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Thomas Aquinas

A Commentary on Aristotle's De anima

Translated by Robert Pasnau

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Introduction

For much of the Middle Ages, western Europe was largely unacquainted with the philosophical legacy of ancient Greece. Almost all of Plato's writings remained unknown until the Renaissance, and Aristotle's most important works—among them the *Physics*, *Metaphysics*, *Nicomachean Ethics*, and *De anima*—began to be available only in the middle of the twelfth century. As a result, it was not until the thirteenth century that philosophers and theologians in the Latin West were able to begin interpreting and making use of Aristotle's works. By far the most influential of these philosophers was Thomas Aquinas (1224 or 1225–1274). In his Aristotelian commentaries, of which the *De anima* commentary was the first, not only did Aquinas help to reclaim Aristotle for western philosophy, but he also grappled with the philosophical principles that would underlie his own broader, systematic works in natural and philosophical theology.

Aquinas arrived at the University of Paris as a young Dominican in 1245, just as the arts faculty there was beginning to focus its attention on Aristotle.[1] Such attention would have come earlier if not for a series of prohibitions at the University of Paris and elsewhere, beginning in 1210, which prohibited masters from lecturing on Aristotle's works in natural philosophy. By 1240 these prohibitions had fallen by the wayside, and the Latin West immersed itself in the Aristotelian tradition.[2] This tradition proved to be just the impetus that western philosophy needed. From the sixth through the twelfth centuries, western Europe had produced only a handful of significant philosophers, most notably Anselm (c. 1033–1109) and Abelard (1079–1142). In the thirteenth century the quality and quantity of philosophy in western Europe grew dramatically, partly as a consequence of the development of universities. The study of Aristotle (who became known as "the Philosopher") rapidly

1. The best study of Aquinas's life is Jean-Pierre Torrell, *Saint Thomas Aquinas*, vol. 1: *The Person and His Work*, translated by Robert Royal (Washington, D.C.: Catholic University of America Press, 1996), a work that supersedes all earlier biographies. Many details concerning Aquinas's life are still uncertain and controversial. In this Introduction I follow the account that is generally accepted, but future research is likely to overturn some of the details.

2. For further information on the medieval reception of Aristotle, see chapters 2 and 3 of Norman Kretzmann, Anthony Kenny, and Jan Pinborg, eds., *The Cambridge History of Later Medieval Philosophy* (Cambridge: Cambridge University Press, 1982), and Mark Jordan, "Medieval Aristotelianism," in *Routledge Encyclopedia of Philosophy*, edited by Edward Craig (New York: Routledge, 1998).

came to dominate the arts curriculum in the universities, and a sophisticated philosophical training became a prerequisite for the study of theology.

In this environment the fundamental areas of research and study all surrounded the Aristotelian corpus itself. Arts masters specialized in lecturing on Aristotle's work, and most prominent theologians wrote commentaries on the Aristotelian corpus. We know that Aquinas heard his teacher Albert the Great lecture on at least the *Nicomachean Ethics* (indeed, Aquinas himself is thought to have written the surviving account of these lectures). It seems likely that Aquinas also heard lectures on Aristotle by members of the arts faculty at the University of Paris. Recent studies of Parisian commentaries from the 1240s have revealed many respects in which the method and style of Aquinas's own commentaries were influenced by these earlier works.[3] But it was not until some twenty years later that Aquinas began writing his own Aristotelian commentaries.

From 1265 to 1268 Aquinas lived in Rome, where, at the behest of his Dominican order, he was establishing a house of studies. During this time Aquinas devoted his scholarly efforts to topics closely associated with those of the *De anima*. His *Disputed Questions on the Soul, Disputed Questions on Spiritual Creatures,* and the first part of his *Summa theologiae* all date from this period. It is no surprise, then, that once Aquinas formed the intention of writing a series of Aristotelian commentaries, he chose to begin with the *De anima*. He began writing his *Sententia libri "De anima"* at some point after November 1267 and finished it by September 1268, when he left Rome for his second stay in Paris. During the next five years he embarked on eleven more Aristotelian commentaries, completing six of them, including the long commentaries on the *Physics, Metaphysics,* and *Nicomachean Ethics.*

Scholastic philosophy in general and Aquinas's work in particular have not always been accorded the respect that they now receive. But there has never been any doubt about the value of Aquinas's Aristotelian commentaries. (The Renaissance philosopher Pico della Mirandola is said to have remarked that "without Thomas, Aristotle would be mute.") Aquinas brings to his commentaries a thorough familiarity with the Aristotelian corpus, a deep appreciation and understanding of Aristotle's philosophy, and, of course, an acute philosophical mind. But beyond making a contribution to our understanding of Aristotle, the commentaries contain some of Aquinas's most sustained reflections on central philosophical topics.

3. Particularly clear evidence that Aquinas knew of earlier commentaries from the Paris arts faculty appears in this commentary, at III.17.118. There Aquinas discusses a view that seems to have been proposed by a member of the arts faculty.

It now seems that earlier scholars exaggerated the *stylistic* originality of Aquinas's Aristotelian commentaries. For a detailed discussion of how Aquinas follows the structure and set phrases of this earlier commentary tradition, see René-Antoine Gauthier's introduction to the Leonine edition of Aquinas's *Sententia libri "Ethicorum"* (Rome: Commissio Leonina, 1969), pp. 237*–246*.

Readers can see such stylistic similarities for themselves by comparing Aquinas's *De anima* commentary with the anonymous *Lectura in librum "De anima"* (c. 1246), edited by Gauthier (Rome: Collegium S. Bonaventurae, 1985). Like Aquinas, the anonymous master from the arts faculty begins by analyzing the main divisions of the text and then offers a line-by-line restatement of the text, pausing periodically to consider at length special difficulties.

It would be misleading to say that in these commentaries Aquinas is pursuing philosophy without regard for its theological implications. But he is bracketing the theology as much as possible, in order to pursue an understanding of Aristotle's philosophy. His approach can be illustrated by a passage from the *De anima* commentary. At III.10 Aquinas reports Aristotle as claiming that, with regard to our sensory powers, "without this perishable part of the soul . . . our intellect understands nothing." This claim is obviously in tension with Christian doctrine, which holds that, after death, the human intellect does have understanding while separated from the perishable senses. Aquinas therefore immediately offers a careful elaboration: "And so when the body is destroyed, the knowledge of things does not remain in the separated soul *in the same way* in which it now intellectively cognizes" (245–248). There is no evident textual basis for this elaboration of the text, and Aquinas offers no defense or further clarification. He simply says: "But to discuss the way it intellectively cognizes then is no part of the present plan" (248–249). On this note the chapter ends. Aquinas is careful to leave enough room to accommodate the tenets of faith, but he is not going to permit himself to stop and work out the details.

The *De anima* commentary is particularly important for understanding certain aspects of Aquinas's philosophy. Here, more than anywhere else, Aquinas gives detailed accounts of the processes involved in human cognition. In so doing Aquinas is following the structure of the text itself. The general structure of the *De anima,* according to Aquinas's analysis, runs as follows.

I. Prologue (I.1–2)
II. The views of other philosophers (I.3–14)
III. The correct view of soul (II–III)
  A. What soul is (II.1–4)
  B. Soul's powers (II.5–III.18)
    1. Soul's powers in general (II.5–6)
    2. Soul's individual powers (II.7–III.16)
      a. The nutritional part (II.7–9)
      b. The sensory part (II.10–III.6)

c. The intellective part (III.7–13)
d. The part of soul that produces movement (III.14–16)

3. The order among soul's powers (III.17–18)

Most of Aristotle's positive account, in Books II and III, is concerned with soul's individual powers—in particular, the five external senses, the internal senses, and intellect. Naturally, Aquinas's commentary has the same focus. As a result, this commentary is the best single place to look for Aquinas's views on our cognitive faculties, perception, abstract thought, and mental representation. The commentary also contains detailed and illuminating discussions of topics that Aquinas frequently discusses in his more theological writings, such as the relationship between soul and body (II.1–4), action theory (III.14–16), the emotions (I.10, III.14), and even the problem of universals (II.12).

As noted, the surface structure of Aquinas's commentaries owes much to earlier commentaries written by the arts faculty at the University of Paris. But the content of the *De anima* commentary also draws heavily on other sources.[4] Aquinas benefited from a wide range of earlier scholars, including the early Greek commentators on Aristotle (especially Themistius), Islamic philosophers (especially Avicenna and Averroes), and thirteenth-century Christian philosophers and theologians (especially Albert the Great). For most of the commentary these sources stay well in the background: Avicenna is mentioned twice, Averroes only once, and the others not at all. But for much of Book I Aquinas does something uncharacteristic: hardly a chapter goes by without his using, verbatim and without acknowledgment, Themistius's *De anima* commentary. (This commentary dates from the fourth century and was first translated into Latin at the same time that Aquinas began working on his own commentary.) These direct borrowings from Themistius abruptly stop at the end of I.11, only to be replaced, in the next two chapters, with equally direct borrowings from Albert the Great's paraphrase of the *De anima.* Then, at I.14, the borrowing stops altogether, and for the rest of the commentary Aquinas works much more on his own. The influence of earlier writers remains, but the words are Aquinas's own.

This sort of direct and unacknowledged dependence on earlier writers was not unusual in the Middle Ages; scholarship was then viewed as a more communal enterprise, and there was less of a sense of ownership attached to an individual's words and thoughts. Nevertheless, this sort of dependence was

4. In his preface to the Leonine edition of this commentary, Gauthier writes, "Research over the last fifty years has shown that, contrary to what was long believed, Saint Thomas took advantage of a wide range of sources, and greatly benefited from the work of his predecessors" *(Sentencia libri "De anima"* [Paris: Vrin, 1984], p. 201*). Gauthier documents these connections with scrupulous care in his notes to the text.

not Aquinas's style, and so the pattern seen here is rather puzzling. Perhaps Aquinas began this, his first Aristotelian commentary, with the thought that he would benefit from closely following Themistius. Perhaps he switched to Albert out of dissatisfaction with Themistius. And perhaps he dropped them both near the end of Book I because he decided he could do without such explicit guidance. Other explanations are possible. Perhaps Aquinas intended from the start to rely more heavily on others only in Book I. Here, after all, Aristotle is primarily reciting the views of his predecessors. The discussion is frequently obscure and contributes only obliquely to "the correct view of soul," as Aquinas characterizes the contents of Books II–III.

Until recently it was believed, based on the earliest catalogues of Aquinas's work, that our text of Book I is a *reportatio*—that it consists, in other words, of notes taken at Aquinas's public lectures on this material. Books II–III, in contrast, were characterized as an *expositio,* a polished version edited by the author. Such a story might explain the heavy dependence in Book I on Themistius and Albert; it would also explain certain stylistic differences that readers may notice in Book I. (In I.1, for instance, Aquinas quotes fragments of the text and then comments on them, a practice he quickly gives up in favor of a more fluid style.) The idea that Book I is a reportatio has now been discredited.[5] It seems quite unlikely, first, that Aquinas ever delivered these commentaries in a lecture format. Moreover, the stylistic differences can be explained by the fact that this is Aquinas's first Aristotelian commentary; the techniques that are firmly in place by Book III emerge piece by piece in the course of the early chapters.

THE LATIN TRANSLATION AND COMMENTARY

In medieval western Europe, knowledge of Greek was an exceptional accomplishment, even in the most learned circles. Aquinas knew no Greek, and consequently he was entirely dependent on Latin translations of Aristotle's work. His *De anima* commentary is based on a Latin translation by William of Moerbeke (c. 1215–1286), itself a revision of a twelfth-century translation by James of Venice. Moerbeke translated or revised translations of a large part of the Aristotelian corpus, along with several Greek Aristotelian commentaries. In many cases these translations became the standard Latin texts for several centuries.

Aquinas's commentary is apparently the first to have been based on Moerbeke's revised translation of the *De anima.* Until very recently it was

5. For details, see ibid., pp. 276*–281*.

believed that Aquinas commissioned this revision directly from Moerbeke, a fellow Dominican. Scholars imagined that Aquinas and Moerbeke must have worked in close collaboration, with Moerbeke providing new or revised translations—and even offering notes on the Greek—to fill Aquinas's scholarly needs. New research has established beyond any doubt that the image of these two men working closely together is but a fiction.[6] Comparison of Aquinas's commentary with the best available copies of Moerbeke's translation reveals many places where Aquinas is relying on a corrupt text. If he had been in close working contact with Moerbeke, he surely would have possessed a better copy of the translation.

The nature of Moerbeke's translation explains certain features of Aquinas's commentary. Moerbeke's approach, standard at the time, is to be literal in a way that will strike modern readers as odd. Translators tried as far as possible to match the Greek word for word, often retaining even the Greek word order. In translating Greek into Latin, this is not a hopeless strategy. For one thing, the languages share many structural similarities. Moreover, because Latin is a highly inflected language, its word order is much more flexible than English word order. (The medieval translators' approach would certainly not be feasible for translating Greek, Latin, or even German into English.) The strategy also has an obvious advantage in bringing the Greekless reader as close as possible to the original text. Even so, the inevitable result is a Latin text that is sometimes extremely puzzling. The strange Latin combined with the exceptionally difficult nature of Aristotle's writings presents the would-be commentator with a considerable challenge. Moreover, these same circumstances make a commentary virtually essential as a companion to the text itself.

These doubly opaque texts call for commentaries that attempt first to answer the most basic questions about what is being said. This is the fundamental aim of each of Aquinas's Aristotelian commentaries. His commentaries fall into the genre of the medieval "literal commentary" rather than the "question commentary." A question commentary stands at a greater distance from the original text: its method is to raise a series of pertinent questions and to answer them on the basis of the text. A literal commentary, in contrast, focuses on the original text at the level of individual sentences, explaining any obscure or controversial passages. As befits a literal commentary, the heart of each chapter of Aquinas's commentaries is a restatement of the text, paragraph by paragraph. In constructing these restatements Aquinas sometimes simply rearranges the words of a sentence, imposing an order that readers of medieval Latin would find more natural. When necessary, unfamiliar words and opaque phrases are explained. Unclear or tightly packed arguments are

6. See ibid., p. 176*.

expanded. Allusions to other texts or doctrines are spelled out. In all of this, Aquinas takes himself to be doing no more than rendering Aristotle's own thought more accessible.

A further way in which Aquinas seeks to clarify the text is by providing an analysis of the work's structure. Each chapter begins with and is periodically punctuated by a short outline. Aquinas gives each paragraph of text a definite role in the emerging argument; in this way the reader always knows where the text is going (at least on Aquinas's reading of it) and how a certain passage is meant to contribute to the broader argument. (The above outline of the *De anima*'s basic structure is taken from this analysis. The Commentary's Analysis of the Text, a much more detailed outline that is also derived from Aquinas's own analysis, begins on p. xxvii.)

Through paraphrase and analysis Aquinas aims to fulfill the primary goal of his commentaries: to make Aristotle's own meaning clear and accessible. But Aquinas regularly takes on a second kind of project: to expand on Aristotle at particularly interesting or difficult points. There is often a clear demarcation between these expansive remarks and the merely expository ones. Aquinas characteristically begins the former with a phrase like "it is important to consider . . ." *(considerandum est).* Aquinas then seems to put Aristotle's text aside, shifting from a careful exposition of Aristotle's words to his own familiar vocabulary and thought. Details of the passage under discussion will be forgotten for the time being, while Aquinas focuses exclusively on the philosophical issue at hand. It is at these points that the commentaries become most interesting. The *De anima* commentary contains many discussions of this sort. Sometimes they merely explain points that are presupposed by Aristotle's argument; at other times they make points that go well beyond the text, as when Aquinas stops in II.1 to criticize the eleventh-century Jewish philosopher Avicebron for supposing that there is a plurality of substantial forms within one human being. (In the Commentary's Analysis of the Text, brief descriptions of these discussions appear in italic type.)

It is sometimes suggested that Aquinas's Aristotelian commentaries grew out of his efforts to rebut "Latin Averroism"—a thirteenth-century movement that interpreted Aristotle along supposedly Averroistic and heretical lines and that took root in the Paris arts faculty.[7] Aquinas certainly was engaged in battling this movement during the time when he composed most of his Aristotelian commentaries (1269–1273). And some of the commentaries do bear traces of this conflict, in particular the *Physics* commentary, where, in chapter after chapter, Averroistic readings of the text are systematically rejected. But

7. See James Weisheipl's *Friar Thomas d'Aquino* (Garden City, N.Y.: Doubleday, 1974), pp. 279–282.

anti-Averroism cannot have been the original motivation behind all Aquinas's commentaries. The first of the series, this *De anima* commentary, was written while Aquinas was in Italy, far from the academic conflicts in Paris. Moreover, the tone of this commentary is markedly calm and unpolemical; it does not stress the issues that would become so divisive in Aquinas's later years, when he returned to Paris and confronted the Averroists.[8]

In fact, Aquinas never indicates precisely why he took up the project of commenting on Aristotle. The timing of the *De anima* commentary, as already noted, suggests that it served as a kind of preliminary study for Aquinas's theological works, particularly the "Treatise on Human Nature," in the first part of the *Summa theologiae* (qq. 75–89). Similarly, Aquinas composed his commentary on the *Nicomachean Ethics* while he was at work on his detailed treatment of the virtues, in the *Summa*'s second part. Obviously, however, these commentaries were not just preliminary studies made solely for Aquinas's own benefit. At the start of his commentary on the *De interpretatione*, Aquinas says that his exposition is meant for both beginning students and more advanced ones. This expressed intention seems to fit the structure of his commentaries: beginners will benefit most from the literal commentary, whereas the more advanced will appreciate most the extended digressions and elaborations.

WHOSE VIEWS ARE BEING PRESENTED?

The Aristotelian commentaries plainly do offer evidence of Aquinas's own views. But how can we distinguish between places where Aquinas is merely stating or expounding Aristotle's view and those where he is presenting his own position? In the passages where Aquinas interrupts his literal commentary to expand on some particular question, in remarks often clearly distinguished from the commentary proper, it seems perfectly clear that he is announcing his own view. In such passages Aquinas is taking characteristic positions on familiar topics, and there is no reason to doubt that we are being given his own view of the issues.

It is more difficult, however, to evaluate the passages where Aquinas is paraphrasing Aristotle or adding an explanation that goes beyond paraphrase but that still seems to be an extrapolation from the text. Either of two extreme attitudes toward such passages can seem plausible. On one hand, if we focus on the fact that Aquinas is writing a literal commentary, then it can seem that we should take these passages merely as reports of Aristotle's views. After

8. Gauthier stresses these points in *Sentencia libri "De anima,"* pp. 234*–235*.

all, the conventions governing this sort of commentary dictate that if the text being studied says that something is so, then the commentary (making due clarifications) must report that it is so.[9] On the other hand, it seems entirely reasonable to suppose that Aquinas would never say anything that he does not believe (unless he goes on to retract the claim). This supposition would lead one to interpret Aquinas's commentaries as statements of his own views, not just Aristotle's. The expectation would be that Aquinas's views are Aristotle's views, unless Aquinas tells us otherwise.

We cannot resolve this interpretative issue without answering some far-ranging questions about the relationship between Aristotle and Aquinas. But several observations will help to shed light on the problem. First, only very rarely—and never in the *De anima* commentary—does Aquinas dissent from one of Aristotle's claims.[10] He does, of course, propose questionable interpretations of difficult passages, as every interpreter of Aristotle must do. But he seldom reads Aristotle in a way that seems obviously contrived or unreasonably slanted toward his own views.[11] So, given that Aquinas almost always offers credible interpretations of Aristotle, and given that his *De anima* commentary never rejects outright a claim made by Aristotle, we face a question: are we to suppose that Aquinas believes *everything* he takes Aristotle to have said in the *De anima?* If this seems unlikely, then it will also seem unlikely that this commentary states Aquinas's own views throughout.

But if Aquinas is systematically presenting claims that he does not always believe to be true, then we would expect him to say as much at some point. He never does. In none of his commentaries does he warn the reader against taking his exposition as a statement of his own views. Even in literal commentaries one expects to find the commentators at least occasionally putting some distance between themselves and the text—unless, of course, a commentator is committed to every word of the original text. We never find Aquinas doing that sort of thing in his *De anima* commentary, which suggests that we are meant to understand the composite work as a statement of Aquinas's as well as Aristotle's views.

9. For a clear statement of this position, see Mark Jordan, "Thomas Aquinas' Disclaimers in the Aristotelian Commentaries," in *Philosophy and the God of Abraham* (Toronto: Pontifical Institute of Mediaeval Studies, 1991).

10. One of the most notable instances where Aquinas does take issue with Aristotle, and where he argues at length against Aristotle's position, is in his *Physics* commentary (bk. VIII, lec. 2), where he takes up and rejects Aristotle's arguments for the claim that motion has always existed.

11. Perhaps we saw one of those rare instances earlier, in considering Aquinas's discussion, at III.10, of the knowledge of separated souls.

We seem, then, to be faced with an *aporia*—to use Aristotle's favorite word for a puzzle that needs resolving. Because so much rests on the issue, it seems worthwhile to look at a specific case where this puzzle arises: Aquinas's discussion of imagination (or *phantasia*, the Greek word that Aquinas usually retains). In his theological works Aquinas consistently speaks of phantasia as an inner sensory power that plays two quite limited roles. First, it preserves prior sensory impressions. As the *Summa theologiae* puts it, phantasia "serves as a kind of storehouse for forms received through the senses" (first part, q. 78, a. 4c). Second, phantasia creates new images by putting these sensory forms together in novel ways. This account draws heavily on Avicenna and Averroes.[12] But Aristotle is generally thought to have offered a more complex account of phantasia. For him, phantasia plays a direct role in sensory experience: it does not merely preserve leftover images but at least in some cases accounts for the sensory experience itself.[13] And, indeed, when we look at Aquinas's *De anima* commentary, we find suggestions of this broader role for phantasia. Especially in III.5.97–115 and III.6.85–116, Aquinas, closely following Aristotle, speaks of phantasia operating concurrently with active sensory perception. And consider how Aquinas reads Aristotle in the following passage (where Aristotle's words appear in boldface): "So Aristotle says first that, since **phantasia is that in virtue of which we say that some phantasm**—i.e., something that can appear—is produced in us . . ." (III.5.25–27). Here Aquinas might have tried to preserve his standard view by taking phantasms in the narrow sense that was common in later medieval discussions: as stored sensory images. Instead he seems to opt for a broader reading: that phantasia is engaged whenever an object appears to us in a certain way. In other words, phantasia seems directly involved in all kinds of sensory experience.

Thus the *De anima* commentary suggests an account of phantasia that is very different from the one Aquinas offers in his theological works. Should we dismiss the commentary passages as mere paraphrases of Aristotle? Or can we suppose that writing this commentary brought Aquinas to a new, broader account of phantasia? There are problems with either approach. If we take this account of phantasia to be Aquinas's own view, then we need to consider why we don't find this new account in his later theological works. On the other hand, if this is not Aquinas's theory of phantasia, why doesn't he tell us so?

12. See the discussion of the internal senses in Simon Kemp, *Cognitive Psychology in the Middle Ages* (Westport, Conn.: Greenwood Press, 1996).

13. The precise role of phantasia in Aristotle is hotly disputed, although there is a broad consensus that it does more than just preserve leftover impressions—if it does that at all. For a brief summary of the state of the literature on this topic, see Christopher Shields, "Some Recent Approaches to Aristotle's *De anima*," pp. 173–175, appended to the second edition of D. W. Hamlyn's English translation of *De anima*, bks. II–III (Oxford: Clarendon Press, 1993).

Readers will have to decide for themselves how questions of this sort should be answered. It is worth keeping in mind, however, that Aquinas is not very interested in historical scholarship for its own sake. In his *De caelo* commentary, he concludes a discussion about the correct interpretation of Plato in this way: "Whichever of these is so makes no difference to us. For the study of philosophy is not about knowing what individuals thought, but about the way things are" (I.22). Presumably this sentiment informs all of his Aristotelian commentaries.

THE ENGLISH TRANSLATION

Until now the only published English translation of Aquinas's *De anima* commentary was by Kenelm Foster and Silvester Humphries; first published in 1951, it was reprinted in 1994.[14] The translation is admirably graceful in style but has a number of grievous faults. The first and most serious is that the translation often strays wildly from Aquinas's words, even in places where philosophical precision is most needed. A typical example occurs in the discussion on the sense of hearing. First, here is the Latin text.

> Sonus autem causatur ex motu et non habet esse fixum et quiescens in subiecto, sed in quadam immutatione consistit; unde simul determinatur de eo secundum quod generatur in sua specie et secundum quod immutat sensum. (II.16.33–37)

Here is Foster and Humphries's translation.

> But as sound is caused by change and has no fixed and stable existence in a subject, but actually *consists in* a movement or change, therefore it can be considered at one and the same time in its objective origin and in its effect on the senses. (§439; pp. 279–280)

Here, thirdly, is my own translation.

> Sound, however, is caused by motion. It does not have a fixed and stable existence in its subject, but consists in a certain alteration. So at the same time he presents an account of it as regards its generation (as a *species*) and as regards its altering sense.

The older translation is not entirely disastrous, but it displays two sorts of faults. First, it scrambles Aquinas's terminology. *Ex motu* (by motion) is

14. Kenelm Foster and Silvester Humphries, *Aristotle's "De anima" in the Version of William of Moerbeke and the Commentary of St. Thomas Aquinas* (New Haven: Yale University Press, 1951; reprint, Notre Dame, Ind.: Dumb Ox Books, 1994).

translated as "by change," which is not bad. But immediately afterward *in quadam immutatione* (in a certain alteration) is translated as "in a movement or change." Then *immutat sensum* (its altering sense) is translated as "its effect on the senses." Foster and Humphries give the reader no sense of whether the same or a different Latin word is being used—information that is absolutely essential for a close reading of the text.

Second, the translation makes two dubious suppositions about the meaning of the passage. It renders *in quadam immutatione consistit* (consists in a certain alteration) as "actually *consists in* a movement or change," adding the word "actually," omitting the word *quadam* (certain), and italicizing the verb phrase. The effect is to suggest that Aquinas is claiming that sound simply *is* the movement or change itself. But this was not Aquinas's view: throughout II.16 he is careful to stress that sound is merely caused by movement and is not identical to a kind of movement. Furthermore, the translation renders *generatur in sua specie* (generation [as a *species*]) as "in its objective origin." Here, admittedly, there is room for disagreement about how the text should be read. But Foster and Humphries's translation is no more clear than the original and has virtually no connection with Aquinas's actual words.

Here is another example.

> Alii vero dixerunt quod lux est forma substantialis solis, et lumen defluens a luce habet esse intentionale, sicut species colorum in aere. (II.14.291–293)

Foster and Humphries translate as follows.

> Others, on the other hand, have said that light was the substantial form of the sun, and that the brightness proceeding therefrom (in the form of colours in the air) had the sort of being that belongs to objects causing knowledge as such. (§420; p. 268)

Here is my own translation.

> But others have said that light *(lux)* is the sun's substantial form, and that the light *(lumen)* emanating from that light *(lux)* has intentional being, like the *species* of colors in air.

Foster and Humphries have gone seriously astray here. First, they seem unaware of the distinction between *lux* and *lumen.* Here Aquinas is taking advantage of the fact that Latin has two words for light: *lux* refers to a source of light, whereas *lumen* refers to the illumination emitted by that source. (English speakers ordinarily use just one word, 'light,' for both meanings: thus we would speak of a light emitting light, whereas Aquinas would speak of *lux emittens lumen.*) Foster and Humphries's oversight is a crippling fault, as this passage comes from a long discussion on "the true nature of light" *(lumen).* Second, they translate the phrase *esse intentionale* (intentional being) as "the sort of being that belongs to objects causing knowledge as such." This is an exceedingly misleading way of translating this important concept. Knowledge isn't at issue here; as Aquinas indicates, intentional being in this context is simply the kind of being that the *species* of colors have in air. But Foster and Humphries also misplace and mistranslate that explanatory phrase. (For the meaning of *species* in both of the passages under discussion, see I.6, note 5.)

Such faults are everywhere in the old translation, vitiating the work's value for serious students of Aquinas. Three of its other shortcomings deserve brief mention. First, it was based on an edition of the Latin that has now been superseded by the critical Leonine edition. Second, the translators made no attempt to match Aquinas's commentary with Aristotle's text. Not only is it difficult to discern when Aquinas is restating Aristotle's own words, but there is also no guarantee (or even likelihood) that the same Latin words will receive the same translation in the original text and in the commentary. Third, within each chapter the old translation provides no headings that might help the reader identity the subject matter of a passage. This is especially frustrating because Aquinas himself offers such headings, in the form of his analyses of the text.

This translation attempts to correct all these faults. It is based on the 1984 Leonine edition of the *Sentencia libri "De anima,"* the phenomenal scholarly achievement of René-Antoine Gauthier. Following Gauthier's practice, this translation marks the places where Aquinas is repeating words directly from the text of the *De anima.* Here these words appear in boldface, which allows the reader to see immediately where Aquinas is following Aristotle word by word. Also following Gauthier, the translation divides text and commentary into sections and labels these sections according to the standard Bekker line numbers of Aristotle's text. The translation supplies a title for each chapter and each section within a chapter; these titles are almost always taken directly from Aquinas's division of the text. Passages in which Aquinas is dividing the text are headed by the label *Analysis.*

Each paragraph of the *De anima* begins with its Bekker line numbers. Each paragraph of the commentary begins with its Gauthier line numbers. The widely cited paragraph numbers from earlier Marietti editions have also been included; they appear within slash marks—e.g., /101/. Readers who are well acquainted with the *De anima* will notice that Aquinas's chapters do not correspond with the conventional Greek chapters of the *De anima.* (This lack of chapter-by-chapter correspondence is generally true for medieval Aristotelian texts.) To prevent confusion, I have omitted standard Aristotelian chapter numbers from references in the translation and notes; references to a chapter are therefore always references to a chapter of the commentary.

The one exception to this practice comes at the beginning of each chapter, where the standard (Greek) book, chapter, and line numbers are supplied—e.g., I.1.402a1–403a2.

As noted earlier, Aquinas did not have before him a terribly good copy of Moerbeke's translation. My translation has followed Gauthier in attempting to provide the text that Aquinas did have, regardless of how close that text comes to Aristotle or even to Moerbeke. My translation of the Latin *De anima* is exceedingly literal, with the aim of preserving, at least to some extent, the awkwardness found in Moerbeke's own translation. At the many places where words have had to be added in order for the text to make sense, square brackets indicate the added words. This approach, although it makes for awkward reading, seemed necessary: if the translation of Aristotle were to clean up the text too much, the commentary would often seem pointless. My translation of Aristotle follows Aquinas's own reading of the text, even when that reading seems clearly mistaken. In an effort to give readers a sense of where the translation does diverge from Aristotle, I have marked with a degree sign (°) passages that seem to differ notably from standard texts and translations of the original Greek. This should be taken as a very rough guide, however, given that in many places it is unclear what the original Greek was or what it means. It is perhaps needless to say that this translation of the *De anima* should be used as a guide only to a better understanding and appreciation of medieval Latin commentaries. It would not make a good guide to Aristotle's own thought.

My translation differs from Gauthier's edition in one superficial but distracting respect. Gauthier departs from all previous editions and translations by taking Book III to begin at 429a10. I have retained the traditional beginning of Book III at 424b22. That leads to the following discrepancy in the numbering of chapters:

This Edition	Gauthier's Edition
III.1	II.25
III.2	II.26
III.3	II.27
III.4	II.28
III.5	II.29
III.6	II.30
III.7	III.1
III.8	III.2
III.9	III.3
III.10	III.4
III.11	III.5
III.12	III.6
III.13	III.7
III.14	III.8
III.15	III.9
III.16	III.10
III.17	III.11
III.18	III.12

The decision about where to begin Book III and hence how to label the commentary's chapters should ideally rest on the question of where *Aquinas* thought Book III should begin. (The issue is not Aristotle's intent, which no one knows.) It is clear that Aquinas took 429a10 to be the important logical division within the text; as Aquinas reads the work, it is here that Aristotle moves from his treatment of the senses to his treatment of intellect. But although 429a10 is the major logical break, it is not clear that Aquinas took it to be the starting point of Book III. The evidence from manuscripts of the commentary does not decide the question, and Aquinas at various times provides bases for different answers.

In fact, the medievals recognized three candidates for the beginning of Book III. There was 429a10, where the discussion of intellect begins. There was 427a17, where Aristotle ends his discussion of sensation and begins talking about the relationship between sense and intellect. Finally, there was 424b22, where the Greek tradition began Book III. (Aquinas himself notes this last fact and describes 424b22 as a reasonable choice [III.1.1–12]—although he does not explicitly endorse it.)

In various works, some coming after he wrote this commentary, Aquinas uses at various times all three of these divisions, apparently adapting his citations to fit the usage most familiar to his audience.[15] This suggests that he did not think it important to insist on one starting point for Book III. His attitude seems to have been pragmatic: the logical structure of the *De anima* is clear; within this logical structure are various plausible starting points for Book III; Aristotle's own intent is lost. Aquinas seems content, in light of these facts, to refer to the work in whatever way seems most convenient. We too, then, should allow our decision to be governed by pragmatic considerations. And what is most convenient by far is to retain the now-conventional starting point: 424b22. This division accords with the common practice among all modern scholars (Gauthier excepted), students of Aristotle and Aquinas alike.

15. Gauthier notes this fact himself; see his discussion of these issues in *Sentencia libri "De anima,"* pp. 210*–217*.

Symbols and References

The reader should be aware of a few special features of the translation. First, as noted in the Introduction, Aristotle's words appear in **boldface.** Also, a degree sign (°) attached to Aristotle's text indicates a departure from the standard reading of the Greek text.

On occasion I have felt the need to emend Gauthier's Latin text. I have marked these instances with an asterisk (*), and I have placed a list of the emendations at the end of the volume. I have corrected misprints silently, without asterisks; these instances are noted in the list of emendations.

Instead of including a glossary of terms, I have supplied footnotes explaining the more important concepts associated with the *De anima.* These footnotes can be found by looking under the appropriate terms in the volume's index: the pages where the explanatory footnotes appear are indicated by *italic* type.

References to Themistius's paraphrase of the *De anima* first give the book, page, and line numbers of Richard Heinze's Greek text (Berlin, 1899). These references are also used in Robert Todd's English translation of the paraphrase (Ithaca, N.Y., 1996). In parentheses, I supply the page and line numbers of Gerard Verbeke's text of the medieval Latin translation (Louvain, 1957).

References to Averroes' long commentary on the *De anima* give first the book and section numbers and then, in parentheses, the page and line numbers of F. S. Crawford's edition of the medieval Latin translation (Cambridge, Mass., 1953).

References to Avicenna's *Liber de anima* are to Simone van Riet's edition of the Latin translation (Louvain, 1968, 1972), first part and chapter numbers and then, in parentheses, page and line numbers.

References to Albert the Great's paraphrase of the *De anima* are to the page and line numbers of Clemens Stroick's edition in *Opera omnia,* vol. 7.1 (Münster, 1968).

Gauthier's edition contains extensive notes, at the bottom of every page of text, which trace the antecedents to Aquinas's positions, but I have not attempted to summarize the content of these notes here. Readers looking for information of this order will want to consult Gauthier's work.

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Book I

Chapter 1

Prologue

DE ANIMA I.1.402A1–403A2

402a1–4. Believing comprehension to be among things good and worthy of special honor, although one kind more than another either as a result of its certainty or because it is concerned with better and more marvelous things, on both these counts it will be reasonable for us to place an exploration of soul among first things.

402a4–7. Cognition regarding [soul], however, seems to make a great contribution to all truth, and especially to [the study of] nature. For soul is like the principle of animals.

402a7–10. Now we are making this investigation in order to consider and have cognition of both [soul's] nature and its substance, and then subsequently of whatever is accidental to it. Some of these seem to be states distinctive [of soul] *(propriae passiones),* **others to be general features in animals on account of soul.**

402a10–22. In general and throughout, however, it is among the more difficult of things to acquire any conviction about this. For since this is a question that is common to many others—I am speaking in regard to substance and what it is to be such a thing—perhaps it will seem to someone that there is one particular method for all the things whose substance we want to cognize, just as there is demonstration of the accidental properties. If so, then this method will have to be sought. But if there is not one common method for what it is to be such a thing, then this becomes still more difficult to tackle: for we will have to grasp what method goes with each. Once it becomes clear whether this is demonstration or division or else some other method, still there are many puzzles and errors about the places from where one should begin a search: for there are different principles for different [subjects], such as for numbers and planes.

402a22–b8. Perhaps it is first of all necessary, however, to make a division: in which of the genera is soul, and what is it? I am speaking, that is, of whether it is something individual *(hoc aliquid)* **and a substance or a quality or a quantity or else another of the categories that have been distinguished. Further, [there is a question of] whether it is one of those that are in potentiality or instead a kind of entelechy—for the difference is not slight. Now we should also consider if it is divisible into parts or not, and whether or**

not every soul is alike in species—and, if not alike in species, whether they differ in species or genus. For, at present, those discussing and investigating soul seem to focus solely on the human [soul]. We, however, should take care not to lose sight of whether there is one account of it, as of animal, or a different one for each—as of horse, dog, human being, and god. The universal animal, however, either is nothing or is secondary, and likewise for anything else common that might be predicated.

402b9–16. Further, however, if there are not many souls, but rather parts, then [there is a question] whether we must look into the whole soul first or its parts. It is difficult, however, to work out how these [parts] are naturally suited to be different from one other, and whether we must look into the parts first or their functions—e.g., intellectively cognizing or the intellective capacity, and sensing or the sensory capacity, and likewise too for others. If, however, [we should look into] the functions first, then someone will further wonder whether the objects of these should be investigated first—what can be sensed, for instance, before the sensory capacity, and what can be intellectively cognized, before the intellective capacity.

402b16–403a2. It seems, however, not only that having a cognition of what a thing is is useful in order to cognize the causes of the accidents belonging to the substances (just as in the case of mathematics [knowing] what straight is, what bent is, and what a line and a plane are [is useful] so as to recognize how many right angles the angles of a triangle are equal to), but that, conversely, the accidents add a great deal to our cognition of what it is. For it is when we are able through phantasia to convey everything or a great deal about the accidents that we will be able to speak best about the substance. For the starting point *(principium)* of every demonstration is what a thing is. Hence any definitions through which one cannot cognize the accidents [of a thing], or even imagine them easily, have clearly all been stated dialectically and are empty.

1–10. *Analysis.* /1/ As the Philosopher teaches in the *De animalibus* [639a15–29, 645a36–b13], in every genus of things it is necessary to consider first the common features and then the properties characterizing *(propria)* each species within that genus. Aristotle even maintains this method in first philosophy: for in the *Metaphysics* he first takes up and considers the common features of being *qua* being, and then he considers the properties characterizing each kind of being. The reason for this method is that if it were not done then we would be saying the same thing time after time.

10–23. Now there is a single genus for all ensouled things. So in considering things with souls we must consider first the features common to them all and then afterward the characterizing properties of each one. The feature common to all ensouled things, however, is soul, for all ensouled things agree in this respect.[1] So to convey knowledge about things with souls it was first necessary to convey knowledge about the soul, the thing that is common to them. Aristotle, then, wanting to convey knowledge about things with souls, first conveys knowledge about the soul and afterward, in subsequent books, presents his account of the properties characterizing particular ensouled beings.[2]

24–39. /2/ Now in the treatise on soul that we have before us, Aristotle first presents a prologue in which he does three things that are necessary in any prologue. For whoever writes a prologue has three things in mind: first, to render us favorably disposed; second, to make us ready to learn; third, to make us attentive. He renders us favorably disposed by showing the usefulness of the knowledge;[3] ready to learn, by setting out in advance the treatise's order and organization; attentive, by showing the treatise's difficulty. And Aristotle certainly does these three things in the prologue to this treatise. First he shows the worth of this knowledge. Second, he sets out the order of the treatise—namely, what it is to take up an account of soul, and how that should be done (beginning at **Now we are making this investigation** {402a7}). Third, he shows the difficulty of this kind of knowledge (beginning at **In general and throughout, however, it is among,** etc. {402a10}).

40–42. In connection with the first he does two things. First he shows the worth of this knowledge, second its usefulness (beginning at **Cognition regarding [soul],** etc. {402a4}).

On the Worth and Goodness of Knowledge

43–56. /3/ In connection with the first it is important to know that *all* knowledge is good—and not only good, but also worthy of special honor. In this latter respect, however, one kind of knowledge surpasses another. Now it is clear that all knowledge is good, because what is good in a thing is that in virtue of which the thing has its perfected existence: for this is what each thing

1. 'Soul' translates the Latin *anima,* and correspondingly 'ensouled' or 'having soul' translates the Latin *animatus.* But *animatus* also bears the less technical meaning of 'having life,' and so it is natural to think of soul *(anima)* as the distinctive feature of all living things *(res animatae).* Because a Latin reader might simply take *animatus* to mean *being alive,* without noticing its derivation from *anima,* Aquinas wants to make the connection explicit at the start. See I.3.18–33.

2. Aquinas is referring to Aristotle's biological works, the foundation of which, Aquinas here tells us, is the *De anima.*

3. *Scientia,* the term that will standardly be translated as "knowledge," often means a body of organized knowledge—a science, in other words. In what follows Aquinas is speaking of the usefulness and difficulty of the science that takes the soul as its subject. (Occasionally, as in II.12, the plural *scientiae* will be translated as "sciences.")

seeks and desires. Therefore, because the perfection of a human being *qua* human being is knowledge, knowledge is the good for a human being. Among goods, however, some are praiseworthy (I mean those that are directed to some end, as we praise a horse as good because it runs well), whereas some are also worthy of special honor (I mean those that are for their own sake, since we give special honor to ends).

56–78. Now some kinds of knowledge are practical, some theoretical. These differ in that the practical kinds are for the sake of some accomplishment, whereas the theoretical kinds are for their own sake. And so theoretical knowledge is both good and worthy of special honor, whereas practical knowledge is merely praiseworthy. Therefore all theoretical knowledge is good and worthy of special honor. /4/ But with respect to this theoretical knowledge we can recognize degrees of goodness and worthiness of special honor. For all knowledge is praised on the basis of the act [associated with it], whereas every act is praised on the basis of two things: its object and its quality or type. Just as constructing a building is better than making a bed, because the object of the construction is better than the bed, in the same way, then, with reference to the same thing, the quality itself confers a certain status. For to the extent that the type of structure is better, to that extent the structure is better. In this way, then, if we consider the knowledge (or the act associated with it) from the standpoint of its object, then clearly that knowledge is loftier that concerns things that are better and more worthy of special honor. If, on the other hand, we consider it from the standpoint of quality or type, then from this perspective that knowledge is loftier that is more certain.

78–97. /5/ But there are different ways in which this is the case with regard to the various kinds of knowledge. For some are more certain than others and yet concern things less worthy of special honor, whereas some concern things that are better and more worthy of special honor and yet are less certain. Even so, that knowledge is better that concerns things that are better and more worthy of special honor. The reason for this, as the Philosopher says in the *De animalibus* [644b24–25, 31–35], is that we would rather know a little about the highest things, the things more worthy of special honor, even if we know it topically (i.e., with probability),[4] than know much, with certainty,

4. Topical arguments were based on a collection of principles that served as premises in dialectical arguments. For an instance of such an argument pattern, see II.1.197–223. For further discussion, see Eleonore Stump's chapter on topics in Norman Kretzmann, Anthony Kenny, and Jan Pinborg, eds., *The Cambridge History of Later Medieval Philosophy* (Cambridge: Cambridge University Press, 1982), and Niels Green-Pedersen, *The Tradition of the Topics in the Middle Ages* (Munich: Philosophia Verlag, 1984).

about things less lofty in status. For the former has its lofty status through itself and its substance, whereas the latter takes this status from its type and quality. /6/ But this knowledge—of soul, that is—has both. For, firstly, it is certain. Anyone can experience this in himself: namely, that he has a soul and that his soul is what gives him life. Also, this knowledge concerns things that are loftier. For among lower creatures, soul has a loftier status.

{402A1–4} THE WORTH OF THIS KIND OF KNOWLEDGE

98–112. And that is why Aristotle speaks of our **believing** all **comprehension** (i.e., all knowledge) **to be among things good** (i.e., numbered among good things) **and worthy of special honor.** But **one kind** of knowledge is **more** good and worthy of special honor **than another.** . . . **Or because it is concerned with better** things (i.e., with things that are good by nature) **and more marvelous things** (i.e., with things whose cause is unknown). **On both these counts**—the two just mentioned—**an exploration of soul.** . . . He speaks in terms of "an exploration" because he is giving us a kind of *summa* regarding soul, without reaching any final evaluation in this treatise regarding all the issues that involve soul. **Among first things:** this, if taken with respect to all of natural knowledge, refers not to order [of investigation] but to worth. If taken with respect only to things with souls, then 'among first things' refers to order.

{402A4–7} THE USEFULNESS OF THIS KIND OF KNOWLEDGE

113–131. /7/ Next, when Aristotle says **Cognition regarding [soul],** etc., he renders the listener favorably disposed because of the usefulness of this knowledge. He says that **cognition regarding** soul **seems to make a great contribution to all truth** imparted through the other kinds of knowledge. "It gives advantage to all the noteworthy parts of philosophy."[5] For if we consider first philosophy, we can reach a cognition of the highest, divine causes only through what we first acquire by force of intellect. Also, if we consider moral philosophy, we can completely arrive at moral knowledge only if we know soul's powers. Hence it is that the Philosopher, in the *Ethics* [e.g., I.1103a3–4], attributes each of the virtues to different powers of soul. Again, if we look to natural philosophy: for it is an important aspect *(magna pars)* of natural beings

5. Themistius, I 1.24 (2.32–33). Throughout Book I, Aquinas borrows ideas and phrases from this fourth-century C.E. Greek commentator (see the Introduction).

that they have soul, and that soul is "the source and principle of all movement"[6] in ensouled things. **For soul is like the principle of animals.** Here "like" is being used not to indicate similarity but to make an assertion.

{402A7–10} THE TREATISE'S ORDER

132–141. /8/ After this, when Aristotle says **Now we are making this investigation,** etc., he indicates the treatise's order, saying that we intend **to consider and have cognition of** what soul is, or **its nature and substance,** and **subsequently of whatever is accidental to it**—i.e., its states. With respect to the latter there is a certain amount of diversity: for some **seem to be states** of soul only, like "understanding and theorizing." Other, **general features** seem **to be in animals on account of soul,** like "pleasure and pain, sense and phantasia."[7]

142–151. *Analysis.* /9/ After this, when Aristotle says **In general and throughout, however, it is among,** etc. {402a10 ff.}, he shows this treatise's difficulty, and this in two respects: first with respect to cognizing soul's substance; second with respect to cognizing its accidental or distinctive *(proprias)* states [I.2.403a3].[8] With respect to the first he reveals two difficulties: first, as regards how soul is to be defined; second, as regards what enters into the definition.

6. Themistius, I 2.3 (3.36–37).

7. Themistius, I 2.30–32 (5.69–71). 'Phantasia' is the Greek word, taken over into Latin (and here into English), for the power that Aquinas also calls "imagination." But this power is broader in its capacities than the word 'imagination' might suggest to modern readers: it is our ability to form sensory images. See III.5–6.

8. Here Aquinas takes for granted the differences among a thing's substance, a thing's accidents, and a thing's distinctive features or *propria.* By a thing's substance he means its essence or defining nature. (Aquinas uses the term *substantia* with this meaning throughout the commentary.) In some contexts, the accidents of a thing will be everything about it that is not part of its essence; in other contexts, a thing's accidents will include only those features that are contingent, such as the color of a person's hair. When 'accident' is used in this second sense, a middle ground opens up between a thing's substance and its accidents, because a thing will have some features that are not part of its defining nature but that are nevertheless not contingent (such as a person's being a biped). Such features were known as *propria,* a term that I translate using the words 'distinctive,' 'special,' or 'identifying,' depending on the context. Aquinas explains all of this at *Summa theologiae* (first part), q. 77, a. 1, ad 5.

{402A10–22} HOW SOUL IS TO BE DEFINED

152–166. So Aristotle says that although knowledge of soul is useful, it is nevertheless difficult to know, regarding soul, what it is. And this difficulty occurs in connection with each and every thing, **since this is** one **question that is common to many others, in regard to** their **substance and what it is.** There is, then, a first difficulty, because we do not know how we are to obtain a definition; for some say through demonstration, others say through division, still others say through composition. Aristotle wanted it to be through composition.[9] /10/ A second difficulty concerns what should be put into the definition. For a definition makes known a thing's essence, and this can be known only if the principles are known. But there are different **principles for** different [subjects], and so it is difficult to know **the places from where** the principles should be taken.[10]

WHAT PRESENTS THE DIFFICULTY

167–171. *Analysis.* The things that present the difficulty to those who would establish a definition come down to three: first, regarding soul's substance; second, regarding its parts [402b9 ff.]; third, regarding the support that in definitions necessarily comes from soul's accidents [402b16 ff.].

{402A22–B8} SOUL'S SUBSTANCE

172–190. /11/ In connection with substance there is a question about genus. For in defining any given thing we ask this question first, so that we know the genus. And hence we have to ask in what genus soul should be placed: whether in the genus of substance, of quantity, or of quality. And we have to grasp not only the highest genus but also the proximate genus. "For when we define 'human being' we do not take *substance* [as the genus], but rather *animal.*"[11] And if soul is found to be in the genus of substance, still, since each genus is spoken of in two ways, both as **potential** and as actual, we will have to ask whether it is a potentiality or actuality. Also, since some substances are composite and some simple, we will have to ask whether soul is composite

9. Themistius, I 2.18–21 (4.56–57).

10. For helpful clarification, see I.2.244–250, where *principium* is translated as "starting point" instead of "principle."

11. Themistius, I 2.36–37 (6.78–79).

or simple and whether **or not it is divisible into parts.** There is also a question of **whether or not every soul is** of one **species** "relative to every soul."[12] And **if** it is **not** of one **species,** there is still a question **whether they differ in species or genus.**

190–211. There is yet a further puzzle concerning things that share *(participant)* a definition. For some are defined in terms of genus, some in terms of species. And hence there seems to be a question as to whether soul's definition is in terms of genus or in terms of the most specific species. /12/ For some **investigating soul seem to focus solely on the human** soul. There were, in fact, two views about soul among ancient philosophers. For the Platonists, who posited separated universals, [claiming] that they were Forms and Ideas and were the cause (for particular things) of cognition and existence, held that there is a kind of soul, separated *per se,* which is the cause and Idea for particular souls and that whatever is found in them is derived from it. The natural philosophers, in contrast, held that particulars are the only natural substances and that there is nothing universal in the natural world. For this reason, then, there is a question whether we should seek **one** common **account** *(ratio)* **of** soul, as the Platonists said, or an account of this soul or that one, as the natural philosophers said—**as,** for instance, the soul **of** a **horse,** or a **human being,** or a **god.** (He says "of god" because these philosophers believed that the heavenly bodies are gods and said that they have souls.)

211–230. /13/ Aristotle, however, holds that we should look for an account of both: both a common account of soul and an account of each single species. And regarding what he says in this connection—**The universal animal, however, is either nothing or secondary**—it is important to know that we can speak of universal animal in two ways: either considered as universal (that is, one in many or of many) or considered as animal. If as universal, then either as it is in the natural world or as it is in intellect. Plato held that universal animal, as it is in the natural world, is a thing and that it comes before the particular. For, as was said, he posited separated universals and Ideas. Aristotle, however, held that it is not a thing in the natural world; and, if it is a thing, he said that it is "secondary." But if we take the nature of animal not as it falls under the notion *(intentioni)* of universality, then in this way it is a thing and it is prior—in the way that what is potential comes before what is actual.

{402B9–16} SOUL'S PARTS

231–246. /14/ After this, when Aristotle says **Further, however,** etc., he touches on the difficulties that emerge in connection with soul's powers. For,

12. Themistius, I 3.16 (7.2).

in soul, parts are powers *(sunt partes potentiales)*—namely, the intellective, the sensory, and the nutritional. So there is a question whether these are different souls, as the Platonists held, or whether they are parts of soul that are powers.[13] And, if they are parts that are powers, then there is also a question of **whether we** ought first to **look into** the powers, before **their** acts—**e.g., intellectively cognizing or the intellective capacity, and sensing** (which is the act) **or the sensory capacity** (which is the power), **and likewise for other** powers and acts. And **if** we ought first to look into the acts before the powers, then there will be a further question whether **the objects of these** acts **should be investigated** before the powers—e.g., whether **what can be sensed** ought to be investigated **before the sensory capacity,** or **what can be intellectively cognized, before the intellective capacity.**

{402B16–403A2} SUPPORT FROM SOUL'S ACCIDENTS

247–273. /15/ After this, when Aristotle says **It seems, however, not only that,** etc., he introduces the difficulties that emerge in the case of things supporting a definition of soul. For in a definition one must reach a cognition not only of essential principles but also of accidental ones. For if the essential principles were rightly defined and could be cognized, then the definition would not need the accidents. But because the essential principles of things are concealed *(ignota)* from us, we must use accidental distinguishing characteristics *(differentiis)* in designating essential characteristics. (For *biped* is not essential but is introduced in designating what is essential.) It is through these accidental distinguishing characteristics, consequently, that we reach a cognition of essential characteristics. And that is why this is difficult. For we have to cognize **what** the soul **is in order to cognize** readily soul's **accidents—just as in the case of mathematics** it is extremely useful to grasp in advance what it is to be **straight,** and curved, **and a plane, so as to recognize how many right angles the angles of a triangle are equal to. Conversely,** also, if **the accidents** are grasped in advance, then this **adds** much **to our cognition of what it is** to be such a thing, as was said. Therefore if someone were to give a definition through which one is not brought to cognize the accidents of a definite thing, then that definition is not a real one but is remote and dialectical. A definition, however, through which one is brought to cognize accidents is real and comes from the thing's characteristic properties and essential features.

