help in understanding the passage. W. D. Ross, ed. *Aristotle De Anima* (Oxford: Clarendon Press, 1961), text and commentary, for instance, says only that "it is difficult to see in what sense reason can be thought of as bent and sense-perception as straight, or *vice versa*; it seems probable that A. is merely saying that . . . (they) are either separate faculties or one faculty operating on different objects" (p. 293).

19. Kahn, "Aristotle on Thinking," p. 370. For a similar interpretation, see also Malcolm Lowe, "Aristotle on Kinds of Thinking," in *Aristotle's* De Anima *in Focus*, ed. Michael Durrant (New York: Routledge, Inc., 1993), pp. 110–127.

20. Kahn, "Aristotle on Thinking," p. 370.

21. Ibid.

22. Ibid., p. 371.

23. τὸ σαρκὶ εἶναι καὶ σάρκα ἢ ἄλλῳ ἢ ἄλλως ἔχοντι κρίνει.

24. ἄλλῳ δὲ, ἤτοι χωριστῷ ἢ ὡς ἡ κεκλασμένη ἔχει πρὸς αὐτὴν ὅταν ἐκταθῇ, τὸ σαρκὶ εἶναι κρίνει.

25. Kahn, "Aristotle on Thinking," p. 370.

26. 431b3; see also 432b9 and 445b16.

27. Actually, it is almost certainly true that Aristotle would accept both this claim and the claim that *only* material things are composed of elements. Technically, this additional claim is required for the argument's validity.

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