Unmixing the Intellect (Greenwood Press, 2003)
Chapter 5 – Aristotle on the Difference between Sensation and Mind.
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I. 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 general 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 mind is separate, and what this separation amounts to.

II. 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).

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 (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, i.e., 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 which 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 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, e.g., the eye, receives its proper sensible object, e.g., 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 which 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 which 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, i.e., 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 which 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, i.e., their organs. It is in fact this constraint which the material medium places on sense powers which allows one to draw further implications about the nature of senses and sense organs.

III. CONSEQUENCES AND LIMITATIONS OF PERCEPTION.

The first constraint which 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 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 which the organ performs, i.e., 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 sound, 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 different 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 which can be affected anahylically. The eye, then, must be made of some matter that has the transparent, i.e., 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 which 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 which 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, i.e., 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 overwhelmed 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 which together constitute a "mean." The mean which is constitutive of each sense, then, allows each to be 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 which 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.[1] 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 it also sets limits 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 which define the sense power of which they are the object. For instance, color is the quality possessed by bodies which animals are able to see, and so vision is defined in terms of color. However, color is more than that quality which an object possess 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 which, 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 which distinguish the senses from the mind. As will become clear, Aristotle believes that mind has none of the limitations characteristic of the senses. From this fact, he concludes that mind is a non-bodily power whose acts are not realized in any organ.

IV. *DE ANIMA* 3.4 ON SENSATION AND MIND.

At the beginning of *DA* 3.4, Aristotle declares his intention to delineate the features distinctive of mind.

> 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 mind 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 mind. At several points in the *DA*, Aristotle questions whether the mind is part of the sensitive faculty, being a kind of

[1] Cf. *Gen. An.* 5.1, 780a7-15.

imagination. The sensitive faculty taken as a whole includes all the particular sense faculties, even imagination, and is necessarily realized in bodily organs. If, however, mind 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 mind, 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.

Initially, Aristotle outlines the similarities between sensation and mind 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).

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 mind and sensation 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 mind is a case of being acted upon, yet insofar as it is a cognitive faculty like sensation, 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 sensation, Aristotle highlights features of mind which, as we have seen, mark it as distinct from ordinary material processes, i.e., alteration. Mind, like sensation, is an anahylic process, but as such it is not necessarily non-bodily since sensation is clearly a bodily process. Since both capacities are anahylic, however, differences between them according to those features characteristic of anahylic processes do distinguish sensation alone as realized in bodily organs and demonstrate that mind is not so realized.

A. The Distinction According to Range of Objects.

While the similarity between mind and sensation 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 mind differs from sensation is according to their respective ranges. This difference, then, provides the basis on which to conclude that mind is not realized in an organ. Having argued that both mind and sensation are anahylic activities, Aristotle now shows that mind is distinct by the fact that its range is unlimited

> It is necessary then, since mind thinks all things, that it should be "unmixed", 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).

Aristotle asserts that mind knows all things and apparently accepts the universality of its scope without argument. It is clear, however, that knowing all things means that mind can receive the forms of all things. Given this universality, Aristotle believes this shows that mind is, in the words of Anaxagoras, unmixed. 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.
> <u>Mind knows all things, i.e., no intellect is hindered in its reception.</u>
> Therefore, mind is unmixed.

By saying that mind 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 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 which 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 which 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 colourless, 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 which 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 it lacking the form so received.[2] 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 mind 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 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, e.g., 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).

Mind has no actual existence until it thinks insofar as it is a cognitive faculty. The essential potency of cognition applies to it without restriction, and its only actuality comes from it 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.[3] Russman argues, however, that what we know about the nature of perception invalidates the assumptions which Aristotle makes about sensation, and so the conclusion that the mind acts separately from the body is unwarranted. "(Aristotle) claims to know the

[2] Jonathan Barnes ("Aristotle's Concept of Mind," *Proceedings of the Aristotelian Society*, 72 (1971-2) pp. 101-10.) has essentially the same reading of the text as mine. Howard Robinson ("Aristotelian Dualism,"in *Oxford Studies in Ancient Philosophy*, I (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 which 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).