13. Compare I.14.58–75.

Chapter 2

Prologue (Continued)

DE ANIMA I.1.403A3–2.403B24

403a3–5. There is a puzzle, however, regarding soul's states, whether they are all common to what has [soul], or whether any is special *(propria)* to soul itself. For to grasp this is certainly necessary and not trivial.

403a5–10. It seems for the most part, however, that without body, [soul] is affected by nothing and does nothing—such as getting angry, being confident, desiring, and sensing in general. Having intellective cognition, however, seems above all else special [to soul]. But if this too is a kind of phantasia, or does not occur without phantasia, then it will not be possible even for this to occur without body.

403a10–16. So if indeed any of soul's functions and states is special to it, then soul could *(continget)* indeed be separated. If none is special to it, however, then of course it will not be separable, but like something straight. Many things are accidentally true *(accidunt)* of it inasmuch as it is straight, such as touching a bronze sphere at a point, although once separated from this, the straight thing will not touch. For [soul] is inseparable, if it always occurs with some body.

403a16–27. All soul's states, however, seem to occur along with body: anger, gentleness, fear, compassion, confidence—as well as joy, loving, and hating. For at the same time that these occur, the body is affected in some way. Now it is an indication of this that sometimes, when obviously difficult states befall someone, that person is neither provoked nor frightened; and sometimes he is moved by things slight and weak, when his body is inflamed, and he is disposed like someone who is angered. And this [can be made] still more clear: for some who are fearful are brought to these states [even] when nothing terrible is imminent.° But if that is how things are, then it is clear that states are defining natures in matter. Hence their terms are like this: to be angry is a certain movement of a body of such a kind, or of its part or power, by something and for the sake of something.

403a27–28. And for these reasons, therefore, it surely belongs to the naturalist to consider soul: either every [soul] or else ones of this sort.

403a29–b16. The naturalist and the dialectician will define each of these differently: what anger is, for instance. For the latter [defines it as] an appetite for vindication, or something of this sort, while the former [defines it as] the raging of blood or heat around the heart. One of these gives the matter,

the other the species and nature. For this is the defining nature of anger.° It is necessary, however, that it be in this sort of matter, if it is to be. Thus the defining nature of a house is something like this: a covering keeping out the damaging effects of winds, rainstorms, and heat. Another [definition], however, speaks of stones, brick, and wood. Still another [speaks of] the species within these [materials], on account of those [natures]. So which of these definitions is natural? Is it what concerns matter yet does not recognize the defining nature? Or is it what concerns only the defining nature? Or is it more what comes from both? Who, then, is each of those? Or is there no one person who is concerned with states of matter that are nonseparable, or insofar as they are separable, whereas the physicist is concerned with all kinds of functions and states belonging to such a body and this sort of matter? Someone else is concerned with anything not of this sort, as the artisan is concerned with certain things, where appropriate: e.g., a builder or a doctor. The mathematician, however, deals with nonseparable things, but through removal, insofar as they are not states of such a body. Inasmuch as they are separated, however, the first philosopher [deals with them].

403b16–24. But we should return to the point from where the discussion started. We were saying that soul's states are not separable from the physical matter of animals insofar as they are [states] like rage and fear and are not like line and plane. Focusing on soul, however, at the same time as we are wondering about the things we must overcome, it is necessary that we pass through the views of earlier [thinkers], including whoever stated anything about it, so that we may accept what they said well and be cautious of anything not said well.

1–10. *Analysis.* /16/ After the Philosopher has shown the difficulty inherent in the knowledge of soul, as regards soul's substance and what it is, he here goes on to establish the difficulty as regards soul's states[1] and accidents. And in this connection he does two things. First he raises and then solves a puzzle regarding soul's states. Second, based on this solution, he establishes that having cognition of soul pertains to the natural philosopher, the "naturalist" *(physicum)* (beginning at **And for these reasons, therefore, surely it belongs,** etc. {403a27}).

1. The word here translated as "state" is *passio,* which has a wide range of philosophical meanings. Sometimes, as in much of this chapter, the word refers to any sort of operation of soul. At other times, it has a more specific meaning, similar to that of our word 'passion.' At still other times, it refers to any sort of reception of an outside influence. I shall often translate the noun *passio* and the verb *patior* in keeping with this last meaning, using some form of the words 'being affected.' (Aquinas himself notes these various meanings of the Latin term in his commentary on Aristotle's *De interpretatione,* bk. I, lec. 2.)

{403A3–5} A PUZZLE REGARDING SOUL'S STATES

11–21. So he says first that there is **a puzzle** in connection with **soul's states** and operations, namely **whether they are special** *(propriae)* **to soul,** having nothing in common with the body, as it seemed to Plato,[2] or **whether** none is special to soul and **all** are **common to** the body and the [soul-body] composite. /17/ And in connection with this puzzle Aristotle does two things. For he establishes, first, this question's difficulty and, second, its necessity, saying that **to grasp this**—viz., whether soul's states and operations are common or special [to it]—**is necessary** and **not trivial,** but extremely difficult.

{403A5–10} THE QUESTION'S DIFFICULTY

22–45. He shows that this is difficult when he says that the reason for the difficulty is that **it seems** at first glance that many states are common and cannot take place without body—**such as,** for instance, **getting angry, sensing,** and this sort of thing, none of which affects soul **without body.** But if any operation were special to soul, it would evidently be intellect's operation. For **having intellective cognition** *(intelligere),* which is intellect's operation,[3] **seems above all else** to be **special** to soul. /18/ Still, if one considers rightly, intellective cognition does not seem to be special to soul. For intellective cognition either **is phantasia,** as the Stoics said,[4] **or does not occur without phantasia.** For there were some, such as the ancient natural philosophers, who said that intellect does not differ from sense. And if this were true, then intellect would in no respect differ from phantasia; thus the Stoics were moved to claim that intellect is phantasia. So since phantasia needs a body, they said that having intellective cognition is not special to soul but common

2. See below, I.10.49–66.

3. In this work I regularly translate the verb *intelligere* as various forms of the phrase 'intellective cognition.' The phrase improves on the standard translation of *intelligere,* 'to understand,' in at least two ways: 'intellective cognition' explicitly states the link between *intelligere* and intellect *(intellectus);* and Aquinas standardly uses *intelligere* as a general term for the cognitive operations of intellect. At its loftiest, *intelligere* does involve genuine comprehension or understanding, but it is misleading to suggest that *intelligere* is always so successful.

4. It sounds rather odd to identify the *operation* of intellective cognition with the sensory *power* of phantasia; if Aquinas were not straining to follow Aristotle's choice of words, he would say, as he does shortly, that the Stoics equated intellect with the senses. This rendering of the Stoic view is offered in Augustine, *City of God,* bk. VIII, chap. 7, and Boethius, *Consolation of Philosophy,* bk. V, verse 4. See also Aquinas's *Summa contra gentiles,* bk. III, chap. 84.

to soul and body. Yet even if it were conceded that intellect is not phantasia, still nevertheless there is no intellectively cognizing without phantasia. It remains the case, then, that having intellective cognition is not special to soul, since phantasia needs a body. Therefore **it** is **not possible for this**—having intellective cognition—**to occur without body.**

How Intellective Cognition Is Special to Soul

46–69. /19/ Now although Aristotle makes this clear enough in Book III of this treatise [7, 429a10–b5], we will all the same still say something in this connection. For having intellective cognition is special to soul in one way, whereas in another way it belongs to the [soul-body] compound. It is important to know, therefore, that there is one kind of operation or state of soul that needs a body as instrument *and* as object. In this way seeing needs a body (i) as an object, since color (the object of sight) is a body, and also (ii) as an instrument, since vision, even if it is from soul, occurs only through the organ of sight (through the pupil, that is, which serves as an instrument). And in this way seeing belongs not only to soul but also to the organ. There is another kind of operation, however, that needs a body not as its instrument but only as its object. For intellective cognition does not occur through a corporeal organ but needs a corporeal object. For as the Philosopher says in Book III [12.431a14–15], phantasms are related to intellect in the same way that colors are related to sight. But colors are related to sight as objects; therefore phantasms are related to intellect as objects. Therefore, since phantasms do not occur without a body, it follows that intellective cognition does not occur without a body—but in such a way that the body serves as the object, not as the instrument.[5]

69–81. /20/ Two results follow. One is that having intellective cognition is an operation that is special to soul and needs body only as its object (as was said). Seeing, however, and other operations and states belong not to soul alone but to the compound. The other result is that what has its operation on its own has its existence and subsistence on its own; what does not have its operation on its own does not have its existence on its own. Hence intellect is a subsistent form; the other powers are forms in matter. And here lay the difficulty of this question: for all soul's states give the appearance of belonging to the compound.

5. Phantasms, for Aquinas, are the images or representations produced by phantasia (imagination). Phantasia is a sensory power that uses a corporeal organ (the brain); consequently, phantasms represent particular remembered or imagined sensory experiences. Such phantasms, as Aquinas indicates here, are the data for intellective cognition. Indeed, as Aristotle will later say, "soul never intellectively cognizes without a phantasm" (III.12.431a16–17).

{403A10–16} THE QUESTION'S NECESSITY

82–101. /21/ After this, when Aristotle says **So if indeed any,** etc., he gives a reason for this question's necessity. For we gain from this [inquiry] the one thing that everyone desires most of all to know about soul: namely, whether soul can be separated. And he says that **if any** operation **or state** could *(contingat)* be **special to** soul, **then** soul **could indeed be separated** from body. For (as was said) what has its operation on its own also has its existence and subsistence on its own. **If, however,** there were no operation or state that was **special to** soul, **then** for the same reason it would **not** be possible for that soul to be separated from body, **but** soul will be **like something straight.** For **although many things are accidentally true of** something straight **inasmuch as it is straight, such as,** namely, **touching a bronze sphere at a point,** still these are true of it only in matter; for **the straight thing touches** a bronze sphere at a point only in matter. The same will be true for soul, if it does not have an operation that is special to it: that although many things will be accidentally true of it, they will be true of it only in matter.

{403A16–27} SOME OF ITS STATES BELONG TO THE COMPOUND

102–136. /22/ After this, when Aristotle says **All soul's states, however, seem,** etc., he clarifies what he had been presupposing, namely, that some of soul's states belong to the compound, not to soul alone. The reason for this is as follows: everything in which the body's constitution takes part belongs not to soul alone but to body as well. But body's constitution takes part in all soul's states, such as, for instance, in **anger, gentleness, fear, confidence, compassion,** and things of this sort. Therefore **all soul's states seem to occur along with body.** And he proves in two ways that the body's constitution takes part in states of this sort. First, because we see that **sometimes obviously difficult states** come over one, and the person **is** neither **provoked** nor **frightened.** But if **his body is inflamed** as the result of rage or its constitution, then **he is moved by things** extremely **slight and weak, and he is disposed like someone who is angered.** He secondly proves this when he says it is made **still more clear** that in states of this sort the body's constitution takes part. For we see that even if **no** danger **is imminent,** some people are put in states like **these states** that involve soul. Thus the melancholy, for instance, [even] if there is no imminent danger, are often made **fearful** as a result of their imbalanced constitution.[6] Therefore because **that is how things are,** namely, that our constitution takes part in states of this sort, **it is clear that states** of this sort **are defining natures** *(rationes)* **in matter**—i.e., that they have their existence in matter. And for this reason **terms like this**—i.e., the definitions of these states—are given only along with the matter. For example, if anger is to be defined, it will be called **a movement of a body of such a kind, or of a part or power** (saying this with respect to the subject or material cause), **by something** (with respect to the efficient cause) **and for the sake of something** (with respect to the final cause).

137–143. *Analysis.* /23/ After this, when Aristotle says **And for these reasons,** etc. {403a27 ff.}, he concludes from the things said that reflection on soul belongs to the natural philosopher, a conclusion he reaches based on how definitions are given. So here he does two things. First, he proves this thesis. Second, he pursues the definitions (beginning at **The naturalist and the dialectician,** etc. {403a29}).

{403A27–28} COGNITION OF SOUL PERTAINS TO NATURAL PHILOSOPHY

144–160. He proves the thesis in this way: operations and states of soul are states and operations of the body, as was shown. But every state, when it is defined, must have in its definition that to which it belongs. For the subject always comes into the definition of a state. So if these sorts of states belong not to soul alone but also to the body, then the body must necessarily be put into their definition. But everything in which there is body or matter pertains to natural philosophy. Therefore even these sorts of states pertain to natural philosophy. But anyone who considers the states considers their subject. **And** so **surely it belongs to the naturalist to consider soul: either every [soul],** unconditionally, **or else ones of this sort**—that is, ones attached to a body. And he says the latter because it still remained in doubt whether intellect is a power tied to the body.

6. 'Melancholy' here means having too much black bile, one of the four humors, or fluids, of the body. So what Aquinas has in mind is literally an "imbalanced constitution."

{403A29–B16} DIFFERENCES FOUND AMONG DEFINITIONS

161–180. /24/ After this, when Aristotle says **The naturalist and dialectician,** etc., he pursues the definitions. He has shown that among the definitions of soul's states there are some that contain matter and body, and others that contain not matter but only form. So now he shows that definitions of this latter sort are inadequate. And in this connection he investigates a difference found in these definitions. For sometimes a definition is given that has nothing to do with body: for example, anger is an appetite for revenge. At other times a definition is put forth in which there is something about body or matter: for example, anger is the heating of blood around the heart. The first is dialectical; the second, which contains something about matter, is physical and hence pertains to natural philosophy. For the one, **the naturalist, gives the matter,** when he says that anger is the heating **of blood around the heart.** But **the other, the dialectician,** introduces **the species and defining nature. For this—an appetite** for revenge—**is the defining nature of anger.**

180–190. /25/ It is clearly apparent, however, that the first definition is inadequate. For in the case of every form that is in determinate matter, if the matter is not contained in its definition, then that definition is inadequate. But this form, the appetite for revenge, is a form in determinate matter. So since matter is not contained in its definition, it is evident that that definition is inadequate. And hence in this definition **it is necessary** that the definition include the fact that **it,** namely, the form, is **in this sort of matter,** namely, determinate matter.

190–208. /26/ In this way, then, we have three definitions. For one gives "the species and the species' defining nature"[7] and is solely formal—as if a **house** were defined as **a covering keeping out winds, rainstorms, and heat. Another** gives the matter, as if it were said that a house is a kind of covering out of **stones, brick, and wood. Still another** gives both—i.e., contains in the definition both matter and form—saying that a house is such a covering constituted from such things and for the sake of such things (to keep out winds, etc.). And so he says that the other definition, namely, the third, places **the species** (i.e., the form) **within these** (in wood and stones, namely, which have to do with the matter), **on account of those** (namely, so as to keep out winds). In this way he includes matter when he says "within these," form when he says "the species," and final cause when he says "on account of these." These three are required for a complete definition.

208–221. /27/ But let us ask **which** of those definitions **is natural** and which is not. One that considers only form belongs not to natural philosophy but

7. Themistius, I 7.33 (19.92).

to logic. On the other hand, one that **concerns matter yet does not recognize** form belongs to natural philosophy alone; for it is the business of natural philosophy alone to consider matter. Yet all the same, the definition that **comes from both**—that is, from matter and form—belongs [even] **more** to natural philosophy. And two of these definitions pertain to natural philosophy, but one is incomplete (the one, that is, that contains only matter) whereas the other is complete (the one that comes from both). For **there is no one who** considers **states of matter that are nonseparable** except **the naturalist.**

221–243. /28/ But because there are some who consider the states of matter in a different way, he accordingly shows who they are and how they consider these states. There are, he says, three sorts. One, although he considers these states as they are in matter, differs from the natural philosopher as regards his starting point *(principium)*—like **the artisan** who considers form in matter but differs because his starting point is his art, whereas the naturalist's starting point is nature. Another sort is someone who considers things that have existence in sensible matter but who does not take sensible matter into the definition. This includes things like *curved* and *straight:* although they have existence in matter and are numbered among **nonseparable things** as regards their existence, still **the mathematician** does not, for his purposes, take sensible matter into account. The reason for this is that some things are sensible through quantity. But quantities exist before qualities. Hence the mathematician is concerned only with what belongs to quantity absolutely, without taking into account this or that matter. The third sort is someone who considers things whose existence either is not in matter at all or else can be without matter. This is **the first philosopher.**

The Rationale for This Division

244–250. /29/ It is important to notice that the entire rationale for this division of philosophy is taken from definitions and how definitions are given. The reason for this is that a definition is the starting point for demonstrating things. But things are defined through their essential characteristics. This is why the different definitions of things demonstrate different essential principles; it is based on these that one kind of knowledge differs from another.

{403B16–24} BACK TO THE PROPER SUBJECT MATTER

251–270. /30/ After this, when Aristotle says **But we should return,** etc., since he seemed to have made a kind of digression from pursuing his investigation into definitions, he brings himself back to the proper subject matter. He says that **we should return** to the proper subject matter **from where the dis-**

cussion took off—namely, that **soul's states,** like **rage, fear,** and this sort of thing, **are not separable from the physical matter of animals insofar as they are as such.** They are not, that is, separable insofar as they are states that do not exist without body **and** are **not like line and plane** (i.e., surface), which can be separated from natural matter conceptually *(ratione).* So if this is how things stand, then it is a matter for natural philosophy (as was stated above) to consider these things and soul as well. **Focusing** on this—that is, **on soul—it is necessary** at present to take up **the views** of the ancients, **whoever** there may be who **stated anything about it.** And this certainly will be useful, for two reasons: first, because **we** will **accept** in support of our account **what they said well;** second, because we will be wary of what they have stated badly.

Chapter 3

The Views of Other Philosophers
Views Based on Movement

DE ANIMA I.2.403B24–404B8

403b24–28. Now the starting point for this question is to set down things that seem to be in it [soul] in virtue of its nature. What has soul, then, seems to differ from what does not have soul in two respects above all: through movement and sense. We gathered from our predecessors roughly these two [features] of soul.

403b28–31. For some said that soul is that which, primarily and above all, produces movement. Supposing, then, that what is not moved cannot move another, they thus believed soul to be among the things that are moved.

403b31–404a16. That is why Democritus says that this [soul] is a kind of Fire or heat. For, given that there are infinitely many shapes and atoms, those round in form he calls Fire and soul—like the particles moved in air that are seen in the rays coming through windows. Democritus calls every seed among those the elements of the whole of nature. (Leucippus too speaks likewise.) Now the spherical among these [are said to be] soul because shapes of this sort, above all, can penetrate anything and move the rest when moved themselves; for they believed that soul brings about movement in animals. Hence the term of being alive is breathing. For what encloses bodies constricts and extrudes those of the shapes that are supplying movement to animals—since these shapes do not in any way come to rest. Support is furnished when, in breathing, other [bodies] of this sort come in from outside: for they prevent those that are in the soul from dispersing and at the same time prevent constriction and compression. And so [animals] live for as long as they can do this.

404a16–20. It seems, moreover, that the claims of the Pythagoreans convey the same understanding. For some of them said that soul is particles in the air, whereas others [said that soul is] what moves these particles. These [particles] were discussed because they seemed to be constantly moved, even when it is completely calm.

404a20–25. But all of those who say that soul is what moves itself are driven to the same [understanding]. They all seem to have supposed that movement above all is a special feature of soul and that all other things are moved on account of soul, while it [is moved] by itself, since nothing seems to produce movement that is not itself moved.

404a25–27. Likewise, Anaxagoras (and anyone else who said that intellect moves all things) also says that soul produces movement. Yet he was not completely like Democritus.

404a27–31. For the latter says unconditionally that soul and intellect are the same; for what seems to be is true. Thus Homer did well [to say] that "Hector lies fallen, thoughts altered *(aliud sapiens).*" **Indeed, [Democritus] does not employ intellect as the power that is concerned with truth, but says that soul and intellect are the same.**

404b1–4. Anaxagoras, however, is less definite about it. For he says many times that intellect is the cause of [acting] well and rightly,° whereas elsewhere [he says] that this intellect° is soul. For he says that it is in all animals, great and small, superior and not.

404b5–7. But intellect, taken as prudence, does not seem to be in all animals alike, or even in all human beings.

404b7–8. So whoever has focused on the fact that what has soul is moved has been of the view that soul is what is, above all, productive of movement.

1–9. *Analysis.* /31/ Above, the Philosopher presented a prologue in which he indicated his plan, what needs to be done, and the difficulty of the task. Here, then, he takes up the treatise in accord with the promised order. Now this treatise is divided into two parts. For it deals with the soul's nature first as regards the views of other philosophers and second as regards the correct view (this comes in Book II).

9–13. The first part is divided into two parts. First, he characterizes other philosophers' views about soul. Second, he investigates those views (beginning at **Now, then, we should first consider,** etc. {I.6.405b31}).

13–17. This first part is further divided in two. First, he shows the basis for the approach that these philosophers took in investigating soul. Second, he shows how different philosophers reached different views about soul (beginning at **That is why Democritus says** {403b31}).

{403b24–28} THE BASES OF THEIR APPROACH

18–33. /32/ So Aristotle says first that **the starting point for** our **question**—i.e., our investigation—**is to set down** all the **things that seem to be in** soul **in virtue of its nature.** In this connection we should know that when we find two things that differ in one respect that is evident and another that is not, surely it is through what is evident that we come to comprehend what is not evident. This is the approach the philosophers took in discovering soul's nature. For ensouled things differ from non-ensouled things in that the former have a soul, whereas the latter do not.[1] But because soul's nature was not evident and because their investigation could proceed only through the evident respects in which things with soul differ from things without it, they thus discovered these evident respects, and through them tried to reach a cognition of soul's nature.

33–43. Now there are two evident respects in which things with soul differ from things without it: *sensing* and *moving.* For **what has soul seems to differ from what does not have soul above all through** both **movement** (since, that is, such things move themselves) **and sense** (or cognition). That is why [these philosophers] believed that when they knew the principles behind these two things, they would know what soul is. Hence they struggled to know the cause of movement and sense, so that through this they might know the nature of soul. For they believed that the cause of movement and sense is the soul. And in this all the ancient philosophers agreed.

44–51. *Analysis.* But from here the ancients were divided into different views: for some tried to gain cognition of soul through movement, others through sense. /33/ And so when Aristotle says **For some said,** etc. {403b28 ff.}, he displays the differences among them: first, those who were investigating soul's nature on the basis of movement; second, those who were investigating it on the basis of cognition or sense (beginning at **Those, on the other hand, who,** etc. {I 4, 404b8}).

{403b28–31} A COMMON ASSUMPTION

52–62. Regarding the first it is important to know that among those who investigated soul's nature on the basis of movement there was one common [assumption]: namely, that if ensouled things are moved, then **soul produces movement** [and hence is itself moved].[2] And the reason for this is that they supposed that **what is not moved cannot move another**—i.e., that nothing produces movement unless it is moved. Therefore if it is soul that moves things having soul, and nothing moves another unless it itself is moved, then it

1. It looks no less trivial in Latin to be told that all and only ensouled things *(animata)* have a soul *(anima).* But the point needs to be made, because the term *animata* has the primary connotation of *animate* or *living.* And it is of course not trivial to claim that soul is what distinguishes the living from the nonliving.

2. Some such emendation to the text seems needed if what follows is to make sense (and see below, 147–162). Indeed, several manuscripts and most earlier editions make such an emendation, although Gauthier does not.

is clear that soul, **above all,** is moved. And it is for this reason that the ancient natural philosophers **believed soul to be** among **the things that are moved.**

{403B31–404A16} DEMOCRITUS

63–98. But even at this point different views emerged, /34/ and so when Aristotle says **That is why Democritus,** etc., he introduces first Democritus's view on soul, saying that **that is why Democritus** . . . (a certain ancient philosopher who formulated the view that it is soul's nature to be, above all else, moved). And because it seems to be Fire's nature to be above all moved, he **says that this** soul **is a kind of Fire or heat.** And his view went like this: for he claimed that everything in the natural world is sensible and corporeal, and he held that the basic principles of all things are **infinitely many** indivisible bodies that he called **atoms.** These, he said, have one nature but differ from each other in **shape,** position, and order—although here his claim is only about shape, since here only difference of shape is necessary. This difference of shape is that some are round, some square, some pyramidal, and so on. He also claimed that they are movable and never come to rest, and that the world was made from a chance concurrence of these atoms. To show that these indivisible bodies are movable he gave an example of **particles** that are **moved in air** even when there is no disturbance, as is apparent **in the** sun's **rays coming through windows.** So because these atoms are much smaller, since they are indivisible whereas the particles that appear in rays are divisible, it is clearly apparent that they, above all, are movable. And because, among the different shapes, round is the shape most suited to movement, since it has no angles and is not hindered from movement, and because they believed soul to be moved above all, given that **they believed that soul brings about movement in animals,** thus he said that, of these infinitely many bodies, **souls** are those bodies that are **round.** /35/ (**Leucippus,** who was his colleague, was also of this view.)

98–123. For this view Democritus had one piece of evidence, that he took **the term** of life—i.e., the defining character of life—to consist in **breathing.** (This condition is inadequate, however, since not everything that has life breathes.) Such breathing was necessary, according to him, because round bodies fill up the body, since they are, according to him, the cause of movement in a corporeal animal and are in constant movement. Further, **what encloses** our **bodies** (viz., air) **constricts and extrudes** (i.e., forces out) **those shapes that are supplying movement to animals—since these shapes** in no way **come to rest.** For this reason, then, breathing is necessary to prevent the possibility of these shapes' being entirely pushed out of our bodies, which would result in our bodies' becoming deficient. Through this breathing **other** bodies are brought in. Through it, moreover, the bodies coming in keep those that are inside from leaving. **And** Democritus said that animals **live for as long as they can do this**—breathe, that is. Now the implication *(vis)* of this evidence is as follows. Breathing is said to be the defining character of life because it encloses these round bodies within animal bodies and also brings them inside—so that the animal body does not become deficient as a result of these constantly moving bodies' leaving. It is for this reason clear that these bodies are the soul, bodies that Democritus held to have the nature of Fire and to be the cause of heat.

{404A16–20} THE PYTHAGOREANS

124–146. /36/ Second, when Aristotle says **It seems, moreover, that the claims of the Pythagoreans,** etc., he introduces the view of certain Pythagoreans, a view that was like Democritus's. For what **the Pythagoreans** say about soul conveys **the same understanding** as what Democritus says, although the Pythagoreans do not [all] agree in this view. For **some of them,** agreeing with Democritus, **said that soul is particles in the air**—i.e., infinitely many indivisible bodies, as Democritus had said. But **others** among them did not say that those indivisible and movable bodies are soul; they called soul the power that moves those bodies. And a certain philosopher named Archelaus, Socrates' teacher, was of this view, as Augustine tells us in *The City of God* [bk. VIII, chap. 2]. And the reason for this—why, that is, they said that bodies of this sort are soul—has been stated: for, as is clear already, they held that soul is what is moved above all. So **because** these bodies **seemed to be constantly moved** (as is evident in air, where they are moved **even when it is calm**), they said that these bodies are soul.

{404A20–25} ONE OVERARCHING VIEW

147–162. /37/ After this, when Aristotle says **But all of those who say that soul,** etc., he reduces the views of many philosophers on soul to one overarching view: he says that all those who in defining soul through movement said that it **is** that which **moves itself are driven to the same**—i.e., to the same understanding as those just discussed. For **they all** agree in this and generally **seem to have supposed that movement above all** and principally **is a special feature of soul and that** whatever is moved is **moved** by **soul,** whereas soul itself is moved **by itself.** And their reasoning, as was touched on already [403b29–30], was the consensus that **nothing** moves another unless it **itself**

is moved. Hence, since soul moves other things, they believed that soul is moved above all and principally.

{404a25–27} ANAXAGORAS

163–179. /38/ Third, when Aristotle says **Likewise, Anaxagoras too says,** etc., he introduces Anaxagoras's view on soul's nature. And first Aristotle introduces the respect in which Anaxagoras agrees with the above philosophers, saying that **Anaxagoras (and** whoever **else said that intellect moves all things) says that soul produces movement** in all things, just as the others also said. But Anaxagoras differs in this respect: he denied that everything that moves another is itself moved; rather, he said that there is one separated and unmixed intellect that moves other things without itself being moved, and he said that soul is of this nature. (Hence it was from here that the error developed of those who said that soul is divine in nature.) In this way, then, it is clear in what respect Anaxagoras agrees with the above philosophers, namely, in saying that soul produces movement. But he differed in saying that soul is not moved, which is contrary to what the others said.

{404a27–31} HOW DEMOCRITUS DIFFERED

180–197. Anaxagoras also differed from Democritus in how he takes intellect, /39/ and so when Aristotle says **For the latter says,** etc. {404a27 ff.}, he presents this difference. And first he presents Democritus's view, saying that **the latter** (Democritus) said **unconditionally**—i.e., in every case and throughout—**that intellect and soul are the same.**[3] The reason for this is that Democritus believed that there is nothing in the world except sensible things. And just as there was nothing in the world except sensible things, so he said that the soul's only power of apprehension is sensory. Hence he was of this view: that there is no truth to be determinately had of things, and that nothing is determinately cognized; rather, whatever appears **is true,** and what one person cognizes of a thing is no more true than what another person cognizes of the same thing at the same time. And, following from this, he claimed that contraries are true at one and the same time.*

3. Gauthier proposes excluding the remainder of this paragraph, on the grounds that it is an earlier draft of the next paragraph. The principal difficulty with his suggestion is that there would then be no earlier referent for the words 'as was said' (at the beginning of the next paragraph).

198–217. The reason for this, as was said, is (i) that Democritus did **not employ** intellect, which **is concerned with truth**—i.e., the intellective power by which soul intellectively cognizes intelligible things—but only the sensory power; and (ii) that [he believed] nothing was cognized except sensible things, because he posited nothing in the natural world except sensible things. So, since sensibles are in constant motion and flux, he was of the view that there is no determinate truth in the world. And because he did not reach the point of recognizing intellect to be **the power that is concerned with truth**—i.e., whose object is what is itself true—and that exceeds all the soul's other powers, but instead he accepted only the soul's sensory powers, as a result he **says** generally and without distinction **that soul and intellect are the same.** This intellect, he says, is transformed through transformation to the human being. For this reason he commends **Homer,** who said **that "Hector lies fallen, thoughts altered"**[4]—i.e., that in virtue of his having been changed, his intellect has been changed, leaving him thinking that the other side is vanquished and his side victorious.

218–222. *Analysis.* /40/ Second, when Aristotle says **Anaxagoras, however,** etc. {404b1 ff.}, he shows the respect in which Anaxagoras differed from Democritus. And in this connection he does two things. First, he presents Anaxagoras's view. Second, he disproves it (beginning at **But intellect, spoken of,** etc. {404b5}).

{404b1–4} HOW ANAXAGORAS DIFFERED

223–234. He says first, then, that **Anaxagoras** speaks of the soul more doubtfully and **is less definite about it.** For Anaxagoras himself **says many times that intellect is the cause of** acting **well**—i.e., of a good act. But **elsewhere,** in other passages, he says **that this intellect**—the one, namely, that is the cause of a good act—and **soul** are the same. And this latter claim is evident because it is plain that soul **is in all animals,** both inferior and **superior,** as well as both **great** and **small.** So given that he says intellect is in all of these, he clearly says that intellect and soul are the same.

{404b5–7} DISPROVING ANAXAGORAS

235–251. /41/ Second, when Aristotle says **But intellect, spoken of,** etc. {404b5 ff.}, he shows that there are contrary claims in how Anaxagoras takes

4. *Iliad,* bk. 23, line 698.

intellect: namely, that he sometimes says that intellect is not the same as soul, whereas sometimes he says that it and the soul are the same. These are contraries, and they cannot hold at one and the same time. And Aristotle proves this with the following argument: it is certain that to act well is the special feature of an intellect that is fully developed *(perfecti)* as regards prudence. For to act well pertains to prudence. Therefore if this intellect that is the cause of a good act were the same as soul, it would follow that a prudent intellect would be the same as soul. But this is false, since soul is in all animals, whereas **intellect, taken as prudence, does not seem to be in all animals, or even in all human beings.** Therefore it is not the same as soul.

{404B7–8} CONCLUSION

252–257. /42/ Next, when Aristotle says **So whoever,** etc. {404b7 ff.}, he concludes that all those who have considered the soul in terms of movement—i.e., in terms of its being **moved** by itself—have **been of the view that soul is** that which **is, above all, productive of movement,** as is apparent in the views already discussed.

Chapter 4

The Views of Other Philosophers
Views Based on Cognition

DE ANIMA I.2.404B8–30

404b8–11. Those, on the other hand, who [looked] to cognizing and sensing what exists say that soul is the basic principles: some, establishing many principles, [say it is] these; others, establishing one, [say it is] this.

404b11–15. In this way, Empedocles [says that soul comes] from all the elements and that each of these is soul, speaking as follows:

> **We have cognition of Earth by Earth, Ether by Ether,**
> **Water by Water, and Fire by Fire, it is clear,°**
> **while Concord by Concord, Discord by sad Discord.**

404b16–18. And in the same way Plato, too, in the *Timaeus*, forms soul out of the elements. For like is cognized by like, and things *(res)* come from principles.

404b18–21. In his lectures on philosophy, too, he presented an account in a like manner. For animal itself comes from the very Idea of the One and from the first length, breadth, and height, and other things come in a similar way.

404b21–27. Yet in still another way: intellect is One and knowledge Two (for it runs uniquely to one), whereas opinion is the number of the plane and sense the number of what is solid. For numbers were said to be the species and basic principles of what has being,° and they come from the elements. Now some things are judged through intellect, others through knowledge, others through opinion, and still others through sense; yet these numbers are the species of things.

404b27–30. But because soul seemed to be both productive of movement and capable of cognition, thus some [philosophers] combined both, maintaining that soul is a self-moving number.

1–9. *Analysis.* /43/ Above, the Philosopher showed how some approached a cognition of soul through movement. Here, then, he shows how some approached a cognition of soul through sense or cognition. In this connection he does two things. First, he shows where the philosophers who considered soul on the basis of sense agreed; second, he shows where they differed (beginning at **In this way, Empedocles,** etc. {404b11}).

{404B8–11} WHERE THESE PHILOSOPHERS AGREED

10–36. He says first, then, that all of **those who** approached a cognition of soul in terms of **cognizing and sensing**—i.e., through cognition and sense—agreed in saying that **soul** comes from **the basic principles: some** established, i.e., posited, **many** principles; **others,** only **one.** These ancient philosophers were motivated to posit that soul is made up of the basic principles because they in a certain way dreamed the truth—as if the truth itself were leading them on. The truth, however, is that cognition is brought about through a likeness of the cognized thing in the one cognizing. For the thing cognized must in some way be in the one cognizing. Yet the ancient philosophers deemed that a likeness of the thing cognized must be in the one cognizing in virtue of its natural being and in virtue of the same existence that it has in its very self. For they said that like must be cognized by like. Hence, if the soul has cognition of all things, it must have a likeness of all things in it in virtue of its natural being, just as they claimed. For they did not know to distinguish between the way in which the thing exists in intellect or in the eye and the way in which the thing exists in its very self. Hence, because what belong to a thing's essence are the basic principles of that thing, and anyone who cognizes principles of this sort cognizes the thing itself, they claimed that it is through the basic principles of things that soul has cognition of everything. They all shared this view.

WHERE THESE PHILOSOPHERS DIFFERED

37–44. *Analysis.* /44/ But they diverged insofar as they differed in the basic principles that they posited. For they did not all posit the same principles: instead, one posited many, another one, whereas one posited this one, and another those. And they differed on which principles made up soul. /45/ Hence, after this, when Aristotle says **In this way, Empedocles,** etc. {404b11 ff.}, he establishes how they differ.

{404B11–15} EMPEDOCLES

45–65. And first Aristotle introduces the view of Empedocles, saying that the ancient philosophers who considered soul through sense say that it consists of elements. Those who establish one basic principle say that that one is soul; those who establish many say that it is composed of them. **In this way Empedocles** says that soul comes **from all the elements, and** he says **that each of these is soul.** In this connection it is important to know that Empedocles posited six basic principles: four material ones (Earth, Water, Air, and Fire) and two active and passive ones (Strife and Friendship). So, since he supposed that soul is composed of basic principles, he said that soul comes from principles of the sort that he posited, as does sense. For **we have cognition of Earth** insofar as it comes from **Earth, Ether**—i.e., Air—insofar as it comes from Air, and **Water** from **Water. And it is clear** that **Fire** comes from **Fire,** whereas through **Concord** we have cognition of **Concord,** and from **sad Discord** we have cognition of **Discord.** (And Empedocles uses "sad" there because he composed his books in verse.)

{404B16–18} PLATO: A FIRST CLAIM

66–87. /46/ Second, when Aristotle says **And in the same way Plato, too, in the *Timaeus,*** etc., he introduces the view of Plato, saying that **Plato** also **forms soul out of elements**—i.e., says that soul is made up of his basic principles. And that this is true—viz., that Plato says that soul is composed of the basic principles of things—Aristotle proves through three claims of Plato's. The first is what he says in the *Timaeus* [35A]. For he says there that there are two elements or basic principles of things: the Same and the Different. For there is one kind of nature that is always disposed in the same way and is simple, as immaterial things are; this he calls the Same. There is another kind of nature, however, that is not always disposed in the same way but takes on change and division, as material things do; this he calls the Different. Soul, he says, is composed of these two, the Same and the Different. Yet it is not that these two are in the soul as parts; instead, they serve as the intermediaries in virtue of which the soul's rational nature is inferior to and worse than things that are superior and entirely immaterial, but worthier than and superior to things that are material and inferior.

87–101. /47/ The reason for this, as stated [404b17–18], was that **like is cognized by like.** Hence if the soul were to have cognition of all things and the Same and the Different were the basic principles, then, Plato posited, soul is composed of these two principles, in the way we have said. Inasmuch as it has the nature of identity, then, it has cognition of things that he supposes to be the same, whereas inasmuch as it has the nature of things that he calls different, it has cognition of the different—that is, of material things. He employs this cognition accordingly: for when soul grasps genus and species, he then says that it represents the Same or identity, whereas when it takes up distinguishing and accidental characteristics, then it comes to recognize dis-

similarity.[1] In this way, then, it is clear how Plato says in the *Timaeus* that soul is composed of his basic principles.

{404B18–21} PLATO: A SECOND CLAIM

102–121. /48/ The second claim of Plato's which shows him to have said that soul comes from his basic principles is introduced when Aristotle says **In his lectures on philosophy, too,** etc. There Plato showed **in a like manner** that soul comes from basic principles. In this connection it is important to know that Plato supposed intelligible things to be separated and subsistent *per se,* and to be always actualized, and to be the cause of cognition and existence for sensible things. (Aristotle, seeking to avoid something so implausible, was driven to postulate an agent intellect.)[2] It followed from Plato's position, as a result, that insofar as there are abstract things, so too there are things that are actualized and subsistent *per se.* But we have two modes of abstraction through intellect: one that runs from particulars to universals, another through which we abstract mathematical from sensible things. And so this drove Plato to postulate three [kinds of] subsistent things: sensible, mathematical, and universal. These [universals] would be causes, and through their participation there would also be sensible and mathematical things.

121–136. /49/ Plato also supposed that numbers are the cause of things. (He did this because he did not know to distinguish between the One that converts with Being and the one that is the basic principle of number insofar as it is a species of quantity.)[3] It followed from this, since he supposed that a separated universal is the cause of things and numbers are the substance of things, that universals of this sort come from numbers. For he said that species and specific number are the basic principle of all things that have being. He calls this number *specific* inasmuch as it is composed of species. For he reduces this number to the One and the Duality, as if to its basic principles and elements. For nothing comes out of one. Hence there was necessarily some nature that underlies *(subiecta)* this One* and by which the many were produced; he called this Duality.[4]

1. Compare Themistius, I 11.8–10 (27.36–39).

2. For discussion of agent intellect, see III.10.

3. Aquinas is here referring to transcendental terms that are superordinate to all other categories and are therefore present in all entities. Included among such terms are 'Being,' 'One,' 'True,' and 'Good.' To say that One "converts with Being" is to say that One can be predicated of anything that Being can be predicated of, and vice versa.

4. Compare Themistius, I 11.27 (29.53), 12.10–18 (31.82–87).

136–164. /50/ And Plato ordered those three [kinds] in keeping with the order of their materiality. For because sensible things are more material than mathematical things, whereas universal things are more immaterial than mathematical things, so he first introduced sensible things, over which he introduced mathematical things, and, over these, separated universals and Ideas. The last differ from the mathematical, because in the case of mathematical things, there are in one species things that differ in number, whereas in the case of Ideas and separated substances, one does not find things belonging to one species that differ numerically. For he posited one Idea for one species. He says that these Ideas come from numbers and are, in virtue of the numbers in them, the defining characteristics of sensible things, which are of course made up **from length, breadth, and** depth. Hence he said that the Idea of length is **the first** Duality: for length runs from one to one—that is, from point to point. The Idea of breadth, next, is the first Trinity: for the shape of a triangle is the first of surface shapes. He said that the Idea of depth, then, which contains length and breadth, is the first Quaternity: for the first figure of bodies is the pyramid, which consists of four angles.[5] Hence, since Plato posited a sensible soul, he also posited a separated soul which is its cause, and said that this latter soul, like other separated things and Ideas, comes from numbers—viz., from the Unity and Duality which he supposed are the basic principles of things.

{404B21–27} PLATO: A THIRD CLAIM

165–199. /51/ Third, when Aristotle says **Yet in still another way,** etc., he introduces a third claim of Plato's through which it is clear that he said that soul is composed of his basic principles. For Plato supposed, as we have said [121–122], that **numbers** are **the species and basic principles** of things. So in speaking about soul he supposed that it reaches a cognition of existing things in virtue of its being composed of basic principles—of numbers, that is—and that all its operations come from these. For we find in soul various powers for apprehending what exists—in particular, **intellect, knowledge, opinion, and sense.** Plato says, then, that soul has **intellect** and its operation through the Idea of the **One,** since the nature of the Unity is in it. For intellect, through one apprehension, apprehends one thing. Also, soul has **knowledge** through the first Duality: for knowledge runs from one **to one**—namely, from principles to a conclusion. Further, it has **opinion** through the first Trinity: for opinion runs

5. Compare Themistius, I 11.30–35 (29.60–67). Notice that what Aquinas calls a pyramid is a tetrahedron: a solid with an equilateral triangle for its base and three equilateral triangles for its sides. This is the first of the Platonic solids.

from one to two, since it runs from principles to a conclusion with misgivings regarding the other [opposite conclusion]. And in this way there are three things there, a principle and two conclusions; one is treated as a conclusion, the other with misgivings.[6] The soul has **sense,** finally, from the first Quaternity: for the first Quaternity is the Idea of body, which consists of four angles (as we have said [159]); and sense is concerned with bodies. Therefore since all things are cognized by these four—intellect, knowledge, opinion, and sense—and Plato says that soul has these powers in virtue of participating in the nature of Unity, Duality, Trinity, and Quaternity, for this reason he clearly said that separated soul, which he supposed to be the Idea of this soul, is composed of numbers, which are the basic principles and elements of things. And it is clear in this way that Plato said that soul is composed of his basic principles.

{404B27–30} VIEWS BASED ON MOVEMENT AND COGNITION

200–213. /52/ After this, when Aristotle says **But because soul seemed,** etc., he establishes that there were **some** philosophers who approached a cognition of soul through movement and sense (or cognition) at the same time. He says that since **soul seemed to be productive of movement** on its own **and capable of cognition,** they **combined** these two and defined soul on the basis of **both**—viz., through movement and cognition—saying that **soul is a self-moving number.** By 'number,' first, they suggest a power capable of cognition: for, in keeping with what was maintained earlier [169–190], they said that soul has cognition of things because it participates in the nature of specific number (this was Plato's view). By 'self-moving,' on the other hand, they suggest a power in soul that is productive of movement.

6. Here Aquinas is expressing the familiar medieval formula that opinion is a state in which one conclusion is accepted, even though the opposite conclusion is not ruled out but simply regarded with misgivings *(cum formidine).* See III.4.199–215 and also Avicenna, *Liber de anima,* V. 1 (79.46).

Chapter 5

The Differences Among These Philosophers

DE ANIMA I.2.404B30–405B30

404b30–405a5. Yet they differ regarding basic principles, what and how many: above all those who establish corporeal principles, compared to incorporeal ones. Also, some mix them, setting out principles from both. Yet they also differ on their amount: for some say there is one, whereas others many. Accordingly, then, they attribute soul too to these [principles]; for they supposed—not unreasonably—that what produces movement by nature is among first things.

405a5–13. That is why it seemed to some that [soul] is Fire: for it is the most subtle in its parts and the most incorporeal of the elements, and further it is both moved and moves others, primarily. Now Democritus spoke more deftly [than others], stating the reason for each of these. For soul and intellect are the same thing, he said, and that thing is one of the bodies that are first and indivisible, and is productive of movement on account of its shape and the subtlety of its parts. Now he says that among shapes the spherical is the most easily susceptible to movement; intellect and Fire, he says, are of this sort.

405a13–19. Anaxagoras, however, seems first to say that soul and intellect are different, as we have said before. But then again he treats both as one nature. Nevertheless, he claims that intellect, above all, is the basic principle of all things; he says that it alone, among existent things, is simple, unmixed, and pure. Yet he attributes both cognizing and moving to the same principle, saying that intellect moves everything.

405a19–21. Thales, however, seems (from what is remembered) to have formed the view that soul is something that produces movement—if in fact he said that a stone has soul because it moves iron.

405a21–25. But Diogenes, like certain others, [holds that soul is] Air, thinking that of all things this is the most subtle and the basic principle and that on this account soul cognizes and moves. It cognizes, on one hand, in virtue of its being first,* with the rest coming from it; it is productive of movement, secondly, in virtue of its being the most subtle.

405a25–29. Heraclitus, next, says that the basic principle is vapor, out of which he constructs other things. It is also the most incorporeal and is always flowing. What is moved is cognized by something moved, and both he and many others held that existent things are in movement.

405a29–b1. Moreover, Alcmaeon too seemed to have formed a view like the others regarding soul. For he says that it is immortal because it is like immortal things: this is true of it since it is always moved. For all divine things are always constantly moved—the moon, the sun, the stars, and the whole heaven.

405b1–5. Among the more ignorant, however, some have stated that [soul is] Water, as Hippo did. For they seemed to have been persuaded on the basis of semen, since [the semen] of all animals is wet. For, indeed, [Hippo] contested those who say that soul is blood, as there is no blood in semen, and this is the first soul.

405b5–7. Others, again, [said that soul is] blood, in the way that Critias did. They held that sensing is more proper to soul and that this [sensing] is in it because of blood's nature.

405b8–10. So all of the elements acquired a judge, except for Earth. None of the philosophers advocated this principle, however, unless [we count] anyone who said that soul comes from all or is all of the elements.

405b10–19. We can say that all of these [philosophers] define soul in terms of three things—movement, sense, and being incorporeal—and each of these is reduced to its basic principles. Hence those defining soul in terms of cognizing either make it an element or make it come from the elements—they speak like one another, except for one [of them]. For they say that like is cognized by like. For because soul has cognition of all things, they construct it out of all their basic principles. All those, then, who say that there is some one cause and one element, they also posit one soul—e.g., Fire or Air. Those, on the other hand, who speak of many basic principles also say that soul is many.

405b19–23. Anaxagoras alone, however, says that intellect is incapable of being affected and has nothing in common with any of the others. Yet as for the way in which it has cognition and through what cause—given that it is like this—neither did he say nor is it discernible from the things he asserted.

405b23–30. Now all those who include contrary pairs within their basic principles also construct soul out of these contraries; meanwhile, all those who [include] just one of the contraries—the hot, the cold, or anything else of this sort—claim likewise that soul is one of these. And so they are guided by names. Some defend hot because *to live* has its name due to this, whereas some [defend] cold [because] *soul* is so called due to breathing and cooling. These, then, are the claims that have been handed down regarding soul and the reasons for their speaking in that way.

1–7. *Analysis.* /53/ In the preceding parts Aristotle showed where ancient philosophers agreed in considering soul: namely, in soul's being the principle

of movement and cognition. In this part, then, he shows where the philosophers under discussion differed as regards this common assumption.

7–13. This part is divided into three parts. First, Aristotle establishes the root of the differences among philosophers in considering soul. Second, he spells out, by kind, the differences (beginning at **That is why it seemed,** etc. {405a5}). Third, he collects and compiles the things that we need to consider regarding these sorts of differences (beginning at **We can say that all,** etc. {405b10}).

{404b30–405a5} THE ROOT OF THE DIFFERENCES

14–24. The root of the differences among philosophers in considering soul is that, as was said, they assign soul to basic principles. So corresponding to the difference among these philosophers in considering principles is also a difference among them in considering soul. Now the philosophers under discussion, although they all claim that soul is composed of basic principles, nevertheless do not agree in claiming that soul is composed of the same principles. Rather, just as they differ with respect to basic principles, so too they differ in considering soul.

25–45. /54/ **Yet they differ regarding basic principles** in two respects: first, with respect to the substance of the principles, i.e., **what** they are; second, with respect to their number, i.e., **how many** there are. They differ with respect to substance, first, because some posited corporeal principles (those, namely, who posited Fire, Water, or Air),[1] whereas others posited ones that are incorporeal and immaterial (like those who posited numbers and Ideas),[2] and still others **mix both** (like those who posited principles that are both sensible and separated). **They differ on their** number or **amount,** [second,] because some posited only **one** first principle (like Heraclitus, who posited Air, and another, who posited Fire), **whereas** some **say** that there are **many** first principles (like Empedocles, who posited four elements). And in keeping with these hypotheses regarding principles, **they accordingly attribute soul to these** principles: for those who posited material principles said that soul is

1. These four principles or elements were standardly viewed in the ancient and medieval world as the fundamental building blocks out of which matter is composed. Each element—Fire, Water, Air, and Earth—is associated with its own fundamental quality—the hot, the wet, the cold, and the dry, respectively—and it is in virtue of these qualities that the elements exercise their causal influence. Here and elsewhere the elements are capitalized to distinguish them from ordinary visible instances of fire, water, and so on.

2. The reference is to Plato's view; see below, I.7–8.

composed of them (like Empedocles), and likewise for those who posited immaterial principles (like Plato). Yet they all **supposed** that soul is something that **produces movement** above all.

THE KINDS OF DIFFERENCES

46–56. *Analysis.* /55/ After this, when Aristotle says **That is why it seemed,** etc. {405a5 ff.}, he spells out, by kind, the differences among philosophers. Now it is important to know that among those who posited that one of the [elemental] bodies is the basic principle of things, no one thought it worthwhile to posit Earth alone: instead, some posited that Fire is the first principle, whereas others posited Air, and others Water. No one posited Earth, except for anyone who posited that all four elements are a first principle. The reason for this is that Earth, because of its denseness, seemed more to be composed of basic principles than to be itself a basic principle.

56–65. And so in this part Aristotle does three things. First, he introduces the views of those who claimed that the first principle and soul are Fire and connected with Fire. Second, he introduces the view of those who claimed that the first principle and soul are Air (beginning at **But Diogenes,** etc. {405a21}). Third, he introduces the view of those who claimed that Water is the first principle and is soul (beginning at **Among the more ignorant, however,** etc. {405b1}).

{405A5–13} THAT SOUL IS FIRE: DEMOCRITUS

66–92. /56/ In connection with the first it is important to know that because producing movement and being capable of cognition is attributed to soul, **it seemed to some** that soul is what produces movement and is capable of cognizing *above all.* And because it seemed to them that what is subtle above all would produce movement and be capable of cognition above all, they said **that** soul **is Fire,** the body that is the most **subtle** and active of [elemental] bodies. And although there were many who held this view and thought in this way that soul is Fire, yet **Democritus said** this more subtly and reasonably, **stating the reason for each of these.** (That is, he better expressed the defining character *[rationem]* of movement and cognition.) For, as we have said [I.3.70–83], he held that all things are composed of atoms. And although, according to him, atoms of this sort are the basic principle of all things, nevertheless he still held that atoms that are round in **shape** have the nature of Fire; thus he said that soul is composed of atoms that are **spherical** in shape. He said that

these atoms, insofar as they are first principles, have the defining character of cognizing, while insofar as they are round they have the defining character of producing movement. Hence insofar as the soul is composed of round **indivisible bodies** of this sort, he said that it has cognition of and moves all things. Thus in claiming that these round bodies have the nature of Fire, he agreed with others that soul has the nature of **Fire.**

{405A13–19} ANAXAGORAS

93–114. /57/ After this, when Aristotle says **Anaxagoras, however,** etc., he introduces the view of Anaxagoras. Anaxagoras agreed with the preceding philosophers in that he assigned the defining character of cognizing and moving to the same thing—to soul, that is. Sometimes, **however,** he **seems to say that soul and intellect are different, as** was said earlier [404b1–6], whereas other times **he treats both,** soul and intellect, **as one nature.** For he himself said that soul is productive of movement and capable of cognizing. Hence, since he claimed that **intellect** moves **all things** and is capable of cognizing, he took soul and intellect for the same. But he differs from others in this respect: whereas Democritus supposed that soul has a corporeal nature, inasmuch as it is composed of material principles, Anaxagoras says that intellect **is simple,** in order to preclude diversity in its essence; **unmixed,** in order to preclude composition with another; **and pure,** in order to preclude contamination by another. But **he attributes moving and cognizing to the same principle,** namely, to intellect. For it belongs to intellect's nature to be cognitive, whereas it has movement because, as stated, Anaxagoras says **that intellect moves** all things.

{405A19–21} THALES

115–141. /58/ After this, when Aristotle says **Thales, however, seems,** etc., he introduces the view of a certain philosopher, Thales, who agreed with the above philosophers only in his saying that it is soul that has the power for producing movement. For he (Thales, that is) was one of the seven sages; while all the others were concerned with moral matters, he alone devoted himself to investigating natural things, and he is the first natural philosopher. (That explains why Aristotle says "from what is remembered.") He held that Water is the basic principle of all things, a view he formed after considering the basic principle in living things. Thus, since the principles or seeds of all living things are wet, he held that the basic principle of all things will be what is wet above

all. And because this is how Water is, he said that Water is the basic principle of all things.[3] But still, he does not pursue his view about the basic principle so far as to say that soul is Water; instead, he said that **soul** is what has the power to **produce movement.** That is why, since **a** kind of **stone** (namely, a magnet) **moves iron,** he said that it **has soul.** Thus Anaxagoras and Thales are placed with these others, not because they would say that soul is Fire, but because they say that soul is what has the defining character of movement and cognition (as Anaxagoras says) or solely of movement (as Thales says).

THAT SOUL IS AIR

142–144. *Analysis.* /59/ Next, when Aristotle says **But Diogenes,** etc. {405a21 ff.}, he introduces the views of those who say that Air is the first principle and soul. There are three such men.

{405A21–25} DIOGENES

145–156. First, he introduces the view of **Diogenes,**[4] who held that **Air** is **the basic principle of all things and is the most subtle** of all bodies. Thus he said that soul is Air, and that from this it draws the power to cognize and to produce movement. It has the power to cognize, **on one hand,** because according to him Air is the principle of all things. For since cognition is brought about through likeness, as was said [404b17–18], the soul, if it is to have cognition of everything, must be composed of the basic principles of all things. It has the power to produce movement, **secondly,** because Air is **the most subtle** of all [elemental] bodies and so is movable above all.

{405A25–29} HERACLITUS

157–177. /60/ Second, when Aristotle says **Heraclitus, next,** etc., he introduces the view of Heraclitus. Heraclitus did not say that Air **is the basic principle** of things, but that something associated with Air is the basic principle—namely, **vapor,** which is intermediary between Air and Water. For because he posited only material things, Heraclitus claimed, not that Water or Air is the basic

3. Compare *Metaphysics* I.983b22–27. Aquinas discusses these seven sages in more detail in his commentary on that passage (lec. 4, n. 77).

4. Diogenes of Apollonia, from the fifth century B.C.E.

principle of things, but instead that an intermediary is. Thus he held that what is more removed from having a contrary is the basic principle of things, and it seemed to him that this is vapor. Accordingly, he held that soul is vapor and that, for this reason, soul is, above all, capable of cognition and productive of movement. For he was of the view that all things are in constant flux; that nothing is at rest, even for a moment; and that no expression can be determinately uttered. So, since vapor is more susceptible to flux than other things, he said that it is the basic principle of all things. He also says that it is soul: it has a nature capable of cognizing, he says, because it is the basic principle, whereas it has a nature productive of movement because **it is the most incorporeal** and is susceptible to flux.

{405A29–B1} ALCMAEON

178–185. /61/ Then, third, when Aristotle says **Moreover, Alcmaeon too,** etc., he introduces the **view** of **Alcmaeon,** who agreed with these philosophers only as regards movement and who said that soul is what is the most susceptible to movement. Hence, because **it is always moved, it is like immortal things**—that is, like the heavenly bodies. So **he says that it is immortal,** in the same way that the heavenly bodies that **are always moved (the moon, the sun,** and so on) are immortal.

{405B1–5} THAT SOUL IS WATER

186–206. /62/ Next, when Aristotle says **Among the more ignorant, however,** etc., he introduces the view of those who supposed that Water is the first principle of all things. For there were some ignorant students and followers of Thales who, as was said [124–132], wanted to equate the basic principle of one thing with the basic principle of all of nature. They saw that the basic principle of all living things is the wet; hence they formed the view that in the same way the basic principle of all things is the wet. Therefore, since Water is the element more wet than any other, they said that it is the basic principle of all things. Up to this point they followed Thales, but here they differed. For Thales, although he claimed that Water is the basic principle of all things, still did not say that soul is Water, but that it is a power that produces movement (as was said [132–135]). But these other **ignorant** ones did say that soul is **Water, as Hippo did. For** he **contested those who** said **that soul is blood,** on the basis of the fact that **there is no blood in** the **semen** or seed of living things. Semen, they said, **is the first soul,** a fact they attributed to Water, on account of its wetness.

{405B5–7} THAT SOUL IS BLOOD

207–218. /63/ After this, when Aristotle says **Others, again, [said that soul is] blood,** etc., he introduces the view of a certain philosopher who considered soul more in terms of cognition. He spoke of it with still less refinement, saying that it is **blood.** The reason for this is that there is no sensation in an animal without blood; hence, since soul is the principle of cognizing, he said that it is blood—without which there is no sensation in an animal. For things without blood—bone, fingernail, and teeth, for instance—lack sensation, even though nerves without blood are exceptionally sensitive.[5] And this is what **Critias** said.

{405B8–10} NO ONE ADVOCATED EARTH

219–229. /64/ But because one might ask why, in considering soul, Aristotle makes no mention of Earth, as he did the other elements, he justifies himself when he says **So all of the elements,** etc. He says that in this respect [these philosophers] formed views regarding soul just as they did regarding basic principles. Therefore since **Earth acquired** no **judge**—i.e., no one judged it to be a basic principle—consequently no one said that soul is Earth, **unless** perhaps [we count] **anyone who said that soul** is composed **from all** the basic principles (as Empedocles said) **or is all** the basic principles (as Democritus said).

230–235. *Analysis.* /65/ Next, when Aristotle says **We can say that all,** etc. {405b10 ff.}, he gives an overview and pulls together, from all the things he has said, their contention: first regarding basic principles, and second regarding the contrary pairs that are in these principles (beginning at **Now all those who have,** etc. {405b23}).

{405B10–19} THEIR CONTENTION REGARDING BASIC PRINCIPLES

235–256. First, regarding basic principles. For they attribute **three things** to **soul:** namely, that it is most subtle, that it is something capable of cognition, and that it is something productive of movement. These three things—**sense, movement, and being incorporeal**—they reduce to their **basic principle.** For they say that a basic principle is something simple. Further, a basic principle

5. Compare Themistius, I 14.1 (35.57–58).

is in its own right capable of cognition: for like is cognized by like, as was said. For that reason too they said that soul is composed **of elements or else** is **elements,** since they said that **like is cognized by like** (except for Anaxagoras, who claimed that intellect is unmixed). Further, since a basic principle is most subtle, they said that it is productive of movement above all. And since **soul has cognition of all things,** they said that it is composed **of all their basic principles.** And they all say this, because they postulate soul in just the way that they postulate basic principles. Hence **all those who** postulate **that there is some one cause** or basic principle **and one element** say (as is clear already) that **soul** is that **one—e.g., Fire, Air,** or Water. Also, those who say that there are **many basic principles** likewise **say that soul is many.**

{405B19–23} ANAXAGORAS'S UNIQUE VIEW

257–266. /66/ Aristotle said that they all agree in saying that soul is composed of basic principles, because like must be cognized by like. They all agree except for one—namely, Anaxagoras. Thus when Aristotle says **Anaxagoras alone, however,** he shows how Anaxagoras differs from the others. He says that **Anaxagoras alone** said **that intellect is incapable of being affected and has** nothing **in common** with anything—i.e., it is like none of the things that it cognizes.[6] But as for how intellect **has cognition, neither did** Anaxagoras **say nor is it** clear **from the things he asserted.**

{405B23–30} THEIR CONTENTION REGARDING CONTRARY PAIRS

267–284. /67/ After this, when Aristotle says **Now all those who,** etc., he puts together their contention as regards the **contrary pairs** that are in these basic principles. Some, he says, introduce contrary principles of things, and they **construct soul out of these contrary** principles, as Empedocles does. For he gives to his elements heat and cold, wetness and dryness, and allows these contraries to be in the soul. (For he said that we observe Earth by Earth, Water by Water, etc.)[7] But those who suppose that one of the elements is the basic principle of all things introduce that element's characteristic into soul: Fire's heat, according to those who say that Fire is the basic principle of all things.[8]

6. Compare Themistius, I 14.12 (36.70–71).
7. Compare II.4.404b11–15.
8. Compare Themistius, I 14.18–22 (36.76–81).

Meanwhile, those who say that Water is the basic principle of all things introduce cold into soul. That is why, in accord with the characteristics of the principles they introduce, they say that soul likewise has the nature of heat, for instance, or of cold, or of something like that.

284–298. This is further shown through the **names** by which they name soul. For those who said that soul has the nature of heat named it from *zin*—i.e., **to live**—which takes **its name** from *zein,* which means to boil. On the other hand, those who said that soul has the nature of cold named it *psikron,* which means cold (and from this comes *psikhis*—i.e., **soul**), **due to** the **cooling** that the animal retains through **breathing.**[9] In this way, then, it is clear that some based soul's name on *life:* those, that is, who said that it has the nature of heat. Others based its name on *breathing:* those, that is, who said that it has the nature of cold. And from all of this Aristotle reaches his conclusion, saying that **these are the claims that have been handed down regarding soul, and the reasons for their speaking** about it **in that way.**

9. Compare Themistius, I 14.21–25 (37.83–87). Although Aquinas knew no Greek, he was able to draw on Themistius, more or less accurately, for transliterated versions of the verbs *zên* and *zein,* the adjective *psuchron,* and the noun *psuchê.* In this last case, however, Aquinas mistook the genitive for the nominative form.

Chapter 6

Arguments Against Defining Soul as the Principle of Movement

DE ANIMA I.3.405B31–406B15

405b31–406a12. Now, then, we should first consider movement. For perhaps it is not only false that its substance is such as they say—those saying that soul is what is self-moving or able to move itself—but it is one of those things that are impossible, that being moved should be a feature of it. And, indeed, it has already been said that it is not necessary for what produces movement to be itself moved. For there are two ways in which anything is moved: either by another or of itself. We say that anything is moved by another that is moved through being in something that is moved—as sailors are. For they are not moved in the way their ship is; for the latter is moved of itself, whereas sailors are moved through being in something that is moved. This is clear in respect of parts. For, of course, walking belongs first to feet,° but it also belongs to human beings, while it does not hold for the sailors then. And so, given that being moved is spoken of in two ways, let us now look at whether soul is moved through itself *(per se)* **and participates in movement.**

406a12–22. Now because there are four [species of] movement—change in location, alteration, increase, and decrease—[soul] will be moved in respect of one of these, several of these, or all of these. Now if it is moved nonaccidentally, then movement will belong to it naturally. And if it does, then so will location, since all the movements just mentioned occur in location. Yet if it belongs to soul's substance to move itself, then being moved will not belong to it accidentally, as it does to what is white and what is three cubits long. For these things too are moved, but accidentally: for the thing that they are in, the body, *that* **is moved. Hence there is no location belonging to them, whereas there will be for soul—if, indeed, it naturally participates in movement.**

406a22–27. Further, if [soul] is moved by nature, then it will also be moved by force; and if by force, then also by nature. Things hold in the same way, too, for rest. For that toward which [soul] is moved by nature is that in which it rests by nature, while that toward which [it is moved] by force is that in which it rests by force. But what these forcible movements and rests of soul will be like is not easy to explain, for those who are willing, or [even easy] to conceive.

406a27–30. Further, if [soul] will be moved upward, then it will be Fire, whereas if downward, then Earth. For these movements belong to these [elemental] bodies. And the same reasoning applies to things in between.

406a30–b5. And because [soul] seems to move the body, it is reasonable for it to move [the body] through those movements by which it itself is moved. Yet if this is so, then it is conversely true to say that what moves the body is what moves the soul too. The body, however, is moved by a change in location; hence soul too will be moved in virtue of the body, carried along either as a whole or else in respect of its parts. But if this is possible, then it is also possible for [soul], after going away, to come in once more; and from this it will follow that dead animals are resurrected.

406b5–11. Now [soul can be moved] by accidental movement, if it is moved by something else. For, clearly, animals are impelled by force. But what has self-movement in its substance does not need to be moved by anything else, except accidentally—just as what is good in its own right, or on its own account, is [good] neither on account of something else nor by reason of something else. Yet someone will say that soul, above all, is clearly moved by sense objects—if indeed it is moved.

406b11–15. But now if soul moves itself, then clearly it itself will be moved. Hence if every movement is a departure from that [by] which [it] is moved,° insofar as it is moved, then clearly soul will depart from its substance, in its own right,° unless it moves itself accidentally. But movement belongs to its substance through itself *(per se).*

1–20. *Analysis.* /68/ Above, the Philosopher introduced the views of other philosophers regarding soul; here, in turn, he argues against these views. Now there are three characteristics that the philosophers under discussion attributed to soul: namely, that it is the principle of movement, that it is the principle of cognition, and that it is most incorporeal or most subtle. Among these, two of them are in a sense most important. These are things that they attributed to soul primarily and *per se:* namely, that it is the principle of movement and that it is the principle of cognition. Now the third thing they attributed to soul, that it is most subtle, is in one respect rightly predicated [of soul] but in another respect wrongly predicated. For if "most subtle" is taken to refer to soul unconditionally, then it is rightly predicated [of soul]. For there is no doubt that soul is most incorporeal and most subtle. If, however, it is not taken unconditionally, but with body, so that soul is called the most subtle *body,* then it is wrongly predicated [of soul]. And this is why the Philosopher takes up in their own right only these two traits, movement and cognition.

21–30. /69/ Now this part is divided into three parts. For Aristotle's investigation of soul first confronts the views of philosophers stating that soul is the principle of movement. Second he confronts their views stating that soul is the principle of cognition (beginning at **We have now presented three ways,** etc. {I.12.409b18}). Then, in the third part, he raises one particular question, namely, whether moving, sensing, and cognizing are attributed to soul as if to one principle or as if to several (beginning at **Now since cognizing,** etc. {I.14.411a26}).

30–39. This first part is divided in two. In the first of these parts he argues against the things said of soul as the principle of movement—because of the fact that they claim it *is* the principle of movement. Second, he argues against one particular view. For some, in addition to saying that soul is the principle of movement, attribute something else to soul, namely, that it is a self-moving number (beginning at **Yet it is unreasonable,** etc. {I.11.408b32}).

39–44. That first part is divided in two. For first Aristotle argues against the views of those who attributed movement to soul—in terms of how they do attribute movement to soul. Second, he asks whether movement can be attributed to soul in any other way (beginning at **One might more reasonably,** etc. {I.10.408a34}).

44–49. That first part is divided in two. For first he argues in general against those who say that soul is the principle of movement. Then, second, he focuses on certain specific questions (beginning at **Now some say that soul,** etc. {I.7.406b15}).

49–52. That first part is divided in two. For first he clarifies his plan; second, he introduces arguments to demonstrate his thesis (beginning at **Now because there are four,** etc. {406a12}).

{405b31–406a12} HIS PLAN

53–65. /70/ So Aristotle says first that, as we see from earlier discussions [I.3.403b25–28], philosophers approached a cognition of soul along two lines: movement and sense. Of these **we should first consider movement.** Now all the philosophers who approached a cognition of soul on the basis of movement held this principle in common: that everything that produces movement is moved. Hence, because it is natural to soul that it produces movement, they believed that it is equally natural *(sit connaturale)* to the same soul that it be moved, and they believed that soul possesses this [characteristic] through its substance. Hence they put movement into its definition, saying that soul is something self-moving.

65–78. /71/ There are, then, two things that must be challenged here: namely, the argument for the position, and the position itself. For each is false—both the argument for their position and their position. What they pre-

supposed to be true *per se*—namely, that everything that produces movement is moved—is false, as is proved well enough in *Physics* VIII [passim], where Aristotle showed that there is an unmovable mover. And this can be shown in brief, for present purposes: for if something produces movement and is moved, then certainly it is actual with respect to its producing movement and potential with respect to its being moved. Thus the same thing, in the same respect, would be actual and potential, which is absurd.

79–113. /72/ But, putting this aside, let us argue against their position: whether, that is, soul is moved. For these philosophers said two things: that soul is moved and that movement belongs to the substance of soul. Aristotle denies each, saying that **perhaps** (he says this because he has not yet proved what he is saying) **it is not only false** that movement belongs to the **substance** of soul—in their terms, **those saying that soul is what is self-moving or able to move itself—but it is** entirely **impossible that being moved** should apply to soul. /73/ And this **has already been said** (in *Physics* VIII [256a4–257a33]): namely, **that it is not necessary for** everything producing **movement to be moved.** For there are two [parts] in something self-moving, one that produces movement and another that is moved, and it is impossible for what is producing movement to be moved through itself *(per se).* But in the case of animals, although the part that produces movement is not moved through itself *(per se),* it nevertheless is moved *per accidens.* **For there are two ways in which anything** that is moved **is moved:** either **by another** or **of itself.** It **is moved by another** (moved *per accidens*) when it is not itself **moved** but rather the thing it is **in**—just **as** a **sailor** is moved not because he himself is moved but because his **ship** is moved. Hence **the latter** (viz., the ship) **is moved of itself,** whereas the sailor is **moved** accidentally. And it is plain that the sailor is not moved through himself *(per se),* because when someone is moved through himself he is moved in virtue of his own **parts** (just as, in the case of walking, **walking belongs first to feet**). **This does not hold** for the sailor, because he is on a ship. In this way it is plain, therefore, **that being moved is spoken of in two ways:** of itself and accidentally. But these others attributed to soul its being moved of itself. So, putting aside for now whether soul is moved *per accidens,* **let us look at whether soul is moved** of **itself and participates in movement,** as they said.

114–115. *Analysis.* /74/ That soul is not moved through itself, Aristotle proves through six arguments.

Why These Arguments Are Effective

116–126. In connection with these arguments it is important to consider that, although Aristotle's arguments scarcely seem compelling, nevertheless they are still effective because they are aimed at his opponents' position. For someone who is aiming at the truth unconditionally must argue in a different way, because he has to advance on the basis of things that are true. But someone who is arguing against his opponents' position advances on the basis of things taken as given. That is why Aristotle, when he is arguing against his opponents' position, frequently seems to introduce arguments that are scarcely effective. For he advances from things taken as given in order to destroy his opponents' position.

{406A12–22} THE FIRST ARGUMENT

127–143. /75/ In this way, then, Aristotle introduces a first argument when he says **Now because there are,** etc. This argument is as follows: if soul is moved, it is moved either through itself *(per se)* or *per accidens.* If *per accidens,* then the movement will not belong to soul's substance (which runs contrary to these philosophers); instead it is moved **as** is **what is white and what is three cubits long.** These **are moved accidentally,** and so for this they do not require **location. Now if it is moved** through itself, then it is moved by some species of movement. And **there are four** species of **movement:** local movement, **increase, decrease,** and **alteration.** (Generation and corruption are not movements, properly speaking, but changes.) Therefore soul **will be moved** by some species of these movements: **in respect of** either location, increase, decrease or alteration. Therefore, if it is moved by any of these and if **all** these **movements occur in location,** then **soul will be** in a **location.**

Two Problems with This Argument

144–161. /76/ But there seem to be two problems with this argument. One comes from his saying that all the movements mentioned occur in location. This, obviously, is clear for local movement and for the movement of increase and decrease. But it seems problematic for alteration. Now some understand the claim in the following way: because everything that is altered is a body, and a body is in a location, alteration thus seems to come about in location. But this does not support Aristotle's text, because Aristotle says that these sorts of movements are movements "in location" [406a16], not "relative to location."[1] And so we must say that undoubtedly alteration occurs in location. For movement in location is one thing, whereas a movement's being relative to location is another. Alteration occurs not relative to location but in location.

1. The distinction seems to be between an actual change in location (movement in location) and a change that occurs at a location (movement relative to location *[secundum locum]).* The interpretation that Aquinas is rejecting appears in Averroes, *De anima* I.38 (51.48–61).

For in the case of alteration the agent of alteration must draw near the thing being altered; without this, nothing would be altered. Therefore, since something draws near through local movement, local movement must be there as a cause.

162–171. /77/ The second problem arises because for these other philosophers it was not absurd for soul to be in location, since they supposed it to be moved through itself. Thus Aristotle's argument does not seem compelling. But one can reply to this in two ways: first, that the absurdity is brought out in the arguments to follow; second, that it is absurd for the following reason. If soul were in location, then one would have to assign to it a proper, separate location in body, and thus it would not be the form of the whole body.

{406A22–27} THE SECOND ARGUMENT

172–181. /78/ Aristotle introduces a second argument when he says **Further, if [soul],** etc. It runs as follows: if soul is moved locally through itself, then it is moved naturally. Yet everything that **is moved** naturally is **moved** forcibly. But if it **is moved** naturally, then **it rests** naturally, and if it rests naturally, then **it rests** forcibly. Therefore soul is moved forcibly and rests forcibly. But it is impossible that it should be moved and rest forcibly: for soul's movement and rest are voluntary.

A Problem with This Argument

182–190. /79/ Yet there seems to be a problem with this argument—namely, with the premise that what is moved naturally is moved forcibly. For the heavens are moved naturally, yet not forcibly. In reply we must say that, in truth, this premise is false. But it is true in the context of his opponents' position. For they claimed that the only bodies naturally moved are the four elements, and there we do see that movement and rest come about forcibly. In this context the argument goes through.

{406A27–30} THE THIRD ARGUMENT

191–199. /80/ Aristotle introduces a third argument when he says **Further, if,** etc. This runs as follows: these others say that soul is moved and that, through this, body moves. And you say that it has this movement due to one of the elements. Therefore [soul] follows the movement either of Fire or of Earth or of other **things in between.** Therefore **if** it participates in Fire's movement, **then** it **will be moved upward** only; **if Earth's, then downward.** But this is false,

because soul is moved in every direction. And this argument goes through, given the initial supposition.

{406A30–B5} THE FOURTH ARGUMENT

200–213. /81/ Aristotle introduces a fourth argument when he says **And because [soul] seems,** etc. This runs as follows: the reason you say that soul is moved is that it **moves the body.** Therefore **it is reasonable** to say that **it moves** the body **through** the **movements by which it itself is moved;** and conversely it will be **true to say that** it is moved through the movements by which it moves the **body.** But the **body is moved by a change in location.** Therefore **soul too** is **moved** with respect to location. But if soul's being moved with respect to location means changing the **body, then it is possible for** soul, **after going away,** to reenter the body **once more.** And since soul's coming into the body is the same as its making the body alive, **it follows from this that dead animals are** naturally **resurrected,** which is impossible.

An Objection to This Argument

214–218. /82/ To this argument some object by saying that this premise—that soul moves through the same movements by which it is moved—is not true. For soul is moved only in virtue of appetite and will, whereas it moves body through other movements.[2]

219–225. In reply we should say that to have appetites and to will, as well as other things of this sort, are not movements of soul but instead operations. Movements and operations differ in that a movement is the actuality of something incomplete, whereas an operation is the actuality of something complete.[3] Nevertheless, that premise is still true in the context of his opponents' view. For they said that the only way soul is movable is with respect to its moving the body.

Does the Unacceptable Conclusion Follow?

226–236. /83/ But if soul is moved locally, then does that unacceptable conclusion follow—that the bodies of animals would be resurrected? It is important to say that some said that soul is mixed together with the whole body and united in virtue of a kind of proportion. It is separated, they said, only when

2. The criticism seems to have been made by Porphyry. See Themistius, I 16.19–25 (42.69–72).

3. For this notion of an operation as "the actuality of something complete," see I.10.201–215, III.12.17–36.

that proportion is broken up. So as far as these thinkers are concerned, the conclusion does not follow. But as regards those who say that soul is in the body in such a way as to be in a location or in a vessel, and that at some point in time it makes its entrance, for them Aristotle's unacceptable conclusion does follow.[4]

{406B5–11} THE FIFTH ARGUMENT

237–247. /84/ Aristotle introduces a fifth argument when he says **Now [soul can be moved],** etc. This runs as follows: it is clear that what is a feature of something of itself *(secundum se)* is not necessarily a feature of it in virtue of something else *(secundum aliud),* unless perhaps *per accidens.* Therefore if it is a feature of soul that it is moved of itself and of its nature, then it is necessary for soul to be movable of itself. Thus it need not **be moved** through anything else and **by anything else.** But we see that it **is moved by sense objects** when it senses and by things worthy of appetite when it has appetites. Therefore soul is not moved through itself.

The Platonists' Opposition to This Argument

248–254. /85/ The Platonists oppose this, saying that soul is not moved by sense objects but that instead these objects are met by soul's movement insofar as soul passes through them. But this is false, because (as Aristotle proves [III.7.429a13–18]) possible intellect is brought to actuality through them—that is, through the *species* of sensible things.[5] Hence it must be moved by them in this way.

4. See Themistius, I 16.39–17.9 (43.94–98), who credits Zeno the Stoic with this mixture view.

5. Here Aquinas is talking about intelligible *species:* these *species* are the vehicles through which likenesses of the external world are brought into intellect. One is able to have thoughts about external objects insofar as one's intellect is informed by *species* that represent those objects. Such *species* occur also at the sensory level, at which point they are called sensible *species* (cf. I.10.189–200), and in the intervening air or water between the object and percipient, at which point they are called *species in medio* (cf. II.14.263–273).

The term *species,* in this context, is distinct (although derived) from the more familiar use of 'species' as a term for any sort of class or kind—e.g., the human species. To mark the difference I will italicize *species* when it is being used to refer to these cognitive intermediaries. For further discussion of these issues, see Robert Pasnau, *Theories of Cognition in the Later Middle Ages* (Cambridge: Cambridge University Press, 1997).

{406B11–15} THE SIXTH ARGUMENT

255–270. /86/ Aristotle introduces a sixth argument when he says **But now if soul,** etc. This runs as follows: **if soul moves itself, then** plainly **it itself will be moved** with respect to its substance. But everything that is moved departs and goes away **from that** by which and in virtue of **which** it **is moved.** In this way, if something is moved by a quantity, it goes away and departs from that quantity by which it is moved. Therefore if **soul** is moved by its substance and by itself, as these others say, then it **will depart** and go away **from its substance,** and thus movement will be the cause of its corruption. This runs contrary to those who said that soul, on account of movement, is made like the divine and is immortal (as is clear earlier [I 5, 405a30–b1]). And this argument works against them because they did not distinguish between operation and movement. For an operation does not lead to any departure but completes the thing that is operating. In movement's case, on the other hand, there must be a going away.[6]

6. Compare Themistius, I 18.20–25 (47.57–61).

Chapter 7

Specific Arguments Against Attributing Movement to Soul

DE ANIMA I.3.406B15–407A2

406b15–22. Now some say that soul moves the body in which it exists just as it itself is moved, as does Democritus, speaking like Philippus, the instructor of comedy. For [Philippus] says that Daedalus made a wooden Minerva that became movable when he poured in fluid silver. Democritus says something similar. For he says that the moved indivisible spheres, since by nature they never stand still, draw together and move every body.

406b22–24. Yet we should question whether this same thing brings about rest as well. As for how it will do so, this is difficult or impossible to say.

406b24–25. And, in general, it does not seem that soul moves an animal in this way, but through will and intellect of some kind.

406b25–28. Yet in the same way Timaeus too gives a physical explanation of how soul moves body. For inasmuch as it itself is moved, it also moves body, on account of its being combined with body.

406b28–31. For [it is] made up of the elements and distributed in accord with the harmonic numbers, inasmuch as it has a sense that shares the nature of harmony, and so that everything is carried along according to harmonic *(consonantes)* **motions.**

406b31–407a2. [God] turned direct awareness *(aspectum)*° **back in a circle and, dividing from one into two circles made to coincide twice, he further divided the one into seven circles, as if heaven's motions were soul's motions.**

1–6. *Analysis.* /87/ Above, the Philosopher introduced general arguments against those who claimed that soul is moved in its own right. Here, then, he introduces specific arguments against certain philosophers who seem to have said something especially problematic in their statements on soul's movement.

6–11. In this connection he does three things. He introduces arguments first against Democritus's view, then second against Plato's view (beginning at **Yet in the same way,** etc. {406b25}), and then third against one other view (beginning at **Another view about soul,** etc. {I.9.407b27}).

11–14. In connection with the first he does two things. First, he introduces and sets out Democritus's view of soul's movement. Second, he argues against it (beginning at **Yet we should question,** etc. {406b22}).

{406B15–22} DEMOCRITUS'S VIEW

15–36. /88/ In connection with the first it is important to know that in the preceding chapter Aristotle introduced one argument against those who claim that soul is moved in its own right and that through this it moves body. The argument is as follows: if soul moves body, then it necessarily does so through those movements by which it itself is moved. And this was granted by **some,** who **say that soul moves the body in which it exists just as it itself is moved**—i.e., through those movements by which it itself is moved. This was **Democritus,** who invoked an analogy to explain his view. For there was a certain master **of comedy** by the name of **Philippus;** he described in his books how someone by the name of **Daedalus made a wooden** statue of the goddess **Minerva.** This statue was **movable** because it was filled with **fluid silver**—i.e., quicksilver—and it was moved by the movement of that quicksilver. **Democritus says** much the same thing, then, in his account of soul's movement. **For** he says that soul is composed of **indivisible spheres** (as is evident earlier [I.3.403b31–404a16; I.5.405a10–13]). And because these sorts of indivisible spheres—i.e., atoms that are round in shape—are constantly **moved,** since they never come to rest, **they draw together and move** the whole **body,** inasmuch as they themselves are moved.

37–39. *Analysis.* /89/ Next, when Aristotle says **Yet we,** etc. {406b22 ff.}, he objects against this view of Democritus's, giving two arguments.

{406B22–24} A FIRST ARGUMENT AGAINST DEMOCRITUS

40–46. The first argument runs as follows. It is plain that soul is the cause not only of movement in an animal but of rest. Yet, according to Democritus's view, soul is not the cause of rest in an animal; for it **is difficult or impossible to say** that these spherical, indivisible bodies rest, since (as was said [406b21]) "they never stand still."

{406B24–25} A SECOND ARGUMENT AGAINST DEMOCRITUS

47–53. /90/ Aristotle introduces a second argument when he says **And, in general, it does not seem,** etc. This runs as follows: it is plain that the movement that quicksilver causes in a statue is not voluntary but brought about by force *(violentus).* Yet soul's movement is not by force, but voluntary; for it **moves through will and intellect.** And so Democritus's position is without merit.

54–57. *Analysis.* /91/ Next, when Aristotle says **Yet in the same way,** etc. {406b25 ff.}, he introduces Plato's view. And in this connection he does two things. First, he introduces Plato's view. Second, he disproves it (beginning at **So first, then, it is wrong,** etc. {I.8.407a2}).

57–61. In connection with the first he does two things. First, he establishes the similarity between Plato's view and Democritus's. Second, he explains Plato's view of soul (beginning at **For [it is] made up of the elements,** etc. {406b28}).

{406B25–28} HOW PLATO'S VIEW IS LIKE DEMOCRITUS'S

62–69. So Aristotle says first that, just as Democritus claimed that body is moved by soul insofar as the soul connected to it is moved, so **too** did **Timaeus,** who was introduced by Plato as a speaker [in the dialogue]. He accounts for the nature by which **soul moves body;** for he says that soul **moves body** insofar as **it itself is moved, on account of** soul's being connected to body by way of some kind of bond.

PLATO'S VIEW

70–74. *Analysis.* /92/ Next, when Aristotle says **For [it is] made up of the elements,** etc. {406b28 ff.}, he explains Plato's view. First, he sets out what [soul's] substance consists of; second, he sets forth how movement comes out of it (beginning at **[God] turned direct awareness back in a circle,** etc. {406b31}).

{406B28–31} WHAT SOUL'S SUBSTANCE CONSISTS OF

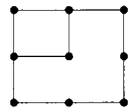
75–86. In connection with the first it is important to know that Plato, when he sets down the words given here to Timaeus, is speaking of the world-soul that lower souls, according to him, imitate. And so by taking up here the nature of the world-soul, he is in a way taking up the nature of every soul. It is therefore important to know that Plato, as was said, supposed number to be the substance of all things, for the reason given earlier [I.4.79–81]. And he supposed that the elements of number are 1 (as the formal element) and 2 (as the material element). For all numbers are made up of 1 and 2.

87–108. And because an odd number in a way retains something of 1's undivided character, he introduced two elements of number: even and odd. To the odd he attributed identity and finitude, while to the even he attributed diversity and infinitude. /93/ Aristotle gives an indication of this in *Physics* III [203a10–15]. For if the odd numbers are added to 1 in order, then the same numerical figure is always produced.[1] For instance, if to 1 we add 3 (which is the first odd number), then 4 comes out—a square number. If, further, we add to this the second odd number (namely, 5), then 9 comes out. Again, this is a square number, and so on, ad infinitum. But in the case of even numbers, a variety of figures always comes out. For if to 1 we add 2 (which is the first even number), then 3 comes out, which is a triangular number. Further, if we add to this 4 (which is the second even number), then 7 comes out, which is a septangular figure, and so on, ad infinitum. This, then, is how Plato supposed that Same and Different are the elements of all things; he attributed one of these to odd numbers, the other to even.

108–117. /94/ Yet Plato supposed that soul's substance is an intermediary between superior substances, which are always disposed in the same way, and corporeal substances, in which one finds diversity and movement. Hence he supposed that soul consists of these elements—namely, of Same and Different, and of even and odd numbers. For an intermediary ought to be allied with both extremes. And thus Aristotle says that Plato supposed soul to be **made up of the elements.**[2]

118–129. /95/ Further, it is important to know that, with respect to numbers, there are infinitely many different proportions. Some of these are harmonic *(harmonicae)*—i.e., a cause of harmonies *(consonantiarum)*. For a double proportion is the cause of the harmony which is called a whole octave *(diapason)*. A proportion of 3 to 2 *(sesquialtera)* causes the harmony which is called a fifth *(diapente)*. A 4-to-3 *(sesquitertia)* proportion causes the harmony which is called a fourth *(diatessaron)*. A 9-to-8 *(sesquioctava)* proportion causes a tone. Also, other harmonies are caused by certain other proportions. For instance,

1. This passage presupposes some familiarity with Pythagorean figurate numbers. In this tradition, square numbers were understood in geometric terms. The number 4, for example, was thought of as square because it was the number of points required to make a square figure. Now add five more points to this figure, so as to make a larger square with three points per side: the total number of points is nine, which makes 9 the next square number (see figure below). An analogous procedure generates triangular numbers (1, 3, 6, 10, . . .) and even septangular numbers (1, 7, 18, . . .). We can also shift to three dimensions and discuss cubic numbers, and so on. See C. B. Boyer and U. C. Merzback, *A History of Mathematics,* 2d ed. (New York: Wiley, 1968), pp. 54–55.



Number 5 added to square number 4 is 9, another square number

2. Compare I.4.73–87.

the harmony composed of a whole octave and a fifth is caused by a triple proportion, and a double-octave *(bis-diapason)* harmony is caused by a quadruple proportion.[3]

129–144. As Boethius tells us in his *Musica* [I.10], Pythagoras grasped this by striking four mallets that gave off consonant sounds according to the proportions just described. So, for instance, if one hammer were to weigh twelve ounces, another nine, another eight, and another six, then the twelve-ounce hammer would have a double proportion to the six-ounce hammer and would give off with it an octave harmony. But the twelve-ounce hammer has a 3-to-2 proportion to the eight-ounce hammer and produces the harmony of a fifth—as does the nine-ounce hammer to the six-ounce hammer. Also, the twelve-ounce hammer is in a 4-to-3 proportion to the nine-ounce hammer and produces with it the harmony of a fourth—as does the eight-ounce to the six-ounce hammer. Finally, the nine-ounce hammer, since it is in a 9-to-8 proportion to the eight-ounce hammer, produces the harmony of a tone.

145–156. /96/ Now although Plato supposed that all things are made up of numbers, he did not mean numbers with harmonic proportions. But he did suppose that soul is made up from numbers with these sorts of proportions; thus Aristotle says that Plato supposed it to be **distributed**—i.e., arranged, so to speak—**in accord with the harmonic numbers**—i.e., in accord with numbers that are proportionate to each other according to musical proportion. For he supposed that soul is made up of these numbers—1, 2, 3, 4, 8, 9, and 27—in which proportions of this sort are found.

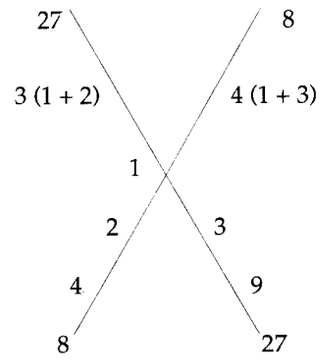
156–173. /97/ There are two reasons why Plato supposed that soul is made up of harmonic numbers. The first is that everything takes pleasure in what is like it and what shares its nature. And we see that soul takes pleasure in all things that are harmonized. Also, it is displeased by things that are outside the proper harmony, whether that be with respect to sound, or to color, or to any sense objects. Hence it seems that harmony belongs to soul's nature. And this is why Aristotle says **inasmuch as** soul **has a sense**—i.e., cognition—**that shares the nature of harmony.** /98/ The other reason is that the Pythagoreans and Platonists supposed that the best-harmonized sounds stem from the motions of the heavens. And because they supposed heavenly motions to come from the world-soul, they supposed that soul comes from harmonic numbers—so that it could cause harmonized movements. And this is why Aristotle says **and so that everything**—i.e., the universe—**is carried along according to harmonic motions.**

3. The theory contained in this and the following paragraphs relies heavily on Boethius's *De institutione musica,* especially bk. I, chaps. 10, 16. For an English translation, see Boethius, *Fundamentals of Music,* translated by C. M. Bower (New Haven: Yale University Press, 1989).

{406B31–407A2} HOW MOVEMENT COMES OUT OF SOUL

174–195. /99/ Next, when Aristotle says **[God] turned direct,** etc., he teaches how heavenly motion comes out of soul. Here we need to consider that all numbers, taken in terms of their natural order, are linearly positioned in a straight line inasmuch as we add one to another. But from the natural series of numbers we can select more than one series: if, for instance, one were to select, as if in a single line, the whole series of doubles, and in another line the whole series of triples, and in another line the whole series of quadruples, and on and on. So what a human being can do in thought with numbers, God also does by constructing the substances of things out of numbers. Thus in constructing soul's substance out of the numbers given earlier [154–155], all of which are, according to natural order, in one straight line, he separates, so to speak, two lines: one of doubles and one of triples. For these proportions contain all the harmonic proportions: a double proportion is divided into those of 3 to 2 and 4 to 3, and the triple into the double and that of 3 to 2.

195–218. So in the aforesaid numbers we have a series of doubles up to the cube number—1 2, 4, and 8—and, in the same way, another series of triples—1, 3, 9, and 27. These two series are obviously joined together at unity, as if there were two straight lines containing an angle [see figure below]. /100/ Moreover, if those in the line of triples were joined together with unity, then the result will be the numbers that are in the line of doubles: e.g., if we were to add 3 to 1, then we would have 4; conversely, if we were to add 2 to 1, then we would have 3. And in this way we will construct, as it were, two intersecting lines—in the manner of the Greek letter that is called chi: X. /101/ And if we go on further we will return to the same numbers: for we will go on from 4 to 8, and from 3 to 27. Thus in both cases we will derive, so to speak, a kind of circle.



Soul represented by twin number-lines

219–233. /102/ It is important to know, however, that Plato took the things found in a more composite nature to stem from the distinguishing features *(proprietate)* of a nature that is more simple, just as the harmonies of sounds stem from the proportions of numbers. Yet he supposed that soul's substance is intermediary between numbers, which are more abstract, and sensible substance. Thus he deduced soul's distinguishing features from the distinguishing features of the numbers discussed earlier [174–218]. For in the case of soul, one first needs to consider **direct awareness** *(aspectum)*, in virtue of which one is directly aware of an object and later returns **in a circle,** inasmuch as intellect reflects back on itself. Also, we find in the intellective soul a circle of evens and odds, so to speak, inasmuch as it has cognition of things that have the same nature and of things that have different natures.

233–258. We can further extend this [account] up to the sensible substance of the heavens, which soul moves. /103/ For there are two circular motions in the heavens to be considered. One, simple and uniform, is that in virtue of which the heavens revolve from east to west in a diurnal motion. This, of course, takes place along the equator. The other motion, that of the planets, runs from west to east along the zodiac. It intersects the equator at the two equinoctial points (the beginnings of Aries and Libra) and falls farthest away from the equator at the two points of the solstice (the beginnings of Cancer and Capricorn). /104/ And because the first motion is uniform, it is not divided into multiple motions and is likened to the [above-mentioned] circle of odd numbers. And for this reason as well the first circle is larger, since the odd numbers introduced earlier [195 ff.] are larger. /105/ The second motion, however, has greater variety; thus it seems to pertain to the circle of even numbers. It is divided into seven circles by six intervals of double and triple numbers (as the *Timaeus* says [36d]): for where there are six divisions there are necessarily seven things divided. And thus these circles are smaller and are contained by the largest circle, which is of the odd numbers.

259–276. This, then, is how the text should be read: **so that everything** (i.e., the universe) **is carried along according to harmonic motions** (i.e., as the harmonized heavenly motions are derived from soul's harmony), God **turned direct awareness back in a circle** in the way set out (in terms of the distinguishing features of both number and soul) **and, dividing from one** (because of the one natural number series and soul's one intellective force) **into two circles**—that is, of even and odd (as regards numbers), and the understanding of movable and immovable (as regards soul), and motion along the equinox and zodiac (as regards the heavens). /106/ Then Aristotle adds **made to coincide twice,** since the two intersecting circles touch one another at two points; **he further divided the one** (namely, the lower circle) **into seven circles** (serving as those of the planets), **as if heaven's motions were soul's motions**—i.e., as if heaven were moved through soul's movement.

Chapter 8

Arguments Disproving Plato's View

DE ANIMA I.3.407A2–B26

407a2–10. So first, then, it is wrong to say that soul is a magnitude. For Plato holds that this [soul], which is of the whole, is the sort that is sometimes called intellect. For it is not like the sensory soul, nor like the desiring soul. For the movement of these is not a rotation. Intellect, however, is one and continuous, in the way that understanding is. Understanding, however, [is the same as its] intellectual objects, whereas these, because [they are arranged] sequentially, are one in the way that number is, but not in the way that magnitude is. For this reason, then, neither is intellect continuous in this way; it is, rather, either indivisible *(impartibilis)* **or not continuous in the way that any magnitude is.**

407a10–18. But how will it intellectively cognize when it is a magnitude? By any one of its parts—part either with respect to magnitude or with respect to point (if one must call this a part)? If with respect to point, and these are infinite in number, then it is clear that [intellect] will never traverse [them all]. But if with respect to magnitude, then it will intellectively cognize the same thing over and over, an infinite number of times. Yet it seems to be in contact just once.° If, on the other hand, it is sufficient for any one of its parts to touch, then why must it be moved in a circle or, in general, have magnitude? And if it is necessary for it to cognize intellectively by touching with the whole circle, then what touch is there through its parts?

407a18–19. Moreover, how will it intellectively cognize what is divisible *(partibile)* **through what is indivisible, or what is indivisible through what is divisible?**

407a19–31. Yet intellect is necessarily this circle. For intellect's movement is understanding, whereas a circle's movement is rotation. Therefore, if understanding is a rotation, then intellect will indeed be a circle (when° understanding is a rotation of this sort). But it will always intellectively cognize something if the rotation is perpetual. For our practical understandings have a terminus, since all of them are for the sake of something else. Theoretical [understandings], moreover, likewise have a terminus in reasoning *(rationibus)*.° **For all reasoning is a definition or a demonstration. But demonstrations both come from a starting point and in a way have an end: a syllogism or a conclusion. And if no conclusion is drawn, still they do not turn back toward their starting point; they always draw on a middle and an**

extreme [term], proceeding in a straight line. But rotation turns back toward its starting point. All definitions, moreover, [also] have an end.

407a31–32. Further, if the same rotation occurs over and over, it will have to cognize intellectively the same thing over and over.

407a32–34. Moreover, understanding is more like a kind of rest and stillness than like movement—and in the same way syllogism, too.

407a34–b2. Also, there is no happiness that [comes] not readily but rather by force. But if its movement is not its substance, then indeed [soul] will be moved contrary to nature.

407b2–5. It is a hardship, however, to be mixed together with body, unable to be set free; this is, moreover, something to be fled—if in fact it is better for intellect not to exist with body, as is routinely said, and as it seems to many.

407b5–13. Yet the cause of the heavens' being carried along in a circular manner is unclear. For soul's substance is not the cause of their being carried along in a circle; [soul] is rather moved in this way accidentally. Nor again is body the cause; rather, soul is more [the cause] of that. And, further, neither is this [kind of movement] said to be better. It had to be for this reason that God made soul be carried along in a circle: that it is worthier for it to be moved than to be stationary, and to be moved in this way rather than in another way. Yet since this sort of scrutiny more properly belongs to different accounts, let us here set it aside.

407b13–26. This account of soul, as well as many others, leads to an unacceptable result. They join and introduce body to soul, but present no account of the cause through which [it is joined] or of how body is disposed. Yet this certainly seems to be necessary. For it is because of commonality that one thing brings something about while another is affected and one thing produces movement while another is moved; none of these occur mutually in just any given things. But these [philosophers] try to say only what sort of thing soul is, whereas they present no account of the receptive body—as if it were possible, as in the Pythagorean fables, for any given soul to make its way into any given body. For it seems that each individual [soul] has its proper species and form. And so they are speaking as if one were to say that the art of building makes its way into flutes. For an art must use its tools *(organis),* **and soul its body.**

1–13. *Analysis.* /107/ Having introduced Plato's view, Aristotle here rejects it. In this connection it is important to realize that very often, when Aristotle rejects Plato's views, he is rejecting them not with respect to Plato's intention but with respect to how his words sound. Aristotle acts in this way because Plato had a faulty manner of teaching: he says everything figuratively and teaches through symbols, intending through his words something different

from how they themselves sound. (Thus he said that soul is a circle.) So, to prevent someone from falling into error on account of these words, Aristotle argues against Plato with respect to how his words sound.

14–22. /108/ Aristotle introduces nine arguments in order to overturn the view introduced above. Some of these go against Plato, and some against his words. For Plato did not hold that intellect is in truth a quantitative magnitude or a circle and a circular movement. Instead, he attributed this to intellect metaphorically. Nevertheless, Aristotle still argues against him in respect of how his words sound—to prevent someone from erring on this basis.

{407a2–10} THE FIRST ARGUMENT

23–39. /109/ So first Aristotle, in connection with his first argument, clarifies which soul Plato was thinking about: namely, the soul of the universe. **He holds that this** (soul), **which is of the whole** (i.e., of the universe), **is** intellective only. **For it is not** the nutritional soul, since it needs no nourishment, nor is it **the sensory soul,** since it lacks an organ, **nor** is it **the desiring soul,** since the desiring soul is a consequence of the sensory soul.[1] And so Plato said that the soul of the universe is neither sensitive nor desiring, because he held that the movement of the soul of the universe is circular. Yet **the movement of these**—that is, of the sensory and desiring soul—**is not** circular, for sense does not reflect on itself, whereas intellect does reflect on itself: human beings intellectively cognize that they are intellectively cognizing. So for this reason Plato says that this soul is intellective only, and for this reason he says that intellect is a kind of magnitude, and a circle.

39–73. /110/ Aristotle rejects this view. Plato, he says, was **wrong to say that soul is a magnitude;** he made a mistake in speaking of soul as a circular magnitude, dividing it into two circles. /111/ And Aristotle shows that he made a mistake. For it is the nature of soul that a judgment regarding any of its powers is taken from that power's act or operation, whereas a judgment about the operation is taken from the object. For powers are cognized through acts, acts through objects. And so it is that a power's definition contains its act, whereas the act's definition contains its object. Yet it is evident that a thing derives its unity through that from which it derives its existence and species. Therefore, if intellect exists and obtains its species from what is intelligible, since that is its object (I am speaking of actualized intellect, since it is nothing before it intellectively cognizes),[2] then clearly if it is one and continuous,

1. Compare II.4.413b22–24.
2. Compare III.7.429a24, III.9.429b31.

as Plato supposed, **intellect** will be **one and continuous** in the same way that intelligible things are one and continuous. For intellect is one only **in the way that understanding** *(intelligentia)* **is** (and this is its operation, to cognize intellectively). And an act is one only in the way that its object is one, since acts are distinguished in terms of their objects. So since the object of intellect is intelligible things, **whereas these** (intelligible things) are **not one in the way that a magnitude** or a continuum **is** but rather **in the way that number is, because** they are arranged **sequentially,** intellect is clearly not a magnitude, as Plato said it was. **It is, rather, either indivisible** *(impartibilis),* "as is that associated with first terms,"[3] **or not continuous in the way that any magnitude is,** but in the way that a number is: insofar as we intellectively cognize one thing after another, and often many things have their terminus in one thing—"as, in the case of syllogisms, propositions have their terminus in a conclusion."[4]

{407A10–18} THE SECOND ARGUMENT

74–104. /112/ Aristotle introduces his second argument beginning at **But how will it intellectively cognize,** etc. This runs as follows. Someone could say that Plato supposed magnitude to be in intellect not because of many intelligible things but because of even just one thing that must be intellectively cognized. /113/ To the contrary, this cannot be the case. For Plato held the view not that intellectively cognizing comes about through intellect's taking in *species* but that intellect cognizes through some kind of contact: insofar, that is, as it comes up against and confronts intelligible *species.* As was said earlier, he attributed this contact to a circle [I.7.237–258, 262–269]. So I ask you: if intellect **is a magnitude,** and if it cognizes in virtue of contact, then **how** does **it cognize?** In order to do so, it touches with respect to either its whole or a part of it. If while in contact with respect to its whole it intellectively cognizes the whole [object], then its parts will be not necessary but useless. In this case it is not necessary for intellect to be a magnitude and [two] circles. But if while in contact with respect to its parts it cognizes parts [of the object], then this will be the case with respect to either all of its parts or only one. If [it is in contact] with respect to only one [part], then the same as before will be true: the other [parts] will be superfluous and so it will not be necessary to suppose that intellect has parts. But if it is going to cognize intellectively while in contact with respect to all of its parts, then this will be the case **either with respect to** parts that are points *(partes punctales)* **or with respect to** quantitative parts. **If**

3. Themistius, I 21.1 (52.61).

4. Themistius, I 20.38 (52.56–58).

with respect to parts that are points, then, as there are an **infinite number** of points in every magnitude, it will have to touch an infinite number of times before it intellectively cognizes. But it will never have cognition in this way, because one cannot **traverse** infinitely many things.

104–111. /114/ (Aristotle speaks of parts that are points not because he holds that a magnitude is divided into such parts but because he is arguing against Plato's reasoning. Plato held the view that body is made up of surfaces, surfaces of lines, and lines of points, a view that Aristotle disproved in the *Physics* [VI.231a21–b18], where he showed that adding point to point adds nothing.)