[3] Thomas Russman, *A Prospectus for the Triumph of Realism* (Macon: Mercer University Press, 1987), pp. 24-5.

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" (p. 25). 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 which has been seen to be false in the light of contemporary biology and neurophysiology (pp. 25-6). 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 (p. 26).

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 (pp. 26-7).

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 do 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.[4] They seem to hold this interpretation despite the fact that Aristotle's text merely says that mind knows all things, 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.[5] 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.[6] It is not, however, necessary that this serve as a basis of his argument that mind 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 which 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

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[4] *Sentencia Libri De Anima*, Lib. III, lect. 7, n. 680.

[5] 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. 163-7). 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') 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-standardly material (anahylic) way. Thus, a given sense (power and organ together) is the subject of an immaterial activity only in a certain respect, i.e., 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.

[6] 418b27; 424a8-11.

sense because they do not receive forms in this way, i.e., anahylically.[7] The senses are thereby limited to one class of object. That is, what receives the form of color anahylically, i.e., 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 mind is non-bodily when coupled with the claim that mind 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, i.e., 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 mind receives *all* forms, Aristotle is claiming that mind 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 lead to the conclusion that the intellect is immaterial given that it knows all things.

B. The Distinction According to Types of Impassivity.

Another point of difference between the mind and the senses concerns their susceptibility to being dazzled. As mind differs from sensation 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).

Senses cannot sense after receiving intense sensible objects. Mind, on the other hand, is able to think after thinking highly intelligible objects and, in fact, thinks better because of it. The reason, Aristotle says, is that sense faculty is not apart from the body, while mind is separate, which means separate in a sense strong enough that its activity is not realized in the body. Apparently, Aristotle reasons that the fact that sensation 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.
> <u>No intellect can be dazzled.</u>
> 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.

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 (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

[7] *DA* 2. 12, 424a32-b20.

premises do not have the same effect indicates that what "sees" premises, i.e., mind, does not have a material organ.

C. 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 committal, and least clear, as to how he draws his conclusion. Upon careful analysis, it seems that Aristotle argues for the distinction between mind and sensation 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, 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, 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).

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.

The core argument, then, first establishes the connection between the ability of sensation to judge and the qualities of bodies. First, Aristotle asserts as an assumption that the objects of sensation 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 sensation. 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 sensation 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, i.e., water, which 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 which is realized in a material organ. That is, he seems to be claiming, e.g., 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, sensation is the faculty which judges flesh, and clearly there the strong connection between sensation and both what is required for its realization (a mean of the elements in its organ) and its object (something having sensible qualities asa 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, i.e., not by sensation. The argument, then, may be summarized as follows:

No material things is its essence.
All material things are composed of elements.[8]
(Therefore, no essence is composed of elements.)
Every material cognitive power (sense) has objects composed of elements.
Therefore, the power which knows essences is not (entirely) a material power.

This argument, like the two which 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 a) the faculty which judges the essence of flesh is not constituted from the elements and so is separate , or b) is sensation in another relation. Either way, it cannot be solely sensation as composed of the elements and in contact with something so composed which 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 for their matter so also are the corresponding faculties of the mind" (429b11-23).

V. 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 organs 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 mind. Each sense power is limited to receiving just one class of sense quality which its matter makes it fit to receive, while mind is able to know, i.e., receive, all things. This difference indicates that mind is not material. Likewise, being material, every sense power is overwhelmed by intense sensibles, while mind is never overwhelmed. This difference, too, indicates that mind 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 mind knows essences which are not so composed. This difference, like those preceding it, indicates that mind 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 mind 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 receive form without matter. Prior to this, it was necessary to establish that mind and the senses are similar in relevant respects, i.e., that they both receive form and do so anahylically, that they both become actually such as their object is from having only been potentially so, and that they both become one with their object. In order to see these similarities, however, it was necessary to first 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 mind 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 mind as compared with the sense powers.

[8] 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 arguments validity.