111–122. /115/ **But if** intellect cognizes while in contact **with respect to** its quantitative parts then, since each part is divided into many parts, it follows that it would **intellectively cognize the same thing over and over.** Further, since every quantity is infinitely divisible in respect of the same proportion (not in respect of the same quantity), it follows that it would intellectively cognize **an infinite number of times,** which is unacceptable.[5] Therefore **it seems** that it makes **contact** only **just once.** And thus magnitude should in no way be attributed to intellect: neither as regards many intelligible things, nor as regards one.

A Proof That Intellect Is Not Divisible

123–131. /116/ Notice that here Aristotle covertly shows that intellect by its nature is not divisible *(partibilis)* but something indivisible. For what can be intellectively cognized, in any given thing, is its quiddity. And a thing's nature is whole in every part, just as the nature of a species is whole in each individual (the whole nature *human being,* for instance, is in each individual), and the individual is indivisible. Hence that which is intelligible in any thing is indivisible; consequently so is intellect.

{407A18–19} THE THIRD ARGUMENT

132–143. /117/ Aristotle introduces his third argument when he says **Moreover, how will it intellectively cognize,** etc. This runs as follows: it is evident that if we suppose intellect to be indivisible, then it will be clear enough how it intellectively cognizes both a thing that is divisible and a thing that is indi-

5. A quantity "is infinitely divisible in respect of the same proportion" in the sense that if you take away half of any extended object, and then half of that half, and then half of that quarter, and so on, you can (in principle) keep going forever. In contrast, if you take away *quantitative parts* of an object (e.g., an inch, and then another inch, etc.), you will eventually run out of material.

visible. For it will cognize a thing that is indivisible in virtue of the distinctive character of its nature, which (as we have said [123–131]) is **indivisible,** whereas it will **intellectively cognize what is divisible** by abstracting from its being divisible. But if intellect is supposed to be **divisible,** as Plato held, then it will be impossible to find an account of how it intellectively cognizes **what is indivisible.** And so it seems that Plato unacceptably supposed intellect to be a magnitude or to be divisible.

{407A19–31} THE FOURTH ARGUMENT

144–158. /118/ Aristotle introduces his fourth argument when he says **Yet intellect,** etc. This runs as follows: you say that **intellect is a circle,** and you say that intellect is moved. But **a circle's movement is rotation, whereas intellect's movement is understanding. Therefore if intellect** is **a circle,** then **understanding** will necessarily be **a rotation.** But this is false. For since in a rotation one cannot find an actual starting point or end (as *Physics* VIII proves [262a19–b8, 265a27–b8]), it would also follow that understanding (viz., intellect's operation, which is to cognize intellectively) would never have a terminus. But this is false. For understanding has both an actual starting point and an actual end. Therefore understanding and rotation are not the same, and consequently intellect is not a circle.

158–185. /119/ Now we can prove that understanding has an actual starting point and end. For every understanding is either practical or theoretical. But it is evident that **our practical understandings have a terminus**—i.e., an end. For **all of them are for the sake of something else**—namely, for the sake of an activity, and the activity is their terminus. **Theoretical** understandings, **moreover,** [also] have an end—namely, **reasoning** *(rationes).* For they all have some kind of reasoning as their terminus: **reasoning** that is either **a definition,** in the case of simple understanding, **or a demonstration,** when [intellect] compounds and divides. But first **demonstrations** are based on principles that are certain **and in a way have an end: a syllogism or a conclusion.** /120/ And **if** someone says that from one conclusion another follows, and thus does not have a terminus, nevertheless one can still say that conclusions are not circular. For there is no rotation in understanding, as *Posterior Analytics* I proves [72b17–73a20]. Rather, conclusions run **in a straight line,** and in something straight it is impossible to find an infinite motion or process. /121/ **Definitions** also have a starting point and an end. For genera do not extend upward ad infinitum; rather, one takes, as it were, the first, most general genus. Nor do species extend downward ad infinitum; instead, one must stop at the most specific species. Thus the most general genus is the starting point in definitions, whereas the most specific species serves as the terminus or end. And in this way it is plain that all understanding has an actual starting point and end.

{407A31–32} THE FIFTH ARGUMENT

186–214. /122/ Aristotle introduces his fifth argument when he says **Further, if the same,** etc. This argument depends on the preceding one, in a way, and is almost part of it. For it was proved earlier [407a19–22] that if intellect is a circle, as Plato claimed, then understanding will be a rotation. Aristotle also proves by the above argument [407a22–31] that understanding is not a rotation. And he proves that same thing here through the following argument: we see that there is this difference between rotation and other movements, that it is impossible in other movements for one and the same movement to be repeated over and over on the very same quantity. This is made clear by going through the individual kinds of movement. For in the case of alteration it is impossible for the same movement to be repeated on the same thing. For the same thing in the same respect is not brought from white to black and from black to white. Also, in the case of movement involving increase, it is impossible for one and the same thing to be increased and decreased in the same respect. It is also impossible, in the case of local movement, for the same movement to be repeated in the same respect. For in the case of local movement along a straight line there are always two actual termini. Hence, if the movement were repeated, it would have to use the terminus *ad quem* twice, as end and as starting point. But a rest would necessarily intervene at that point, and hence it would not be numerically the same movement. It is only in the case of rotation, then, that one and the same movement can be repeated over and over with respect to the same quantity. The reason for this is that in rotation's case there are not actual termini; hence, however much it is repeated, there is no intervening rest, nor does the movement vary.

215–228. /123/ So on this basis Aristotle argues as follows: you say that intellect is a circle, and therefore understanding is a rotation. But it is unacceptable that understanding should be a rotation. Therefore the first is unacceptable as well. /124/ That this is unacceptable is shown in the following way: it is evident that **the same rotation,** in one and the same respect, **occurs over and over**—i.e., is repeated. Therefore, if understanding is a rotation, as you say, then understanding—with respect to one and the same movement, and on the same thing—is repeated over and over. And thus intellect **will intellectively cognize the same thing over and over.** For in moving, intellect

touches, and in touching it cognizes, as they themselves say. And in circling it touches over and over the same thing; thus it will intellectively cognize the same thing over and over, which is unacceptable.

{407A32–34} THE SIXTH ARGUMENT

229–251. /125/ Aristotle introduces his sixth argument when he says **Moreover, understanding,** etc. This runs as follows: if understanding is a rotation, as you say, then it ought to be like movement. But we see the complete opposite. For **understanding is more like rest than like movement.** Therefore understanding is not a rotation. But that it is more like rest than like movement is plain: for, as *Physics* VII shows, we cannot become wise when our movements are neither settled nor at rest. This is why it is not easy to find wisdom in children and in all those in whom movements do not come to rest. Instead, one acquires wisdom when one is at rest: that is why Aristotle says that "while at rest and seated the soul becomes wise and prudent" [247b23–24]. /126/ But because one could say that this is true of simple understanding but not of a syllogism, Aristotle goes on to say that **in the same way syllogism, too,** is more like rest than like movement. And this is evident; for before a syllogism has been produced regarding something, the human intellect and mind fluctuates from one side to the other, not coming to rest with either one. Once the syllogism has been produced, however, then [intellect] fixedly adheres to one side and comes to rest there.

{407A34–B2} THE SEVENTH ARGUMENT

252–267. /127/ Aristotle introduces his seventh argument when he says **Also, there is no happiness,** etc. This runs as follows: it is evident that soul's happiness *(beatitudo)* consists in intellectively cognizing. But happiness, since it is soul's perfection, cannot exist in what occurs **by force** and contrary to nature. Therefore, since **movement is not** in keeping with soul's nature and **substance,** but rather **contrary to** its **nature,** it is impossible that to cognize intellectively, which is soul's operation and what its happiness consists in, should be movement, as Plato said. It is evident from Plato's position, however, that this movement is contrary to soul's nature. For he himself said that soul is made up of numbers;[6] then later he said that it is distributed into two circles,

6. Compare I.4.121–164, I.7.70–173.

and these he turned into seven,[7] and from this comes movement. It is apparent on this basis that movement belongs to it not naturally, but *per accidens.*

{407B2–5} THE EIGHTH ARGUMENT

268–286. /128/ Aristotle introduces his eighth argument when he says **It is a hardship, however,** etc. This runs as follows: it seems that in Plato's view, soul is not by its nature united to body. For he supposes that it is first composed of the elements, and then combined and made one with body, and that it cannot withdraw from there when it wishes. From this we get the following: it is a punishment whenever one thing is united against its nature with something else and cannot withdraw from that thing when it wishes. And whenever one thing is made worse through its union with another, then this is **something to be fled** and is harmful. But soul is united with body against its nature, as is said, and cannot withdraw from there when it wishes, and moreover is made worse by its union with body—as **is routinely said** by the Platonists, **and as it seems to many** of them. Therefore **to exist with body** is a punishment for soul and something to be fled. So Plato's claim is not acceptable, namely, that soul is first composed of the elements and then **mixed together with body.**

{407B5–13} THE NINTH ARGUMENT

287–315. /129/ Aristotle introduces his ninth argument when he says **Yet the cause,** etc. This runs as follows: Plato speaks of the soul of the universe and says that it is moved circularly. But in his view **the cause** of why **the heavens** are moved circularly is **unclear**—i.e., no cause is given. For if the heavens are moved circularly, this will be either due to [their inner] principles, naturally, or due to some end. If one says naturally, due to principles, then this will be either due to the nature of the soul or due to the nature of the heavenly body. But it is not due to the **soul's** nature, since being moved **in a circle** is not true of the soul in virtue of its **substance,** but **rather** *per accidens.* For, as was said, the soul is moved *per se* and in virtue of its substance with a straight motion, and then "[God] turned direct awareness back into circles" [I.7.406b31]. Neither, again, does this movement occur due to the nature of the heavenly **body** itself. For body is not the cause of soul's movement; **rather, soul is more** the cause of body's movement. If, however, one says that it occurs due to some

7. Compare I.7.406b32–407a1.

end, then no determinate end can be given (in keeping with Plato's view) for why [the heavens] are moved in this way and not by some other motion—unless that **God** so wanted them to be moved. But there is some other reason, a reason Plato does not give, for why God thought it **worthier for** the heavens **to be moved than to be stationary, and to be moved in this way**—i.e., circularly—**rather than** with another motion. But because giving this reason **belongs more properly to** other **accounts**—i.e., to another treatise, the *De caelo*—**let us** then **set it aside** for now.[8]

{407B13–26} A TENTH ARGUMENT

316–338. /130/ Aristotle introduces a tenth argument when he says **This account of soul, as well as many others,** etc.[9] This argument, which applies not only to Plato but to many others, leads to absurd conclusions and reveals their positions as inadequate. It runs as follows: there is clearly a certain proportion between what produces movement and what is moved, and also between what acts and what is affected, and likewise also between form and matter. For not just any form is suited to and united with any body, nor does every agent act on everything that is affected, nor does just any mover move just anything that is moved. Rather, between such things there must be something in common and some proportion on which basis the one is naturally suited to produce movement, the other to be moved. Yet it is plain that these philosophers supposed **soul** to be in **body** and to move body. So when they speak about soul's nature, it **seems necessary** that they should have said something about body's nature as well: **the cause through which** it is united with body, **how body is disposed** relative to it, and how body is related to soul. So they do not **present** an adequate **account** of soul when they **try to say only what sort of thing soul is** and neglect to show what sort of thing **the body** is that takes it on.

338–363. /131/ As a result, what is described in **the Pythagorean fables** becomes **possible** for them: **any given soul** may **make its way into any given body.** It might by chance happen, for instance, that the soul of a fly comes into the body of an elephant.[10] Yet this cannot occur. For **each individual** body,

8. Aristotle discusses circular motion in *De caelo* I.268b12–269b16; see also *Physics* VIII.265a12–266a9.

9. Earlier (line 14), Aquinas said that there would be nine arguments against Plato's view; perhaps this tenth argument isn't counted there because it is directed against others as well as Plato.

10. Compare Themistius, I 24.1 (59.96–97).

especially animal bodies, **has its proper form and proper species,** as well as what properly moves it and what is properly moved. The body of a worm greatly differs from the body of a dog, as does the body of an elephant from the body of a flea.[11] Those who say this, that any given soul makes its way into any given body, **are speaking as if one were to say that** the art of weaving **makes its way into flutes,** or the coppersmith's art into a loom. And yet if these arts did, through themselves, naturally make their way into bodies or **tools,** then not just any one would make its way into any other. Rather, the flutist's art would make its way into flutes, not lutes, and the harpist's art would make its way into harps, not flutes. In the same way, then, if there is a body for every soul, then each soul will make its way into the proper body—or rather, soul itself *forms* the body that fits it and does not take up one already prepared.[12] So Plato and other philosophers who discussed only the nature of soul did not say enough: they did not establish that for each soul there is a suitable body, nor how, and existing in what way, they are united.

11. Compare Themistius, I 23.35–38 (59.91–95).

12. Compare Themistius, I 24.8 (60.4).

Chapter 9

Against Defining Soul as a Harmony

DE ANIMA I.4.407B27–408A34

407b27–30. Another view about soul has been handed down, one credible to many (not any less than those that have been discussed), providing direct arguments, even in arguments made in common.° For they said [that soul is] a kind of harmony.

407b30–32. For [they say] that harmony is the due tempering and composition of contraries, and the body is composed of contraries.

407b32–34. Yet harmony is a certain ratio of the things composed, or else it is the composition, whereas it is not possible for soul to be either of these.

407b34–408a1. Further, producing movement does not belong to harmony, yet all attribute this to soul.°

408a1–5. It is more suitable, however, to speak of harmony in connection with health, and bodily capacities in general, than in connection with soul. This would have been clear if someone had tried to reduce the way soul acts and is affected to a kind of harmony. For it is difficult to fit these together.

408a5–18. Further, we speak of harmony in reference to two [cases]. On one hand, most strictly, [in the case of] magnitude in things that have position and movement, [we say that harmony is] the composition of these things when they so fit together that no homogeneous thing is left out. Hence, on the other hand, [we also speak of] the ratio of things that are mixed together. [The account is] reasonable in neither way. The composition of the body's parts is very easily investigated: the parts have many compositions and are [composed] in many ways. So out of what, and how, is it suitable to take intellect to be a composition, or the sensory capacity, or the appetitive capacity? But it is similarly unacceptable for soul to be the ratio of a mixture. For the mixing together of elements in virtue of which there is flesh does not have the same ratio as that in virtue of which there is bone. It will be the case, then, that it has many souls. And, with regard to every body, if indeed they all do come from elements mixed together,* then the ratio of the mixing together will be a harmony and soul.

408a18–21. Now someone certainly should examine Empedocles about this: he says that each one of these [bodies] exists through a kind of ratio. Is soul the ratio, then, or is it rather something else, coexisting, brought about in the parts?

408a21–22. Further, is Concord the cause of each and every mixture, or [only] of those in accord with a ratio?

408a22–24. And is this [Concord] the ratio, or something else beyond the ratio? These [issues], therefore, raise puzzles of this sort.

408a24–29. But if soul is something different from the mixture, what is taken away at the same time that existence [is taken away] from flesh and the other parts of an animal? Moreover, if it is indeed not the case that each one of the parts [of the body] has a soul, and if soul is not the ratio of composition, then what is it that accounts for [the body's] being corrupted when it lacks soul?

408a29–34. It is clear from what has been said, then, that it is not possible for soul to be a harmony or to be moved circularly. Yet it is moved accidentally, as we said, and is self-moving, in such a way that what it is in is moved and is moved by soul. It is not otherwise possible for [soul] to be moved locally.

1–11. *Analysis.* /132/ Now that the Philosopher has rejected Plato's view, he here in turn rejects another view that conforms with Plato's view in one respect. For there were some who said that soul is a harmony; they agreed with Plato in that Plato said that soul is composed of harmonic numbers, whereas these others said that soul is a harmony. They differed, however, in that Plato said that soul is a harmony of numbers, whereas these others said that soul is a harmony of both composite and contrary things.

12–17. In this connection Aristotle does three things. First, he introduces the view of these philosophers and the argument for their view. Second, he argues against their view (beginning at **Yet harmony is,** etc. {407b32}). Then, third, he shows a way in which this view is highly plausible (beginning at **But if soul is something,** etc. {408a24}).

{407B27–30} WHAT THIS VIEW IS

18–39. /133/ In connection with the first he does two things. First, he introduces the view of soul that is under discussion: he says that **another view about soul has been handed down** by the ancients. This view seemed to have correct **arguments**—not only specifically about soul but also as regards what is **common** to all basic principles. And he says as regards what is "common," because the ancient philosophers never took up formal causes but only material ones. And of all of them, those who most seemed to approach formal causes were Democritus and Empedocles. Empedocles claimed that all things are constituted out of six basic principles, four of which he claimed to be ma-

terial (the four elements), whereas two (Friendship and Strife) were partly material, partly active. And they [both] said that these material principles had among themselves a kind of proportion that resulted from them in such a way that they combined into something that is one; for without this they could not exist together. This proportion, they said, is the form of things and a kind of harmony. And that is why **they said** that soul, like other forms, is **a kind of harmony.**[1]

{407b30–32} AN ARGUMENT FOR THIS VIEW

40–48. /134/ Second, when Aristotle says **For harmony,** etc., he introduces an argument for this view, saying that **harmony is** the combination, proportion, and **tempering of contraries** in composites and mixtures. The proportion between these **contraries** is called the harmony and form of that composite. Thus, since soul is a kind of form, they said that it is a harmony. This view is said to have belonged to a certain Dinarchus and to Simmias and Empedocles.[2]

ARGUMENTS AGAINST THE VIEW

49–54. *Analysis.* /135/ After this, when Aristotle says **Yet harmony,** etc., he argues against the view under discussion. And in this connection he does two things. First, he argues in general against the position of the philosophers mentioned. Then, second, he argues specifically against one who posited it, namely, against Empedocles (beginning at **Now someone certainly should,** etc. {408a18}).

1. Earlier discussions of Democritus do not make it very clear why he should be included here with Empedocles. At I.3.63–123 and I.5.66–92, it looks as if Democritus identifies soul with a certain kind of atom, the round kind, which has the nature of Fire. But at the start of *De generatione et corruptione* (314a21–b1), Aristotle makes it clearer that Democritus takes his indivisible atoms to be the building blocks of composite things, such as fire, water, and presumably soul. On this view, then, soul would be identified as a harmonious composition of the proper sorts of atoms.

2. The best-known discussion of this doctrine occurs in Plato's *Phaedo,* 85e, where the position is presented by Simmias. "Dinarchus" is actually Dicaearchus, a follower of Aristotle. Aquinas is getting his information from Nemesius's *De natura hominis,* a work that he believed was written by Gregory of Nyssa. See *De natura hominis,* edited by G. Verbeke and J. R. Moncho (Leiden: E. J. Brill, 1975), pp. 24 (lines 31–34), 30 (lines 73–75).

{407b32–34} THE FIRST ARGUMENT

55–69. Aristotle objects to the position through four arguments, the first of which runs as follows: it is evident that, strictly speaking, harmony is a pleasing combination *(consonantia)* of sounds. But these philosophers adapted this name to all right proportion, both in things composed of diverse parts and in things mixed together out of contraries. In this respect, then, **harmony** can mean two things: either **the composition** or mixing together itself, or the proportion of that composition or mixing together. But it is evident that **soul** is **not either** of these. Therefore soul is not a harmony. That soul is neither the composition nor the proportion of the composition is clear. For they take soul to be a kind of substance, whereas these two things are accidents. Therefore they are not the same.

{407b34–408a1} THE SECOND ARGUMENT

70–80. /136/ Aristotle introduces a second argument when he says **Further, producing movement,** etc. This runs as follows: it is evident that **all** philosophers say that **soul** produces movement. But **harmony does not** produce **movement;** rather, it follows from and is the result of moving. Thus it is that a kind of harmony in sound results from a musician's moving the strings, and a kind of proportion in something composite results from someone's joining and duly tempering the parts. Therefore, if soul is a harmony and this harmony results from something that harmonizes, then we will have to introduce another soul to do the harmonizing.

{408a1–5} THE THIRD ARGUMENT

81–102. /137/ Aristotle introduces a third argument when he says **It is more suitable,** etc. This runs as follows: in *Physics* IV [211a6–11] the Philosopher says that in any case where someone attributes a definition or nature to something, that attribution, if it is adequate, will apply to how that thing functions and **is affected.** For what a thing is is best defined when we have cognition not only of the thing's substance and nature but also of its accidents and how it is affected.[3] Therefore, if soul is a kind of harmony, we must reach a cognition of soul's functions and accidents through a cognition of harmony. But this **is** extremely **difficult.** Say, for instance, that we want to trace soul's functions back

3. Compare I.1.402b16–403a2.

to **harmony.** "To which harmony will sensing belong, and to which loving or hating," and to which intellectively cognizing?[4] But **it is more suitable,** through the cognition of **harmony,** to arrive at a cognition of the accidents belonging to body. If, for instance, we want to have a cognition of **health,** then we will say that it is the duly combined and matched constitution of humors and qualities in the body, **and** likewise for other **bodily capacities.** And thus harmony should be attributed to body more **than** to **soul.**

{408A5–18} THE FOURTH ARGUMENT

103–127. /138/ Aristotle introduces a fourth argument when he says **Further, we speak,** etc. This runs as follows: **harmony** is sometimes found in composite things and **in things that have position and movement.** For when these are at the same time positioned and ordered relative to one another in such a way **that** nothing **homogeneous is left out**—i.e., nothing of the same genus is lacking there—then these parts "are said to be well harmonized, and their composition is called a harmony: pieces of wood, for instance, and stone," and other natural bodies.[5] In this way, too, strings or flutes, when they are well ordered so that a pleasing combination of sounds results from them, are said to be well harmonized; this sort of pleasing combination is called harmony. And it is in this way that 'harmony' is used, **strictly.** Sometimes, on the other hand, harmony is found in bodies **that are mixed together** from contraries. For when contrary things are combined and mixed together in something in such a way that there is neither incompatibility nor excess as regards any one of the contraries (e.g., hot or cold, wet or dry), then these contraries are said to be well harmonized and their **ratio**—i.e., their proportion—is called a harmony. Therefore, if soul is a harmony, it will be said to be so with respect to one of these ways. But it is evident that **in neither** of these **ways** is it **reasonable** for soul to be called a harmony. Therefore they wrongly say that soul is a harmony.

127–151. /139/ Now it is plain that soul is called a harmony in neither of these ways. For soul cannot be called a harmony with respect to its being found in composite things and in things having position. For the order **of** composite **parts** in **the body** is extremely clear, since it is easy to know the order of bones to bones, nerves to nerves, arm to hand, and flesh to bones. But as regards the order of *soul's* parts, that ratio is not clear to us. For through this [knowledge of body] we cannot know the order that lies among **intellect,**

4. Themistius, I 24.35 (62.37–38).
5. Themistius, I 25.3–5 (62.42–44).

sense, appetite, and things of that sort. /140/ Also, [soul] cannot be called a harmony with respect to the proportion of bodies mixed together from contraries, for two reasons. One reason is that a different proportion is found in the body's different parts. For **the mixing together of elements in virtue of which there is flesh does not have the same ratio**—i.e., proportion—**as that in virtue of which there is bone.** Therefore there would be different **souls** in different parts [of the body]. The second reason is this: **all** bodies are **mixed together from elements** and from contraries. Therefore, if the proportion **of the mixing together** in each body is **a harmony, and** if the harmony is **soul,** then there will be a soul in every body, which is unacceptable. And thus the unacceptability of saying that soul is a harmony is clear.

AGAINST EMPEDOCLES

152–154. *Analysis.* /141/ After this, when Aristotle says **Now someone certainly should,** etc., he argues against Empedocles and sets out against him three questions that [Empedocles himself] does not raise.

{408A18–21} THE FIRST QUESTION

155–167. The first of these questions goes like this. Empedocles himself claims that every body consists in **a kind of ratio**—i.e., a proportion—which he calls a harmony. This, he says, is soul. So I ask: **is soul the ratio** itself—i.e., the proportion—of the mixing together, **or is it something** different from the proportion? If you say that it is the proportion itself, then, since in one body there are various proportions in respect of the various parts, the unacceptable results already mentioned [408a13–18] will follow: there will be many souls in one body in respect of the various parts, and there will be a soul in anything mixed together. If you say that soul is something different from the proportion, then, since proportion is harmony, soul will not be a harmony.

{408A21–22} THE SECOND QUESTION

168–182. /142/ Aristotle introduces the second question when he says **Further, is Concord,** etc. It goes like this: Empedocles claimed that Friendship causes things to gather together, whereas Strife causes them to separate. But when things gather together some proportion is brought about. So I ask: **is** Friendship **the cause of each and every** gathering **or** only **of** gatherings that are har-

monious? If you say that Friendship is the cause of each and every gathering, then one has to introduce something different from Friendship that causes this sort of proportion and harmony in harmonious gatherings. Otherwise one will have to say that this sort of harmoniousness occurs by chance. If you say that Friendship is the cause only of a harmonious gathering, then Friendship will not be the cause of every gathering, which is contrary to his view.

{408A22–24} THE THIRD QUESTION

183–195. /143/ Aristotle introduces a third question when he says **And is this [Concord] the ratio,** etc. It goes like this: Empedocles says that it is Friendship that makes things gather together. So I ask: **is** Friendship the same as this harmonious gathering, **or** not? If one says that it is the same, then, since nothing is the cause of itself, Friendship will not be the cause of that gathering, as Empedocles said it was. But if one says that it is not the same, then, to the contrary, a harmonious gathering is nothing other than a kind of agreement. But Friendship seems to be a kind of agreement. Therefore it is the same, and so the same follows as before.

{408A24–29} WHY THIS VIEW IS HIGHLY PLAUSIBLE

196–212. /144/ After this, when Aristotle says **But if soul is something different,** etc., he shows why this view is highly plausible. And in this connection he does two things. First, he shows that this sort of view is highly plausible, saying that it seems plausible for this reason: that when the one is introduced the other is introduced, and when the one is removed the other is removed. For soul departs from body when the harmony departs, whereas as long as the harmony remains, soul remains. But the conclusion does not follow. For this sort of proportion is not a form, as these philosophers believed, but the disposition of matter for form. And if one takes the proportion of the harmonious composition to be a *disposition,* then it does correctly follow that as long as the disposition of matter for its form remains, the form remains, whereas when the disposition is destroyed, the form is removed. It does not, however, follow that harmony is form, but that it is the disposition of matter for form.

{408A29–34} CONCLUSION

213–221. /145/ Second, when Aristotle says **It is clear,** etc., he concludes, in summary, **that soul** is not **moved circularly,** as Plato said, nor is it a **harmony,** as Empedocles asserted. **Yet it is moved accidentally, as we said** earlier [I.6.406a12–b15], **and is self-moving.** And it is plain that soul is moved accidentally, because it is moved insofar as the body **it is in is moved,** and the body **is moved by soul.** There is no other way **for [soul] to be moved locally,** except *per accidens.*

Chapter 10

A More Lucid Argument That Soul Is Moved

DE ANIMA I.4.408A34–B31

408a34–b4. One might more reasonably puzzle over this [soul] as something that is moved when one considers things of this sort: for we say that soul is sad, joyful, assured, fearful, and further that it gets angry, senses, and intellectively cognizes. But all of these seem to be movements; thus someone might form the view that soul is moved.

408b5–9. This is not necessary. For if, above all, being in pain or being joyful or intellectively cognizing are movements, and if each one is something's being moved,° still being moved comes from soul°—being angry or fearful, for instance, in that the heart is in a certain way moved. Intellective cognition of this sort, however, is perhaps something different.°

408b9–18. Yet some of these take place in virtue of a change in place in certain things that are moved, whereas others take place in virtue of alteration. (Yet as for what sort of thing and how, this belongs to another account.)* But to say that soul gets angry is as if someone were to say that it weaves or builds. It is perhaps better not to say that soul feels pity, learns, or intellectively cognizes, but that a human being does so, by means of soul. The way this [occurs], however, is not through movement within it, but sometimes [through movement] up to it and sometimes [through movement] from it: sensation *(sensus)* comes from these [outside objects], whereas remembering comes from it [soul], toward the movements or states of rest that are in the sensory organs.

408b18–30. Intellect, however, seems to be a substance of some kind in a state of becoming *(in fieri)*° and seems not to be corrupted. For certainly it would be corrupted above all because of the weakness that comes with aging. But in fact it happens just as in the case of our sensory [organs]: for if someone elderly were to receive the eye of a young person,° he would see like a young person. This is why aging comes not from soul's enduring something but from what it is in—just as in the case of drunkenness and illness. Therefore intellective cognition and consideration decline because something else inside is corrupted. It itself, however, cannot be affected. Yet intellectively cognizing and loving or hating are not affections of it, but of something of this sort that has it, insofar as it has it. Hence when this is corrupted, [soul] neither remembers nor loves. For [such affections] belonged

not to it but to that which is common, which has been destroyed. But perhaps intellect is something more divine that cannot be affected.

408b30–31. It is clear from these remarks, therefore, that it is not possible for soul to be moved. But if it is not at all moved, then it is clear that neither [is it moved] by itself.

1–11. *Analysis.* /146/ Now that the Philosopher has introduced the arguments of those who said that soul is moved because it moves the body, and now that he has argued against them, he here in turn wants to show that a more lucid argument that soul is moved can be taken from soul's very operations. And in this connection he does two things. First, he raises the puzzle of those whose claim that soul is moved stemmed from soul's operations. Then, second, he resolves this sort of puzzle as far as our subject is concerned (beginning at **This is not necessary,** etc. {408b5}).

{408A34–B4} MOVEMENT STEMMING FROM SOUL'S OPERATIONS

12–29. So Aristotle says first that, although for the philosophers discussed earlier the puzzle of whether soul is moved stems from the fact that it moves body, nevertheless **one might more reasonably** (i.e., plausibly) **puzzle over** soul's being **moved when one considers things of this sort** about to be discussed (i.e., when one considers soul's operations). For on this basis it could plausibly be maintained that soul is moved. **For we say that soul is sad, joyful, assured**—i.e., confident—and **fearful. And, further,** we say **that it gets angry, senses, and intellectively cognizes.** Therefore, since **all of these** are operations of soul and are kinds of **movement,** it seems that soul **is moved.** Now this puzzle seems more plausible than the above one. For the earlier view considered soul's movement on the basis of body's movement. It said that nothing produces movement unless it is moved; for that reason, since soul moves body, it itself is clearly moved. This view, on the other hand, considers soul's movement on the basis of operations that are unique *(propriis)* to soul.

30–31. *Analysis.* /147/ After this, when Aristotle says **This is not necessary,** etc. {408b5 ff.}, he resolves the puzzle.

A Note on Aristotle's Strategy

32–49. In this connection it is important to know that whenever Aristotle investigates some truth by raising and then resolving objections, he sometimes does this after the truth has been worked out, and then he raises and re-

solves the objections in keeping with his own view. But sometimes he does this before the truth has been worked out, and then he raises and resolves the objections by assuming the views of others, in accord with neither his own view nor the truth that he holds. We see an example of this in *Physics* III [202b30–208a23], where the Philosopher argues against those who postulate the infinite. Against them he uses many arguments that are false in their own right even though these others take them to be true—e.g., that every body has lightness and heaviness [205b26]. The reason Aristotle does this is that he had not yet presented his account of whether every body has lightness and heaviness. Later he did present his account, in the *De caelo* [269b18–270a12], and so he repeated there his question on the infinite [271b1–276a17].

49–66. Aristotle maintains this manner of raising and resolving objections here, and so he proceeds against them [his opponents] by assuming their views. /148/ For they, especially the Platonists, held the view that being sad or joyful, getting angry, sensing, intellectively cognizing, and things of the sort that have been mentioned are movements of soul. They held that each of these, even intellectively cognizing, is produced by a determinate organ, and in this respect there is no difference between the sensory and intellective capacities. And they held that the whole soul, not just the intellective capacity, is incorruptible. Aristotle, then, grants all of these, for he supposes that operations of this sort, even intellectively cognizing, are produced by determinate organs and that the whole soul is incorruptible. [Here] he denies only the following: he says that these sorts of operations (sensing, being joyful, and things of this sort) are not movements of soul but of the [soul-body] compound. It is in this respect, then, that he argues against them.

66–70. *Analysis.* /149/ In this connection, Aristotle does two things. First, he indicates that these sorts of operations are not movements of soul. Second, he proves this claim through one particular premise *(quodam medio)* (beginning at **Intellect, however,** etc. {408b18}).

{408b5–9} THESE OPERATIONS ARE NOT MOVEMENTS OF SOUL

71–82. So Aristotle says that these philosophers say two things: first, that to be joyful, sad, and things of this sort are movements; second, that these (viz., to get angry, to be joyful, to sense, and things of this sort) are attributed to soul and that it thus seems that soul is moved. **This is not necessary,** however, but rather both of these claims are false: that is, operations of this sort are not movements, nor are they attributed to soul. But if we allow that they are movements, and if we speak of them in terms of their being movements, then it is nevertheless false that they are attributed to soul, and consequently false that soul is moved in virtue of these sorts of operations.

82–104. This is clear as follows: /150/ For it is evident that, if operations of this sort **are movements** and are attributed to **soul,** then they are attributed to it only in virtue of some determinate part of the body. It is in this way that sensing is attributed to soul only in a certain part of the body—the sensation *(sensus)* that comes from sight, for instance, is in the eye—and that **being angry** is in the heart. And it is likewise clearly apparent in other cases that these operations are movements not of soul but of the compound. Nevertheless they come from soul, as, for instance, in the case of getting angry. For soul judges something to be worth getting angry about, and as a result an animal's heart is moved and blood rages around it. [Soul] is related to fear in this way: a certain portion of the body is contracted in the face of something frightening and is altered.[1] Much the same occurs in other cases, too. And so soul is not moved; rather, **being moved comes from** it **in that** something (**the heart,** for instance) **is in a certain way moved.** And because Aristotle will establish below [III.7.429a18–27, 430a17–25] that intellectively cognizing is a particular operation of soul which it does not share with body and which does not belong to the compound, he thus says that **intellective cognition is perhaps something different** from the compound's operations. (And he says "perhaps" because he is not giving his definitive account, but proceeding under an assumption.)

{408b9–18} TWO KINDS OF MOVEMENT FROM SOUL

105–119. Now because Aristotle said that movements of this sort belong not to soul but to the compound, and yet come from soul, /151/ he therefore wants to show, when he says **Yet some of these,** etc., that these sorts of bodily movements come from soul in virtue of two kinds of movement. One kind occurs **in virtue of a change in place,** as is clear in the case of anger. When a portion of the body (the heart) is moved by anger, then the blood, moved by the heart's boiling, rushes to the [body's] external parts. The **other** kind occurs **in virtue of alteration,** as is plain in the case of fear. For the heart is contracted and cooled in the face of something frightening, and a human being is altered and turns pale. (**Yet as for what sort of thing** these affections are, **and how** they are put in motion, it **belongs to another account** to say.) In this way, then, it is clear that movements of this sort belong, not to soul, but to body from soul, as has been said.

1. Compare I.2.403a29–b1; Themistius, I 27.15–20 (67.43–52).

119–136. /152/ Therefore, just as an animal has bodily operations, and things of this sort belong not to soul but to the body or the compound, so too these sorts of operations (sensing, being joyful, and things of this sort) ought to be referred not to soul but to the compound. For if someone were **to say that soul gets angry** and, in virtue of operations of this sort, is moved, then this **is as if someone were to say that** soul itself **weaves or builds** or plays the harp. For soul "is the cause of these movements: the disposition for building," weaving, and playing is in soul itself, and things of this sort come from soul. But just as it is better to say that "it is the builder who builds, and not the craft," even though "it is through the craft of building that the builder builds,"[2] so **perhaps it is better to say that soul** does **not feel pity,** or **learn,** or **intellectively cognize, but that a human being does so,** through **soul.** (And he says "perhaps," even for intellective cognition, because he is speaking under an assumption, as was said [32–66; 103–104].)

136–148. /153/ Now when Aristotle says that it is not soul that is moved, but a human being through soul, the movement could be understood to exist in soul. So to rule out this possibility he says: when I say a human being is moved by soul I am **not** speaking in such a way as if **movement** exists **within it** (viz., within soul), **but** as if movement comes **from it.** /154/ For when I say "this is moved through this," that can be understood in two ways. Sometimes the thing that moves an object itself maintains the movement, as when I say that a human being is moved by his feet because his feet themselves are moved. Other times the thing does not itself maintain the movement but impels the object to movement. It is in this way that a human being is said to be moved by soul.

148–166. /155/ And here as well there are two kinds of movement. For **sometimes** soul is like the terminus of movement, namely, when the movement is toward it (viz., toward the soul), as in the case of the operations of sense. For when we apprehend external sense objects, the sensory power that is in the organ strives and is moved to send and bring back the *species* and intentions of sensible things **up to it** (i.e., up to soul). **Sometimes,** however, soul is like the starting point for movement, namely, when the movement comes **from it** (i.e., from soul). This occurs in **remembering,** by which hidden and obscure intentions and phantasms of things are brought out for cognizing sensible things. (Whether one should say that these sorts of phantasms left behind internally are **movements or states of rest** is irrelevant to the present topic.)[3] /156/ It is plain, then, that movements of this sort are not attributed

2. Themistius, I 27.33–38 (68.63–67).

3. Compare Themistius, I 28.17–19 (70.88–90).

to soul but belong to the compound, whereas they come from soul, although not as from a movement existing within soul.

The Ways in Which Movement Is Found in Soul's Operations

167–174. /157/ It is important to note, nevertheless, that this solution to the puzzle under discussion is not conclusive and definitive but rather adversarial. For we should know that movements are attributed to soul's different operations in different ways. Indeed, three kinds of movements are found in soul's operations. For movement is found strictly in some, whereas in others it is found less strictly, and in still others it is found with a minimum of strictness.

174–189. /158/ Strictly, movement is found in the operations of the nutritive soul and in sensory appetite. In the operation of the nutritive soul there is movement, strictly, when it is moved in terms of the being of nature, through nourishment; this is the movement of growth. In this respect the nutritive soul stands as what acts, whereas the body stands as what is affected. In the case of sensory appetite, however, movement is found strictly both with respect to alteration and with respect to local movement. This is because human beings, when they have an appetite for something, are immediately moved and altered: either to anger, as in the case of an appetite for revenge, or to joy, as in the case of an appetite for something pleasant. Also, as a result of this the blood around the heart is moved to the [body's] external parts, and human beings as well are moved from place to place in pursuit of that toward which they have an appetite.

189–200. /159/ Less strictly, movement is found in the operations of the sensory soul. For movement occurs in these operations not as regards the being of nature but only as regards spiritual being, as is plain in the case of sight. Its operation involves not natural being but rather spiritual being, because it occurs through sensible *species* received in the eye in keeping with spiritual being. But still [sight] has some capacity for alteration—inasmuch, that is, as the subject of the visual power is a body. In this respect it has the character of a movement, although less strictly. For movement is strictly said to occur in these operations only when an operation involves the being of nature.[4]

4. These last two paragraphs rely on the distinction between natural being, or the being of nature, and spiritual being *(esse naturale, esse spirituale).* Elsewhere Aquinas refers to the latter as intentional being and also immaterial being. But contrary to what this terminology suggests, the distinction between natural being and spiritual being cuts across the modern distinction between the physical and the nonphysical. Some sorts of spiritual being can be wholly physical in our modern sense (e.g., in air and water), and some sorts of natural being

201–215. /160/ It is with a minimum of strictness, however, that movement is found in intellect: no movement is found there except metaphorically. For in intellect's operation there is no alteration *(immutatio)* with respect to natural being, as there is in the nutritive soul, nor is there a natural subject to be altered *(immutetur)*, as there is in the sensory soul. But the operation itself is there, and it is said to be a movement in a way, insofar as intellect is brought from potentially cognizing to actually cognizing. Yet this is different from movement, because an operation is the actuality of what is complete, whereas movement is the actuality of what is incomplete.[5] /161/ And thus it is plain how operations of the sensory and nutritive soul are movements not of soul but of the compound, whereas intellect's operations are not called movements, except metaphorically, and belong only to the intellective soul, without any determinate organ.

The Appetitive Power in Intellect

216–227. /162/ It is important to know as well that just as we find both an appetitive and an apprehensive power in sense, so too do we find both an appetitive and an apprehensive power in intellect. Thus these—love, hate, joy, and things of this sort—can be understood both as they exist in sensory appetite, in which case they have a conjoined bodily movement, and also as they exist in intellect and will alone, without any sensory affect. And in this case they cannot be said to be movements, because they do not have a conjoined bodily movement. We also find these [appetites] in separated substances, as will be more evident in what follows [III.8.432b5].

{408b18–30} A PROOF THAT THESE OPERATIONS ARE NOT MOVEMENTS OF SOUL

228–261. /163/ After this, when Aristotle says **Intellect, however, seems,** etc., he wants to prove the things he has maintained, namely, that operations of this sort, even if they are movements as these others have said, are attributed

can be wholly nonphysical (e.g., in angels). For further discussion, see II.5.55–83, II.14.262–286, II.20.44–88, II.24.18–95. See also Robert Pasnau, *Theories of Cognition in the Later Middle Ages* (Cambridge: Cambridge University Press, 1997), pp. 36–47.

5. In other words, a thing is said to be in movement when it is going from an incomplete or potential state toward a completely actualized state. In this way, building a house is a kind of movement, but once the house has been completed we should speak no longer of movement but of function or "operation." The house, now complete, functions as a shelter from the weather; this is operation, not movement. Cf. III.12.17–36 and *Physics* III.201b7–33.

not to soul but to body and to the compound. Aristotle proves this through a view of theirs that was famous in his time, namely, that every soul is incorruptible, which, according to them, held for intellect and for every soul. So he says that it **seems** to the philosophers under discussion that **intellect** is **a substance of some kind** that is **in a state of becoming,** not yet complete, **and** that is **not corrupted.** The reason for this is as follows: we see that none of the weaknesses surrounding intellect and sense touch soul itself in its own right; rather, they stem from the weakness of an organ. Hence it seems that intellect and every soul is incorruptible and that a weakness in its operations comes not from its being corrupted but from its organs' being weakened. /164/ **For** if soul were to be corrupted, **it would above all be corrupted because of the weakness that comes with** old age. This, for example, is what **happens in the case of our sensory** organs, which are weakened by old age. Yet *soul* is not weakened by this; for **if** someone old **were to receive the eye of a young person, he would see** as **a young person. This is why** the old weaken: it is **not,** to be sure, **soul** itself or the sensory power that is affected, **but** that **in** which it exists—**just as** in the case of sickness or **drunkenness** it is not one's soul that is weakened or altered but one's body. And it is in this way, then, that **intellective cognition** (i.e., simple apprehension) **and consideration** (i.e., the operation of intellect that consists in compounding and dividing) **decline**—it is certainly not that intellect is corrupted and affected, but **because something else inside is corrupted** (i.e., something is corrupted that is the organ of intellect). Intellective cognition **itself, however, cannot be affected.**

262–288. /165/ Now Aristotle does not say this because it is his view that intellect has a determinate bodily organ. Rather, as stated, he is speaking here by assuming the views of the philosophers who held this view (namely, the view that all soul's operations, even those of intellect itself, have determinate organs). And so it is in accord with this [strategy] that he accounts for how intellective cognition declines. Operations of this sort—**intellectively cognizing, loving,** and **hating—are not affections of it** (that is, of soul—here he is speaking on an assumption), **but of something of this sort** (the compound, that is, or a bodily organ). I mean an organ **that has it** (has intellective cognition, that is) and **something of this sort . . . insofar as it has it.** Thus **when this is corrupted** (the determinate organ of this operation of loving or intellectively cognizing), it neither remembers **nor loves** (viz., soul does not). The reason for this is that these sorts of affections **belonged not to** soul alone, **but to that which is common** (the compound) **which has** now **been destroyed** and corrupted. Therefore, if all movements and operations of this sort are weakened not because of soul but because of the body's or organ's weakness, as stated, then it is clear that they belong not to soul alone but to the compound.

Consequently, then, it is not soul that is moved but the compound, although it is moved by soul.

288–297. /166/ But here, as is already plain, Aristotle spoke of intellect on the assumption of others' views. So, to prevent someone from believing that he thinks intellect does exist in the way he assumed it to, he rules this out by saying that **perhaps intellect is something more divine that cannot be affected**—i.e., something loftier, and a greater operation of soul than is here stated. And he says "perhaps" because he has not yet presented his account; later, in Book III [7.429a18–27, 430a17–25], he sets out this view. Hence he is speaking under an assumption.

{408b30–31} CONCLUSION

298–303. /167/ After this Aristotle draws a conclusion from all of this, saying that **it is clear from** the things said **that it is not possible for soul to be moved.** But, again, **if it is not moved** in any way, **then it is clear** that it is not moved **by itself** through these sorts of movements, as those others supposed.

Chapter 11

Soul as Self-Moving Number
Xenocrates' View

DE ANIMA I.4.408b32–5.409b18

408b32–409a1. Yet it is unreasonable, much more so than the views already stated, to say that soul is a self-moving number. For impossible consequences arise for those [who say this]: first, of course, ones that occur from its being moved, but also special ones, as a result of their saying it is a number.

409a1–3. For how must one understand that a unit is moved? By what, and how, when it is indivisible and undifferentiated? For if it both produces movement and is movable, then [these] must differ.

409a3–7. Moreover, because they say that a moved line makes a plane, and a point a line, the movements of units will be lines. For a point is a unit having position. But soul's number is now somewhere and has position.

409a7–10. Moreover, if someone subtracts a number or unit from a number, then the result will be another number. But plants and many animals live when divided, and they [then] seem to have a soul that is the same in species.

409a10–18. Yet it will certainly be seen that it makes no difference whether one says [that soul consists of] units or small bodies. For if points are made out of Democritus's spheres, and if quantity alone remains, then there will be something in that [point]: on one hand something producing movement, on the other hand something moved, as in what is continuous. For the stated result occurs not on account of differences in being large or small but because it is a quantity *(quantum)*. Hence it is necessary that there be something capable of moving the units. But if what produces movement in an animal's case is its soul, then [this will be so] in number's case as well. Hence soul is not both mover and what is moved, but is only the mover.

409a18–28. Yet it somehow happens that this [soul] is a unit.° For some kind of differentia must be in it, relative to others. And, indeed, what will the differentia of a solitary point be, if not position? So if the points and units in a body are different, then the units will be in the same [place], because [each] will occupy the place of a point. And then if there are two in the same [place], what prevents there being infinitely many? For things whose place is indivisible are so themselves. If, however, the points in a

body are the number of its soul, or if its soul is the number of those points that are in the body, then why is it not the case that all bodies have soul? For points seem to be in all [bodies] and to be infinitely many.

409a28–30. But further, how is it possible for points to be separated and detached from their bodies, if lines are in fact not divided into points?

409a31–b11. The outcome, as we have said, is that in one way [this view] makes the same claims as those who supposed it [soul] to be a kind of body of subtle parts. In another way, however, as Democritus says that [body] is moved by soul, there is a special absurdity. For if soul exists in the whole *(omni)* body, wherever it senses, then it is necessary for two bodies to exist in the same [place], if soul is a body. And for those who say [that soul is] a number, [there will be] many points in one point, or else every body has a soul—unless [soul] is made a different sort of number, distinct from those of the points that are in body. The outcome, also, is that an animal is moved by a number, just as we have said that Democritus makes it move. For what difference is there in speaking of small spheres, or large units, or units in general being carried about? It is necessary in each case that the animal moves as a result of their being moved.

409b11–18. So when number and movement are combined into one, then these results and many others of this sort occur. For it is impossible not only for this sort of thing to be the definition of soul but even for it to be an accidental feature. This becomes clear if someone would have struggled on the basis of this account to declare how soul is affected and functions—its thoughts, sensations, joys, pains, and all others of this kind. For, as we have said before, it is not easy even to conjecture [about how soul functions] on the basis of these [number and movement].

1–6. *Analysis.* /168/ Now that the Philosopher has disproved the view of those who said no more than *(simpliciter)* that soul is moved, he here in turn argues against Xenocrates' view. In addition to movement, Xenocrates added something else: that soul is a self-moving number.

{408B32–409A1} A LESS REASONABLE VIEW

6–18. This view is **much more unreasonable** than the views of other philosophers that have been stated. For many **impossible consequences arise for those** who **say that soul is a self-moving number. First, of course,** are **ones that occur** as a result of **its being moved,** i.e., as a result of movement; these occur for everyone who says that soul is moved. But those who speak in this way also face **special** absurd consequences **as a result of their saying** that soul **is a number.** For this reason, the Philosopher disproves Xenocrates' definition of soul, arguing not only against his words but also against his intent.[1]

THE VIEW'S ABSURDITY

19–23. *Analysis.* Now in this connection Aristotle does two things: he shows that this definition is absurd first as regards soul's very substance, second as regards soul's accidental features (beginning at **So when number and movement,** etc. {409b11}).

23–28. In connection with the first he does two things. First, through arguments, he overturns the definition of soul just presented. Second, he shows that from this definition all the absurdities follow that follow the views of other philosophers (beginning at **The outcome, as we have said,** etc. {409a31}).

{409A1–409A3} THE FIRST ARGUMENT

29–52. /169/ That the definition under discussion is incoherent Aristotle proves through six arguments, the first of which runs as follows. You say that soul is a self-moving number; but a number consists of units.[2] Therefore you say that soul is units. And if you say that soul is a self-moving number, then soul is also self-moving units. But everything self-moving has two parts, as *Physics* VIII [257a33–258b9] proves: one part producing movement and the other part moved. Therefore one will have to say that **a unit** or point is divided into two parts, one of which produces movement whereas the other is **moved.** But this is impossible. Therefore it is impossible for soul to be a self-moving number. And Aristotle proves that it is impossible for a unit to have one part producing movement and another part moved. For that which is entirely **indivisible and undifferentiated** can in no way be understood to be moved of itself *(per se),* in such a way that it would have one part producing movement, another part moved. For these two capacities, to **produce movement** and to be **movable,** can be in something only if they **differ.** Therefore,

1. Compare I.8.1–13, where only Plato's words are said to be under criticism, not his intent.

2. Aquinas conceives of units *(unitates)* as the conceptual building blocks of numbers. A unit is abstract in the way that a point is, and yet it is even more abstract than a point, inasmuch as a point has a certain position, whereas a unit is conceived of without position (see below, 56–58).

since a unit is indivisible and undifferentiated, it cannot have parts of this sort, and so neither can it be moved. Therefore soul is not a self-moving number.

{409A3–7} THE SECOND ARGUMENT

53–72. /170/ Aristotle introduces a second argument when he says **Moreover, because,** etc. This runs as follows: you say that soul is a number and therefore (as we have stated) units. But there is no difference between a unit and a point except that a point has position. **For a point is a unit having position.** But if soul is a number, then this sort of number, **soul's number,** must be **somewhere** and have a **position.** Therefore soul will consist of units having position. Yet things of this sort are points. Therefore soul will be points. But the Platonists[3] **say** that the movement of **a point** makes **a line,** whereas **a moved line makes** a surface, and a surface a body. But soul is a self-moving number. Therefore, in the same way, it is a unit, and consequently it is a self-moving point. But a moved point makes nothing but a **line.** Therefore soul's movement makes nothing but a line, and thus soul does not cause life through its movement, which is false. Therefore soul is not a self-moving number.

{409A7–10} THE THIRD ARGUMENT

73–91. /171/ Aristotle introduces a third argument when he says **Moreover, if someone,** etc. If soul is a number, as you say, then it must conform to the way that number is affected and to the nature of number. But it is evident that **if someone subtracts** some **unit from a number** or adds to it, then its species is changed. For if you add a unit to a given number—say, three—then that changes its species: the number four has one species, whereas the number three has another. And if you subtract a unit from this same number, then the result is two, and that likewise changes its species. It is evident, however, that animals take their species from their soul, because every single thing attains its species through its form. Therefore, if soul is a number, then the result of anything's being subtracted from or added to soul will be a soul that is different in species. But this is false. For we see, when **plants and** segmented **animals** are cut apart, that **when divided** or cut apart **they live and have the same species.** Therefore soul is not a number.

3. The philosopher in question here, Xenocrates (396–314 B.C.E.), took over leadership of Plato's academy in the later years of Aristotle's life.

{409A10–18} THE FOURTH ARGUMENT

92–124. /172/ Aristotle introduces a fourth argument when he says **Yet it will be seen,** etc. This runs as follows: you say that soul is a number, and (as stated) it follows that soul consists of units having position and consequently that it consists of points. But in this regard, if we rightly consider, **it will certainly be seen that it makes no difference whether one says** that soul consists of **small** and indivisible **bodies,** as Democritus said, **or** that it consists of **units** having position. For one thing having position is **a quantity** and is indivisible. On this basis, then, I argue in the following way. Soul, according to your position, is a self-moving number and consequently is self-moving units and points. But let us suppose that the indivisible bodies that **Democritus** posited are **points,** since (as stated) the two do not differ, and that they are quantities. (The latter is necessary since something does not move, strictly speaking, unless it is a quantity.) Yet points of this sort move themselves, since soul is a self-moving number. But, as we have stated, there are two things in something self-moving. Therefore **in that** point **there will be** one thing that is **producing movement,** another that is **moved.** Nor should we care whether they are large or small, as long as they are quantities, because **in** everything **continuous** and self-moving it is the case that two things are there: one thing producing movement, the other moved. Thus **it is necessary** for there to **be something capable of moving the units. But in an animal's case what** moves the animal **is its soul.** Therefore **in number's case as well** what moves the number will be its soul. Therefore **soul is not** what **is moved but is** what produces movement. And so it is bad to define soul as a self-moving number and better to define it as what moves a moved number.

{409A18–28} THE FIFTH ARGUMENT

125–151. /173/ Aristotle introduces a fifth argument when he says **Yet it somehow happens,** etc. It runs as follows: according to the view of Xenocrates **it happens that this**—soul, that is—**is a unit.** But as a result of this it happens that soul consists of points. For if soul is a unit then **it must** differ from **other** units, and it can differ from them only by position. For **what** is **the differentia of a solitary point**—i.e., a unit—**if not position?** There is none. Yet a unit having position is a point [cf. 409a6]. Therefore soul is not units but points. But a soul is in a body, and every body has its points *per se.* So I ask whether **the points** that are soul are the same as or different from its body's points. **If** they **are different,** then, since soul is in every part of its body, soul's points will be in every part of its body, and thus there **will be** two points **in the same**

place simultaneously. **And if two,** why not more or even **infinitely many?** For things **whose place is indivisible are themselves** indivisible; hence they do not need any greater place.[4] Thus if someone claims that two [points] exist in an indivisible place, then there can consequently be infinitely many in the same place. **If,** however, you say that **the points in a body** are the same as the points that are **its soul, then** it follows, since every body has **points,** that every body has a **soul.** But this is false. Therefore soul is not a number.

{409A28–30} THE SIXTH ARGUMENT

152–162. /174/ Aristotle introduces a sixth argument when he says **But further, how,** etc. This argument derives from the preceding one and runs as follows: as we have said, it follows from the position of Xenocrates that soul consists of points. But we see that points are not **separated and detached from their bodies.** For lines **are not divided** from surfaces, nor **points** from **lines,** whereas soul is separated and detached from body. Therefore it is neither points nor a number. It is clear, then, that Xenocrates' definition of soul is incoherent with regard to what the definition claims.

{409A31–B11} THE SAME ABSURDITIES AS BEFORE

163–181. /175/ After this, when Aristotle says **The outcome, as we have said,** etc., he shows that the definition under discussion is incoherent due to its absurd consequences. For from a definition of this sort all the absurdities follow that follow from the views on soul of all the philosophers. For some philosophers erred in connection with soul and said that **it** is **a body of subtle parts.** From this it would follow, since **soul exists** wherever sense does in a **body,** and sense exists everywhere throughout the body, that **if soul is a body,** then **two bodies exist** at the same time and place *(simul).* And, as stated [136–151], this same thing follows if soul consists of points: two [points], and even infinitely many, would exist at the same time and place. And this follows if soul's points are **distinct from** body's **points.** But if the **number** of soul's points is not **made different**—i.e., if soul's points do not differ from body's points—then it will follow that **a soul** exists in each **body.** For points are to be found in every body.

181–194. /176/ On the other hand, someone **like Democritus** erred in saying that soul **is moved** and body, too, through the movement of **soul.** And

4. Compare Themistius, I 31.35 (77.31–34).

because he said that soul is composed of indivisible spheres and that body is moved by their movement, it followed that body would be moved by indivisible bodies. And this same absurdity follows from the definition of these philosophers—namely, that **an animal is moved by a number** and consequently by points. And it makes no **difference** whether we **speak of small spheres** being moved and of **large units** being moved, **or units** of any kind. For **it is necessary in each case** (i.e., in the case of both spherical bodies and units) **that the animal** be moved **as a result of their being moved**—viz., the spherical bodies and points or units.

{409B11–18} ABSURD AS REGARDS SOUL'S ACCIDENTS

195–219. /177/ After this, when Aristotle says **So when number and movement,** etc., he shows that the definition under discussion is inadequate with respect to soul's accidental features. So he says that whenever a definition is adequately assigned, it ought to lead to a cognition not only of the substance but also of the accidental features of the thing defined.[5] But if we run together **into one** the two things posited in the definition of soul, **number and movement, then** not only do the absurdities **occur** for us that have been discussed regarding the substance of soul itself, but also **many others** result. For **it is impossible not only** that these two **be the definition**—i.e., the substance—**of soul,** but it is even impossible for these (viz., number and movement) to be **accidental features** of soul or to lead to a cognition of its accidental features. Therefore it is not a coherent definition. And that these do not lead to a cognition of soul's accidental features **becomes clear if someone** tries **on the basis** of this sort of definition to account for **how soul is affected and functions**—e.g., its reasonings, pleasures, **pains, and** things **of this kind.** For **on the basis of these** (viz., number and movement) not only will it not be **easy** to reach a cognition of soul's accidental features and its operations, but neither will we be able on this basis **even to conjecture** at all about how soul is affected and operates.

5. Compare I.1.402b16–403a2.

Chapter 12

Against Defining Soul as the Principle of Cognition

DE ANIMA I.5.409B18–411A7

409b18–25. We have now presented three ways in which they define soul. Some maintained that, in moving itself, it is productive of movement above all, whereas for others it is a body that is the most subtle and incorporeal, compared to other things. We have just gone over the puzzles and inconsistencies that these views raise. It remains, then, to consider how soul is said to come from the elements. For they say [this] so that it may sense things that exist and have cognition of any given thing.

409b25–410a13. Necessarily, the account faces many impossible consequences. For they claim that like has cognition of like, as if they were claiming that soul *is* the things [it cognizes]. Yet not only these [elements] exist, but many other things, or perhaps instead an infinite number of things, existing as a result of these. So soul [might]° cognize and sense that out of which each one of these comes. But it will neither cognize nor sense the composite°—what god is, for instance, or a human being, or flesh, or bone, and likewise for any other composite thing. For each one of these [consists] not in the elements' being related in just any given way but in a certain ratio and composition. It is in this way that Empedocles speaks of bone:

> Yet well-suited Earth, in well-provided containers,
> Of eight parts drew two of liquid clarity,
> While four are of Vulcan; So bones are made white.

It does not help at all, then, for elements to be in soul, unless the ratios are in it as well, along with the composition. For any thing will have cognition of what is like it; but there is none of bone or human being, unless these too are in [soul]. But that this is impossible goes without saying. For who will be in doubt whether a stone or a human being is in soul? And much the same holds for the good and not good, and in the same way for others.

410a13–22. Further, since what exists is spoken of in many ways (for it signifies an individual thing, or else a quantity, or a quality, or else another of the categories that have been distinguished), will soul come from all of these or not? But the elements do not seem to be common to all [of these categories]. Therefore, whatever things belong to substances, if° [soul comes] from these alone, then how will it cognize any of the others? Or

will they say that there are elements and principles proper to each genus and that soul consists of these? Then it will be quality, quantity, and substance. But it is impossible for substance rather than quantity to come from the elements of quantity. So those who say [that soul comes] from all [these elements] face these consequences and others of this sort.

410a23–26. Now it is unacceptable to say, on one hand, that like is unaffectable by like and, on the other hand, that like senses like and cognizes like by like. Yet they claim that sensing is a kind of being affected and making° and being moved—and likewise both cognizing and intellective activity.

410a27–b2. Saying, as Empedocles does, that individuals are cognized by physical elements, relative to what is like them, presents many puzzles and difficulties, as what has now been claimed bears witness. For all the things in animal bodies that are fully made of Earth—e.g., bones, sinews, hair—seem to sense nothing. Thus neither [do they sense] what is like them, and yet this would be appropriate.

410b2–4. Further, each one of the basic principles exists more in ignorance than in intelligence. For although each will have cognition of one thing, it will be ignorant of many things—of all the things that differ [from it].

410b4–7. Also, Empedocles will face the consequence that his god is most ignorant. For he alone will not have cognition of one of the elements, discord, whereas mortals [will have cognition of] them all, since each [mortal] comes from them all.

410b7–10. In general, then, why do not all things that exist have a soul, since everything either is an element or comes from an element (from one, many, or all of them)? For they must necessarily have cognition of one particular thing, or of several, or of them all.

410b10–15. And someone may well puzzle over what is making them one. For the elements correspond to matter, whereas what contains [them], whatever it is, is what is most proper° [to them]. But it is impossible for something to be better and older° than soul. And this is even more impossible in intellect's case. For it is entirely reasonable that it be the noblest and be in control by nature. Yet they say that the elements are the first of beings.

410b16–27. Moreover, they all, both those who say that soul comes from elements because it cognizes and senses the things that exist and those who [say that it is] productive of movement above all, fail to speak of every soul. For not everything sensory produces movement: there seem to be some animals that, in terms of location, are stationary. Yet it seems that soul moves an animal by that kind of movement alone. And likewise, too, for whoever forms the intellective and sensory capacities from the elements. For plants seem to live without taking part in [any] change of place or in sensation

(sensu); **and many animals do not have intelligence. Yet if someone would have separated these out and claimed that intellect is [merely] a part of soul, and likewise too the sensory capacity, then he will not yet be speaking° of every soul, or of the whole, or of one.°**

410b27–411a2. The account that is in the so-called Orphic hymns suffers from this as well. For it says that soul comes in, from the whole, by breathing and is carried by the winds. And thus it is not possible for this to occur in the case of plants or certain animals, if they do not all breathe. But this fact was hidden from those who took such a view.

411a2–7. Still, if we must form soul from the elements, there is no need [to form it] from them all. For one member of a contrary pair is adequate to assess both itself and its opposite. For by what is straight we cognize both it and what is bent: a measure is the judge of both, whereas what is bent [is judge] neither of itself nor of what is straight.

{409b18–25} IS SOUL COMPOSED OF ALL THINGS?

1–19. /178/ Earlier the Philosopher showed how the ancient natural philosophers approached the cognition of soul along **three** lines: namely, through **movement,** through cognition, and through its **most incorporeal** existence [I.5.405b10–12]. And he argued against those who came to a cognition of soul through movement [I.6–11] and against those who said that soul is what is most incorporeal and simple above all [cf. I.6.10–18]. Here, in turn, he argues against those who said that soul has cognition of all things because it has been composed of all things. /179/ It was their position that soul has cognition of all things. And because cognition is brought about by one thing's being made like another, they said (conjecturing, as it were) that soul, in order to have cognition of everything, is composed of everything, and that in soul a likeness of all things exists according to those things' own mode of being.[1] Thus, since things consist of elements, they said that soul is composed of **elements** so as to **sense and have cognition of** everything **that exists.**

1. On this view, in other words, the objects of cognition have natural being within soul, not spiritual being (see I.10.174–200). The absurdities involved in such a claim will be spelled out shortly.

THE ARGUMENT AGAINST EMPEDOCLES

19–26. *Analysis.* The principal advocate of this position was Empedocles, since he claimed that soul is composed of more elements than did any one of the others. That is why the Philosopher principally rejects his view here and argues against it. And in this connection Aristotle does two things. He first discredits Empedocles' view and then discredits one other view (beginning at **Some, however, say that soul,** etc. {I.13.411a7}).

{409b25–410a13} THE FIRST ARGUMENT

27–65. /180/ Aristotle gives ten arguments discrediting Empedocles' view, the first of which runs as follows: Empedocles says that, because cognition is brought about by likeness and because soul has cognition of all things, soul must be composed of all things. But it is plain that, **necessarily,** this **account faces many** unacceptable and **impossible consequences.** For it is evident that in any given thing **not only these exist** (viz., these elements) but **many things other** than the elements, like the proportion in which they are mixed together and the ratio of any of them. And perhaps there are **an infinite number of things** that arise in composite objects **as a result of these** (that is, as a result of the elements). So much is plain in the case of bone. For one must **cognize** not only the things **out of which** bone is composed but also the proportion between the things out of which it is composed and bone's ratio. For everything that is composed consists **not in the elements' being related in just any way** at all **but in a certain ratio and composition**—as, that is, they are proportionate to one another. For **bone,** although it has **eight parts** (according to what **Empedocles** says that each composite thing has), the eight parts are not equally assigned to all the elements. Rather, **Earth** has **two** parts in it, Air has one, and Water likewise, whereas Fire has **four.** And so, as a result of Fire's greater participation, Empedocles says that **bones are made white,** while as a result of Earth they are made dry. So therefore in composite things there is not only the elements themselves but also the proportion and ratio of any given thing. And from this it follows that these proportions either are or are not in soul with the elements. If they are in soul, then bones and flesh and things of this sort are in soul, and consequently so is **a human being** and **a stone** and so forth. Yet no one is **in doubt** that these are not **in soul.** But if you say that proportions and ratios of this sort are not there and that only the elements are there, then soul will not have cognition of the proportions of things or of the composites themselves. For in what way could soul have cognition of **god**

(that is, the whole heavens) **or a human being or** a stone or a **bone?** There is no way; it would have cognition only of the elements.

{410A13–22} A SECOND ARGUMENT

66–82. /181/ Aristotle introduces a second argument when he says **Further, since what exists,** etc. It runs as follows: you say that soul is composed of basic principles. But there are different basic principles for different genera. Therefore, **since what exists is spoken of in many ways** (i.e., there are different genera, such as substance, **quality, quantity,** and the other **categories**),[2] there are thus different basic principles. So I ask: is **soul** composed (i) from the basic principles of substance alone or (ii) **from** the basic principles of **all** the genera? **If** (i), it is composed only of the basic principles of substance, **then it will have cognition** only of substances. Yet they claim that it has cognition of all things. If, on the other hand, (ii), soul is composed of the basic principles of all the genera, then, since whatever comes from the basic principles of substance is substance and whatever comes **from** the basic principles **of quantity** is **quantity** (and so on in each case), soul **will be substance, quantity, quality,** relation, and [all the others] of this sort.

83–94. /182/ One could, however, reply to this argument of Aristotle's that the basic principles of substance are also those of quantity, quality, and the others, since they are all based on substance. There would thus be no need for anything other than substance in soul, and nevertheless it would cognize all things. We should say in reply to this that each thing has proximate and remote principles, and cognition must take place through proximate principles. But the principles of substance, although they may be the principles of other things, are nevertheless [in that respect] remote, not proximate. So through them one can cognize only substance.

{410A23–26} A THIRD ARGUMENT

95–104. /183/ Aristotle introduces a third argument when he says **Now it is unacceptable to say,** etc. This argument, which leads to an unacceptable result, runs as follows: the reason that soul is composed of all the elements is that soul cognizes all things and cognition occurs through a likeness. To the

2. The reference is to Aristotle's *Categories,* which divided all the things that exist into ten genera (or categories). The four genera most often mentioned are substance, quantity, quality, and relation.

contrary: it is evident that **sensing and cognizing** are **kinds of being affected.** But it is **unacceptable to say that like is** affected **by like;** rather, the contrary [is true]. Therefore it is unacceptable as well to say that one **senses** or **cognizes like by like.**

{410A27–B2} A FOURTH ARGUMENT

105–119. /184/ Aristotle introduces a fourth argument when he says **Saying, as Empedocles does,** etc. It runs as follows: **what has been claimed** above **bears witness** to the fact that the claim of **Empedocles** (namely, that like is cognized by **like**) **presents many puzzles and difficulties.** But it is apparent that the claim is even more problematic and improper. For if soul were to cognize like by like, as Empedocles says, then it would follow that through the elements of Air it would cognize Air, and so on for the other elements. But we see that in animals **there are many parts made of Earth** that **sense nothing,** such as **hair, bones,** and **sinews. And yet** it **would be appropriate,** according to the position of these [philosophers], for these parts to sense. Therefore like is not cognized by like, or else soul is not composed of all the elements.

{410B2–4} A FIFTH ARGUMENT

120–129. /185/ Aristotle introduces a fifth argument when he says **Further, each one of the basic principles,** etc. It runs as follows. From Empedocles' position that like is cognized by like there is still another unacceptable consequence that follows: namely, that a **basic principle** is characterized **more** by **ignorance than** by **intelligence.** For if cognition occurs solely through what is like, and if each basic principle is simple and has in itself no likeness of anything except for its own likeness, then it **will have cognition** only of itself and **will be ignorant of many things—of all the things,** that is, **that differ** from it.

{410B4–7} A SIXTH ARGUMENT

130–146. /186/ Aristotle introduces a sixth argument when he says **Also, Empedocles will face,** etc. It runs as follows: from the position described, that like is cognized by like, **Empedocles will face** still another unacceptable **consequence**—namely, that compared to all the animals **his god is most ignorant.** That follows on this basis: we should know that, as we have stated, Empedocles supposed that all lower [beings] are composed from the four elements

and from Strife and Friendship, whereas generation and corruption in things comes from these latter two. He said that the heavens are god and are composed of the four elements and Friendship, but not of Strife; this is why they are incorruptible. So if like is cognized by like, then, since god is not composed of Strife, **he will not have cognition of** Strife. In this respect, then, he will be more simple-minded than the other animals who do have cognition of Strife, since they are composed of it.

{410b7–10} A SEVENTH ARGUMENT

147–155. /187/ Aristotle introduces a seventh argument when he says **In general, then, why,** etc. It runs as follows: if soul is composed of all the elements, then it follows that **all things that exist have a soul.** For **everything** that exists **comes either from all of the elements or** from some of them. But everything that is composed of the elements is a body. Therefore all bodies and all things that exist have a soul. This is false.

{410b10–15} AN EIGHTH ARGUMENT

156–171. /188/ Aristotle introduces an eighth argument when he says **And someone may well puzzle,** etc. It runs as follows: the elements are multiple and contrary. Yet wherever any contraries are composed and combined, there must be something else that contains and makes **them one.** Therefore if soul is composed of all the elements, there must be something else that **contains** them. But it is extremely puzzling to work out what this is, since so described it would be more elevated than and prior to **soul,** which **is impossible.** And [this is so] at least for **intellect,** since **it is** extremely **reasonable** for intellect to **be the noblest** of all **and be in control by nature.** Again, it would follow that that [containing thing] would be prior to the elements, which is false, since Empedocles and others **say that the elements are the first** of all **beings.** Therefore soul is not composed of the elements.

{410b16–27} A NINTH ARGUMENT

172–193. /189/ Aristotle introduces a ninth argument when he says **Moreover they all, both those who say that soul,** etc. Here he reveals the deficiency and inadequacy of the position of Empedocles and of all the others who considered soul through movement or sense. The argument runs as follows: it is

evident that **they all,** even all those who said that soul is something **productive of** local **movement,** spoke inadequately. For there are many things with souls that are not moved **in location** but rather **are stationary,** such as plants and other things of this sort. **And likewise, too,** those who said that soul is something **intellective and sensory** spoke inadequately. For there are many things with souls that neither sense nor intellectively cognize. But **if someone would have separated these out**—that is, being intellective, sensory, and productive of movement—and were to say that [only] one **part of soul** is intellective, **and likewise sensory, then he will** still **not** in this respect **be speaking of every soul,** because not every soul is intellective, **or of the whole** soul, since being intellective and sensory are [merely] parts of soul, **or of one** soul, since he would in this way not be speaking of all the distinctive features of every single soul. For there are other distinctive features in soul beyond intellectively cognizing and sensing.

{410b27–411a2} THE DEFICIENCY OF ORPHEUS'S VIEW

194–197. /190/ A certain philosopher called Orpheus also spoke about soul in a faulty manner. And because he fell into a fault that is more or less similar, Aristotle for that reason includes his fault here.

Who Was Orpheus?

198–210. It is important to know, however, that this Orpheus was one of the first philosophers who were, as it were, poet-theologians, speaking in verse about philosophy and God. There were only three of these—Musaeus, Orpheus, and a certain Linus. This Orpheus first persuaded humans to live together; he gave the most beautiful recitals, thereby leading beastly and solitary human beings into society. And it is said of him that he sang and played the harp better than anyone, inasmuch as he made stones dance (i.e., he gave such beautiful recitals that he would soften stony human beings). After these three came the seven sages, one of whom was Thales.

210–226. *{410b27–411a2, Continued}* So this Orpheus held that all air is ensouled and is a kind of soul and that the soul of living bodies is nothing other than what an animal draws in through breathing from the ensouled air. He said this in verse. And thus the Philosopher says that Orpheus's **account** of soul **that is in** his metrical **hymns suffers from** the same fault that the accounts of the preceding philosophers suffered from. For, as we have said, he held **that soul** is what is drawn in through the **breathing** of animals. But such a claim is inadequate. For there are many **animals** that **do not breathe. But this fact**—namely, that certain animals do not breathe—**was hidden from**

those who held the **view** under discussion. And thus it is plain that they are reproved for their view's inadequacy.

{411A2–7} A FINAL ARGUMENT AGAINST EMPEDOCLES

227–253. /191/ Aristotle introduces a tenth argument when he says **Still, if we must form soul,** etc. Here he charges these philosophers with superfluousness. The argument runs as follows: they say that for soul to have cognition it must be composed of the elements. But we see that one can have a cognition of everything through less. Therefore, even if we grant that **soul** is composed **from the elements,** we should not suppose that soul is composed **from all** the elements but at most from two. And clearly we do cognize through less. For since what is composite consists of one complete thing and another incomplete thing, the basis *(ratio)* for cognizing the incomplete is the complete. Also, "since contraries can be reduced to privation and possession *(habitum),*"[3] **one member**—viz., the member that stands as the possession and as something complete—**is adequate** for cognizing both **itself** and the other member that exists as the privation and as something incomplete. **For** through **what is straight we** assess and **cognize** the straight **and** also **what is bent.** For **a measure**—i.e., a ruler—**is** that through which we make a judgment about **both.**[4] But through **what is bent** we cognize **neither it nor what is straight.** Therefore it was not necessary to **form soul**—i.e., to compose it—**from all the elements,** but only from two, namely, Fire and Earth. Through these one might cognize both them and their contraries, and so one might cognize hot and cold things through Fire, dry and wet things through Earth.

3. Albert the Great, *De anima,* 50.87–89. At this point in the commentary and for no apparent reason, Aquinas ends his close reliance on Themistius and begins relying (in this and the next chapter) on the commentary of his former teacher, Albert the Great (see the Introduction).

4. Compare Albert, *De anima,* 51.1–2.

Chapter 13

Against Soul's Existing in the Elements
Thales

DE ANIMA I.5.411A7–26

411a7–8. Some, however, say that soul is mixed in with the whole. And perhaps this was why Thales thought that all things are full of gods.

411a9–16. But this presents a number of puzzles. For why does soul, when it is in Air or in Fire, not produce an animal, whereas in mixtures [it does], when this [soul] is supposed to be better in these [unmixed elements]? For someone might well ask why a soul that is in air is better and more immortal than one that is in animals. Yet each gives rise to an absurd and unreasonable result. For, plainly, saying that Fire or Air is an animal is among the more unreasonable of claims, while not saying that things are animals when there is soul in them is absurd.

411a16–20. Yet they seem to believe that there is soul here° because a whole is homogeneous with its parts. Therefore it is necessary for them to say that soul, too, is homogeneous with its parts, if animals are made to have souls when something from the surroundings is drawn into the animals.

411a20–23. But if the detached air is homogeneous, while soul is heterogeneous, then evidently some [part] of that will exist, whereas another [part] will not exist.° Therefore it is necessary for soul to be homogeneous or else not to exist in every single part of it all.

411a24–26. So it is clear from what has been said that it is not because of soul's coming from the elements that cognition is present in soul or that soul is moved. That is said neither well nor truly.

1–5. *Analysis.* /192/ Now that the Philosopher has presented the view, as well as the arguments, of those who took soul to come from the elements, and now that he has disproved those arguments, he here, by extension, presents the view of certain philosophers who said that soul exists in the elements.

6–8. And in this connection he does two things. For he first presents their view and then, second, the reason for their view (beginning at **Yet they seem,** etc. {411a16}).

8–10. In connection with the first he does two things. First, he presents their view; second, he disproves it (beginning at **But this presents,** etc. {411a9}).

{411A7–8} THE VIEW

11–21. So Aristotle says first that there are **some** who **say that soul is mixed in with the whole** universe, placing it both in the elements and in things composed of the elements.[1] **This was why** a certain philosopher by the name of **Thales, perhaps** motivated by this view, **thought that all things are full of gods.** For he held that the whole universe is ensouled and that its soul is god. Thus, just as the whole soul is in every part of an animal,[2] so he held that god is in every part of the universe—and in this way **all things are full of gods.** And perhaps this gave rise to idolatry.

{411A9–16} THE VIEW DISPROVED

22–33. /193/ After this, when Aristotle says **But this presents,** etc., he disproves this view. He says that **this**—namely, that soul exists in the elements and in things composed from the elements—**presents a number of puzzles** and contradictions. One of these is that, if soul exists **in Air** and **in Fire** (they said that it exists in these two above all), then it will be difficult to say **why soul does not produce an animal** in these (i.e., why these elements are not animals), although soul does produce an animal **in mixtures** (i.e., although mixed ensouled things are animals). This is especially puzzling because one has to **suppose** that **this** (viz., soul) is **better in** simple elements than in things composed from those elements.

33–39. /194/ Another puzzle is this: **someone,** impelled by these considerations, **might well ask** why **a soul that,** according to them, exists **in** the elements **is better and more immortal** than a soul **that** exists **in** the things composed from those elements. For that which exists in things composed from the elements gives rise to a cognizing and sensing animal, whereas soul does not do this in the elements.

39–47. /195/ **Yet,** whatever one claims, these two puzzles **give rise to an absurd and unreasonable result.** For **saying that Fire or Air is an animal,** a claim that the first puzzle gives rise to, **is** absurd above all else. It is apparent to the senses that this is false, and this is a claim made by those who lack reason. Meanwhile, **not saying** that things **in** which **there is soul** are **animals**

1. Here and for much of this chapter Aquinas closely follows Albert the Great, *De anima,* 51.9–52.1.

2. Compare *Summa theologiae* (first part), q. 76, a. 8.

is utterly **absurd.** For on that view there would be no difference between a soul's being in a body and its not being there.[3]

48–53. *Analysis.* /196/ After this, when Aristotle says **Yet they seem,** etc. {411a16 ff.}, he introduces the reason for the view just set out. And in this connection he does two things. First, he introduces their reason and disproves it. Second, he concludes with what is clear from everything said (beginning at **So it is clear,** etc. {411a24}).

{411A16–20} THE REASON FOR THE VIEW

54–65. First, Aristotle introduces the reason for the view, saying that the reason why the philosophers under discussion **seem to believe that there is soul here**—i.e., in all the elements—is that they held that **whole** and **part** in the elements, since they are simple, are **homogeneous.** Now they saw and believed that part of **the surroundings** (i.e., air), when **drawn into animal** bodies through inhaling and breathing, is the reason why **animals are made to have souls,** and hence is soul. And so it was **necessary** for them **to say that soul is homogeneous with its parts**—i.e., that all of what surrounds us is ensouled.

{411A20–23} THIS REASON DISPROVED

66–84. /197/ Second, when Aristotle says **But if the detached,** etc., he disproves the reason just given. He says that **if the detached** and drawn-in **air is homogeneous** with the whole air, then it will follow that the soul of an animal is homogeneous with the soul of the whole air. But it is evident that the **soul** of any animal **is heterogeneous** with the soul of air. For one [part] **of that** (viz., the soul of air) **will exist** (i.e., is immortal), according to them, inasmuch as it always gives and will give life to all living things. **Another [part]** (viz., the soul of this or that animal) **will not exist** (i.e., is mortal), according to them. So **it is necessary** that one of two absurd results follow from this. First, that air is **homogeneous**—viz., that which is inside and that which is outside—

3. Compare Albert, *De anima,* 51.33–36. The point is that it would be absurd to allow that a thing can have a soul without being an animal. What then would souls be said to do within bodies, if not give them life? (Strictly speaking, an ensouled thing might be a plant, not an animal, but for now Aquinas is simply following Aristotle's looser presentation of the argument.)

and **soul** too, which was just disproved. **Or,** if the soul itself is heterogeneous and the air homogeneous, then it follows that soul does **not exist in every single part of it all** (i.e., of the whole air) which runs contrary to those who supposed that the whole air is ensouled.

{411A24–26} CONCLUSION

85–94. /198/ After this, when Aristotle says **So it is clear from what has been said,** etc., he concludes from all the things that have been said about the ancients' views that neither of the things that they attributed to soul is true and **well said,** in the way in which they said it. That is, **cognition is not present in soul** as a result **of soul's coming from the elements,** as they claimed, and neither is movement or being **moved** present in it as a result of soul's consisting, according to them, of the elements that were mentioned. And this is evident and clear enough to anyone who examines the above remarks.

Chapter 14

Is This Soul One Principle or Several?

DE ANIMA I.5.411A26–B30

411a26–b5. Now since cognizing, as well as sensing and forming opinions, belongs to soul, and also wanting *(concupiscere),* deliberating, and appetites in general, while local motion is brought about in animals through soul, and in addition growth, maturity, and deterioration—is each of these in the whole soul? Is it through every [part] that we intellectively cognize and sense and that we act and are acted on by each of the others? Or do the different [operations] occur through different parts? So, too, being alive: is it in some one of these [parts], or in several, or in them all? Or is the cause something else?

411b5–6. Some say that soul is divisible into parts and that it intellectively cognizes through one part, wants through another.

411b6–14. What holds soul together, then, if it is naturally suited to be divisible into parts? For this certainly is not body. On the contrary, it seems that instead soul holds body together, for when it withdraws, [the body] expires and withers away. If, then, something else makes it one, then that will surely be soul above all. Yet we will again have to ask whether that is one or has many parts. For if it is one, then why is soul not one, straight off? If, on the other hand, it is divisible, then the account will again ask what is holding it together, and so on it will go, ad infinitum.

411b14–19. Someone will ask, regarding soul's parts, about what power each part has in the body. For if the whole soul holds together the entire body, then it is proper for each one of its parts to hold together some share of the body. Yet this is next to impossible. For it is difficult even to conceive the sort of part intellect will hold together or how it will do so.

411b19–27. Moreover, plants seem to remain alive when divided, as do certain animals when cut up,° inasmuch as they have specifically the same soul [in their different parts], even if not numerically the same. Indeed, each of the parts has sense and is locally moved for some time. And if they do not endure, this is in no way unacceptable: for they do not have the mechanisms with which to preserve their nature. But nevertheless every part of soul is present in each of its parts, and these [parts] are homogeneous with one another and with the whole—with one another, first, as things that are not separable, and with the whole soul inasmuch as it is indivisible.

411b27–30. The soul that is in plants seems as well to be a kind of principle.° For animals and plants have this alone in common. And it is separated from the sensitive principle, although no [animal] has sense without it.

1–6. *Analysis.* /199/ Now that he has introduced the ancient philosophers' views on soul and disproved them, here in turn the Philosopher raises several puzzles. And in this connection he does two things. First, he raises those questions; second, he resolves them (beginning at **Some say that soul,** etc. {411b5}).

Two Ways of Treating Soul's Operations

7–26. It is important to know that soul's operations—sensing, intellectively cognizing, having appetites, moving locally, and growing—can be treated in two ways. For they are treated in one way with respect to their manner of functioning; in this way there are three powers of soul, and these sorts of actions are attributed to them. The powers are the nutritive, the sensitive, and the intellectual. /200/ These clearly differ. For the nourishing *(nutritiva)* or nutritive *(vegetabilis)* power acts by means of active and passive qualities, such as hot, cold, and so on. But the sensory power, or sense, although it does not need sensible qualities in order to sense, still needs a bodily organ. Intellect, however, needs neither of these. For it intellectively cognizes neither by means of [such] qualities nor through an organ; instead, it fulfills its function *(perficitur)* without any organ. /201/ If, on the other hand, we were to treat these sorts of actions with respect to the sorts of actions they are, then in this way there are five powers: the nourishing, the sensory, the power for local motion, the appetitive, and the intellective. The actions belonging to these powers are sensing, taking nourishment, being moved, having appetites, and intellectively cognizing.

{411a26–b5} TWO QUESTIONS

27–45. /202/ And so, since the Philosopher dealt earlier with soul as a whole, with respect to ancient views, and discredited those views, here he investigates soul's parts and the operations of those parts. He raises two questions, the first of which is as follows: do the operations of soul—which are **cognizing** and **sensing,** as regards sense; **forming opinions,** as regards intellect; **and also wanting** *(concupiscere),* as regards the concupiscible power; **deliberating,** as regards the rational power; **and appetites in general** (this covers more, because along with the last two it includes the irascible power), being

locally moved and also growing, reaching maturity, and declining[1]—do these apply to **the whole soul** in such a way that **each of these is in every** part of soul (i.e., so that we **intellectively cognize** and **sense,** and are moved, have appetites, and are nourished in virtue of each of soul's parts)? Or does every single one of those have a single determinate part of soul, in such a way that we intellectively cognize through one part, sense through another, and so on?

45–50. /203/ Here is the second question. Given that each of soul's operations has its specific part, there will be a further question: does **being alive** apply to certain of the parts, in such a way that **it is in some one of** them **or in several** of the parts? **Or** is it **in them all?** And if [living] is not in these, then does it come from **something else?**

51–54. *Analysis.* /204/ After this, when Aristotle says **Some say that soul,** etc. {411b5 ff.}, he replies to the questions introduced: first to the first, second to the second (beginning at **That soul that is in plants,** etc. {411b27}).

54–57. And in replying to the first question, he first introduces the view that certain philosophers held on it; second, he disproves this view (beginning at **What holds soul,** etc. {411b6}).

{411b5–6} THE VIEW OF CERTAIN PHILOSOPHERS

58–75. Some say that operations of this sort apply not to the whole soul but to its parts. For they **say that soul is divisible into parts and that it intellectively cognizes through one part, wants through another.** There are, for instance, those who claimed that the sensory capacity is in the brain, the capacity for living in the heart, and so on. /205/ Yet this sort of view is true in one way, false in another. For if your understanding is that there are various parts in soul that are powers *(partes potentiales),* then in that way it is true that soul has various parts and powers and that it intellectively cognizes through one, senses through another. For soul is a kind of whole that is a power, and in this connection 'part' is interpreted as a power *(potentialis)* with respect to the whole power *(totius potestativi).* If, however, one understands soul as a kind of magnitude or quantity divided into various quantitative parts,[2] then

1. All the principal functions of soul are listed here. There are, first, two sorts of cognitive operations: those associated with the senses and those associated with intellect. Next are three sorts of desires or appetites: one associated with intellect and two with the senses. The two kinds of sensory appetites are produced by the concupiscible and irascible powers, respectively (see III.5.149–157). Finally, there are the power for local movement (see III.14–16) and the power responsible for our maturing and growing old (see II.7–9).

2. Compare I.8.98–122.

in that way the view is false. And these philosophers understood soul to be divisible into parts in this latter way, and they added, furthermore, that these sorts of powers of soul are different souls.[3]

{411B6–14} THIS VIEW DISPROVED: THE FIRST ARGUMENT

76–98. After this, when he says **What holds soul,** etc., the Philosopher disproves the view just described through three arguments. The first of these runs as follows. Different things cannot combine unless they are united by something. So if there are different souls in a body, they must be held together and united by something. But there is nothing that **holds** them **together** and unites them. Therefore, they are not different. And that there is nothing holding soul together and uniting it is clear in the following way. For that would be either (i) the body in which soul exists or (ii) something else. But, (i), the **body** does **not** unite and hold soul together. **Instead soul holds body together: for** we see that **when** soul **withdraws** from body, the body fails **and withers away. If** (ii), **something** else holds it together, **then that above all will be soul,** since it belongs to soul to hold together and rule. And if **that** is soul, then **we will again have to ask whether** it **is one or has many parts.** And **if** we say that **it** has many parts, then **again** there is a question of what unites it, **and so on, ad infinitum. If, on the other hand,** we say that **it is one, then** why do they **not** say **straight off**—i.e., from the very beginning—that **soul** is **one?** Therefore, soul is not divisible into quantitative parts, as they claim.

{411B14–19} THE SECOND ARGUMENT

99–106. /207/ Aristotle introduces the second argument when he says **Someone will ask,** etc. For if there are different **parts** of soul in different parts of the body, then it follows that for each operation of soul there is a determinate **part** of **the body** or a bodily organ. But **this** is **impossible,** because **intellect** does not have a determinate **part** or organ in the body. Therefore, soul does not have different parts, as they claim.

3. The specific division of powers considered here ("the sensory capacity is in the brain," and so on) reflects an account proposed, in particular, by Avicenna, *Liber de anima* V.8 (176.76–81). But it is Plato to whom Aquinas attributes the position that a human being contains multiple souls (cf. I.1.235–236; *Summa theologiae* [first part], q. 76, a. 3c). And see below, III.14.269–273.

{411B19–27} THE THIRD ARGUMENT

107–124. /208/ Aristotle introduces the third argument when he says **Moreover, plants seem to remain,** etc. For if there are different operations of soul in its different parts, then one will not find a part in which there is more than one operation at once, nor will the parts of an animal be homogeneous. But we find parts of some living things that have more than one operation. And the soul of these animals is homogeneous both as a whole and in its parts. This is the case for **plants** and **certain animals** that **remain alive when** cut apart—as occurs in segmented animals, each part of which senses **and is moved for some time** when cut apart. And **if** someone says that **they do not** live very long, this is irrelevant, because **they do not have the mechanisms with which to preserve their nature.** Yet, **nevertheless,** more than one of the operations **of soul is present in its** severed **parts, and these [parts] are homogeneous with one another and** also **with the whole.** Therefore, there are not different parts of soul for the different parts of the body.

Why Some Things Remain Alive When Cut Apart

124–134. Now the reason that [some plants and animals] remain alive when cut apart is that a soul carries out more and different operations to the extent to which it is more complete. And so, in order to carry out such operations, it needs more and different bodily organs. And since the rational soul is more elevated and complete, to that extent it needs a variety of organs. On the other hand, the soul that is in segmented animals (and also in plants) is far from complete, nor does it carry out different operations. So for these reasons such a soul requires a body that is more uniform *(simile),* and it survives in each part.

{411B27–30} A REPLY TO THE SECOND QUESTION

135–157. /209/ After this, when Aristotle says **The soul that is in plants seems,** etc., he resolves the second question. In this connection it is important to know that, strictly speaking, living belongs to things that have movement and operation through themselves, without being moved by other things. And so 'living' is taken in two ways. In one way 'living' is taken as the existence of what is living—just as the Philosopher says that "for living things, existing is living" [II.7.415b13]. In another way, living is the activity of life. /210/ We should say, then, that **the soul that is in plants** (the nutritive soul) **seems to be a kind of principle** that exhibits the life in lower beings. For nothing lives without it, and all things that live **have this alone in common.** But not all

living things have in common the other [principles]. For the only respect in which **animals and plants** are alike is in their nutritive principle. Also, the nutritive soul can occur without **the sensitive** and intellective principles, but these cannot exist without the nutritive. For **no** animal **has sense** or intellect **without it**—that is, without the nutritive principle. Thus living is attributed to this principle, the nutritive, in the same way that sense is attributed to touch: it is not that an animal lives through the nutritive principle alone, but that this is the first principle in which life is exhibited.[4]

4. Analogously, Aristotle will claim that none of the other senses are found without touch (II.6.415a3–6). Later, Aquinas calls touch "the source and basis of all the senses" (III.3.54).

Book II

Chapter 1

What Soul Is
A First Definition

DE ANIMA II.1.412A3–B9

412a3–6. We have stated what earlier philosophers proposed regarding soul. Now, as if from the beginning, let us start over again and attempt to determine what soul is and what the most general account of it will be.

412a6–11. We say that substance is one genus among existent things. Included in this, first, is matter, which is surely not in its own right an individual thing; there is, next, the form and species in virtue of which there is then said to be an individual thing; third, there is what comes from these [two]. Now matter is potentiality, whereas species is entelechy. And the latter is so in two ways: first as knowledge [is an actuality], second as considering [is].

412a11–15. But bodies seem to be substances above all and, among these, physical [bodies]—for these are the sources of the others. Moreover, among physical bodies, some have life whereas others do not. We say that [a thing has] life that on its own [takes part in] nourishment, growth, and deterioration.

412a15–21. Hence every physical body participating in life will be a substance, and a substance in such a way as to be composite. Yet since it is a body and is of this sort—for it is a thing having life—body will indeed not be soul. For body is not one of those things that are in a subject but serves more as the subject and the matter. Therefore soul is necessarily a substance, serving as the species of a physical body potentially having life. Yet substance [is] actuality. Therefore [soul] is the actuality of a body of this sort.

412a22–28. Yet this [actuality] is spoken of in two ways: in one way as knowledge, in another way as considering. It is clear, then, that [soul is an actuality] like knowledge, since as a result of soul's existence there is both sleep and waking. Wakefulness corresponds with considering, whereas sleep [corresponds] with having and not using [knowledge]. Now knowledge is prior in terms of generation within the same individual. Thus soul is the first actuality of a physical body potentially having life.

412a28–b4. But anything with organs is of this sort. Even the parts of plants are organs, although quite simple. Thus leaves are the shelter for the fruit-bearing part, whereas the fruit-bearing part [is the shelter] for the fruit. The roots, meanwhile, are like a mouth, for both take in food.

412b4–6. So if we must identify something common in every soul, it will be the first actuality of a physical body having organs.

412b6–9. Thus we need not ask whether soul and body are one—just as we do not [ask about] wax and its shape or in general [about] the matter of any given thing and that of which it is the matter. For although one and existing are spoken of in more than one way, it is actuality that is properly [spoken of in this way].

1–8. *Analysis.* /211/ Now that Aristotle has introduced, in Book I, the views of others regarding soul, he here starts to present an account of soul in keeping with his own view and with the truth. And in this connection he does two things. First, he says what his plan is, linking himself to the preceding discussions. Second, he pursues his plan (beginning at **We say that there is one,** etc. {412a6}).

{412a3–6} HIS PLAN

9–29. So Aristotle says first that in Book I **we have stated** the things that **earlier philosophers proposed regarding soul.** But we must **again,** as if starting **over** at **the beginning, determine** the truth. This, on account of its difficulty, is certainly something that one must **attempt,** rather than presuming that the truth is guaranteed to be found. Now above, in the Prologue, Aristotle had asked whether one should present an account first of soul itself or instead of its parts [I.1.402b9–10]. So he here says, by way of settling this question, that at the beginning one should say **what soul is,** thereby making soul's essence known. Later an account will be given of its parts or powers [II.5–III.18]. And, by way of giving a reason for this claim, he further adds: **and what the most general account** *(ratio)* **of it will be.** For when one shows what soul is, one focuses on the general level; when, on the other hand, one presents an account of each one of soul's parts or powers, then one focuses on that which is specific as regards soul.[1] And this is the order in which one teaches, as the Philosopher showed at the beginning of the *Physics* [184a23–24]: one goes from the general to the less general.

30–35. *Analysis.* /212/ Next, when Aristotle says **We say that,** etc. {412a6 ff.}, he pursues the plan that he put forward. This is divided into two parts. In the first he shows what soul is; in the second he presents his account of its parts or powers (beginning at **Now of the powers of soul,** etc. {II.5.414a29}).

1. In other words, the discussion will begin by considering features that apply generally to all souls and then will focus on special features of certain kinds of souls.

35–39. That first part is divided in two. In the first he introduces a definition of soul that functions as the conclusion in a demonstration. In the second he introduces a definition of soul that functions as the first premise (*principium*) in a demonstration (beginning at **Now because what is certain,** etc. {II.3.413a11}).

The Place of Definitions in Demonstrations

40–50. It is important to know here, as *Posterior Analytics* I says [75b30–32], that every definition is either the conclusion of a demonstration (for instance, thunder is a continuing sound in the clouds) or else the first premise of a demonstration (for instance, thunder is fire's being extinguished in a cloud) or else is a demonstration that is out of position, i.e., out of order (for instance, thunder is a continuing sound in the clouds as the result of fire's being extinguished in a cloud). Both the conclusion and the first premise of the demonstration are contained in this last example, but not in keeping with syllogistic order.[2]

51–53. *Analysis.* This first part is divided in two. In the first of these parts Aristotle introduces a first definition of soul; in the second part he clarifies the definition (beginning at **So it has been said generally,** etc. {II.2.412b10}).

54–58. The first of these is divided in two. In the first he sets out in advance a number of divisions that lay out a path for investigating soul's definition. In the second he investigates soul's definition (beginning at **Hence every physical,** etc. {412a15}).

Substantial Versus Nonsubstantial Definitions

59–83. /213/ It is important to know, however, as the Philosopher teaches in *Metaphysics* VII [1030b14–1031a14], that there is this difference between the definitions of substance and of accident: nothing is contained in a definition of substance that is outside the substance of what is being defined. This is be-

2. Compare *Posterior Analytics* I.93b8–94a14. The last of the three is a demonstration that is out of order because it puts the conclusion first and then the first premise.

As will become clearer in Chapter 3 (see, in particular, II.3.106–116), Aquinas reads these opening chapters of Book II as an extended attempt to demonstrate a definition of soul—viz., that soul is the first actuality of a physical body having organs (412b5–6) or, alternatively, the first actuality of a physical body potentially having life (412a27–28). This definition is itself demonstrated on the basis of another definition: that soul is the first principle of life (413b1–2).

So in this example, the definition of thunder as a continuing sound in the clouds is explained by another definition: that thunder is fire's being extinguished in a cloud. Why does thunder make a noise? Because it consists in fire's being extinguished. Analogously, Aristotle attempts to derive the definition of soul as first actuality from the definition of soul as the first principle of life.

cause every substance is defined through its material and formal principles. The definition of an accident, on the other hand, contains something that is outside the essence of what is being defined—namely, the subject. This is because the definition of an accident must contain its subject, as, for instance, when one says "snubness is the curvature of a nose." The reason for this is that a definition signifies the what-it-is of a thing. Now, a substance is that which is complete in its existence and its species. An accident, on the other hand, does not have a complete existence but is dependent on a substance. Likewise, too, no form is something complete in species. Rather, the completeness that belongs to a species is characteristic of a composite substance. Thus a composite substance is defined in such a way that nothing is included in its definition that is outside its essence. But in every definition of a form something is included that is outside the form's essence—namely, its proper subject or matter. Hence, since soul is a form, its matter or subject must be included in its definition.

84–90. *Analysis.* /214/ And so it is that in this first part Aristotle introduces two divisions. The first of these is necessary for investigating what is included in soul's definition as an expression of its essence. The other division is necessary for investigating what is included in soul's definition as an expression of its subject (beginning at **But bodies seem,** etc. {412a11}).

{412a6–11} DIVISIONS PERTAINING TO SOUL'S ESSENCE

91–95. In connection with the first he refers to three divisions. Through the first of these, being is divided into its ten categories. He refers to this when he says that **substance** is said to be **one genus** of being.

96–117. /215/ The second division is that through which substance is divided into matter, form, and composite. **Matter** is that which **is not in its own right an individual thing** but is only in potentiality for being an individual thing. **Form, next,** is that **in virtue of which there is then** in actuality **an individual thing.** A composite substance, finally, is that which is an individual thing. For an individual thing is said to be something picked out that is complete in being and in species, and this—in the case of material things—is characteristic only of a composite substance. (Separated substances, although they are not composed of matter and form, nevertheless are individual things, since they are actually subsistent and complete in their nature.) Now a rational soul can in one respect be called an individual thing, inasmuch as it can be subsistent on its own. Yet because it does not have a complete species, but is more part of a species, soul is not entirely suited to being an individual thing. The difference, then, between matter and form is that **matter is** being

in **potentiality, whereas** form **is entelechy**—i.e., the actuality through which matter is actualized. Hence the composite is a being in actuality.

118–129. /216/ The third division is that actuality is spoken of **in two ways:** in one way **as knowledge** is an actuality, in another way **as considering** is an actuality. And the difference between these actualities can be appraised via potentialities. For before acquiring the disposition associated with grammar (either through learning from another or through discovering on one's own), a person is still said to be potentially a grammarian. This potentiality is of course brought to actuality when someone now has the disposition associated with that knowledge. But then that person, when not actually considering, is once more in potentiality with regard to using the disposition. And this potentiality is brought to actuality when the person actually considers. It is in this way, then, that both knowledge and consideration are actualities.

130–133. *Analysis.* /217/ Next, when Aristotle says **But bodies seem,** etc. {412a11 ff.}, he introduces divisions through which we can investigate what is included in the definition of soul, as pertains to its subject. He refers to three divisions.

{412a11–15} DIVISIONS PERTAINING TO SOUL'S SUBJECT

134–141. The first of these divisions is that some substances are bodies and some are not. It is the bodily substances that are most apparent among these substances. For nonbodily substances, whatever they may be, are less apparent inasmuch as they are remote from sensible things and can be investigated by reason alone. This then is what he says, that **bodies above all seem to be substances.**

142–158. /218/ The second division is that, **among** bodies, some are **physical**—i.e., natural—and some are not natural, but man-made *(artificialia).* For a human being, a piece of wood, and a stone are natural bodies, whereas house and ax are man-made ones. Now, natural bodies seem to be substances more than man-made ones do, because natural bodies **are the sources of** man-made bodies. For a craft works with the matter that nature supplies, whereas the form introduced through craft is an accidental form, such as a shape or something of that sort. Thus man-made bodies are in the genus of substance not by way of their form but only by way of their matter, which is natural; hence their being substances comes from natural bodies. This is why natural bodies are substances more than man-made ones are. For they are substances not only with respect to their matter but also with respect to their form.

159–162. /219/ The third division is that some natural bodies **have life** and

some **do not.** But that is said to have **life that on its own** takes part in **nourishment, growth, and deterioration.**

A Note on the Proper Account of Life

163–181. It is important to know, however, that this explanation serves more as an example than as a definition. For a thing lives not merely as a result of taking part in growth and deterioration but also as a result of sensing, intellectively cognizing, and being able to carry out other living activities. Thus there is life in separated substances as a result of their having intellect and will, as is clear in *Metaphysics* XII [1072b26–30], even though they do not take part in growth or nourishment. But in things that are capable of being generated and corrupted the principle of life is the soul that is in plants, to which nourishment and growth pertain (as stated at the end of Book I [14.411b27–28]). For this reason Aristotle, in order to provide examples, here characterized having life as what takes part in nourishment and growth. Yet the proper account of life derives from something's being suited to move itself, where 'move' is interpreted broadly so that even intellectual operation is said to be a kind of movement. For we say that those things that can be moved only by an external source are without life.

INVESTIGATING THE DEFINITION OF SOUL

182–188. *Analysis.* /220/ Next, when Aristotle says **Hence every physical body,** etc. {412a15 ff.}, he investigates soul's definition, presupposing the divisions just set out. And in this connection he does three things. First, he investigates parts of the definition; second, he introduces the definition (beginning at **So if we must identify,** etc. {412b4}); third, on the basis of the definition given, he rules out a certain puzzle (beginning at **Thus we need not ask,** etc. {412b6}).

189–193. In connection with the first he does two things. He investigates first the portions of the definition that pertain to soul's essence and second the portion that pertains to the subject's essence (beginning at **But anything with organs,** etc. {412a28}).

193–196. In connection with the first he does two things. First, he investigates the following portion: that soul is an actuality. Second, he investigates another portion: that soul is the first actuality (beginning at **Yet this [actuality] is spoken of,** etc. {412a22}).

{412A15–21} THAT SOUL IS AN ACTUALITY

197–223. So first Aristotle concludes from what was discussed earlier that, since physical bodies seem to be substances above all, and every body having life is a physical body, it is necessary to say that **every body** having **life** is **a substance.** And, since it is an actual being, it is necessarily **a composite substance.** But when I say "body having life" I am saying two things: namely, that **it is a body, and** that it is a body **of this sort**—viz., one **having life.** For this reason one cannot say that, of a body having life, the **soul** is the part that is called the **body.** For by 'soul' we understand that through which what has life is alive, and so soul must be understood as something existing **in a subject.** (Here 'subject' has to be interpreted broadly, not in such a way that only an actual being is called a subject, which is the way in which we say that an accident is in a subject, but also inasmuch as prime matter, which is a potential being, is called a subject.) The **body** that receives life, however, **serves more as the subject and the matter** than as something existing **in a subject.** /221/ So then, since substance is divided three ways—the composite, matter, and form—and soul is not the composite itself, which is a body having life, nor is it the matter, which is the body that is the subject of life, it remains (by way of the Topic from division)[3] that **soul is a substance, serving as the** form or **species** of such a body—that is, **of a physical body potentially having life.**

223–235. /222/ Now Aristotle says "potentially having life," and not, unconditionally, "having life," because a body having life is understood as the living composite substance. Yet it is the matter, not the composite, that is included in the definition of form. The matter of a living body is that which stands to life just like potentiality to actuality, and this actuality is the soul, in virtue of which the body lives. A similar case would be my speaking of shape as actuality. That shape would not, of course, be the actuality of the body actually having the shape, since that is the composite of shape and body. It would be the actuality, rather, of the body that is the subject of the shape and that stands to the shape just like potentiality to actuality.

235–241. /223/ Also, since someone might believe that soul would thus be an actuality in the way that an accidental form is an actuality, he adds, in order to rule this out, that soul is **substance** inasmuch as it is an **actuality**—i.e., inas-

3. In effect Aquinas is appealing to what we call the process of elimination. Technically, he is alluding to a premise described in treatises on topical arguments. In this case the premise would be that if either *A, B,* or *C,* and if not *A* and *B,* then *C.* This is, then, a kind of disjunctive syllogism. See Boethius, *De topicis differentiis,* translated by Eleonore Stump (Ithaca, N.Y.: Cornell University Press, 1978), bk. II, pp. 58–60; on topical argument in general, see Stump's introduction as well as the references cited in I.1, n. 4.

much as it is a form. And because every form exists in some determinate matter, it follows that it is the form of the kind of **body** that has been described.

HOW SUBSTANTIAL AND ACCIDENTAL FORMS ACTUALIZE BEINGS

242–257. /224/ It is important to know, however, that there is this difference between accidental and substantial forms. An accidental form does not unconditionally actualize a being but actualizes a being of a certain kind or size—e.g., large, white, or anything else of that sort. A substantial form, on the other hand, unconditionally actualizes existence. Thus an accidental form attaches to a subject that is already actually existing, whereas a substantial form does not attach to an already actually preexisting substance, but only to one potentially existing—that is, to prime matter. It is clear for this reason that it is impossible for more than one substantial form to belong to one thing: the first would actualize its being unconditionally, whereas all the rest would attach to the now actually existing subject. Thus they would attach to it accidentally, since they would actualize its being in a certain respect, not unconditionally.

258–280. /225/ On this basis we can eliminate Avicebron's position in his book *The Fountain of Life.*[4] He claimed that parallel to the order of genera and species is an order of multiple substantial forms in one and the same thing—e.g., that in this particular human being is one form through which he is a substance, another through which he is a body, a third through which he is a living body, and so forth. But, in keeping with the above discussion, we must say that it is one and the same substantial form through which this particular thing is an individual or a substance and also through which it is a body, and a living body, and so forth. For a more complete form gives to matter that which a less complete form does, and more besides. Hence soul brings into existence not only a substance and a body, which the form of a stone does as well, but also a living body. Therefore, we should not understand soul's being the actuality of body, and body's being its matter and subject, in such a way that the body is established through one form that makes it be a body while, coming on top of that, is the soul that makes it be a living body. Soul is, rather, the actuality of body in such a way that from soul comes its being, its being a body, and its being a living body.

4. See in particular Avicebron's *Fons vitae,* edited by C. Baeumker, *Beitraege zur Geschichte der Philosophie des Mittelalters* I:2–4 (1895), bk. IV, chap. 3 (pp. 215–217). Avicebron, also known as Ibn Gabirol, was an eleventh-century Jewish philosopher. He wrote in Arabic and was widely assumed in the late Middle Ages to have been Muslim.

280–288. But its being a body, which is something less than complete, serves as the material with respect to life. /226/ Thus, when soul withdraws, the body that is left is not the same in species: for the eyes and flesh of the dead are spoken of equivocally, as the Philosopher makes clear in *Metaphysics* VII [1035b24–25]. The reason for this is that, when soul withdraws, another substantial form takes over that provides an existence that differs in species. For the corruption of one thing entails the generation of another.

{412A22–28} THAT SOUL IS THE FIRST ACTUALITY

289–319. /227/ Next, when Aristotle says **Yet this [actuality] is spoken of in two ways,** etc., he explores a second portion of the definition. Actuality, he says, **is spoken of in two ways: in one way as knowledge,** and **in another way as considering** (as was explained earlier [118–129]). And **it is clear that** soul is an actuality **like knowledge,** because **as a result of soul's existence there is both sleep and waking** in an animal. Waking, obviously, is analogous to consideration, since just as consideration is the use of knowledge, so waking is the use of one's senses. **Sleep,** on the other hand, is analogous to dispositional knowledge when someone is **not acting** in connection with that disposition. For while an animal is asleep, its capacities are at rest. /228/ **Now** of these two actualities, **knowledge is prior in terms of generation within the same individual,** since consideration is to knowledge just as actuality is to potentiality. Actuality, however, is naturally prior to potentiality, as *Metaphysics* IX holds [1049b4–1051a3], since it is the end and completion of that potentiality. And, universally speaking, actuality is prior to potentiality even relative to the order of generation and time. For what is in potentiality is brought to actuality by some actual being. Within one and the same individual, however, potentiality is prior to actuality, since something is first in potentiality and later actualized. This is why Aristotle says that **in terms of generation knowledge is prior** to consideration **within the same individual.** /229/ **Thus** he concludes that, since **soul** is an actuality like knowledge, it **is the first actuality of a physical body potentially having life.** And we should know that the Philosopher says soul is "the first actuality" not only to distinguish soul from the actuality that is an operation but also to distinguish it from the forms of the elements. These forms, unless impeded, always possess their [characteristic] actions.

{412A28–B4} THE NEED FOR ORGANS

320–357. /230/ Next, when Aristotle says **But anything with organs is of this sort,** etc., he explores a portion of the definition that has to do with the subject. And because he said that soul is the actuality of a physical body potentially having life, he also says that every body **with organs is of this sort.** Here "body with organs" refers to what has a variety of organs. This variety of organs is necessary in a body being given life because of the variety of soul's operations. For soul, since it is the most complete form among the forms of bodily things, is the source *(principium)* of a variety of operations. Thus the thing it completes requires a variety of organs. But the forms of things that are without souls, because of their incompleteness, are the sources of fewer operations, and so the things they complete do not need a variety of organs. /231/ Now the soul of plants is recognized as the least complete among souls. Thus there is less of a variety of organs in plants than there is in animals. So in order to show that every body being given life has organs, he chooses an argument based on plants: in them there is less of a variety of organs. That is why he says that **even the parts of plants are** various **organs, although** the parts of plants are **quite simple**—i.e., homogeneous. For there is no such variety in them as there is in the parts of animals. An animal's foot is composed of various parts (flesh, sinew, bones, and so forth), but the organs of plants do not have such a variety of parts out of which they are composed. /232/ And that the parts of plants are organs he makes clear by saying that the various parts are for various operations: **leaves** give **shelter** to the skin or **fruit-bearing part**—i.e., the part in which fruit is produced—**whereas the** skin or **fruit-bearing part** gives shelter to **the fruit.** Also, **the roots** in plants correspond to the **mouth** of animals, since **both take in food**—viz., in plants the root, and in animals the mouth.

{412B4–6} INTRODUCING THE DEFINITION

358–365. /233/ Next, when Aristotle says **So if we must identify,** etc., he compiles out of everything said above a definition of soul. And he says that, **if a common** definition has to be given that applies to **every soul, it will be** this: soul is **the first actuality of a physical body having organs.** And we need not add "potentially having life," because in place of that he puts "having organs," as is plain from what we have said.

{412B6–9} A PUZZLE RULED OUT

366–392. /234/ Next, when Aristotle says **Thus we need not ask,** etc., on the basis of the given definition he solves a certain puzzle. For many had puzzled over how soul and body are made one; some claimed that there are intermediaries of some kind by which soul is united and in a way combined with body.[5] But this puzzle is groundless, now that it has been shown that soul is the form of body. This is why Aristotle says that **we need not ask whether soul and body are** made **one—just as we do not** puzzle over this in regard to **wax and its shape or in general** in regard to any **matter and** the form **of which it is the matter.** For *Metaphysics* VIII [1045a7–b23] showed that form is united to matter *per se,* as its actuality, and that matter's being united to form is the same as matter's existing in actuality. This is also why he says here that **although one and** being **are spoken of in more than one way**—as being in potentiality and as being in actuality—**it is actuality that is properly** being and one. For just as a potential being is not a being unconditionally but rather in a certain respect, so it is not one unconditionally but rather in a certain respect. For something is said to be one in just the way that it is said to be a being. Hence, just as body has existence through soul, as its form, so too it is united to soul immediately inasmuch as soul is body's form. But inasmuch as soul is body's mover, nothing prevents there being an intermediary, insofar as soul moves one part of body by means of another.

5. Here Aquinas seems to have in mind, not Aristotle's contemporaries, but earlier medieval authors, among whom it was widely supposed that soul and body could be united only through some kind of medium: either through spiritual stuff of some sort (as, for instance, Costa Ben Luca [864–923] argued) or through intermediary forms (as, for instance, Philip the Chancellor [d. 1236] argued). See *Summa theologiae* (first part), q. 76, aa. 6–7, and Richard Dales, *The Problem of the Rational Soul in the Thirteenth Century* (Leiden: E. J. Brill, 1995).

Chapter 2

Clarifying Soul's Definition

DE ANIMA II.1.412B10–413A10

412b10–17. So it has been said generally what soul is: for it is substance, considered as defining character. And this is the what-it-is-to-be for a body of this sort—just as if some tool were a physical body, such as an ax. For, to be sure, the what-it-is-to-be for an ax [would be] its substance, and this [would be] its soul. Yet if that were separated then it would be no longer an ax, or rather, [would be only] equivocally so. But, as things are, the ax [would still] exist. For soul is not the what-it-is-to-be and the defining character of this sort of body, but rather of a physical one of this sort: one having in itself a principle of movement and rest.

412b17–25. We must, however, consider what was said [about soul and body] in connection with their parts. For if the eye were an animal, then surely its soul would be sight. For this is the substance of an eye, considered as defining character, whereas the eye is the matter of sight. If it is lacking, then the eye no longer exists, except equivocally, as a stone eye or a painted one. So one must accept what holds in a part for the whole living body. For proportionally, just as part is related to part, [so] the whole sense is related to the whole sensory body, considered as such.

412b25–413a3. But it is not what casts off soul that is a being potentially living but what possesses [soul]. Seed and fruit, however, are potentially a body of this sort. Indeed, then, just as cutting and seeing, so wakefulness is an actuality. Soul, on the other hand, is like sight and the potentiality of a tool. Body, then, is what is in potentiality. But just as the eye is pupil and sight, so* too the animal is soul and body.

413a4–9. Indeed, then, it is not unclear that soul is not separable from body, nor are certain of its parts, if [soul] is naturally suited to be divisible into parts. For the actuality of some is that of the parts themselves. Yet with respect to some [parts of soul] nothing prevents [such separation], because they are not the actuality of any body. Still, it is unclear whether soul is the actuality of the body, as a sailor is of his ship.

413a9–10. So thus we describe and give an account of soul in outline.

1–6. *Analysis.* /235/ Now that the definition of soul has been introduced, the Philosopher here clarifies it. And in this connection he does two things. First,

he clarifies the definition introduced earlier. Second, on the basis of the clarified definition, he derives one particular truth (beginning at **Indeed, then, it is not unclear,** etc. {413a4}).

6–11. In connection with the first he does two things. First, he clarifies soul's definition as regards what is included in this definition with respect to soul itself. Second, he clarifies the definition as regards what is included there with respect to the subject (beginning at **But it is not what casts off,** etc. {412b25}).

11–25. In connection with the first he does two things. First, he clarifies soul's definition through a likeness with man-made things *(artificialium);* second, he clarifies the definition through soul's parts (beginning at **We must, however, consider what,** etc. {412b17}). For since man-made forms are accidents, and these are better known to us than are substantial forms (inasmuch as they are closer to the senses), it is therefore appropriate for Aristotle to clarify soul's defining character *(rationem),* which is a substantial form, through a comparison to accidental forms. Likewise, too, soul's parts or powers are clearer to us than is soul itself. For we advance to a cognition of soul from objects to acts, and from acts to powers; it is through these that soul itself becomes known to us. Thus it is also appropriate for soul's defining character to be made clear through its parts.

{412B10–17} A LIKENESS WITH MAN-MADE THINGS

26–44. /236/ So Aristotle says first that **it has been said** in general **what soul is,** since the definition given above applies to every soul. For it was said that soul **is** a **substance that** is the form from which a thing's **defining character** is taken. But there is a difference between a form that is a substance and a form that is not a substance. This is because an accidental form, which is not in the genus of substance, does not pertain to the essence or quiddity of its subject. (For whiteness does not belong to the essence of a white body.) But a substantial form does belong to the essence or quiddity of its subject. In this way, then, soul is called a substantial form because it belongs to the essence or quiddity of an ensouled body. And this is what he adds: **yet this**—that is, the **substance considered as defining character—is the what-it-is-to-be for a body of this sort**—i.e., a body situated in its species through such a form.[1] For that form pertains to the thing's essence, which is signified through a definition signifying of a thing, what it is.

1. Aristotle regularly speaks of the *quod quid est* of a thing, or the *quod quid erat esse.* These are set phrases that point to a thing's form, essence, or nature: the what-it-is of a living being, or the what-it-is-to-be a living being.

44–70. /237/ And because substantial forms, such as the forms of natural bodies, are hidden, he makes this point clear through man-made forms, which are accidental. And this is why he adds **just as if some tool** (i.e., a man-made instrument), **such as,** for example, **an ax, were a physical** (i.e., natural) **body.** Then its form would be related to it in just the way that was stated. Thus he continues: **for, to be sure, the what-it-is-to-be for an ax [would be] its substance.** That is to say: the form of the ax in virtue of which the ax's defining character is acquired (the defining character that he refers to as "to be an ax" because it is in virtue of it that the ax is said to be an ax), this form would be the ax's substance. He says this because the forms of natural bodies are in the genus of substance. **And,** furthermore, if the ax were not only a physical body but also an ensouled body, then the form of the ax would be **its soul.** And, if that form were removed, **then it would be no longer an ax** except **equivocally**—in the same way that, when soul is removed, flesh or eye exists only equivocally. **But, as things are,** an ax is not a natural body, nor is its form the what-it-is-to-be for such a body. For this reason, if the ax's form is taken away, still **the ax exists**—i.e., the *substance* of the ax exists. For the substance of man-made bodies is their matter, which remains when the man-made form is removed, even though that man-made body does not remain in actuality.

70–80. /238/ And because he had said that, as things are, it is different for the ax than it would be if it were an ensouled physical body, he gives a reason for this. This is so, he says, because **soul is not the what-it-is-to-be and the defining character** (i.e., the form) **of this sort of body** (that is, the man-made sort) **but rather of a physical** body **of this sort** (that is, the sort having life). And in order to clarify what it is to be a physical body, he adds: **one having in itself a principle of movement and rest.** For natural entities are those that contain within themselves a principle of movement and rest: nature is said to be a principle of this sort.[2]

{412B17–25} SOUL'S PARTS

81–104. /239/ Next, when Aristotle says **We must, however, consider,** etc., he clarifies soul's definition through its parts, saying that **we must consider what was said** about the whole soul and the whole living body, **in connection with** the **parts** of each. For **if the eye were an animal, then sight would** have to **be its soul.** This is because sight is the substantial form **of an eye,** and **the eye is the matter of sight,** in the same way that a body with organs is soul's matter. Yet if sight **is lacking, then the eye** does not remain **except**

2. Compare Aristotle, *Physics* I.192b13–14, 20–23.

equivocally, as a stone eye or a painted one is equivocally called an eye. And this is so because things that are equivocal share only their name and differ in the defining character of their substance. Hence, once the form is removed through which the eye's substance has its defining character, then all that remains is the name 'eye,' spoken equivocally. **So what** one finds **in a part** of a living body **one must accept for the whole living body.** That is, just as sight is eye's substantial form, and just as when that is taken away then an eye remains only equivocally, so too soul is the substantial form of a living body. When it is taken away, the living body remains only equivocally. For **just as** one **part** of the sensory soul is related **to** one **part** of a sensory body, so **the whole sense is related to the whole sensory body,** to the extent that it is **such.**

{412B25–413A3} THE SUBJECT OF THE DEFINITION

105–125. /240/ Next, when Aristotle says **But it is not what casts off soul,** etc., he explicates the definition of soul under discussion with respect to his having said that it is the actuality of a body potentially having life [II.1.412a28]. For an object is said to be something *potentially* in two ways: in one way when it does not possess the principle of its operation; in a second way when it does possess that principle but is not functioning in accord with it. But a body whose actuality is soul has life in potentiality in the second way, not the first. This is why he says that a body **being potentially living** (i.e., potentially having life) whose actuality is soul, is said to be in potentiality for life not in such a way that it **casts off soul** (i.e., is lacking the principle of life that is soul) **but** so that it **possesses** a principle of this sort. It is true, however, that **seed and fruit** (in which the seeds of the plant are preserved) **are** in potentiality for **this sort of** living **body** that has soul. For seed does not yet have soul, but it is in potentiality for soul and thus is in potentiality as something that "casts off soul."

125–138. /241/ And in order to show how a body whose actuality is soul is in potentiality for life, he adds that **wakefulness is** the **actuality** of the sensory soul **just as cutting** is a knife's actuality **and seeing** is an eye's actuality. For each of these is the operation and use of a principle that it possesses. But **soul** is a first actuality, just **like sight and** any sort of **potentiality of a tool.** For each of these is the principle of an operation. But a **body** that is completed by soul **is a potentiality** that has its first actuality, although it sometimes lacks its second actuality. **But just as the eye is** something composed of the **pupil** (its matter) **and sight** (its form), **so an animal** is composed of **soul** (its form) **and body** (its matter).

{413A4–9} ONE PARTICULAR TRUTH DERIVED

139–157. /242/ Next, when Aristotle says **Indeed, then, it is not unclear,** etc., he derives one particular truth from the things stated above. For since he has shown that soul is the actuality of the whole body and that parts are the actuality of parts, while actuality and form are not separated from that of which they are the actuality or form, **it is** clear **that soul** cannot be separated **from body**—neither the whole **nor** some **of its parts, if** it **is naturally suited** to have parts in some way. For it is clear that certain parts of soul are **the actuality** of certain **parts** of body—just as it was said that sight is the eye's actuality. But **with respect to some** parts **nothing prevents** soul from being separated, since some of soul's parts **are not the actuality of any body,** as will be proved below for cases involving intellect [III.7.429a18–b5]. /243/ And, because Plato supposed that soul is the actuality of body not as a form is but as a mover is, Aristotle adds that **it is** not yet clear **whether soul is the actuality of the body as a sailor** is the actuality **of his ship**—that is, as a mover only.

{413A9–10} SUMMARY

158–164. /244/ Next, in summary, he brings together the claims that have been made. With regard to what was stated above, he says that **an account** has been given **of soul and** a description of soul has been introduced **in outline**—which is to say extrinsically, superficially, and incompletely. For the account of soul will be completed when it so reaches the innermost details that the nature of every one of soul's parts is accounted for.

Chapter 3

Demonstrating the Definition

DE ANIMA II.2.413A11–B13

413a11–13. Now because what is certain and better known as regards its defining character is made more certain through what is uncertain,° we should attempt once more to approach soul.

413a13–20. For a defining account must not only establish the fact, which is what many terms state, but must also contain and demonstrate the cause. Yet, as things are, the accounts of the terms are like conclusions. What, for instance, is a tetragon that is equal to a figure with one longer side?° It is an equilateral rectangle. But such a term is the account of a conclusion. In contrast, one who says that the tetragon is the discovery of the mean, states the cause of the matter.

413a20–25. Let us say, then, taking a starting point for our plan, that what has soul is divided from what does not in being alive. But since 'being alive' is said in more than one way, we say that a thing is alive if even just one of these is present: intellect, sense, local motion and rest, and also movement with respect to nourishment, deterioration, and growth.

413a25–31. And so evidently all nutritive things are alive. For they evidently have in themselves the sort of power and principle through which they achieve growth and deterioration with respect to opposite directions. For they do not grow upward [only] and not downward, but alike in both [directions]. And, in all,° all things that take in food live up to the end of their being able to obtain the food.

413a31–b2. It is possible, however, for this [principle] to be separated from the others, although it is impossible for the others [to be separated] from it (in the case of mortal beings). This is clear in the case of things that are [merely] nutritive: for there is no other power of soul in them. So it is on account of this principle that life is present in all living things.

413b2–4. An animal, however, [is so-called] first on account of sense. For things that are neither moved nor changing place but do have sense, we say are animals and not just alive. There seem to be many animals of this sort; they by nature remain still and have sense alone.°

413b4–9. Of the senses, however, touch is primary in all [animals]. Just as the nutritional principle can be separated from touch and from every sense, so too touch [can be separated] from the other senses. Now, we say that the

nutritional [principle] is the part of soul in which even [merely] nutritive things participate. But all animals seem to have a sense of touch.

413b9–13. Later we will say why each of these is so. For now, however, let just this much have been said: that soul is the principle of the things we have stated and is divided into these [principles]—the nutritional, the sensory, the intellective, and motion.

1–5. *Analysis.* /245/ Now that the Philosopher has introduced a definition of soul, he here plans to demonstrate it. And, first, he says what his plan is; second, he pursues it (beginning at **Let us say, then, taking,** etc. {413a20}).

5–9. In connection with the first he does two things. First, he presents an account of the manner of demonstration that he intends to use in demonstrating the definition. Second, he clarifies the manner in which some particular definitions can be demonstrated (beginning at **For a defining account must,** etc. {413a13}).

A Note on Different Kinds of Demonstrations

10–36. In connection with the first it is important to know that because one must arrive at a cognition of things unknown through things that are known, and because every demonstration is put forward for the sake of making something known, it is necessary for every demonstration to proceed from things better known relative to us. By these means, the demonstration makes something known. Now in some cases the same thing is better known relative to us and as regards its nature, as in the case of mathematical entities, which are abstracted from matter. In these cases the demonstration proceeds from things that are better known both unconditionally and as regards their nature—that is, it proceeds from causes to effects. Thus this is called an explanatory demonstration *(propter quid).*[1] But in other cases it is not the same thing that is better known unconditionally and relative to us—namely, in the case of natural entities, where much of the time sensible effects are better known than their causes. Thus, in the case of natural entities, one proceeds most often from things that are less known as regards their nature but better known relative to us, as is said in *Physics* I [184a16–21]. /246/ And this is the manner of demonstration that Aristotle intends to use here.

1. In what follows Aquinas contrasts two kinds of demonstrations. An explanatory demonstration (a demonstration *propter quid*) argues from the top down: from causes to effects. A demonstration of the fact (a demonstration *quia*) moves in the opposite direction, from effects to causes. The former kind of demonstration is a priori, the latter a posteriori. Ideally all demonstrations should take the first form. But, given our limited knowledge, we often have to settle for demonstrations *quia.* That is the case here, Aquinas believes (see below, 100–116).

{413A11–13} THE INTENDED MANNER OF DEMONSTRATION

30–36. That is why he says that, since **what is certain** as regards its nature **and better known as regards its defining character is made more certain** relative to us **through** things that are **uncertain** as regards their nature and yet more certain relative to us, **we should attempt once more to approach soul** by demonstrating the definition of it introduced earlier [II.1.412a27–28, b5–6].

{413A13–20} HOW SOME DEFINITIONS CAN BE DEMONSTRATED

37–49. /247/ Next, when Aristotle says **For a defining account,** etc., he gives the rationale for the plan just described, showing that some definitions can be demonstrated. This is why he says that we need to approach soul once more. For **a defining account must not only** state **the fact** *(quia),* **which is what many terms**—i.e., definitions—**state, but** a definition must **also** extend to **the cause,** and a definition stating only the fact must be demonstrated by a definition stating that explanation *(propter quid).* **Yet, as things are,** many **accounts of the terms**—i.e., many definitions—are found that **are like conclusions.** And he gives an example from geometry.

How to Understand the Geometric Example

50–61. /248/ To understand this example one has to know that some four-sided figures have all right angles and are called rectangles—i.e., surfaces made up of right angles. Others do not have right angles, and they are called rhombuses or rhomboids. One should know, moreover, that some rectangles consist of all equal sides; these are called squares or tetragons *(tetragonismus).* Others, however, do not have all equal sides but have two opposite sides that are equal; figures of this sort are called rectangles with one longer side.

61–72. /249/ Also, it is important to know that in the case of any surface made up of right angles, the two straight lines that make up one of the right angles are said to *contain* the whole surface. The reason for this is that, since the other two sides are equal to these two, each one to its opposite, one of the lines mentioned as making up the right angle necessarily measures the length of the rectangular surface, whereas the other measures the width. Thus the whole rectangular surface arises from one of these lines being extended to the other; if we were to imagine one of them being moved across the other, then such a surface would arise.

72–87. /250/ It is also important to know, in the case of an rectangle with one longer side, that since the two lines containing that rectangle are unequal,

if one takes a line that is a mean between the two, proportionally, and extends that line to itself, then a square will be made that is equal to the figure with one longer side. And because it would be a drawn-out affair to show this through geometrical demonstrations, let it suffice for now to establish the point in the case of numbers. Let there be, then, an rectangle with one longer side whose greater side measures nine units and whose smaller side, four. Now take the line that is the mean proportional between those two. This line would measure six units.[2] The square of this line will be equal to the aforesaid figure with one longer side, a fact that the numbers make evident. For 4 times 9 is 36, and likewise 6 times 6 is 36.

88–100. *{413a13–20, Continued}* /251/ So this is what Aristotle is saying: if one asks **what is a tetragon** (i.e., a square)[3] **that is equal to a figure with one longer side,** then a definition will be given in such a way that it is said to be a **rectangle** (i.e., a surface with right angles) that is **equilateral** (i.e., having all equal sides). **But such a term** (i.e., such a definition) **is the account of a conclusion** (i.e., is the conclusion reached through a demonstration). **In contrast,** if someone were to define it in such a way as to say that the square **is the discovery of the mean**—viz., of a line that is the mean proportional between the two unequal lines of a figure with one longer side (i.e., the square is the rectangle established by such a discovered line)—then someone who defines it in this way **states the cause of the matter.**

100–105. /252/ It is important to note, however, that Aristotle's introduction of this example is similar in one respect to what he aims to do regarding soul, namely with respect to his demonstrating soul's definition. But there is no similarity with respect to his doing so through a demonstration stating the explanation *(propter quid).*

106–116. *Analysis.* /253/ Next, when Aristotle says **Let us say, then,** etc. {413a20 ff.}, he takes the definition of soul introduced earlier and begins to demonstrate it in the way just stated—that is, through an effect. And he uses

2. The mean proportional is the square root of the product of any two numbers. Alternatively, 6 is to 4 as 9 is to 6 (the proportion being 2:1). On this sort of proportion, in the context of this very example, see Aquinas's commentary on the *Metaphysics,* bk. III, lec. 4, secs. 380–381.

3. Aquinas, like many other medieval commentators, was misled here by the term *tetragonismus,* a transliteration of the Greek word for the geometrical operation of squaring. Although Aquinas understands the point of the example, the precise text eludes him. The question is not "What is a square?" but "What is squaring?" For the correct interpretation, see D. W. Hamlyn's notes to his translation of the *De anima,* 2d ed. (Oxford: Clarendon Press, 1993), p. 87.

a demonstration of the following sort. That which is the first principle of life is the actuality and form of living bodies. But soul is the first principle of life for things that are alive. Therefore soul is the actuality and form of a living body. This demonstration, however, is clearly a posteriori. For soul is the principle of the activities of life as a result of being the form of a living body, and not vice versa.

117–121. So in this connection Aristotle does two things. First, he shows that soul is the principle of life. Second, he shows that the first principle of life is the form of a living body (beginning at **Yet because that through which we live,** etc. {II.4.414a4}).

121–127. In connection with the first he does three things. First, he distinguishes ways of being alive. Second, he shows that soul is the principle of being alive (beginning at **And so evidently all nutritive things,** etc. {413a25}). Third, he makes it clear how soul's parts—parts in virtue of which soul is the principle of the activities of life—are related to one another (beginning at **But is every single one of these,** etc. {II.4.413b13}).

{413A20–25} DIFFERENT WAYS OF BEING ALIVE

128–139. /254/ So Aristotle says first that in order to pursue our **plan,** by which we plan to demonstrate soul's definition, we must here take it as **a starting point that what has soul** is distinguished **from what does not in being alive.** For things with soul live, whereas things without it do not. But since there is **more than one way** of **being alive,** a thing will be said to be **alive** and to have soul **if** even **one** of those ways **is present.** /255/ And Aristotle posits four ways of being alive, one of which is through **intellect,** a second through **sense,** a third through local **motion and rest,** and a fourth through the **movement** of **nourishment, deterioration, and growth.**

Why Only Four Ways of Being Alive?

140–157. Now the reason Aristotle posits only four ways of being alive, when above he had posited five kinds of operations of soul [I.14.411a26–b5], is that he here intends to distinguish ways of being alive in accord with the grades of living things, which these four ways distinguish. For in some living things (in plants, that is) we find only nourishment, growth, and deterioration, whereas in others we find, along with these, sense without local motion. (This is the case in incomplete animals, like oysters.) In certain others we also find local motion, as is the case in complete animals, which are moved progressively (like an ox or horse). In still others (in human beings) we find, along with

all these, intellect. The appetitive capacity, however, which concerns a fifth operation beyond these four, does not produce any diversity within the grades of living things. For wherever there is sense there is also appetite.

158–165. *Analysis.* /256/ Next, when Aristotle says **And so evidently all,** etc. {413a25 ff.}, he makes it clear that soul is the principle of life with respect to all of the aforesaid ways of being alive. And in this connection he does three things. He shows how soul is the principle of life first in plants, then, second, in animals (beginning at **An animal, however, [is so-called] first,** etc. {413b2}). Third, he shows what has been said and what remains to be said (beginning at **Later we will say why,** etc. {413b9}).

{413a25–31} SOUL IS THE PRINCIPLE OF LIFE IN PLANTS

166–184. In connection with the first he does two things. First, he shows that soul is the principle of life in plants. It was stated, he says, that a thing is said to be alive whenever one of the four above-mentioned [ways of being alive] is present. For this reason it follows that **all nutritive things are alive. For they** all **have in themselves** a kind of **power and principle** by **which they achieve** the movement of **growth and deterioration.** /257/ And it is clear that this principle is not nature but soul: for nature does not move [an object] in opposite directions, but the movement of growth and deterioration occurs **with respect to opposite directions. For** all nutritive things **grow not** only **upward** or **downward but in both** ways. It is clear, then,* that the principle of these movements is not nature but soul. Nor do only nutritive things live while they grow and deteriorate; **all things** that take nourishment **live** for as long as **they can obtain** the nourishment through which growth occurs.

{413a31–b2} THE NUTRITIVE PRINCIPLE IS FIRST AND SEPARABLE

185–200. /258/ Second, beginning at **It is possible, however,** etc., Aristotle shows that the principle of life just discussed comes first and is separable from other principles. And he says that **this** (namely, the principle of growth and nourishment) can **be separated from other** principles of life, but **the others** cannot be separated **from** it **in** things that are **mortal.** (He adds this because in the case of immortal things, such as separate substances and heavenly bodies—if indeed these have soul—one finds the intellective principle without the nutritional.) **And** that this principle is separable from others **is clear in**

the case of things that are [merely] nutritive—i.e., in plants—**in** which **there is** no **other power of soul** except one of this sort. It is clear on this basis that it is the **principle** of growth and nourishment **on account of** which life is first found in things that are mortal. This is called the nutritive soul.

{413b2–4} SOUL IS THE PRINCIPLE OF LIFE IN ANIMALS

201–212. /259/ Next, when Aristotle says **An animal, however, [is so-called] first,** etc., he establishes how soul is the principle of life in animals. And in this connection he does two things. First, he says that something is **first** said to be an **animal on account of sense,** even though some animals both sense and are moved. For **we say** that **things are animals and not just alive** when, although they do not change **place,** nevertheless they **have sense.** For **there are many** such **animals,** which naturally **remain** in the same place and nevertheless **have sense**—such as oysters, which are not moved progressively.

{413b4–9} TOUCH IS PRIMARY

213–229. /260/ Second, beginning at **Of the senses, however, touch,** etc., Aristotle shows that, relative to the other **senses, touch is primary in** animals. He proves this from the fact that, **just as the nutritional principle can be separated from touch and from every sense, so touch** can be separated **from the other senses.** For there are many animals that have only the sense of touch, as do incomplete animals.[4] **But all animals have the sense** of touch. **Now we say that the nutritional** principle **is** that **part of soul in which even [merely] nutritive things**—i.e., plants—**participate.** So then, based on what has now been said, three grades of living things are apparent. First is that of plants; second, that of incomplete animals that are not susceptible to movement and that have only the sense of touch; third, that of complete animals, moved progressively and having the other senses as well. It is clear, moreover, that there is a fourth grade of animals that, along with all these, have intellect as well.

4. Later Aristotle *defines* incomplete animals as those whose only sense is touch (see III.16.433b31). Yet at III.5.97–115 Aquinas treats bees and ants as instances of incomplete animals, even though they plainly have other senses. (In the *De sensu* [444b11], Aristotle explicitly attributes a keen sense of smell to these animals.)

{413B9–13} WHAT HAS BEEN SAID AND WHAT REMAINS

230–243. /261/ Next, when Aristotle says **Later we will say why,** etc., he shows what has been said and what remains to be said. And he says that it has to be stated **later why each of these is so**—viz., why the nutritional principle occurs without sense, and why touch occurs without the other senses. (He will state this at the end of the work [III.17–18.434a22–435b25].) **For now, however,** let it suffice for **this much** to **have been said, that soul is the principle** of life with respect to the ways we have described **and** that it has been distinguished in terms of these four [principles]: **the nutritional,** which is in plants and all living things; **the sensory,** which is in all animals; **the intellective,** which is in all human beings; **and** progressive **motion,** which is in all animals completed by sense or intellect.

Chapter 4

Demonstrating the Definition (Continued)

DE ANIMA II.2.413B13–414A28

413b13–15. But is every single one of these soul or part of soul? And, if it is part, then is it so in such a way as to be separable only in account or also spatially?

413b15–24. In regard to some of these [the answer] is not difficult to see, whereas others present a question. For just as in the case of plants certain ones seem to be living when divided and separated from each other, inasmuch as the soul existing in them is actually one in each plant while potentially many, so we see happen too in regard to various other kinds of soul, as in cut-apart entomic animals. For each of their parts has both sense and local motion, and if sense, then both phantasia and appetite. For where there is sense, there is both sadness and joy, and where there is these there is necessarily also desire.

413b24–29. As for intellect and the analytic power, nothing is yet clear. But it seems that it is a different sort of soul and that only this can be separated, in the way that what is everlasting [is separated] from what can be corrupted. It is clear from these [earlier considerations], however, that the remaining parts of soul are not separable, as some say they are.

413b29–31. Clearly, however, they do differ in account. For the powers for sensing and for forming opinions have a different being, if indeed sensing [is different] from forming opinions. And likewise for any one of the other [powers] that have been mentioned.

413b32–414a4. The fact that all of these [principles] are present in some animals, whereas some of them are in others and only one in others still, is what makes the difference between animals. Later on we will have to look at why this occurs. Yet the same thing holds for the senses, too. For some [animals] have them all, whereas others have some and still others have [only] the one that is most necessary, touch.

414a4–12. Yet because that through which we live and sense is spoken of in two ways, just as that through which we know (we speak on one hand of knowledge and on the other hand of soul, for we say that we know through both of these), and likewise that through which we are restored to health (on one hand there is health, whereas on the other hand [it comes] through a certain part of the body or even through the whole), whereas of these

knowledge and health are form, and a kind of species and nature *(ratio),* **as the actuality of what acquire them (the one being the actuality of what is capable of knowledge, the other of what is capable of health), since the actuality of things that are acting seems present in the thing affected and [properly] disposed,**

414a12–13. whereas soul is this first thing through which we live, sense, are moved,° and intellectively cognize,

414a13–14. for this reason it will indeed be a kind of nature and species, but not as matter and as subject.

414a14–18. For because substance, as we have said, is spoken of in three ways, one of which is species, another matter, and the third what comes from both, while of these, matter is potentiality, species is actuality, and in turn° what comes from both is ensouled, body is not the actuality of soul, but instead soul [is the actuality] of a certain sort of body.

414a19–21. And for this reason some hold the right view—those to whom it seems that soul neither exists without body nor is a body. For it is not body, but it is something belonging to body.

414a21–27. And for this reason it exists in body and in a body of this sort—and not as earlier [thinkers] fitted it to body, determining nothing about what and what sort [of body] it is in. And, truly, [this is so], since it is evident that it cannot take on just any given thing.° But on our account this happens in a reasonable way. For the actuality of each and every thing is naturally suited to be produced in what potentially exists and in its proper matter.

414a27–28. It is therefore clear from these remarks that [soul] is a kind of actuality and nature *(ratio)* **of what has the potentiality for this sort of existence.**

HOW SOUL'S PARTS ARE RELATED TO ONE ANOTHER

1–6. *Analysis.* /262/ Earlier the Philosopher showed that soul is the principle of life as regards various kinds of life. So now he investigates how, as regards the various kinds of life, the principles of life are related to soul and to each other.

{413B13–15} TWO QUESTIONS

6–23. And in this connection he does two things. First, he raises two questions, the first of which is this: since soul, which is the principle of life, is made up of the nutritional, sensory, moving, and intellective [II.3.413b12–13], **is** each one of these a **soul** in its own right *(per se),* **or** is it **part of soul?** And it

is clear in the case of things that only grow and take nourishment, like plants, that the nutritional principle is soul. In the case of things that are nourished and sense, however, [each] is part of soul, and much the same is true for the others. The second question is this: **if** each one of those mentioned is **part** of soul (for instance, because they are all found in one soul, such as the human soul), are they in this way parts that are separated from each other **only** in terms of their **account** *(rationem),* in such a way, namely, that they are different powers, **or** are they **also** separated **spatially,** in such a way that the sensory principle is in one part of the body, the appetitive principle in another, the moving principle in still another, and so on for the others? To some philosophers this seemed to be the case [cf. 413b28–29].

24–27. *Analysis.* /263/ Second, when Aristotle says **In regard to some of these,** etc. {413b15 ff.}, he resolves the questions just raised. He first resolves the second, then the first (beginning at **The fact that all of these,** etc. {413b32}).

27–32. In connection with the first he does two things. First, he resolves the second question as regards its second part, showing whether soul's parts are spatially separable. Second, he resolves it as regards its first part, namely, whether they are separable in account (beginning at **Clearly, however, they are different,** etc. {413b29}).

{413B15–24} ARE SOUL'S PARTS SPATIALLY SEPARABLE? EASY CASES

33–45. Aristotle says first, then, that **in regard to some** of soul's parts it **is not difficult to see** whether they are spatially separable—i.e., separable in subject—but in regard to **others** there is **a question.** /264/ And in order to show that in certain cases this is easy to see, he first sets out a similarity to **plants:** that **certain** parts **seem** to live **when divided** from the plants **and separated from** their other parts. (This is shown by the fact that cut-off branches that are grafted or planted recover; such a thing would not occur if life and consequently soul, which is the principle of life, did not remain in them.) This happens **inasmuch as, in each plant, soul is actually one** and **potentially** multiple.

46–60. This is what we see happen in the case of the forms of natural bodies that lack souls, which because of their incompleteness do not require any diversity among their parts. In any whole one [of these], the form is actually one and potentially many—just as its body is actually one and potentially many. For any one of these can be divided into different homogeneous parts, as is clear in the case of air, water, and mineral bodies. So if the parts are homogeneous with one another and with the whole, then the specific form must, after

division, exist in each of the parts. And for that same reason, because a plant's soul is incomplete relative to other souls, it does not require great diversity among its parts. Thus the soul of the whole plant can survive in one of its parts.

61–89. /265/ And **so we see too** in the case of **various other kinds of soul,** such **as in cut-apart entomic animals**—i.e., in the case of animals that live when cut apart.[1] For **each of their parts has sense,** which is clear from the fact that it recoils if pierced. **And** it also has **local motion,** as is evident to the senses. So the sensory and moving principle is therefore evident in one and the same part. And **if sense** is there, then necessarily **phantasia** is there. For phantasia is nothing other than a movement made by actualized sense, as will be said below [III.6.429a1–2]. **And** likewise, if the cut-off part has sense, then it necessarily has **appetite.** For from **sense** there necessarily follow **joy and sorrow,** or pleasure and pain. For it is necessary that if the perceived sensible quality is agreeable then it is pleasant, whereas if it is harmful then it is painful. **And where there is** pain and pleasure there must be **desire** and appetite. Thus it is necessary that, if the cut-off part senses, it also has appetite. /266/ In this way it is clear, then, that the nutritional, sensory, appetitive, and moving principles are found in a single cut-off part, from which it is plain that they are not spatially distinguished in an animal body. But it is clear that certain particular powers are spatially distinguished. For, clearly, sight exists only in the eye, hearing in the ear, smell in the nose, and taste in the tongue and palate. But the sense that is first and most necessary for an animal, touch, exists throughout.

Does Phantasia Have a Determinate Organ?

90–100. /267/ There seems to be a problem, however, in Aristotle's saying that phantasia exists in the cut-off part, since some people attribute phantasia to a determinate bodily organ.[2] But it is important to know that in incomplete animals one finds an indeterminate phantasia, whereas in complete animals there is a determinate phantasia, as Aristotle will say below, in Book III [16.433b31–434a5]. A determinate organ is assigned to phantasia, then, for the greater completeness and determinateness of its act; it is not the case that without this organ phantasia's act can in no way take place—in the way that the act of sight can in no way take place without the eye.

101–103. *{413b15–24, Continued}* In this way, then, Aristotle clarified which

1. Aquinas's translation of the *De anima* simply transliterates the Greek word for insect, and Aquinas is apparently uncertain about its exact meaning.

2. Aquinas himself, following the science of his day, locates phantasia in the front part of the brain (see, e.g., *Questions on Truth,* q. 18, a. 8c).

powers of soul present no difficulty as regards seeing whether they are separable spatially.

{413B24–29} PROBLEM CASES

104–119. /268/ Next, when he says **As for intellect,** etc., he points to the part of soul in which there could be a problem. And he says that **as for intellect and** whatever is referred to by the name '**analytic power**' *(perspectiva potentia),* that is, the theorizing power, **nothing is yet clear.** For through the things that have been said it is not yet clear whether it has a bodily organ or whether it is spatially distinct from the other organs. **But** nevertheless, as far as is superficially apparent, **it seems that it is a different sort of soul** than soul's other parts—i.e., is of a different nature and has a different mode of existing—**and that only this** sort of soul can **be separated** from soul's other parts. Indeed, it seems that it is separated even from a physical organ, **in the way that what is everlasting [is separated] from what can be corrupted.** But **that the remaining parts of soul are not** spatially **separable** from one another **is clear from** the things stated earlier.

{413B29–31} ARE SOUL'S PARTS SEPARABLE IN ACCOUNT?

120–129. /269/ Next, when he says **Clearly, however,** etc., he shows that [soul's parts] are separable **in account** *(ratione).* For the account of any power is in relation to its act. Hence it is necessary that if the acts are different in species, the powers have specifically different accounts. This is why he says that **the powers for sensing and for forming opinions** (i.e., the intellective power) **have a different being** (i.e., the account of each power is different) **if sensing** is different **from forming opinions. And likewise for the other** powers **mentioned** earlier.

{413B32–414A4} THE FIRST QUESTION RESOLVED

130–147. /270/ Next, when Aristotle says **The fact that all of these are present,** etc., he resolves the first question. He says that this **is what makes the difference** among **animals, that all** of the above-mentioned principles **are present in some animals, whereas some of them are in others and only one** in still others. But for those in which only one of the above-mentioned principles is

present, that must be their soul. Next, for those in which more than one principle is present, each is part of their soul, and that soul takes its name from the most important part, whether that be sensory or intellective. As for why some animals have one, some have more than one, and some have them all, this will be stated **later on** [II.5.414a29–b19]. And just as this holds for soul's powers, so it **holds for the senses.**

147–154. But this section can be given another reading, so that it says the following: that because the Philosopher showed earlier that soul's parts are not separable from one another, either spatially or in subject, in the animal that has them, for that reason these parts will also not be separated in other animals; rather, wherever one is, they will all be. So in this section he rules out this [invalid inference].

THE DEFINITION DEMONSTRATED

155–161. *Analysis.* /271/ Next, when Aristotle says **Yet because that through which we live,** etc. {414a4 ff.}, since he has now shown that soul is the first principle of life, he derives from this the definition given earlier. And in this connection he does two things. First, he demonstrates his thesis. Second, based on the true claim that he has demonstrated, he adduces a number of further conclusions (beginning at **And for this reason some hold the right view,** etc. {414a19}).

162–173. In connection with the first he introduces a demonstration of the following sort: when there are two things, both of which we speak of as *being* something or as *doing* something, then one of them—the one that is first—serves as the form, whereas the other serves as the matter. Soul, however, is the first thing through which we live, although we live through soul and body. Therefore soul is the form of a living body. And this is the definition of soul introduced earlier: that soul is the first actuality of a physical body potentially having life [II.1.412a27–28]. It is clear, however, that the medium for this demonstration is a certain definition of soul—namely, that soul is the first thing through which we live.

{414A4–12} THE MAJOR PREMISE

173–195. /272/ In connection with this demonstration Aristotle does four things. First, he introduces the major premise, saying that **that through which we live and sense is spoken of in two ways** (viz., in one way as form and in another way as matter) **just as that through which we know** is also spoken

of in two ways (for there are two things through which we are said to **know, knowledge** and **soul**). **Likewise that through which we are restored to health** is spoken of with regard to two things, one of which **is health,** whereas **the other** is some **part of the body** or **even the whole** body. In both cases one serves as form whereas the other serves as matter. For **knowledge and health are forms** serving as **the actuality of what acquire them:** knowledge is a form belonging to **what is capable of knowledge**—i.e., a form belonging to the part of soul in which there is knowledge—whereas health is a form belonging to a body **capable of health.** (He uses the terms 'capable of health' and 'capable of knowledge' in order to point to the fitness for such forms within the subject. For the actualities **of things that are acting,** i.e., the forms that are introduced by the agents into the matter, **seem** to be **in the thing affected and [properly] disposed,** i.e., in that which is naturally suited to undergo the action of an agent, by an agent of that sort, and which is disposed to attain the end of its being affected—that is, the form to which it is being brought by being affected.)

{414A12–13} THE MINOR PREMISE

196–213. /273/ Second, beginning at **whereas soul is this,** etc., Aristotle introduces the minor premise. He says that **soul is** the **first thing through which we live, sense, are moved, and intellectively cognize.** And these four [operations] refer to the four kinds of life to which he referred earlier [II.3.413a22–25, b12–13]. For living is traced back to the nutritional principle, since he said earlier that "it is on account of this principle that living is present in all living things" [II.3.413b1–2]. It is important to know, however, that although we are said to be healthy through health and body, nevertheless health is the first thing through which we are said to be healthy. For we are said to be healthy through our body only insofar as it has health. And likewise knowledge is the first thing through which we are said to be knowing: for we are said to be knowing through soul only insofar as it has knowledge. Likewise, too, we are said to be living through body only insofar as it has soul. This is the reason why he says here that soul is the **first thing through which we live, sense,** etc.

{414A13–14} THE CONCLUSION

214–218. /274/ Third, beginning at **for this reason it will indeed,** etc., Aristotle presents the conclusion. (Until here this passage remains a dependent construction that begins at **Yet because that through which,** etc. {414a4}.)

So he concludes from what has been stated that soul stands as **nature and species, not as matter and subject.**

{414A14–18} SHOWING THAT THE CONCLUSION FOLLOWS

219–235. /275/ Fourth, beginning at **For because substance, as we have said,** etc., Aristotle shows that this conclusion follows from the premises. For it did not seem to follow that soul is form any more than that body is, since we are said to live through both of these. So in order to complete the demonstration just given, he adds that, as was stated earlier [II.1.412a6–11], **substance is spoken of in three ways**—that is, as **matter,** form, and the composite **from both.** Of these **matter is** in* **potentiality, species** or form **is actuality,** and **what comes from both is ensouled.** For this reason it is clear that **body is not the actuality of soul, but** rather soul is the actuality **of** some **body,** whereas body is in potentiality with respect to soul. And so, since it follows from the demonstration given earlier [414a4–12] that either body or soul is the species, and since body, as we have just said, is not soul's species, it remains that soul is body's species.

{414A19–21} ONE FURTHER CONCLUSION

236–243. /276/ Next, when Aristotle says **And for this reason some hold,** etc., he adduces a number of conclusions from the things just stated. The first of these is that **some** held **the right view—those to whom it** seemed **that soul neither exists without body nor is body. For it is not body** because it is not matter; but **it is something belonging to body,** because it is the actuality of body.

{414A21–27} A SECOND FURTHER CONCLUSION

244–257. And because every actuality exists in that of which it is the actuality, Aristotle in turn (beginning at **And for this reason it exists,** etc.) infers /277/ a second conclusion: that soul **exists in body and in a** certain sort of **body**—namely, a physical organic one. **And** this is so **not** in the way in which **earlier** philosophers spoke of soul and its union **to body,** establishing **nothing about what** or **what sort** of body **it is in. And, truly,** this is the case in just the way that we are saying—soul exists in a determinate [sort of] body, **since it is evident** that soul **cannot take on** just any body, but only a determinate [sort].

And it is **reasonable** that this is so, because **each and every actuality is naturally suited to be produced in its proper** and determinate **matter.** And thus soul must be received in a determinate [sort of] body.

{414A27–28} SUMMARY

258–260. /278/ Lastly, then, in summary, Aristotle concludes **that** soul **is a kind of actuality and nature of what has this sort of existence** in **potentiality**—that is, of what is potentially living.

Chapter 5

Soul's Powers
Distinguishing Them from One Another

DE ANIMA II.3.414A29–B31

414a29–32. Now of the powers of soul that have been mentioned, some [living beings] have them all, some have some of them, and some have only one. We have said that these powers are the nutritional, the sensory, the appetitive, the capacity for local motion, and the intellective.

414a33–b6. Plants, however, have only the nutritional power, while others have this and the sensory power. But if the sensory power [is there], then so is the appetitive. For desire, anger, and will are appetites. All animals, however, have [at least] one sense, touch. But that which has one sense [has] joy and sorrow, and also the enjoyable and sad, whereas one that has these has concupiscence as well, for this is the appetite for what is pleasant.

414b6–19. In addition, they have a sense for food: for touch is the sense for food. For it is by means of dry, wet, hot, and cold things that all living things are fed, and touch is the sense for these. But of the other sensibles [this is so] accidentally. For sound, color, and smell add nothing to food. But moistness is one of the things that are tangible. Hunger and thirst, however, are concupiscence: hunger for the hot and dry, thirst for the cold and wet. Flavor, on the other hand, is like the pleasantness that belongs to these [qualities]. Later on we will have to become definite about these matters; for now let this much be said, that animals having touch have appetite. The case of phantasia is unclear, and later on we will have to focus on this. But some [animals] have, beyond these, the power for local motion as well. Others, too, have the intellective power and intellect—such as human beings (and if there is anything else of this sort or even superior).

414b20–31. It is clear, then, that the account of soul and of figure will be one in the same way. For in the latter case there is no figure over and above triangle and those that come next in sequence, and in the former case there is no soul over and above [the parts] already mentioned. Yet surely in the case of figures a common account will result, one that applies to all but will be unique *(propria)* to no figure. And the same sort of thing holds as well for the souls under discussion. Hence it is ridiculous to hunt for a common account—in these cases as well as in others—which will be the unique account of none of those [souls] that exist and will not correspond to a unique

and individual species, meanwhile giving up on [accounts] of this latter sort. Yet considerations about soul stand similarly to what concerns figures. For, in the case of figures and ensouled things, that which is prior always exists potentially in what comes next in sequence: trilateral, for instance, exists in a quadrilateral, whereas the nutritional [exists] in the sensory.

1–8. *Analysis.* /279/ Now that Aristotle has defined soul in general, he here begins to present his account of its parts. But soul has parts only inasmuch as its powers are called its parts; in this way the parts of something capable of many things can be called capacities for those various things. Hence to present an account of soul's parts is to present an account of its individual powers.

9–13. This part is divided in two. In the first of these he presents his account of soul's powers in general, distinguishing them from one another. In the second he presents his account of each individual one (beginning at **And so first we should discuss,** etc. {II.7.415a22}).

13–17. That first part is divided in two. In the first of these he distinguishes soul's powers from one another. In the second he shows what needs to be worked out regarding soul's powers, and in what way and order (beginning at **And so, as regards each individual,** etc. {II.6.414b32}).

18–21. In connection with the first he does two things. First, he distinguishes soul's powers from one another. Second, he shows how the general account *(ratio)* of soul is related to the parts that are under discussion (beginning at **It is clear, then, that the account,** etc. {414b20}).

22–24. In connection with the first he does two things. First, he lists soul's powers. Second, he shows how they follow from one another (beginning at **Plants, however, have,** etc. {414a33}).

{414A29–32} A LIST OF SOUL'S POWERS

25–34. So Aristotle says first that among **the powers of soul that** were referred to earlier, some **have them all,** as human beings do; others **have some of them,** as other animals do; and **some have** just **one,** as plants do. And because earlier he had referred to them not as **powers** but as parts of soul, he thus makes it clear that by 'powers' he means the same thing that he meant earlier by 'parts.' Of these there are five kinds: **the nutritional, the sensory, the appetitive, the capacity for local motion, and the intellective.**

Why Five Kinds of Powers Are Introduced

36–41. /280/ Here we must look at two things. The first is why five kinds of powers of soul are introduced here, especially since it is customary to speak of soul as having three parts: nutritive, sensitive, and rational. Second, we must consider why Aristotle here introduces five powers when earlier he had introduced only four [II.3.413a22–25, b12–13].

43–54. /281/ In connection with the first it is important to know that, since every power is spoken of relative to its distinctive *(proprium)* act, an operative power is spoken of relative to an act that is an operation.[1] Soul's powers, however, are operative, because the power of a form is operative. Hence it is necessary to admit a distinction among powers to the extent that there is a distinction among soul's operations. But an operation of soul is the operation of a living thing. Therefore, since the operation specific to any given thing holds of it to the extent that that thing has being *(esse)* (because any given thing operates insofar as it is a being), we must consider soul's operations in connection with the being that we find in living things.

55–70. /282/ Now, lower [orders of] living things,[2] the sort whose actuality is the soul we are now dealing with, have two kinds of being. One is material being, which they share with other material things. The other is immaterial being, which in some way they have in common with higher [orders of] substances. /283/ There is a difference between each [mode of] being. For in virtue of material being, which is confined by matter, each thing is only that which it is—in the way that this stone is nothing other than this stone. In virtue of immaterial being, in contrast, which is expansive *(amplum)* and in a certain way infinite, inasmuch as it is not limited by matter, a thing is not only that which it is but is also in a certain way other things. This is the reason that all things exist, in a certain way, in the higher immaterial substances, as if existing in their universal causes.

70–83. /284/ Now this sort of immaterial being has two levels in lower [orders of] living things. One of the levels, intelligible being, is thoroughly immaterial: for in intellect things have being both without matter and without the individuating conditions of matter, and also without a bodily organ. Sensible being, on the other hand, is halfway between these two. For in the senses

1. An operation is a specific sort of act; it is, roughly, the action of a power that is fully actualized and is therefore functioning in the way it is meant to function. See I.10.208–210, with note.

2. Among "lower living things" Aquinas means to include human beings as well as all other earthly creatures. He means to exclude from consideration any sort of thing that might not have a material side at all—such as angels, the so-called separated substances. See below, 216–220.

a thing has being without matter, but not without the matter's individuating conditions or without a bodily organ. For sense has to do with particulars, whereas intellect has to do with universals. And it is with respect to these two kinds of being that the Philosopher says in Book III [13.431b21] that "soul is in a certain way all things."

83–103. /285/ So the operations that are suited to a living thing in virtue of material being are the operations that we attribute to the nutritive soul. These operations are directed toward what even the actions in things without souls are directed toward: attaining and preserving being. Nevertheless in living things this happens in a higher and loftier way. For bodies without souls are generated and preserved in being through an outside moving principle, whereas ensouled things are generated through an inner principle that exists in the seed and are preserved through an inner nutritional principle. For this seems to be an identifying property *(proprium)* of living things, that they operate inasmuch as they are moved by themselves. Now the operations that we attribute to living things in virtue of entirely immaterial being pertain to soul's intellective part. And those that we attribute to them in virtue of a halfway being pertain to soul's sensory part. It is in keeping with these three kinds of being that soul is generally distinguished in three ways—that is, as nutritive, sensitive, and rational.

104–120. /286/ But because all being occurs in virtue of some form, it must be that sensible being occurs in virtue of a sensible form, whereas intelligible being occurs in virtue of an intelligible form. But from every form some inclination results, and from an inclination an operation results. It is in this way that from fire's natural form an inclination toward a higher place results, in virtue of which fire is said to lack weight. And from this inclination an operation results—namely, upward motion. So from both sensible and intelligible forms a kind of inclination results that is called a sensible or intellectual appetite—in the way that an inclination following after a natural form is called a natural appetite. Then from appetite an operation results, which is local motion. Therefore this is the reason why soul must have five kinds of powers, which was the first question.

122–131. /287/ In connection with the second question it is important to know that earlier, because Aristotle planned to show that soul is the principle of living in all living things, he distinguished living in terms of the grades of living things rather than in terms of the operations of life. Here the kinds of powers are distinguished in terms of the latter. But the appetitive power does not constitute a distinct grade among living things, because all things that have sense have appetite. Thus there remain only four grades of living things, as was shown earlier.

{414A33–B6} HOW THESE POWERS FOLLOW FROM ONE ANOTHER

132–157./288/ Next, when Aristotle says **Plants, however, have,** etc., he shows how the powers under discussion follow from one another, making clear his earlier claim that "some powers have them all, some have some, and some have only one" [414a29–30]. Here we need to consider that, in order for the universe to be perfectly complete,[3] no grade of completeness among things is omitted; nature advances by degrees from incomplete to complete things. On this account, too, Aristotle in *Metaphysics* VIII [1043b36–1044a2] assimilates the species of things to numbers, which grow greater by degrees. Thus in the case of living things some have only one of the powers under discussion—**plants,** that is, which **have only the nutritional power.** This power necessarily exists in all living material things, because we attribute to this power the operations that pertain to material being. Others, however, have the nutritional **and the sensory power**—animals, that is. **But if the sensory power** is there then a third power must be there, namely, **the appetitive.** This power is divided three ways. There is **desire,** which occurs in virtue of the concupiscible power, and **anger,** which occurs in virtue of the irascible power.[4] These two appetites pertain to the sensory power, since they result from sensory apprehension. The third is **will,** which is intellective appetite, a result of intellectual apprehension.

157–175. /289/ Aristotle proves through two arguments that all animals have appetite. The first is that **all animals have** at least **one sense,** namely, **touch. But** what **has one sense** has **joy and sorrow**—i.e., pleasure and pain. (Joy and sorrow seem the result more of an inward apprehension, whereas pleasure and pain follow from the apprehension of sense, especially the sense of touch.) **And** if there is joy and sorrow, there necessarily is something **enjoyable and sad**—i.e., pleasant and painful. (For everything that is sensed by touch must be either suitable, in which case it is pleasant, or harmful, in which case it is painful.) But anything to whom something pleasant and sad occurs **has concupiscence as well,** which **is the appetite for what is pleasant.** Therefore, running from first to last, all animals that have the sense of touch have appetite.

3. 'Perfectly complete' translates the Latin *perfectum,* a word that can mean either perfect or complete. Here Aquinas needs both senses: he takes the universe to consist of a complete and perfect hierarchy of beings, from the lowest to the highest order of perfection.

4. The difference between the concupiscible power and the irascible power is that the former inclines us to pursue things that seem, to the senses at least, to be immediately good (food, warmth, etc.)—or to avoid things that seem immediately bad. The verb *concupisco* will be translated by 'wanting.'

The irascible power inclines us to pursue things that seem good but are difficult to obtain (things that must be obtained through violence, suffering, etc.)—or to struggle against things that seem bad. These are discussed in detail at III.14.120–162.

{414B6–19} ALL ANIMALS HAVE APPETITE: A SECOND ARGUMENT

176–208. /290/ Aristotle introduces a second argument to show the same thing, beginning at **In addition, they have,** etc. This runs as follows: all animals **have a sense** by means of which they recognize their **food**—namely, the sense of **touch,** which **is the sense for food.** And because it is necessary for all animals to take in food, as was stated [II.3.413a25–b2], it is thus necessary that they have a sense of touch by which they perceive the food that is suitable for them. And it is clear that touch is the sense for food: for just as **living** bodies consist of **hot, wet, cold, and dry things,** so too these things nourish them. **Touch is the sense** that discriminates **these. But of the other sensibles** (i.e., by means of the other sensibles) living things are nourished only **accidentally**—inasmuch, that is, as [these qualities] are connected to things that are tangible. **For sound, smell,** and **color add nothing to food** considered as such, but only inasmuch as it happens that what is hot, cold, wet, or dry has color, smell, or sound. **But moistness**—i.e., flavor—is numbered among **tangible** qualities, just as taste is also a kind of touch. In this way, then, it is clear that all animals have a sense for food. /291/ But whatever has a sense for food has **hunger and thirst,** each of which is **concupiscence** for food. **Hunger** is concupiscence **for the hot and dry,** which has the nature of solid food, whereas **thirst** is **for the cold and wet,** which has the nature of drink. (**Flavor,** meanwhile, **is** one sort of **pleasantness that belongs to these [qualities].** For a pleasant flavor indicates a suitable proportion of hot and cold, wet and dry, in food, and thus it pertains more to the enjoyment of food than to any necessity.) Therefore, wherever the sense of **touch** is, **appetite** is.

209–228. /292/ Now, as for how **phantasia** is related to the sensory and appetitive powers, this will be stated **later on** [III.5.429b27–6.429a9, III.16.433b27–434a5]. /293/ **But some** animals **have,** in addition to **these** three—viz., the nutritional, the sensory, and the appetitive powers—**the power for local motion also.** Still others, in addition to these four, have also **the intellective power and intellect** itself—as do **human beings, and if** any other sort of thing **is** like humans **or even superior** to humans. And we do find something superior to human beings, who have intellect. For there is intellect in separated substances and in heavenly bodies (if, indeed, these

have souls).[5] But among living mortal things there is no genus of living things with intellect—except in the human species. /294/ For intellect does not have a bodily organ. Thus we cannot draw distinctions among things with intellect in virtue of the different constitutions of their organs, in the way that we draw distinctions among the species of sensory [things] in virtue of the different constitutions that dispose them toward sensory operations in different ways.

{414B20–31} HOW SOUL'S DEFINITION RELATES TO THESE PARTS

229–231. /295/ Next, when Aristotle says **It is clear, then,** etc., he shows how the definition of soul given earlier relates to the parts that have been listed.

The Platonic Background

232–247. To understand this it is important to know that Plato claimed that universals are separated in being. But in the case of those [universals] that are related sequentially, like numbers and figures, he did not posit one common Idea. For he did not posit one Idea of Number over and above all numbers, in the way that he did posit one Idea of Human Being over and above all human beings. The reason for this is that the species of numbers are related sequentially by a natural order; thus the first of them, Duality, is the cause of all the rest in the sequence. Hence one need not posit a common Idea of Number in order to cause the species of numbers. And much the same account holds for figures. For the species of figure are related sequentially just as are the species of numbers: for Trilateral comes before Quadrilateral, and Quadrilateral before Pentagonal.

248–270. *{414b20–31, Continued}* /296/ So Aristotle says **it is clear** that **the account of soul** is **one in the same way** that the account **of figure** is one. **For** just as among figures **there is no figure** that is **over and above triangle and** the other species **next in sequence,** in such a way as to be the common idea of all figures, so in this case **there is no soul** existing, as if separate, **over and above** all the parts **already mentioned.** /297/ But although there is no one figure that is separate in being over and above all figures (even according to the Platonists, who posited common separated species), nevertheless we do find one **common account that applies to all** figures and that is not **unique to**

5. Aquinas takes Aristotle to have believed that the heavens possess a rational soul. Aquinas himself neither rejects nor wholly accepts this view. See II.6.64–74 and also *Summa contra gentiles,* bk. II, chap. 70.

any one of them. This is the case **for souls as well.** And so **it is ridiculous** for a person **to hunt for** one **common account**—both **in** soul's case and **in** others—that would not apply to any of the souls **that exist** individually in the natural world. Nor, also, is it appropriate for a person to hunt for a definition of soul that **corresponds to** each one of soul's **species** and to **give up on** a definition common to all souls. Therefore, there was no need to neglect a common definition of soul, nor need we give a common definition of soul that does not apply to individual souls.

270–281. /298/ And because Aristotle said that **the account of soul** stands **in the same way** as the account **of figure,** he shows the correspondence between them, saying that figures and souls **stand similarly** to one another. **For in** both cases **that which is prior exists potentially in what comes next in sequence.** For it is clear in the case of figures that **trilateral,** which is prior, **exists** potentially **in a quadrilateral,** since a tetragon can be divided into two triangles. Likewise in the case of **the sensory** soul, **the nutritional** serves as a particular power of it and does not on its own serve as soul. And much the same holds for other figures and other parts of soul.

Chapter 6

What Remains to Be Determined

DE ANIMA II.3.414B32–4.415A22

414b32–33. And so, as regards each individual thing, we must look into what the soul of each one is—such as what that of a plant is and what that of a human being or a beast is.

414b33–415a13. We have to consider, however, *why* they are related sequentially like this. For the sensory power does not occur without the nutritional, whereas the nutritional power is separated from the sensory in plants. Further, without that which can touch there is not one of the other senses, whereas there is touch without the others. For many animals have neither sight nor hearing nor sense of smell. Among sensory things, however, some have local motion,° whereas others do not. Last, however, and least, [some have] reasoning and intellect: for those that have reasoning, among corruptible things, [have] all the rest as well. Yet those that [have] each of these [others] do not all [have] reasoning. Nor do some, indeed, [have] imagination, whereas others live by this alone. There is, however, a distinct account for theoretical intellect. It is clear, therefore, that this account of each one of these [powers] is the most proper account of soul as well.

415a14–16. It is necessary, however, for one who would come to look into these [powers], to grasp what each one of them is and in this way subsequently to investigate their possessions and the rest.

415a16–22. Yet if we must say what each of these is—what, for instance, the intellective, sensory, or nutritional power is—then first we still have to say what it is to cognize intellectively and what it is to sense. For acts and operations are prior to powers in terms of their account. Yet, if so, then prior to these we must consider in addition their counterparts. For the same reason, we will first have to present an account of these—food, for instance, and the sensible and the intelligible.

1–6. *Analysis.* /299/ Now that the Philosopher has listed the sorts of powers belonging to soul and how the general definition of soul introduced earlier relates to its parts, he here shows what needs to be determined next and in what order.

6–9. This part is divided into two parts. In the first he shows what remains

to be determined regarding soul. Second, he shows the order in which it must be determined (beginning at **It is necessary, however, for one who would,** etc. {415a14}).

{414B32–33} WHAT NEEDS TO BE DETERMINED FIRST

10–21. In connection with the first he shows that two things remain to be determined. He derives the first of these from things stated earlier. Above, he said that just as we should not hunt for a general definition of soul of the sort that applies to none of its parts, so we ought not to be content with a general definition—rather, we must investigate the special *(propriam)* definition that belongs to each part of soul [II.5.414b25–31]. On this basis he concludes here that **as regards each individual** ensouled **thing, we must look into what the soul of each one is**—so that, namely, we know **what** the soul **of a plant** is, **what** the soul **of a human being** is, and what the soul of **a beast** is. And this is to know, for each part of soul, what it is.

{414B33–415A13} WHAT NEEDS TO BE DETERMINED NEXT

22–47. /300/ Second, beginning at **We have to consider, however,** etc., he introduces something else that remains to be determined. For he said earlier [II.5.414b19–31] that soul's parts are related sequentially to one another, like the species of figure. But **we have to consider *why*** soul's parts **are related sequentially** in this way. He will give the reason for this at the book's end [III.17.434a22–18.435b25]. But [here] he sets out *how* they are related sequentially: **the sensory power** cannot **occur without the nutritional,** whereas **the nutritional power is separated from the sensory in plants.** Nor is this surprising, since it was stated earlier [II.5.83–96] that the functions of the nutritional power are directed toward achieving and preserving natural being, which underlies [the other powers] as their foundation. A **further** kind of sequence is found in the senses themselves, for **without** the sense of touch there can be none **of the other senses, whereas** we find **touch without the other** senses. **For many animals have neither sight nor hearing nor sense of smell** but touch alone. And it is reasonable that this, too, is so. For touch is the sense that is perceptive of things that pertain to the animal's constitution, things through which the animal is constituted and nourished. The other sensible qualities, however, add to this only *per accidens.* Hence the other senses do not belong to an animal of necessity, and for this reason they are found not in all animals but only in complete ones.

47–58. /301/ We should also consider the sequence between the sensory and the motive power. The motive power does not occur without the sensory, for some things that have sense also **have local motion, whereas others do not.** But this must be understood with reference to the progressive motion of animals, in virtue of which animals are moved from place to place. For this motion does not occur in all animals, and those that lack this motion have some local motion—that, namely, of expansion and contraction, as is apparent in the case of oysters.

58–63. Last among all the parts of soul, **however, and least** (because it is not divided into beings of different species), is that which has reason **and intellect.** For all **corruptible things** that **have** reason have **all** the other [powers] mentioned earlier **as well.**

A Note on Intellect in Incorporeal Beings

64–74. He makes this last claim to sidestep separated substances and heavenly bodies (if they have souls). For since they exist without generation and corruption, they do not need the nutritional power. Also, their intellect on its own contemplates objects that can be understood in their own right; hence these beings do not need the senses to pursue intellective cognition. But in mortal beings that have intellect, all the other [powers] necessarily exist beforehand, like underpinnings of some kind, preparing the way for intellect, which is the ultimate perfection aimed at in the operation of nature.

75–82. *{414b33–415a13, Continued}* **Yet not all** of **those** that have one of the above-mentioned powers have reason as well. And because imagination seems to have some kind of tie with intellect (since it was said earlier that intellect either "is a kind of phantasia or does not occur without phantasia" [I.2.403a8–9]), he adds, regarding phantasia, that **some** animals not only do not have intellect but do not even have **imagination.**

How Animals Have Phantasia

84–95. /302/ Yet this seems contrary to what Aristotle had said earlier: that if a cut-off part has sense and appetite, then it also has phantasia [II.4.413b21–22]—if indeed phantasia is the same as imagination, as it seems. So we should say that incomplete animals do indeed have phantasia (as will be said in Book III [16.433b31–434a5]), but indeterminately, since phantasia's movement does not remain in them after sensory apprehension. In the case of complete animals, on the other hand, phantasia's movement does remain, even once the sense objects have left. And it is in this respect that Aristotle says here that imagination does not occur in all animals.

96–105. *{414b33–415a13, Continued}* But there are certain animals that **live by this alone,** lacking intellect and directed in their operations by imagination in just the way that we are directed by intellect. And although not all animals have imagination, just as they do not all have intellect, nevertheless **there is a** different **account for theoretical intellect** than there is for phantasia. For the two differ from one other, as will be evident below [III.5.427b27–6.429a9]. **It is clear, therefore, that this** definition that was assigned to **soul** is applied most properly to **each** part of soul.

106–108. *Analysis.* /303/ Next, when Aristotle says **It is necessary, however,** etc. {415a14 ff.}, he shows the order in which an account of soul's parts should be presented. He assigns an order in two respects.

{415A14–16} THE PROPER ORDER, IN ONE RESPECT

109–117. First, in this respect: one **who would look into** soul's parts should first **grasp what each one of them is** and **subsequently** should consider **their possessions** (i.e., the parts next in sequence) and the **rest,** which have to be considered with respect to soul's parts and to the thing that has the soul (its organs, for example, and other such things). And this order **is necessary,** because if an account of them all were presented all at once, then this teaching would be confused.

{415A16–22} THE PROPER ORDER, IN A SECOND RESPECT

118–130. /304/ Aristotle touches on a second respect beginning at **Yet if we must say,** etc. Here he says that **if we must say,** of some part of soul, **what** it **is** (viz., **what the intellective, sensory, or nutritional power is**), **then** we must **first say** this of acts (viz., **what it is to cognize intellectively and what it is to sense**), and this is so because **in terms of their** defining **account, acts and operations are prior to powers.** For a power, in virtue of what it is, carries a certain disposition for an act: for it is the basis of acting or being affected. Hence acts must be included in the definitions of powers. And **if** this is how things are with respect to the order of act and power, [then] **in addition,** acts are **prior to their counterparts**—i.e., their objects.

On the Objects of Active and Passive Powers

131–155. /305/ This last point is so because the species of acts and operations are derived according to how they are ordered to their objects. For every operation of soul is the act of either an active or a passive power. The objects of passive powers are active relative to the operations of these powers because they bring these powers to actuality—just as the visible does for sight and every sensible quality does for the senses. The objects of active powers,

on the other hand, are ends relative to the operations of those powers. For the objects of active powers are the things that they produce. It is clear, however, that wherever things are produced, these things are the ends of the operations (as *Ethics* I [1094a5] says)—just as the house that is constructed is the end of the construction. It is clear, then, that every object is either active or an end relative to soul's operation. But both give that operation its species. For it is clear that specifically distinct active objects have operations that differ in species, in the way that heating comes from heat and cooling from cold. In much the same way, an operation draws its species from its terminus and end: becoming healthy and getting sick, for example, differ in species in virtue of the difference between health and sickness. It is in this way, therefore, that objects are prior to soul's operations, in the course of defining them.

156–161. *{415a16–22, Continued}* /306/ And hence **we will have to present an account of** objects before acts, **for the same reason** that we present an account of acts before powers. Objects, then, are things such as **food,** with respect to the nutritional power; **the sensible,** with respect to sense; **and the intelligible,** with respect to intellect.

When Objects Distinguish Acts and Powers

162–172. /307/ But it is important to know that soul's acts and powers are distinguished by their different objects only when the objects differ *qua* objects—i.e., in terms of the object's formal nature *(rationem formalem),* as the visible differs from the audible. But if the object's nature remains the same, then no other difference introduces a specific difference either among the acts or within the power. For it belongs to the same power to see a *person* that has color and a *stone* that has color, since for the object, *qua* object, this difference holds *per accidens.*

A Note on Self-Knowledge

173–190. /308/ It is important to know, however, that our possible intellect is only potentially in the order of intelligible things and that it is actualized by a form abstracted from phantasms. Yet a thing is cognized only inasmuch as it is in actuality. That is why our possible intellect cognizes itself through an intelligible *species,* as Book III [9.430a2–5] will affirm, but not by directly intuiting its own essence. So in cognizing soul we must advance from things that are more external, from which the intelligible *species* are abstracted through which intellect cognizes itself. In this way, then, we cognize acts through objects, powers through acts, and the essence of soul through its powers. But if soul were to cognize its essence directly, through itself, the opposite order would have to be observed in cognizing soul: for the closer something came to soul's essence, the more directly soul would cognize it.

Chapter 7

The Nutritional Part
Some Preliminary Points

DE ANIMA II.4.415A22–B28

415a22–26. And so first we should discuss food and generation: for the nutritional soul, among the others, is first.° And it is soul's most widely shared power, in virtue of which living occurs in all things. Its functions are generation and the use of food.

415a26–b7. For this is the most natural of functions for living things (any that are complete and not deformed or spontaneously generated): to make another like themselves, animal making animal and plant making plant, so that they participate in this always, the divine and the immortal,° as much as they can. For all have an appetite for that, and for the sake of that do all the things they do in keeping with nature. That for the sake of which something happens has two [meanings]. One is that *of* which, the other is that *with* which.° Therefore since [such living things] cannot have any share in this always and in the divine through continuation, given that no corruptible things can endure as numerically one and the same, each one shares [in perpetual existence] to the extent that it can participate: one more and another less. And it endures not as the same, but as if the same—not numerically one, but specifically one.

415b7–12. Soul, however, is the cause and principle of a living body. Yet these are spoken of in more than one way, and moreover soul is called a cause in the three ways already established: for soul is a cause (i) as that from which movement itself comes, (ii) as that for the sake of which, and (iii) as the substance of ensouled bodies.

415b12–14. That (iii) it serves as the substance, then, is clear. For in the case of everything, the cause of its very existing is its substance. But for living things, existing is living, and soul is the cause and principle of these.

415b14–15. Further, the account of that which is in potentiality is its actuality.

415b15–21. It is clear, however, that soul is the cause also as (ii) that on behalf of which. For just as intellect acts on behalf of something, in the same way nature does, too, and this thing is its end. But the soul in animals is of this sort, by nature. For all physical bodies are the instruments of soul—of animals and plants alike°—inasmuch as they exist on soul's behalf. But

there are two ways in which that for the sake of which is spoken of: that of which, and that with which.°

415b21–28. Soul is also (i) that from which local movement first [comes]. But not all living things have this power. Both alteration and growth, however, occur in virtue of soul. For sense seems to be a kind of alteration, and nothing senses that does not have soul. The same holds for growth and deterioration. For nothing suffers degeneration or grows physically unless it is fed, whereas nothing is fed that has no share in life.

1–10. *Analysis.* /309/ Now that the Philosopher has distinguished soul's powers from one another and shown what should be taken up in their regard and in what order, he here, in keeping with the order laid out earlier, presents his account of them. This is divided into two parts. In the first he presents his account of what each of soul's individual parts is. In the second he gives the reason why they have such a sequence relative to one another (beginning at **So it is necessary for every,** etc., in the last chapter of the work {III.17.434a22}).

10–20. The first is divided into four parts. In the first Aristotle presents his account of the nutritional part, in the second his account of the sensory part (beginning at **Now that we have presented an account,** etc. {II.10.416b32}), in the third his account of the intellective part (beginning at **Now regarding the part of soul,** etc. {III.7.429a10}), and in the fourth his account of what produces local motion (beginning at **we should inquire, regarding moving,** etc. {III.14.432a18}). He does not, however, formulate a specific treatment of the appetitive part, because (i) the appetitive part does not constitute a specific grade of living things and because (ii) an account of it is presented along with the capacity for motion [III.14–16].

20–25. The first of these parts, however, is divided in two. In the first Aristotle sets out certain things that are necessary for a cognition of the nutritional part. In the second he presents his account of the nutritional part (beginning at **But because the nutritional,** etc. {II.9.416a18}).

25–28. That first part is divided in two. In the first Aristotle says what his plan is; in the second he makes clear in advance certain things that are prerequisites for a cognition of the nutritional part (beginning at **For this is the most natural,** etc. {415a26}).

{415A22–26} HIS PLAN

29–46. So Aristotle first concludes from things already stated that since one should discuss objects and acts before powers, and the first power before those next in sequence, **we should first discuss food,** which is the object of

the nutritional soul, **and generation,** which is its act.[1] And so we should discuss the object and act of this part before those of other parts, because this part **is first** among the other parts of soul (in those subjects in which it occurs with **the others**). For it is like the foundation for the others, just as the natural being involved in its operations is the foundation of sensible and intelligible being. There is also another reason that we should discuss it first: for **it is shared** by all living things (in that it may be separated from the other powers, whereas those others may not be separated from it), and we should deal with shared things first. The **functions** of this part **are generation and the use of food.** And so we should deal with these first.

47–60. *Analysis.* /311/ Next, when Aristotle says **For this is the most natural,** etc. {415a26 ff.}, he presents his account of certain things that are prerequisites for a cognition of soul's nutritional part. And this account is divided into two parts. In the first he shows that generation pertains to the nutritional part. It was necessary to show this because earlier he did not attribute generation to this part, but only growth and deterioration [II.3.413a24–b2]. In the second he shows that the nutritional power's functions come from soul. It was necessary to show this because (i) since these functions are carried out by active and passive qualities, it could seem to someone that they come from nature and not from soul;[2] and especially because (ii) in plants, life is obscure and hidden. (This part begins at **Soul, however, is the cause and principle,** etc. {415b7}.)

{415A26–B7} GENERATION PERTAINS TO THE NUTRITIONAL PART

61–75. /312/ Aristotle shows the first through the following argument: every operation that is naturally found in all living things pertains to the nutritional power, "in virtue of which living (first) occurs in all things," as he said [415a25]. But generating is natural to all living things. Therefore it pertains to the nutritional power. He says, therefore, that generating is the function of the nutritional soul in such a way that, compared to other **functions,** it is the

1. Here 'generation' refers to the act of reproduction, which of course every kind of living thing engages in. Reproduction is treated as one kind of generation, to be explained in terms of Aristotle's general theory of generation and corruption.

2. Active and passive qualities are the corporeal qualities, such as heat and cold, that are associated with the basic elements of nature (see I.14.7–26). Since these qualities are associated more with natural operations than with the operations of soul, it would be easy to suppose that soul is not involved in the operations of the nutritional part.

more natural **for** all **living things.** And it is called **the most natural** because it applies in this respect even to other beings that lack souls. They have generation, although in a different way, since things that lack souls have generation through an external generative source. Living things, on the other hand, have generation through an internal principle, inasmuch they are generated from a seed that develops into a living thing.

75–99. /313/ There are, however, three exceptions to this generalization about living things, and to them this function does not apply. The first is those that are incomplete—such as children, who do not generate. For what in any given genus is complete can make another like itself. Second, we make an exception for those that are affected by a defect in some natural principle, such as the impotent and the frigid. The third exception is animals and plants that are generated without seed, through putrefaction. For in their case, because of their incompleteness, a universal agent—the power of a heavenly body—suffices for their production, along with matter disposed [in a certain way].[3] In the case of complete animals, on the other hand, further principles are required. For a universal agent does not suffice; instead, it requires its own univocal agent.[4] /314/ So Aristotle says that living things can **make another like themselves—any that are complete,** thus ruling out children, **and not deformed,** thus ruling out eunuchs and those with similar defects, or any that are not **spontaneously generated,** thus ruling out those generated through putrefaction. These are said to be born spontaneously, so to speak, because they are produced from earth without seed; the likeness here is to someone's being said to do *spontaneously* that to which he is not led by anything external.

99–123. Now the fact that a living thing makes **another like** itself is understood in the following way: that **animal** makes **animal** and **plant** makes **plant,** and moreover that it is in keeping with its species that such an animal makes such an animal, so that a human being generates a human being and an olive tree an olive tree. And it is natural for living things **to make another** of a sort **like themselves,** so that **they always participate, as much as they can, in the divine and immortal**—i.e., so that they are made as much like that as

3. Aquinas refers to the view, accepted until Louis Pasteur's discoveries in the nineteenth century, that living beings could be spontaneously generated out of decaying matter. Thus Hamlet warns Polonius: "For if the sun breed maggots in a dead dog . . . Have you a daughter? . . . Let her not walk i' the sun: conception is a blessing; but as your daughter may conceive—friend, look to 't" (*Hamlet,* act 2, scene 2, lines 181–186).

4. A univocal agent is one that produces just one kind of effect, in the way that living things "make another like themselves" [415a28]. The sun, in contrast, is an equivocal agent, able to produce various kinds of effects—maggots in a dead dog, heat in the sand on a beach, and so on.

possible. /315/ For we should be aware that just as there are different levels of completeness in one and the same thing going from potentiality to actuality, so too there are different levels of completeness in different beings. So to the extent that something is more complete it becomes that much more like things that are more complete. Take any given thing, at the time it is going from potentiality to actuality. This thing, while it is in potentiality, is directed toward its actuality and naturally desires that. And while it is in a less complete [state of] actuality, it desires a more complete actuality. In the same way, then, any given thing that belongs to a lower level of things desires to become like those that are higher, to the extent that it can. And this is why he adds that **all have an appetite for that**—namely, to be made like the divine and immortal—**and for the sake of that do all the things they** naturally **do.**

124–141. /316/ But it is important to understand that we speak in **two** ways about **that for the sake of which** a thing is done. In one way we speak of that for the sake **of which** a thing is *directly* done, in the way that a doctor acts for the sake of health. In another way we speak of **that** *with* which; this can be understood in two ways. First, so that we understand that the end refers even to the subject possessing that for the sake of which a thing is done—for instance, if we were to say that the end of medicine is not only health but the body possessing health. Second, so that we say that the end is not only the principal aim but also that with which we achieve our aim—for instance, if we were to say that the end of medicine is to heat the body, since with heat our constitution takes on the balance that is health. So, accordingly, it can be said in this case, too, that that for the sake of which a thing is done is (i) perpetual existence itself; (ii) the thing having such existence, which natural entities aim to be made like through generation, in which there is [a kind of] perpetuity; or even (iii) the very generation with which they achieve that perpetuity.

141–157. /317/ **Therefore** lower living beings **cannot have any share in this** everlasting **and divine** existence, by way of **continuation**—i.e., so as to remain numerically the same—**given that no corruptible things can endure** always, **numerically one and the same,** since the necessity of corruption is an absolute necessity (inasmuch as it stems from matter itself, not from some end).[5] For this reason it follows that **each one shares** in perpetual existence **inasmuch as it can: one more** (a being that is more long-lasting) **and another less** (a being that is less long-lasting). **And** yet **it endures** always, through gen-

5. Compare *Summa theologiae* (first part), q. 82, a. 1, where Aquinas describes material necessity as one sort of absolute natural necessity. His example is that "everything composed of contraries must necessarily be corrupted." The necessity of an end, in contrast, is not absolute; he uses the example of the necessity of food for life or a horse for a journey. These are necessities only with respect to certain ends.

eration, **not as the same** absolutely **but as if the same**—i.e., in what is like it in species. So, explaining what he has said, Aristotle adds that it endures **not** as **numerically one,** which is to be the same absolutely; rather, it endures as **specifically** the same, since everything generates what is like itself in species.

THE NUTRITIONAL POWER'S FUNCTIONS COME FROM SOUL

158–163. *Analysis.* /318/ Next, when Aristotle says **Soul, however, is the cause and principle,** etc. {415b7 ff.}, he shows that the functions attributed to the nutritional power come from soul. And in this connection he does two things. First, he shows what is true; second, he rules out an error (beginning at **Empedocles, however, did not speak well,** etc. {II.8.415b28}).

{415B7–12} HOW SOUL IS THE CAUSE OF A LIVING BODY

164–171. First, Aristotle puts forward what his aim is, saying that **soul is the principle and cause of a living body.** And since principle and cause **are spoken of in more than one way, soul is called** the principle and **cause** of a living body **in three ways.** It is so in one way as **that from which** the principle of **movement comes.** In another way it is so as **that for the sake of which**—i.e., the end. In a third way it is so **as the substance**—i.e., the form—**of ensouled bodies.**

{415B12–14} AS FORM: A FIRST ARGUMENT

172–181. /319/ Second, beginning at **That (iii) it serves as the substance,** etc., Aristotle proves what he has assumed. And first he proves that soul is the cause of a living body as its form; he does so through two arguments. The first of these runs as follows: that is the cause of something as **its substance**—i.e., as its form—which **is the cause** of its being. For each and every thing is actual through a form. Yet **for living things soul is the cause** of being, since they live through soul, and this **living is** their **existing.** Therefore, soul is the cause of a living body as its form.

{415B14–15} A SECOND ARGUMENT

182–187. /320/ Aristotle introduces a second argument beginning at **Further, the account,** etc. This runs as follows: that which **is** the **actuality** of something

is **the account** *(ratio)* and form **of that which is in potentiality.** But soul is the actuality of a living body, as is evident from things said earlier [II.4.414a14–28]. Therefore, soul is the account and form of a living body.

{415B15–21} AS END

188–213. /321/ Second, beginning at **It is clear, however, that soul,** etc., Aristotle shows that **soul is the cause** as an end. And that it is the cause, as an end, of living bodies, he shows in this way: **for just as intellect** functions for an end, so **too does nature,** as *Physics* II [198b34–199b33] proves. But in the case of things done through a craft, intellect directs and arranges matter on account of form. Therefore nature does so as well. So since soul is the form of a living body, it follows that it **is** its **end.** /322/ And, moreover, **soul** is the end not only of living bodies but also of all natural bodies among those lower entities. He proves this as follows: we see that **all** natural **bodies are the instruments,** as it were, **of soul.** This is so not only in **animals** but even in **plants.** For we see that human beings, for their own benefit, use animals, plants, and things without souls, whereas animals use plants and things without souls, and plants use things without souls (insofar, that is, as they take in food and sustenance from them). But anything that happens in the natural world is naturally disposed *(natum)* to happen that way. Thus it seems that all bodies without souls are the instruments of beings with souls and exist for them, whereas less complete beings with souls exist for more complete beings with souls. And accordingly Aristotle distinguishes that **for the sake of which** it is, just as he did earlier.

{415B21–28} AS THAT FROM WHICH MOVEMENT COMES

214–228. /323/ Third, beginning at **Soul is also (i),** etc., Aristotle shows that **soul is** the principle of a living body as **that from which movement [comes].** And he uses something like *(quasi)* the following argument: every form of a natural body is the principle of that body's own specific *(proprii)* movement—just as the form of fire is the principle of its movement. But some movements are specific to living things—in particular, local movement, with which animals move themselves locally in a progressive motion, although **not all living things have this.** Likewise, sensing is **a kind of alteration,** and only things **that have soul** have this. Also, only things that are **fed** have the movement of **growth and deterioration,** and **nothing is fed** unless it has soul. Therefore, soul must be the principle of all these movements.

Chapter 8

Several Mistakes Ruled Out

DE ANIMA II.4.415B28–416A18

415b28–416a2. Empedocles, however, did not speak well when he added this: that growth occurs in plants when they send their roots downward because of Earth's being carried that way by nature, whereas [growth occurs] upward because of Fire, analogously.

416a2–5. For neither does he take 'up' and 'down' in the right way. For up and down are not the same for all things and for the whole. Rather, the roots of plants are just like the heads of animals—if it is fitting to say that instruments are different and the same because of their functions.

416a6–9. But beyond this, what is it that holds together Fire and Earth, which are carried in opposite [directions]? For they will be pulled apart if nothing prevents it. But if there will be [anything of that sort], then this is soul and the cause of growth and nourishment.

416a9–13. But it seemed to some that Fire's nature is the cause, unconditionally, of growth and nourishment. For indeed it seems that [Fire] alone, of bodies and elements,° is fed and grows. And hence in plants and animals someone may judge that this is what functions.

416a13–18. Now, this is in a certain way a concurrent cause. Yet it is not the cause unconditionally, but rather soul is. For Fire's growth goes on ad infinitum, as long as there is something flammable. Of all naturally constituted things, however, there is a limit and ratio to their magnitude and growth. But these belong to soul, not to Fire, and to the account rather than to the matter.

1–7. *Analysis.* /324/ Earlier the Philosopher showed that the functions attributed to the nutritive power come from soul; now he rules out several mistakes that run counter to the truth that has been established. This account is divided into two parts, in keeping with the two mistakes that he eliminates. (The second part begins at **But it seemed to some** {416a9}.)

7–9. In connection with the first he does two things. First, he presents the mistake; second, he discredits it (beginning at **For neither does he** {416a2}).

{415B28–416A2} EMPEDOCLES' MISTAKE

10–27. It is important to know in connection with the first, then, that **Empedocles did not** say that other beneficial features occurring in living things are the result of nature's plan; instead, these features result from matter's necessity—e.g., that the feet of animals are arranged as they are not in order to be beneficial for walking, but because it happens that the matter has been so arranged, part by part.[1] Likewise, too, he attributed the **growth** of living beings not to soul but rather to the movement of heavy and light things. For he saw that living beings grow in different directions—e.g., upward and downward. This is clearly apparent in the case of **plants,** which **send their roots downward** while their branches are raised upward. So he said that the downward growth of plants is caused by the movement of the **Earth** that is part of the plant's composition and is naturally **carried** downward as the result of its weight. **Upward** growth, on the other hand, is caused by the movement of the **Fire** [within the plant], which is naturally carried upward as the result of being light.

{416A2–5} EMPEDOCLES' MISTAKE DISCREDITED

28–53. /325/ Next, when Aristotle says **For neither does he,** etc., he discredits in two ways the view just described. He does so first through the fact that Empedocles **does** not **take 'up' and 'down' in the right way.** To clarify this, one needs to know that 'up' and 'down,' as well as other differences in position—front and back, right and left—are in some cases distinguished by nature, whereas in other cases only through position relative to us. For where determinate parts serve naturally as the sources of certain movements, in these cases the above differences in position are distinguished by nature. This is how it is in the universe, toward whose center heavy things are naturally carried, whereas light things are naturally carried toward its circumference. Thus in the universe up and down are naturally distinguished: the place toward which light things are carried is called "up," [whereas the place] toward which heavy things are naturally carried is called "down" or "the center." Also, in the case of living mortal beings, up and down are determined by the movement of growth and deterioration. For the part through which living things take in food is said to be upward, whereas the opposite part, through which excess is released, is said to be downward. /326/ Moreover, front and

1. Compare Aristotle, *Physics* II.198b23–32.

back are determined in the case of some living things by the senses, whereas right and left are determined by local motion.[2]

53–59. On the other hand, where no determinate part is the source or terminus of some movement, in those cases differences in position are determined not by nature but only through position relative to us. This is the case for things without souls. Thus the same column is said to be on the left or the right depending on whether it is to someone's right or left.

60–80. Now, in the case of some living things—those for whom up and down are determined by nature—these are determined in the same way as they are in the universe. This is so in the case of human beings, whose upper part, the head, is toward the upper part of the universe, but whose lower part is toward its downward part. In the case of plants, however, things are arranged conversely. For **the roots of plants** are comparable to **the head,** since they are directed toward the same act. (For just as animals take in food through their mouth, which is in their head, so do plants through their roots.) But **instruments** are said to be **the same and different,** or alike and unlike, on the basis of **their functions,** which are their ends. Thus **the roots of plants** are similar to the heads **of animals,** and nevertheless they face down. Hence for plants and for the universe, up and down hold in opposite ways. Nor do they hold in the same way for nonhuman animals, since their heads are not toward the upper part of the universe or toward its downward part. This is why Aristotle says that **up and down are not the same for all things**—for all living things, that is—**and for the whole,** i.e., for the universe.

80–89. /327/ But Empedocles treats 'up' and 'down' as if they hold in the same way for all living beings and for the universe. For if the movement of growth, according to which up and down are determined in living beings, occurs according to the movement of heavy and light things, according to which up and down are determined in the universe, then it will follow that up and down occur in the same way in all living beings and in the universe. And so Empedocles says that even the growth of the roots in plants is downward.

{416A6–9} THE MISTAKE DISCREDITED IN ANOTHER WAY

90–114. /328/ Second, beginning at **But beyond this,** etc., Aristotle discredits the position under discussion in another way. To understand this, one needs to know that since elements exist in a mixture, not actually, but virtually, it

2. The idea here is that the location of the sense organs determines the body's front side, whereas movement is initiated by the right side of the body. See, e.g., Aristotle, *De caelo* II.284b28–30, and *De progressu animalium* 705b9–706a26.

is not the case that each element in the mixture has its own special movement. Rather, the whole mixture is moved by the movement of the element that is predominant in it. But if each element were to have its own special movement, as Empedocles seemed to claim, then since the elements' natural movement is toward **opposite** locations, it would follow that they would be wholly separated from one another unless there were something holding the elements **together** that would not allow them to disengage wholly from one another. Now that which holds the elements together so that they are not wholly set apart from one another seems above all to be **the cause of growth and nourishment,** if growth as regards the various parts occurs as the result of the elements' various movements. For the only way that one could imagine growth's occurring through elements moved in opposite directions is by their remaining connected to one another, because if they were wholly separated there would be division, not growth. Therefore, that which holds the elements together so that they are not wholly separated from one another is principally the cause of growth. And **this is soul,** in living things. Therefore, soul is the source *(principium)* of growth.

115–118. *Analysis.* /329/ Next, when Aristotle says **But it seemed to some,** etc. {416a9 ff.}, he presents the other position. And in this connection he does two things. First, he presents it; second, he disproves it (beginning at **Now, this is,** etc. {416a13}).

{416A9–13} A SECOND MISTAKE

118–134. It is important to know, however, that this position differs from the first in this respect: that the first attributed **the cause of growth and nourishment** to several elements, Fire and Earth, whereas this one attributes their cause to **Fire** alone. /330/ And [those who held this position] were impelled to do so for this reason: that a thing seems to be the source of any state *(passionis)* or movement in an object if it has that state or movement in its own right. In this way Fire, which is hot in its own right, is the cause of heat in mixed things, whereas Earth, which is heavy in its own right, is the cause of heaviness in them. Now among the **elements** Fire **alone seems** to be nourished and to grow (if we speak superficially of nourishment and growth). Therefore only Fire seems to bring about growth and nourishment **in plants and animals.** But as to whether Fire truly is nourished and grows, this will be clear below [II.9.416b9–11].

{416A13–18} THIS SECOND MISTAKE DISCREDITED

135–147. /331/ Next, when Aristotle says **Now, this is,** etc., he disproves the position just described. But it is important to know that there is some truth to this position. For it is necessary that all food be broken down, which of course takes place through Fire.[3] Hence Fire in some way does **function** in nourishment and consequently in growth—not indeed as the principal agent (since this belongs to soul), but as a secondary and instrumental agent. And thus he says that Fire **is in a certain way a concurrent cause** of growth and nourishment—in the sense that an instrument is the concurrent cause of the principal agent. **Yet it is not the cause unconditionally,** as the principal agent, **but rather soul is** the cause in that way.

147–175. Aristotle proves this as follows: /332/ in any action, what is primary is that through which the thing being done is assigned its limit and ratio. This is clear in the case of the products of any craft: a chest or a house has its limit and ratio imposed on it not by the instruments [that are used] but by the craft itself. For it makes no difference to the instruments whether they take part in producing this shape and size or some other. For a saw, taken on its own, is naturally suited for cutting wood, whether [the result] is appropriate for a door, a bench, or a house, and in any sort of size. But that the wood is cut in such a way that it is naturally suited to such a shape and in such a size, this occurs in virtue of the craft. It is clear, **however,** that in **all things** that exist by nature **there is** a fixed **limit and** a limited **ratio to their magnitude and growth.** For just as certain distinct accidental features are appropriate to each species, so too is a distinct size. (There is some leeway here, because of differences in matter and because of other particular causes. For not all human beings are of one size, although there is a size so great that the human species does not reach beyond it, and there is a size so small that no human being is found below it.) Therefore, that which causes the limitation on magnitude and growth is the principal cause of growth. But this is not Fire. **For** it is clear that **Fire's growth** does not go up to a limited size but is extended **on ad infinitum,** if an infinite amount of **flammable** material is available.

175–184. It is therefore clear that Fire is not the principal agent in growth and nourishment, **but rather soul is.** And it is reasonable that this is the case, since the limitation on size in natural things occurs through form, which is

3. The verb *decoquo,* here translated as "to be broken down," often means simply "to cook." But in this chapter and the next the word must bear the further, extended sense of "to digest." (Not all food, after all, must be cooked.) The translation is intended to allow for either meaning.

the source of the species, **rather than** through **matter.** And soul is related to the elements in a living body just as form is related to matter. Therefore, **the limit and ratio to their magnitude and growth** come more from **soul** than from **Fire.**

Chapter 9

The Nutritional Power's Operations

DE ANIMA II.4.416A18–B31

416a18–21. But because the nutritional and the generative are the same power of soul, it is necessary first to present an account of food. For [that power] is separated from other powers by this [nutritive] function.

416a21–29. Now one contrary seems to be food for another—not every one for every other, but all those contraries that receive from one another not just generation but also growth. For many things are brought about through one another, but not all°—being healthy, for instance, through suffering. But neither do those seem to be food for one another in the same way. Rather, Water is food for Fire, whereas Fire does not feed Water. Indeed, then, this seems to be so among simple bodies above all, that food is one thing while that which is fed is another.

416a29–b3. There is, however, a puzzle. For some say that like is fed by like, as in the case of growing. But, as we have said, to others it seems on the contrary that contrary [is applied] to contrary, inasmuch as like is unaffectable by like, and food is changed and broken down. In all cases, however, change is to a contrary or an intermediary [state]. In addition, however, food is affected in some way by that which is fed, whereas the latter is not [affected] by food—just as a builder is not [affected] by his material, but rather it [is affected] by him. The only way the builder is changed is from leisure to activity.

416b3–9. It makes a difference whether food is what comes last or first. But if both [are food], and if the latter is not broken down, whereas the former is broken down, then it will be possible to speak of food in both ways. For insofar as it is not broken down, contrary is fed by contrary, whereas insofar as it is broken down, like [is fed] by like. Thus it is clear that both [views] speak rightly and not rightly—in a certain way.

416b9–11. But because nothing not taking part in life is fed, the body that is fed will indeed be one that has a soul—considered as having soul. And so food, too, is relative to what has soul, and not accidentally.

416b11–14. There are different [kinds of] being, however, for food and for what is productive of growth. For [food] is productive of growth inasmuch as what is ensouled is some quantity, whereas it is food inasmuch as [what

is ensouled] is an individual thing and a substance. For [a living thing] preserves its substance and exists for as long as it is fed.

416b15–17. Yet it is also capable of producing generation, not of that which is fed, but of something like that which is fed. For that very substance already exists, and nothing generates its very self, but [merely] preserves [itself].

416b17–20. Therefore this sort of principle of soul is a power able to preserve what takes it in, considered as such. Food, on the other hand, provides for the operation [of what takes it in]. And so, deprived of food, it cannot exist.

416b20–23. But because three things are involved—that which is fed, that by which it is fed, and that which takes in food—that which takes in food is the first soul, whereas that which is fed is the body having this [soul], and that by which it is fed is the food.

416b23–25. Yet because it is right to name all things on the basis of their end, and the end [in this case] is to have generated what is like it, this first soul will indeed be capable of generating what is like it.

416b25–29. That by which a thing is fed, however, is one of two things, just as that by which a thing is steered is both one's hands and a rudder.° The latter is moving and is also moved, whereas the former is only moving.° But it is necessary that all food be able to be broken down, and it is [something] hot that does the breaking down. Thus everything with a soul possesses heat.

416b30–31. It has been said in outline, then, what food is. Later we will have to become more definite about it, on its own terms.

1–10. *Analysis.* /333/ Now that the Philosopher has shown that soul is the principle of the operations that are attributed to the nutritional power, he here focuses on presenting his account of these [operations]. And in this connection he does three things. First, he presents his account of what the object in its own right is—that is, of food.[1] Second, he presents his account of that in virtue of which food is suited to the operations of the nutritional soul (beginning at **But because nothing not taking,** etc. {416b9}). Third, he defines the powers that are the principles of these operations (beginning at **Therefore this sort of principle,** etc. {416b17}).

10–15. In connection with the first he does three things. First, he says what

1. The word *alimentum* can mean either food or the process of nutrition. Sometimes one translation seems obviously right; at other times either translation is defensible. (A similar ambiguity arises for *sensus,* as will be seen in the next chapter.)

his plan is. Second, he presents what at first glance appears true regarding food (beginning at **Now one contrary seems to be,** etc. {416a21}). Third, he raises a puzzle in this connection (beginning at **There is, however, a puzzle,** etc. {416a29}).

{416a18–21} HIS PLAN

16–25. So Aristotle says first that since **the nutritional and the generative** are contained under **the same** general **power of soul** (even though the nutritional—i.e., the nourishing—is a certain special power distinct from the generative), one must **first present an account of food,** which is the object of the nutritional or nourishing power. **For** it is **by this function,** nutrition, that this part of soul is distinguished **from others**—viz., the intellective, the sensory, etc. For the other operations of this part of soul presuppose this one.

{416a21–29} WHAT AT FIRST GLANCE APPEARS TRUE

26–42. /334/ Next, when Aristotle says **Now one contrary seems,** etc., he presents what at first glance appears true regarding food. He puts forward three claims. The first of these is that **food seems to be the contrary** of that which is fed, for the reason that nourishment is turned into that which is nourished, whereas the various kinds of generation occur through contraries. The second claim he puts forward is that it does **not** seem that just any contrary suffices for the nature *(rationem)* of food; this must instead come from those contraries that **receive generation from one other.** For nourishment is turned into the substance of the thing nourished. Hence no contraries occurring in substances pertain to food's nature if they are those in virtue of which alteration occurs from one to the other, rather than generation. For we do not say that being sick is nourishment for **being healthy,** nor being white for being black, nor anything of that sort. (As for how contrary pairs do occur in substances, that is a different question.)

42–55. /335/ Third, [food] must involve those contraries that acquire **growth from one another,** for growth seems to follow from food. Thus although (i) Water is generated from Fire, and vice versa, nevertheless one does **not** say that **Water** is nourished by **Fire,** but that (ii) by **Water Fire** is nourished, inasmuch as watery fluids can become nourishment for Fire. The reason for this is that (i) when Fire is turned into Water, newly generated Water appears; but (ii) already existing Fire seems, for its preservation and growth, to turn fluid into the Fire itself. And so **among** the elements only Fire **seems** to be nourished and only Water seems to be nourishment for it—inasmuch as all moistures and liquids pertain to Water.

56–59. *Analysis.* /336/ Next, when Aristotle says **There is, however, a puzzle,** etc. {416a29 ff.}, he raises one particular puzzle in connection with the account just given. And first he objects to each side; second, he resolves the puzzle (beginning at **It makes a difference,** etc. {416b3}).

{416a29–b3} A PUZZLE ON EITHER SIDE

60–79. A puzzle arises in connection with the above claim that food must be a contrary. To some it seemed that food must be **like** that which **is fed,** since food is the cause of growth and like must grow by means of like. For if something different were added on to a thing, this would not be the growth of that same thing but would be the addition of a foreign nature. Therefore it seems that **like** must be **fed by like.** /337/ **But to others it seems** that food must be **contrary** to that which is fed, in keeping with what was said earlier [416a21–22]; they are led to this view through two arguments. The first of these is that **food is broken down and changed** into that which is nourished. **But** nothing is changed unless **to** a **contrary** or **intermediate [state],** in the way that white is changed into black or gray. But the intermediate state is in a certain way a contrary. For compared to white, gray is black, whereas compared to black it is white (since it is composed out of both). Therefore food is the contrary of that which is fed, into which it is changed.

80–94. /338/ The second argument is that an agent is contrary to that which it affects, since **like** is not affected **by like. Food, however, is affected by that which is fed,** since it is altered and digested by it. That which is fed, however, **is not** affected **by food, just as** an artisan **is not** affected **by his material, but rather** vice versa. For it is his material that is changed, not the artisan—unless perhaps *per accidens,* in virtue of the fact that he goes from potentiality **to activity.** It seems, therefore, that food is contrary to that which is fed. So the first of these arguments is taken from the contrariety that must exist between the end points of change, whereas the second is taken from the contrariety that must exist between that which acts and that which is affected. For that which is fed both acts on food and is the end point toward which the food is changed.

{416b3–9} THE PUZZLE RESOLVED

95–113. /339/ Next, when Aristotle says **It makes a difference,** etc., he resolves the proposed puzzle: he says it makes a difference as regards the question at

hand **whether food** is called that which **comes last** (after the breaking down and digesting) or that which is taken up **first** (before being digested and broken down). And **if both** of these are food—the one **broken down,** the other **not broken down**—then one will be able to make a judgment about **food** that is in keeping with each side of the question. For **insofar as** we speak of food that is **not broken down,** to that extent **contrary is fed by contrary,** since this [sort of food] is what is affected and changed. **Insofar as it is broken down,** however, to that extent **like** is fed **by like.** For that which acts makes what it affects be like it. Thus at the end of this process the thing that was affected must be like the thing acting. And it is in this way that food can produce growth in that which is fed. And thus it is plain that **both** of the views under discussion **speak rightly** in one **way and not rightly** in another.

114–121. *Analysis.* /340/ Next, when Aristotle says **But because nothing,** etc. {416b9 ff.}, he presents his account of food as regards its being suited to the operations of the nutritional soul. He does so first as regards its being suited to nourishment, second as regards its being suited to growth (beginning at **There are different,** etc. {416b11}), third as regards its being suited to generation (beginning at **Yet it is also,** etc. {416b15}).

{416B9–11} FOOD AND NOURISHMENT

122–130. So Aristotle says first that since **nothing** is nourished that does **not** take **part in life,** whereas everything that takes part in life has a soul, it follows that **the body that is fed has a soul.** But food is in potentiality relative to that which is fed, since it is turned into that. Therefore it remains that **food,** insofar as it is the object of nutrition, **is** something that exists in potentiality **relative to what has soul, and** does so *per se,* **not accidentally.**

A Note on Nourishment and Individuation

131–149. /341/ We should be aware, however, that nothing is nourished, strictly speaking, unless it has a soul. Fire, on the other hand, because of a certain resemblance, seems to be nourished, but strictly speaking it is not nourished. This is clear as follows: we say that a thing is nourished, strictly, when it receives in its self something that serves to maintain it. And in the case of fire this certainly does seem to happen, but nevertheless it does not happen. For when any flammable material is added to a fire that was already lit, a new fire is generated in that flammable material. But this does not happen in such a way that the flammable material added gets applied to maintaining the fire already lit in the other material. For example, if a piece of wood is newly set on fire, this burning does not maintain the burning of another piece of wood already set on fire. For the whole fire that comes from many lit fires gathered together is not one fire unconditionally, but *seems* to be one, due to aggregation, in the way that a heap of stones is one heap. The resemblance to nutrition is present there on account of this sort of unity.

150–162. /342/ Ensouled bodies, however, are truly nourished, because life is maintained through food in the *same* part in which it was before. And for this reason as well, only ensouled things truly grow, because each one of their parts is both nourished and grows. This does not happen in things without souls; they seem to expand through addition. For it is not the case that what was there before expands but that a different, greater whole gets established through the addition of something else. In this way, then, the resemblance to growth and nourishment appears in fires especially, because Fire has more form than do the other elements and is more powerful as regards its active capacity. It is for this reason, then, that that which turns others into itself seems to be nourished and to grow.

{416B11–14} FOOD AND GROWTH

163–182. /343/ Next, when Aristotle says **There are different,** etc., he shows how food is suited to growth. And he says that although the object of nutrition (inasmuch as it is called **food**) and the object of growth (inasmuch as it is called **productive of growth**) are the same in subject, they nevertheless differ conceptually *(ratione).* For it was said that food is in potentiality relative to an ensouled body. An ensouled body, however, is both a certain quantity and also a individual thing and a substance. Therefore **inasmuch as** it is a certain **quantity,** in this respect the food coming into it, which is also a kind of quantity, produces growth and is said to be **productive of growth.** Insofar, however, as an ensouled body **is an individual thing and a substance,** so [this food] has the nature *(rationem)* of **food. For** it is part of food's nature that it maintains the substance of what is fed—maintenance that is obviously necessary because of the constant consumption of what is wet by what is naturally hot. And so the **substance** of the thing nourished endures for as long as it is nourished.

{416B15–17} FOOD AND GENERATION

183–194. /344/ Next, when Aristotle says **Yet it is also capable,** etc., he shows how food is suited to generation. And he says that food **is capable of pro-**

ducing generation as well, since seed, which is the principle of generation, is the excess of food.[2] Food, however, is the principle for generating **not that which is fed, but** another that is specifically **like that which is fed.** For the **substance** that is fed **already exists,** and what exists is not generated. Also, **nothing generates itself,** since what generates already exists, whereas what is generated does not yet exist. **But** something can act so as to maintain itself.

195–199. *Analysis.* /345/ Next, when Aristotle says **Therefore this sort of principle,** etc. {416b17 ff.}, he draws from the above claims a definition of the powers of the nutritive soul: first, a definition of the power for nourishment; second, a definition of the whole nutritive soul (beginning at **Yet because it is right,** etc. {416b23}).

{416b17–20} DEFINITION OF THE POWER FOR NOURISHMENT

200–211. First, based on the above claims, he derives a definition of the power for nourishment. And he says that since it was stated that nourishment, considered as such, preserves the thing being nourished, this **principle of soul** (i.e., the principle of nutrition) **is** nothing other than **a power** able **to preserve** what **takes it in,** as it is **such. Food,** then, is what **provides for the operation** of this sort of power, inasmuch as such a power, with the help of food, preserves what takes it in. For this reason, something **deprived of food cannot** be maintained.

{416b20–23} HOW FOOD AND THE POWER FOR NOURISHMENT RELATE

212–223. /346/ And because Aristotle had said that the principle of nutrition is a power of soul, the principle of which in turn is food, as is clear from what we have said, he thus secondly shows (beginning at **But because three things,** etc.) how in different ways both this power of soul and also food are principles of nutrition. So he says that **three things are involved** in nutrition: **that which is fed, that by which it is fed, and that which takes in food.** The first thing **that takes in food is the first soul**—the nutritive soul—**whereas that which is fed is the body having this** soul, and **that by which it is fed is the food.** In this way, then, [this] power of soul is the principle of nutrition inasmuch as it is the principal agent, whereas food is so inasmuch as it is the instrument.

2. Compare Aristotle, *De generatione animalium* I.726a26–27.

{416b23–25} DEFINITION OF THE WHOLE NUTRITIVE SOUL

224–247. /347/ Next, when Aristotle says **Yet because it is right,** etc., he defines that first soul, which is called the nutritive soul, and which in plants *is* their soul, while in animals it is *part* of their soul. And in this connection he does two things. First, he defines this sort of soul. To understand this definition it is important to know that there is a certain order among the three operations of the nutritive soul. For its first operation is nutrition, through which something is preserved as it is. Its second and more complete operation is growth, by which something develops a greater completeness, both with respect to its size and with respect to its capacities. Third comes generation, the most complete and the final operation, through which something already existing as complete in itself imparts existence and completeness to another. For each individual thing is most complete, as *Meteora* IV says [380a13–15], when it can make another like it. Therefore since **it is right** to define and give a name to **all things on the basis of their end, and the end** of the nutritive soul's functions is to generate another **like it,** it follows that this is an appropriate definition of **first soul** (viz., nutritive soul): to **be capable of generating** another that is alike in species.

{416b25–29} ANOTHER INSTRUMENT OF THE NUTRITIVE SOUL

248–276. /348/ Food, Aristotle said, is the instrument of this soul. So to prevent anyone from believing that this soul has no other instrument he secondly shows (beginning at **That by which a thing is fed,** etc.) that it does have another instrument. And he says that there are two instruments **by which a thing is fed, just as** there are two instruments of steering. For one who steers does so with both his **hands and a rudder.** For his hands are an attached instrument whose form is the soul. Thus a rudder is an instrument that **is moving** the boat **and is moved** by his hands, while his hands are an instrument moved not by anything external but by an internal principle alone. For they are part of the individual, and he is self-**moving.** In this way, then, nourishment is the instrument of nutrition that both is separated and whose form is not yet soul. But there must be another, attached instrument of nutrition. For **it is necessary** for **food to be broken down,** and that which **does the breaking down** is something **hot.** Therefore, just as the one who steers moves the rudder with his hands and moves the boat with his rudder, so the soul moves food through heat and takes nourishment through food. In this way, then, the instrument attached to this soul is the thing that is hot, and the natural heat of

digestion has its root in this. And for this reason **everything with a soul** that is nourished must **possess** natural **heat,** which is the principle of digestion. But if this soul were not to have an attached instrument, then it would not be the act of any part of the body, something that characterizes intellect alone.

{416B30–31} SUMMARY

277–282. /349/ Finally, summarizing what he has said, Aristotle concludes that **it has been said in outline**—i.e., in general—**what food is.** But **later we will have to** take up food in a more **definite** way, **on its own terms.** For Aristotle wrote one book specifically on food,[3] just as he did on generation and movement in *The Generation of Animals* and *The Movement of Animals.*

3. No work entitled *De alimento* survives; Aristotle does seem to refer to it, however, at *De somno* 456b6.

Chapter 10

The External Senses
The Relation of Sense to Sense Object

DE ANIMA II.5.416B32–417A21

416b32–417a2. Now that we have presented an account of these things, let us speak generally about all the senses. Sense involves being moved and being affected, as has been said. For it seems to be a kind of alteration. Some, however, have also said that like is affected by like. But this—how it is possible or impossible—has been discussed in our general account of acting and being affected.

417a2–9. There is, however, a question concerning why no sensation *(sensus)* **is produced of the senses themselves. Also, why do [the senses] not produce sensation without outside things, if they have within themselves Fire, Earth, and the other elements of which there is sensation, [either] on their own or in virtue of their accidents? It is clear, then, that the sensory capacity is not in actuality but only in potentiality. It is for this reason that [the senses] do not sense—just as what is flammable does not set itself on fire without a flame. For [otherwise] it would set itself on fire and would not need any actual fire.**

417a9–14. We speak of sensing, however, in two ways. For we say of something potentially hearing and seeing that it hears and sees, even if it is perhaps asleep; [and we say this] also of what is acting now. For this reason sense will also be spoken of in two ways: on one hand as potential, on the other as actual. Likewise too for sensing:° there is what is potential, and what is actual.

417a14–17. First, then, we certainly do speak as if being affected and being moved are the same as acting. For movement is a kind of actuality, although incomplete, as was said in other places.

417a17–21. All things, however, are affected and moved by what is active and actually existing. So a thing is affected as by something that is like [it]—but also as if by something unlike [it], as we have said. For what is being affected is unlike, whereas what has *been* affected is like.

1–8. *Analysis.* /350/ Now that the Philosopher has presented his account of the soul's nutritional part, he here begins to present his account of its sensory part. This account is divided into two parts. In the first he presents his

account of what is apparent concerning this part: namely, the external senses. In the second he presents his account of what lies within the sensory part (beginning at **Someone might believe,** etc. {III.1.424b22}).

8–11. The first of those parts is divided into two parts. In the first of these he shows how a sense is related to its sense object.[1] In the second he presents his account of sense object and sense (beginning at **Something ought to be said first,** etc. {II.13.418a7}).

11–14. In connection with the first of these he does two things. First, he reviews some things said earlier. Second, he investigates his subject (beginning at **There is, however, a question,** etc. {417a2}).

{416b32–417a2} REVIEW

15–23. Aristotle says first, then, that **Now that we have presented an account of these things** that pertain to the nutritional part, we should talk about the things that pertain to the senses in general. (Later he will talk about the things that pertain to each sense in particular [II.14–23].) He reviews two facts about the senses. One of these is that to sense consists in **being moved and being affected.**[2] For actual sensing *(sensus)* is **a kind of alteration,** and that which is altered is affected and moved.[3]

23–36. The other fact that he reviews is that **some** say that **like is affected by like.**[4] For this reason, since to sense is a kind of being affected, /351/ the ancients claimed that like is cognized and sensed by like. Empedocles, for instance, claimed that Earth is cognized by Earth, Fire by Fire, and so on.[5] But **this—how** it could or could not be that like is affected by like—**has been discussed in our general account of acting and being affected,** i.e., in the work *On Generation* [I.323b1–324b24], where Aristotle presents his account of acting and being affected in general. There he said that at the beginning what is affected, while it is being affected, is contrary to the agent, whereas at the end, when it has already been affected, it is like [the agent]. For an agent, by acting, makes like itself whatever it affects.

1. Here and in the chapters to come, *sensibile* is often translated as "sense object." One should keep in mind that for the most part the *sensibilia* (sense objects) in question are the sensible qualities possessed by external objects. Thus the object of taste is not ice cream exactly, but the *flavor* of the ice cream. Similarly, the sense object associated with sight is color, and the sense object of hearing is sound.

2. Compare I.12.410a25–26.

3. The Latin *sensus* standardly refers to the sensory powers or faculties. But sometimes the term picks out the process of sensation, as is the case here. This faculty/process ambiguity in the Latin mirrors a parallel ambiguity in the Greek term for sense/sensation, *aisthêsis;* see, for instance, 417a3–5.

4. Compare I.5.405b15–19, I.12.410a23–b2.

5. Compare I.4.404b11–15.

37–43. *Analysis.* /352/ Next, when Aristotle says **There is, however, a question,** etc. {417a2 ff.}, he presents his account of what is true about his subject. And here he does three things. First, he shows that sense exists in potentiality. Second, he shows that it sometimes is actualized (beginning at **We speak of sensing, however,** etc. {417a9}). Third, he shows how a sense is brought from potentiality to actuality (beginning at **We should, however, draw,** etc. {II 11, 417a21}).

{417a2–9} SENSE EXISTS IN POTENTIALITY

44–51. With respect to the first we should be aware that Empedocles, as well as all the others who claimed that like is cognized by like, claimed that sense is actually the sense objects themselves. For in order for it to have cognition of all sense objects, they claimed, the sensory soul is somehow composed of all sense objects. This was true, according to them, inasmuch as it was made up out of the elements of sense objects.

51–63. /353/ Two things follow from this position. One is this: if sense is the actual sense objects themselves (inasmuch as it is composed of them), then, since the actual sense objects can be sensed, it will follow that the senses themselves can be sensed. The second is as follows: the senses can sense when sense objects are present; so, if sense objects actually exist within a sense (inasmuch as it is composed of them), it will follow that a sense can sense without external sense objects. Each of these, however, is false. And so these two absurd results, which follow from the position of the ancients, are brought into question [by Aristotle] as things that cannot have been settled by the ancients.

64–67. So he says, **There is a question concerning why no sensation** *(sensus)* **is produced of the senses themselves**—i.e., why the senses themselves are not sensed. For this does seem to follow if the senses are like sense objects.

68–79. /354/ He also has a question about **why [the senses] do not produce sensation** *(sensum).* That is, why do the senses not sense in actuality **without outside things**—i.e., without external sense objects—when regardless, on the ancients' view, **Fire, Earth, and the other elements** exist internally, within the senses themselves? These elements can be sensed either in **their own** right (i.e., in virtue of their substance, according to those who make no distinction

between sense and intellect; strictly speaking, it is intellect that has cognition of substance) **or in virtue of their** own distinctive **accidents** (e.g., heat, cold, and other such things that are sensible *per se*).

79–88. These questions cannot be settled if the senses have their sense objects in actuality, as the ancients claimed. So for this reason Aristotle takes this conclusion to be **clear:** that **the sensory** soul **is** its sense objects **not in actuality but only in potentiality.** Accordingly, the senses **do not sense** without external sense objects, **just as what is flammable,** which is only potentially on fire, **does not set itself on fire without some** external **flame.** For if it were actually on fire then **it would set itself on fire and would not need** an external **fire** to do so.

{417A9–14} SENSE IS SOMETIMES ACTUALIZED

89–100. /355/ Next, when Aristotle says **We speak of sensing, however,** etc., he shows that sense is sometimes actualized as well, and in this regard he does three things. First, he shows that sense is sometimes actualized. He shows this through the fact that **we speak of** someone **sensing in two ways. For** sometimes **we say that** a person **hears and sees** who is **potentially hearing and seeing**—e.g., when someone is **asleep.** But sometimes we say that a person hears and sees because he is in the very act of hearing and seeing. From this it is clear that **sense** and **sensing** are spoken of **in two ways:** namely, in actuality and in potentiality.

{417A14–17} HOW WE SHOULD UNDERSTAND THIS

101–117. /356/ Second, beginning at **First, then,** etc., Aristotle clarifies how we should understand what has been said. For the fact that sensing is spoken of in actuality seemed incompatible with the claim that sensing is a kind of being affected and being moved. This is because being in actuality seems to pertain more to acting. And so to explain this he says that we speak of sensing in actuality just as we speak of **being affected and being moved** as a kind of **acting**—i.e., a kind of being in actuality. For **movement is a kind of actuality,** but **incomplete,** as **was said in** *Physics* III [201b31–32]. It is the actuality of what exists in potentiality—namely, of what is movable. Therefore, just as movement is an actuality, so being moved and sensing are kinds of acting or being in actuality. (By saying "first" he indicates that later [II.11–12] he will add certain other things in order to show how the senses become actualized.)

{417A17–21} HOW THE ANCIENTS' POSITION COULD BE TRUE

118–131. /357/ Third, beginning at **All things, however, are affected,** etc., Aristotle shows, in keeping with what has just been said, how the position of the ancients can be true (namely, the position that like is sensed by like). So he says that **all things** that are in potentiality **are affected and moved by what is active** and **actually** existent; the agent, in other words, when it actualizes the things affected, makes them be like itself. **So,** in a way, a thing **is affected** somehow **by something that is like [it]** and in a way **by something unlike [it],** as has been said [II 9, 416b3–9]. For at the beginning, when it is being changed and affected, it is **unlike.** But at the end, when it has been changed and **affected,** it **is like.** So in this way even sense, after it has been actualized by a sense object, is like that object, whereas beforehand it is not like it. The ancients went wrong because they did not make this distinction.

Chapter 11

How a Thing Is Brought from Potentiality to Actuality
The Example of Intellect

DE ANIMA II.5.417A21–B16

417a21–22. We should, however, draw some distinctions about potentiality and actuality. For at present we are speaking unconditionally of what we hold with respect to them.

417a22–29. There is this way in which something is knowing: as we say that a human being [is knowing] because a human being is among the things that know and have knowledge. Then again, there is the way we say that someone having knowledge of grammar is now knowing. Each of these is capable *(possibilis est)*, **but not in the same way: the one [is capable] since he is this kind of thing and matter, whereas the other [is capable] because if he wishes to, it is possible for him to consider [a thing], unless something externally prevents him. But the one that is now considering is in actuality and is, strictly speaking, knowing this letter *A*.**

417a30–b2. So, indeed, both of the first two are potentially knowing. But the one is altered by teaching and often changed from the contrary disposition. The other, however, [passes] from having sense or grammar, without acting, to acting; [he is actualized] in a different way.

417b2–5. Being affected, however, is also not [spoken of] unconditionally. Rather, there is first a kind of corruption by a contrary, whereas another is more the preservation of what is in potentiality by what is in actuality and what is like it—just as potentiality is related to actuality.

417b5–11. Someone who has knowledge arrives at contemplating. Either this is not truly a case of being altered (for an addition is [made] to him and to his activity), or else this is another kind of alteration. Hence it would not be correct to say that someone with wisdom is altered when he displays this wisdom, just as a builder is not [altered] when he is building. Therefore what brings [a thing] from potentiality to actuality as regards intellectively cognizing and displaying wisdom does not rightly have the label 'teaching,' but another.

417b12–16. Now someone [who comes] from potentiality, learning and gathering knowledge from someone in actuality, an instructor, either ought not to be said to be affected (as was said), or else there are two sorts of alteration. There is, first, a change to negative *(privativas)* **states, and also a change to dispositions and nature.**

1–4. *Analysis.* /358/ Now that the Philosopher has shown that sense is in potentiality and in actuality, he here intends to show how it is brought from potentiality to actuality.

4–9. This account is divided into two parts. In the first part he distinguishes potentiality and actuality, and shows how in different ways something is brought from potentiality to actuality. His example is intellect. In the second part he develops these claims with regard to the senses (beginning at **The first transformation,** etc. {II.12.417b16}).

9–14. In connection with the first he does three things. First, he says what his plan is. Second, he distinguishes potentiality and actuality with respect to intellect (beginning at **There is this way,** etc. {417a22}). Third, he shows how something is brought from potentiality to actuality (beginning at **So, indeed, both,** etc. {417a30}).

{417A21–22} HIS PLAN

15–20. So Aristotle says first that **we should draw some distinctions about potentiality and actuality**—i.e., we should show how many ways there are in which something is called either potential or actual. This was necessary because 'potential' and 'actual' had been used above **unconditionally**—i.e., without distinction.

{417A22–29} POTENTIALITY AND ACTUALITY DISTINGUISHED

21–30. /359/ Next, when Aristotle says **There is this way,** etc., he distinguishes potentiality and actuality in connection with intellect. And he says that in one way, **something** is called **knowing**—for instance, **a human being**—because it has a natural potential for knowing. In this way, **a human being** is said to be numbered **among the things that know and have knowledge** inasmuch as that person has a nature suited for knowing and having dispositional knowledge *(habitum scientiae)*. In a second way, something is said to know in **the way we say that someone having** some dispositional knowledge—e.g., **knowledge of grammar**—is **now knowing.**

31–46. /360/ It is apparent, however, that **each of these** is said to be knowing because he can do something *(aliquid potest)*. But it is *not in the same way* that each has the potential to know: the first is said to have the potential because **he is this kind of thing and matter**—i.e., because he has the natural potential to know, according to which he is classed within such a kind, and because

he is in pure potentiality for knowing, just as matter is for form. The second, however—namely, the one that has dispositional knowledge—is said to have the potential **because,** whenever **he wishes,** he can **consider [a thing], unless something** extrinsic accidentally impedes him (e.g., something external preoccupying him or some disorder on the part of his body). /361/ **But** the third, the one that **is considering now,** is in **actuality.** This is the one that properly and fully knows things concerning an art—**this letter *A*,** for instance, which pertains to grammar (which was mentioned above [417a25]).

47–53. So of these three, the last is entirely actualized and the first is entirely potential, whereas the second is actualized relative to the first and potential relative to the third. It is apparent from all of this that to be potential is spoken of in two ways, the first and the second, and that to be actualized is also spoken of in two ways, the second and the third.

54–60. *Analysis.* /362/ Next, when Aristotle says **So, indeed, both,** etc. {417a30 ff.}, he shows how from each potentiality something is brought to actuality. And in this connection he does two things. First, he shows how from each potentiality something is brought to actuality. Second, he shows whether such an actualization happens in virtue of something's being affected (beginning at **Being affected, however,** etc. {417b2}).

{417a30–b2} HOW EACH POTENTIALITY IS BROUGHT TO ACTUALITY

61–79. So Aristotle says, first, that **both of the first two are potentially knowing.** Hence, since what is in potentiality is brought to actuality, someone is brought to actuality from the first potentiality in one way and from the second in another. For one who is in potentiality in the first way is brought to actuality as if **altered by teaching** and moved by someone else who is actualized, such as a teacher. **And often** such a change comes **from the contrary disposition.** He says this because, when someone is brought from first potentiality to actuality, then he is made knowing from being ignorant. /363/ But being ignorant is spoken of in two ways. In one way it corresponds to a simple negation, when the person is neither compelled by the truth nor held back by a contrary error. It is not as if someone ignorant in this way who is made actually knowing is changed from the contrary disposition. Rather, that person simply acquires knowledge. In a second way someone is called ignorant in virtue of a flawed state, inasmuch as that person is held back by a mistake that runs contrary to the truth. This person is brought to actual knowledge as if "changed from the contrary disposition."

79–84. /364/ On the other hand, someone who is in potentiality in the second way—viz., so that he already has the disposition—passes **from having sense** or knowledge and not acting with respect to them **to acting.** For that is to say that he is made active with respect to his knowledge. But he is actualized **in a different way** than the first one is.

85–91. *Analysis.* /365/ Next, when Aristotle says **Being affected, however,** {417b2 ff.}, he clarifies whether something can be said to be affected inasmuch as it is brought from potential to actual knowledge in either of the two ways. And in this connection he does two things. First, he shows the number of ways in which something is said to be affected. Second, he clarifies this matter (beginning at **Someone who has knowledge,** etc. {417b5}).

{417b2–5} WAYS OF BEING AFFECTED

92–109. So he says, first, that just as potentiality and actuality are spoken of not **unconditionally** but in several ways, so too being affected is spoken of not in one way but in several. For being affected is in one way spoken of with respect to **a kind of corruption** that is brought about **by a contrary.** For being affected, strictly speaking, seems to imply a kind of harm to the thing affected to the extent that that thing is overcome by whatever is acting. Harm to what is affected, however, occurs inasmuch as something is given up by the affected thing. This giving up is a kind of corruption: either absolutely so (as when the thing's substantial form is given up) or in a certain respect (as when an accidental form is given up). This sort of giving up of form is brought about by a contrary agent. For a form is given up by its matter or by its subject as a result of the introduction of a contrary form, and this is the result of a contrary agent. In this first way, therefore, being affected is spoken of strictly inasmuch as **a kind of corruption** is brought about **by a contrary.**

109–128. /366/ In another way, being affected is spoken of generally and less strictly—that is, inasmuch as it implies a kind of reception. Anything that can receive another is compared to that other as potentiality to actuality, and actuality is the completion of a potentiality. From this it follows that being affected is spoken of in this way, not because any corruption occurs in what is affected, but **more** because a kind of **preservation**—i.e., completion—**of what is** potential is produced **by what is** actual. For what is potential is completed only by what is actual. The actual, however, is not the contrary of what is potential, considered as such. Rather, they are alike. For potentiality is nothing other than a certain ordered relationship *(ordo)* to actuality. But if there were no likeness between potentiality and actuality, then it would not be

necessary for the proper actuality to be produced in the proper potentiality. Therefore, being affected, when spoken of in this way, is not the product of a contrary, as being affected is when spoken of in the first way. It is, instead, produced by **what is like it,** in the way that **potentiality is related** by a likeness **to actuality.**

129–135. *Analysis.* /367/ Next, when Aristotle says **Someone who has knowledge,** etc. {417b5 ff.}, he clarifies whether someone brought from potentiality to actual knowledge is affected. He first clarifies this in connection with someone's being brought from second potentiality to pure actuality. Second, he clarifies this in connection with someone's being brought from first potentiality to a disposition (beginning at **Now someone [who comes],** etc. {417b12}).

{417b5–11} FROM SECOND POTENTIALITY TO PURE ACTUALITY

136–151. So he says, first, that **someone who has knowledge**—i.e., someone dispositionally knowing—**arrives at** actually **contemplating.** But this **is not truly** and strictly **a case of being altered** and affected. For, as was said [109–128], it is not strictly affection and alteration when something goes from potentiality to actuality, but rather when something is changed from contrary to contrary. So when someone dispositionally knowing arrives at actually contemplating, he is not changed from contrary to contrary but is completed with respect to what he already possesses. And this is why Aristotle says that **an addition is [made] to him and to his activity,** for a completeness is added to him inasmuch as he reaches actualization. **Or,** if [the one knowing] is said to be altered and affected, this will be a different **kind of alteration** and affection, not one in the strict sense. And Aristotle makes this clear through an example when he says that one **would not be correct to say that someone with** the disposition for **wisdom is altered when he** actually **displays this wisdom, just as** we do **not** say that **a builder** is altered **when he is building.**

152–161. /368/ Someone who passes from the disposition to the act, however, is not receiving that knowledge for the first time but instead is completed by and reaches what he [already] has. To be taught, on the other hand, is to receive knowledge. For this reason Aristotle concludes further that when someone is brought from **potentiality to actuality as regards** his being made to be actually **intellectively cognizing and displaying wisdom,** it is clear that such a passage from potentiality to actuality **does not rightly have the label 'teaching' but** has some other. This other label has perhaps not been introduced, but it can be.

{417b12–16} FROM FIRST POTENTIALITY TO DISPOSITIONAL KNOWLEDGE

162–179. /369/ Next, when Aristotle says **Now someone [who comes],** etc., he clarifies whether someone is altered and affected when he passes from first potentiality to actual knowledge. And he says that when someone who at one point knows only potentially is made to be **learning and gathering knowledge from** one who knows **in actuality,** through a teacher, either he should not be said to be **affected** unconditionally and altered, **or** one should say that **there are two sorts of alteration.** Of these two sorts, one occurs as the result of **a change to negative states**—i.e., to contrary states through which earlier existing dispositions are negated *(privantur).* For one of a pair of contraries is the negation of the other. The second sort of alteration occurs as the result of a change **to dispositions and nature**—i.e., as the result of the fact that some dispositions and forms that constitute the completion of a thing's nature are received without anything's being given up. One who is given knowledge, therefore, is neither altered nor affected in the first way, but is so only in the second.

Is Learning an Alteration from Contrary to Contrary?

182–185. /370/ But this seems to run contrary to what he said above. He said that "often" someone who is being given knowledge is "changed" from "the contrary disposition" [417a31–32]. So it seems that this is an alteration as the result of "a change to negative states" [417b15].

186–199. But we should say that when someone is brought from error to knowledge of the truth, there is something resembling an alteration that goes from contrary to contrary. But there is not really that kind of alteration in these cases. For there are two things that essentially and *per se* characterize alteration from contrary to contrary: namely, that it be from a contrary and that it be to a contrary. We are not making something white if there is no alteration toward white—likewise if there is no alteration from black or from some in-between [shade] that is in a way black, compared to white. But in the case of acquiring knowledge it is accidental if the person acquiring knowledge of the truth was at an earlier time in error. For someone can be brought to knowledge of the truth without this being the case. Hence that is not truly an alteration from contrary to contrary.

Does Knowledge Always Come from a Teacher?

201–205. /371/ A problem also comes up when Aristotle says that someone receiving knowledge is made actually knowing by someone who is actually knowing and is a teacher [417b12–13]. For this does not always happen. For one acquires knowledge not only through learning from a teacher but also by discovering on one's own.

206–224. In reply to this we should say that it must always be the case, when someone potentially knows, that if he comes to have knowledge actually this must result from something that is actual. But notice that sometimes a thing is brought from potentiality to actuality by an extrinsic principle, as when air is illuminated by something actually shining. At other times this is brought about by an intrinsic principle as well, as when a person is healed by both nature and a physician. In both cases the person is healed by actual health. For it is clear that the physician holds in his mind a formula for health according to which he does his healing. In the one healed by nature there must also be some part that is healthy (the heart, for instance), through whose positive influence *(virtute)* the other parts are healed. And when the physician does his healing, he does so in the same way that nature would—e.g., by heating, cooling, or transforming in some other way. Hence a physician does only what helps [the patient's] nature expel the disease; that nature would not need this help if it were strong.

224–242. /372/ The same is true in the case of acquiring knowledge. For a human being acquires knowledge both by an intrinsic principle, when he discovers something, and by an extrinsic principle, when he is taught something. In both of these cases the person is brought from potentiality to actuality by something actual. For through the light of agent intellect a person has immediate and actual cognition of first principles that are naturally cognized. And when he draws conclusions from these principles, then, as a result of his actually knowing, he comes to an actual cognition of the things that he was knowing potentially. Externally, someone teaching helps him know in the same way—namely, leading him, through a demonstration, from principles that he knows to conclusions of which he had been unaware. Of course, this help would not be necessary for human beings if our intellect were acute enough that it could draw conclusions from known principles on its own. And, of course, this acuteness is given to human beings in varying degrees.

Chapter 12

How Sense Is Brought from Potentiality to Actuality

DE ANIMA II.5.417B16–418A6

417b16–19. The first transformation of something sensory is produced by what generates it. But when it has been generated, then at that point it has sensing—in the same way that it has knowledge. We speak of sensing in actuality, however, in much the same way that [we speak of] considering.

417b19–29. They differ, however, because the things that actualize the former operation are outside: things visible and audible, and likewise too for the other sense objects. The reason is that sensing in actuality is concerned with singulars, whereas knowledge is concerned with universals. For these [universals] are in a certain way in the soul itself. That is why to cognize intellectively is in its [power] whenever it wants, whereas to sense is not. Instead, it is necessary for there to be a sense object. It is much the same in the case of sciences *(scientiis)* concerning sensible things, and for the same reason. For things that are sensible are among the things that are singular and external. But we will find time later to become more definite about these things.

417b29–418a6. For now, however, all that has been determined is that what is in potentiality is not spoken of unconditionally. Rather, it is one thing, for instance, for us to say that a boy can be a soldier and another [to say this] when he is of age. So it is for the sensory capacity. But although the differentia of those [two potentialities] has not been named, we have all the same established both that they differ and how they differ. Still, it is necessary to use 'being affected' and also 'being altered' as appropriate names. As has already been said, the sensory capacity is potentially such as the sense object already actually is. Therefore, it is not like it while it is being affected. But having been affected, it has been made like it, and is such as it.

1–4. *Analysis.* /373/ Now that the Philosopher has distinguished potentiality and actuality and shown, with respect to intellect, how something passes from potentiality to actuality, he here takes what he said about intellect and adapts it to the senses.

5–10. In this connection he does three things. First, he shows how, with respect to the senses, something is brought from potentiality to actuality. Second, he points to a difference between sense and intellect (beginning at

They differ, however, etc. {417b19}). Third, he brings together, in summary, the things he has said about the senses (beginning at **For now, however,** etc. {417b29}).

{417b16–19} POTENTIALITY TO ACTUALITY IN THE SENSES

11–26. In connection with the first, we should be aware that just as in the case of knowledge there are two sorts of potentiality and two sorts of actuality, so too with respect to sensing. For that which is suited to sense but does not yet do so is in potentiality with respect to sensing. And that which already has sensation and is not yet sensing is potentially sensing, as was said in connection with knowledge. But just as something is transformed from first potentiality to first actuality when it acquires knowledge through teaching, so too something is transformed from first potentiality for sensing to actuality (with the result that it has sensation) through generation. For sensation is naturally present in animals. So just as something acquires its proper nature and species through generation, so too it acquires sensation. It is different for knowledge, however, which is not present in a human being naturally but acquired through discovery and learning.

27–37. /374/ This is why Aristotle says that **The first transformation of something sensory is produced by what generates it.** He is referring to the first transformation that is from pure potentiality to first actuality. This transformation **is produced by what generates it:** for it is through a power in the semen that the sensory soul, along with all its capacities, is brought from potentiality to actuality. **But at that point when** the animal **has been generated,** it then **has** sensation—**in the same way that** someone **has knowledge** when he has already learned. But when the animal comes to sense **in actuality,** it is then in a position comparable to someone who is now actually **considering.**

{417b19–29} A DIFFERENCE BETWEEN SENSE AND INTELLECT

38–49. /375/ Next, when Aristotle says **They differ, however,** etc., he wants to show the difference between actually sensing and considering, in light of his claim that they are alike. He begins by attributing the reason for their difference to a difference in their objects—viz., the sensible and intelligible things that are actually sensed and considered. For things that can be sensed,

which are **the things that actualize** the sensory **operation**—namely, things that are **visible and audible** and other things like these—**are outside** the soul. **The reason** for this **is** that **sensing in actuality is concerned with singulars** that are outside the soul, whereas **knowledge is concerned with universals,** which **are in a certain way in the soul.**

49–63. It is clear from this that someone who already has knowledge does not need to search outside for the objects of his knowledge. Rather, he has them within himself. **That is why** he can consider them **whenever** he **wants,** unless something accidentally prevents it. But someone is **not** able **to sense** whenever he wants, because he does not have the objects of sense within himself: they must be present to him externally. /376/ And just as for the senses' operation, so too **in the case of sciences concerning sensible things. For things that are sensible are** also numbered **among the things that are singular and** outside the soul. Hence a human being cannot, in virtue of his knowledge, consider all of the sensible things he wants to consider, but only those that he has perceived through the senses. **But** there will be **time** later on to present a definite account **about these things**—viz., in Book III, where Aristotle will deal with intellect [7.429a10–11.431a4] and the relation of intellect to sense [12.431a4–b19].

65–68. /377/ In connection with the things said here we should consider (i) why sense is concerned with singular things whereas knowledge is concerned with universals, and (ii) in what way universals exist in the soul.

Why Is Sense Concerned with Singular Things, Knowledge with Universals?

71–79. It is important to know, then, in regard to the first of these questions, that a sense is a power in a corporeal organ. Intellect, on the other hand, is an immaterial power that is not the act of any corporeal organ. But each and every thing is received in another according to the mode of the recipient. And every cognition is produced by the cognized thing's somehow being in the one cognizing—namely, in virtue of a likeness. For what is actually cognizing is the very thing actually cognized.

79–94. The senses, therefore, must corporeally receive a likeness of the thing being sensed. Intellect, in contrast, incorporeally and immaterially receives a likeness of what it cognizes. But in the case of corporeal and material things, the individuation of a common nature is the product of corporeal matter contained under determinate dimensions. A universal, on the other hand, exists through abstraction from this kind of matter and from the individuating material conditions. Therefore it is clear that a thing's likeness, received in the senses, represents that thing as it is singular. A likeness received in intellect, on the other hand, represents that thing as the defining character *(ratio-*

nem) of a universal nature. That is why the senses have cognition of singular things, whereas intellect has cognition of universals. And it is these latter that the sciences *(scientiae)* are concerned with.

In What Way Do Universals Exist in the Soul?

96–116. /378/ In connection with the second question, we should be aware that 'universal' can be taken in two ways. In one way, the common nature itself can be called universal inasmuch as it falls under the notion *(intentioni)* of universality. In the second way, [a common nature can be taken] in its own right. Similarly, 'white' can be taken in two ways—either for that to which being white applies or for white itself inasmuch as it is subsumed under whiteness. But that nature to which the notion of universality belongs—e.g., human nature—has two kinds of existence. One kind is of course material, in virtue of its existing in natural matter. The other is immaterial, in virtue of its existing in intellect. Inasmuch, then, as it has existence in natural matter, no notion of universality can belong to it, for it is individuated through matter. Thus the notion of universality belongs to it inasmuch as it is abstracted from individual matter. But it is not possible for it to be abstracted in reality *(realiter)* from individual matter, as the Platonists claimed. For no human being exists except in this flesh and these bones (as the Philosopher proves in *Metaphysics* VII [e.g., 1034a5–8]).

116–139. So the result is that human nature does not exist outside its individuating principles—except only in intellect. /379/ But yet intellect is not deceived *(falsus)* when it apprehends a common nature outside the individuating principles without which it could not exist in the natural world. For intellect does not apprehend this: that a common nature exists without its individuating principles. Rather, it apprehends the common nature without apprehending the individuating principles, and there is no deception there, although there is in the first case. Similarly, if I were to separate whiteness from a white man in such a way that I would intellectively cognize that he is not white, then this apprehension would be false *(falsa)*. But if I were to separate whiteness from the man in such a way as to apprehend the man while apprehending nothing with respect to his whiteness, then that would not be a false apprehension. For the truth of an apprehension does not require that when one apprehends some thing one apprehends all the things in it. So in this way, without falsity, intellect abstracts genus from species insofar as it cognizes the nature of the genus without any cognition of the differentiae.[1]

1. *Differentiae* is a Latin term that I sometimes translate more loosely as "distinguishing characteristics." In stricter contexts, as here, the differentia is what one adds to the genus to obtain the definition of the species: e.g., the differentia *rational,* when added to the genus *animal,* yields a definition of *human being.*

Likewise, intellect abstracts species from individuals insofar as it cognizes the nature of the species without cognizing the individuating principles.

139–151. /380/ So in this way it is clear that the notion of universality can be attributed to a common nature only as regards its existence in intellect. For [such a nature] is one from many only inasmuch as it is intellectively cognized without the principles by which one is divided into many. The result, then, is that universals, inasmuch as they are universal, exist only in the soul. But the natures to which the notion of universality applies exist in the world *(in rebus)*. And for this reason the common names signifying those natures are predicated of individuals. But this is not the case for names signifying [logical] notions. For Socrates is a human being, but he is not a species, even though *human being* is a species.[2]

{417b29–418a6} SUMMARY

152–177. /381/ Next, when Aristotle says **For now, however,** etc., he brings together again the things he has said about the senses. And he says that **for now all that has been determined is** that **what** is potential **is not spoken of unconditionally** but in several ways. For in one way we say **that a boy can be a soldier** in virtue of a remote potentiality. Once he has reached the right **age,** we say in another way that he can be a soldier; this is in virtue of a proximate potentiality. Something similar is true for **the sensory capacity.** For, as has already been said [417b16–19], there are two ways in which someone is potentially sensing. And although no appropriate names have been established for indicating **the differentia** of these potentialities, nevertheless **we have established** that the potentialities differ from each other **and how**

2. Aquinas has been discussing the notion *(intentio)* of universality. Here he speaks of notions in general, by which he means logical concepts such as species, genus, and so on. The point he is making about language is that the words 'human being' signify a common nature but nevertheless can be truly predicated of individuals in the world, as in the sentence 'Socrates is a human being.' In contrast, the word 'species,' which signifies a logical notion, cannot be truly predicated of individuals in the world. It is not true, for example, that Socrates is a species.

To see why these issues might seem puzzling, consider the further sentence *'Human being* is a species.' It looks as if this third sentence, combined with the first, should yield a sound argument, with the second sentence as its conclusion. But the argument is not sound. Aquinas has just explained why it is not.

they differ. /382/ And although something is not properly said to be altered and affected insofar as it passes from second potentiality to actuality—e.g., as something having sense is made to be actually sensing—nevertheless **it is necessary to use 'being affected' and also 'being altered'** as if these were **appropriate** and suitable **names.** For **the sensory capacity is potentially such as the sense object actually is.** And for this reason it follows that a sense is **not like** its sense object in virtue of its **being affected** at the outset. Rather, in virtue of its already **having been affected, it has** already **been made like** the sense object **and is such as it** is. Because the ancients did not know this distinction, they claimed that the senses are composed of their sense objects.[3]

3. Compare II.10.118–131.

Chapter 13

Sense Objects
Proper Sense Objects Distinguished

DE ANIMA II.6.418A7–25

418a7–11. Something ought to be said first, however, about the sense objects for each of the senses. But we use the term 'sense object' in three ways. In two of the three ways we speak of sensing *per se,* in one way sensing *per accidens.* Of the first two, however, one kind is proper to each sense, whereas the other is common to them all.

418a11–17. Now I call that [kind] proper that cannot be sensed by a different sense and with respect to which it is not possible to err—as sight of color, hearing of sound, and taste of moistness. Touch, however, has a number of different [objects]. But each [sense] makes judgments about these [proper objects] and is not deceived about whether there is color or sound. But [these senses are deceived about] what that colored thing is, or where, or what is making a sound. Things of this sort, then, are said to be the proper [objects] of each [sense].

418a17–20. Movement, rest, number, shape, and size, however, are the common [objects]. For [objects] of this sort are proper to no one [sense] but common to all. For some movement can be sensed by touch and sight. These, then, are the things that can be sensed *per se.*

418a20–25. On the other hand, something is said to be sensible *per accidens,* for example, if white belongs to Diares. For that is sensed *per accidens* because the thing sensed is accidental to white. Thus [the sense] is not at all affected by the sense object in virtue of being such. But of the things that can be sensed in their own right, it is the proper [objects] that are properly sensible. And the substance of each sense is naturally suited to them.

1–7. *Analysis.* /383/ Now that the Philosopher has shown how sense is related to sense objects *(sensibilia),* he begins to present his account of sense object and sense. This account is divided into two parts. In the first part he presents his account of sense objects. In the second part he presents his account of sense (beginning at **Now universally,** etc. {II.24.424a17}).

7–11. The first account is divided in two. First, he distinguishes proper sense objects from the other sorts of sense objects. Second, he presents his account of the proper sense objects for each of the senses (beginning at **That concerning which,** etc. {II.14.418a26}).

11–14. In connection with the first of these he does two things. First, he introduces a division among things that can be sensed. Second, he characterizes the members of this division (beginning at **Now I call that [kind] proper,** etc. {418a11}).

{418a7–11} A DIVISION AMONG SENSE OBJECTS

15–23. Aristotle says first, then, that before any account is given of what the senses are, he must **first** say something **about the sense objects for each of the senses.** For objects come before powers. But we talk about sense objects in three ways: in one way ***per accidens*** and in two ways ***per se.*** In one of these latter ways we call those things sense objects that are **proper** to individual senses; in the other way we call things sense objects that are sensed in common by **all** the senses.

{418a11–17} PROPER SENSE OBJECTS

24–33. /384/ Next, when Aristotle says **Now I call that [kind] proper,** etc., he characterizes the members of the division. And first he gives a characterization of the things that are proper sense objects: he says that a **proper** sense object is one that is sensed by one sense in such a way that it cannot **be sensed by** another **sense and with respect to which** a sense cannot **err. Sight** is in this way properly cognitive **of color, hearing of sound, and taste of moistness**—i.e., flavor. But **touch has a number of different [objects]** that are appropriate to it. For it has cognition of hot and cold, wet and dry, heavy and light, and many other such things.

34–43. Each of these senses, however, **makes judgments about** its proper sense objects **and is not deceived** about them. Sight is in this way not deceived about there being a **color** of a certain sort, nor hearing about **sound.** /385/ **But** with respect to *per accidens* or common sense objects, the senses are deceived. Sight is in this way deceived if a human being wishes to make a judgment through sight about **what that colored thing** is **or where** it is. Someone is likewise deceived who wishes to make a judgment through hearing about **what** it is that makes the sound.[1] These, **then,** are **the proper** sense objects **of each** sense.

1. The point here may be that the senses are *liable* to deception when they make judgments about *per accidens* or common sense objects. Or Aquinas may be saying something rather different: that the senses *will* be deceived if they attempt, without the aid of the higher sensory and intellectual powers, to make judgments that go beyond color and sound—judgments, for instance, about what and where the object is.

{418a17–20} COMMON SENSE OBJECTS

44–54. /386/ Second, beginning at **Movement, rest, number, shape,** etc., Aristotle characterizes the second member of the division. He says that these five: **movement, rest, number, shape, and size are the common** sense objects. **For** these **are proper to no one** sense **but** are **common to all.** This should not be understood as if all of these were common to all. Rather, some of these (number, movement, and rest) are common to all of the senses, whereas **touch and sight** perceive all five.[2] In this way, **then,** it is evident which **things can be sensed *per se.***

{418a20–25} ACCIDENTAL SENSE OBJECTS

55–63. /387/ Third, beginning at **On the other hand, something,** etc., Aristotle characterizes the third member of the division. He says that **something is said to be sensible *per accidens*, for example if** we were to say that **Diares** or Socrates is sensible *per accidens* because it is accidental to him to be **white. For that is sensed *per accidens*** that **is accidental** to the thing sensed *per se.* It is, however, **accidental to white** (which is sensible *per se*) that it belongs to Diares. Hence Diares is sensible *per accidens.* **Thus [the sense] is not at all affected** by Diares as such.

64–70. But although both common and proper sense objects are sensible *per se,* still **proper** sense objects **are properly sensible** *per se.* For **the substance of each sense** and its definition lies in its being **naturally suited** to be affected by such a sense object. For the defining character *(ratio)* of any power consists in its relationship **to** its proper object.

The Distinction Between Common and Per Accidens *Sense Objects*

72–81. /388/ There is, however, a problem here concerning the distinction between common sense objects and things that are sense objects *per accidens.* For just as *per accidens* sense objects are apprehended only insofar as proper sense objects are apprehended, so too for common sense objects. For the only time sight apprehends size or shape is insofar as it apprehends something colored. Therefore, it seems that common sense objects are also *per accidens* sense objects.

82–90. /389/ So some say that there are two reasons that common sense ob-

2. Compare *De sensu* 442b7.

jects of this sort are not *per accidens* sense objects. First is because common sense objects of this sort are proper to the common sense—in the way that the proper sense objects are proper to individual senses. Second is because proper sense objects cannot exist without common sense objects, whereas they can exist without *per accidens* sense objects.

90–98. /390/ Each of these replies, however, is inadequate. The first is inadequate because it is false that those common sense objects are the proper objects of the common sense.[3] For, as will be clear below [III.1.425a16, III.3.427a9–16], the common sense is a certain power at which all sensory alterations *(immutationes)* terminate.[4] That is why it is impossible for the common sense to have a proper object that is not the object of a proper sense.

98–105. But with respect to these alterations of the proper senses from their objects, the common sense does have some proper operations that the proper senses cannot have: it perceives the sensory alterations themselves and distinguishes between sense objects of different senses. For it is through the common sense that we perceive that we see and distinguish between white and sweet.

106–118. /391/ Moreover, even if common sense objects were the proper objects of the common sense, that would not rule out their being sensible *per accidens* with respect to the proper senses. For the question here concerns things that can be sensed as regards their relationship to the proper senses; the power of the common sense has not yet been explained. But that which is the proper object of any internal power can be sensible *per accidens,* as will be said below [182–222]. Nor is it surprising that what is sensible *per se* to one of the external senses is sensible *per accidens* with respect to another sense. Something sweet, for instance, is visible *per accidens.*

119–124. /392/ The second argument is also not adequate. For it is irrelevant to being sensible *per accidens* whether the subject of the sensible quality is or is not its subject *per se.* For no one would say that fire, which is the proper subject of heat, is sensible *per se* to touch.

3. Albert the Great had argued that the common sense objects are in fact objects of the common sense. See *Summa de homine* (*Opera omnia,* vol. 30), edited by A. Borgnet (Paris: Vivès, 1896), vol. 35, q. 35, a. 4 (pp. 315–318).

4. Here and in the following chapters, I use 'alteration' to translate *immutatio.* Aquinas relies heavily on this term to explain the way in which sensory things make an impression on the senses. 'Alteration' is the most comfortable and natural English word available, but readers should be aware that this is not standing for the Latin *alteratio,* which refers to a specific kind of Aristotelian change: change with respect to quality (see *Physics* V.226a25). Because the sensory *immutatio* in question is in fact a kind of alteration (a reception of a sensible quality), the translation should not be misleading.

125–134. /393/ And so one should answer in a different way. Sensing consists in a kind of being affected and being altered *(alterari),* as was said earlier [II.10.416b33–34]. Therefore, whatever makes a difference to a sense's being affected or altered has *per se* a relationship to the sense and is said to be sensible *per se.* But that which makes no difference in how a sense is altered *(immutationem)* is said to be sensible *per accidens.* That is why the Philosopher says in the text [418a23–24] that "by the *(per accidens)* sense object," sense "is not affected in virtue of being such."

134–144. /394/ But there are two ways in which something can make a difference in how a sense is altered. It can do so in one way in virtue of the kind *(speciem)* of agent it is. It is in this way that *per se* sense objects make a difference in how a sense is altered—inasmuch as this one is a color, that one a sound, this one white, that one black. For, among things active on the senses, the *proper* objects of sense are those kinds for which a sensory power is naturally suited. As a result, the senses are distinguished in terms of the differences among these sense objects.

144–159. Other things make a difference in how a sense is altered not in virtue of the agent's kind but in virtue of the way it acts. For sensible qualities move a sense corporeally and with respect to position. Thus they move a sense in different ways insofar as they are in a larger or smaller body, and insofar as they are in a different position—viz., closer or farther, the same or different. And this is how common sense objects make a difference in how the senses are altered. For it is clear that either size or position is made to differ with respect to all five of these [common sense objects]. And because they do not have a relationship to a sense as do the kinds *(species)* of the active [objects], it follows that we do not draw distinctions among the sensory powers in accord with them.[5] Instead, [these objects] remain common to more than one sense.

Why Something Is Said to Be Sensible Per Accidens

161–163. /395/ So now that we have seen how both common and proper sense objects are said to be sensible *per se,* it remains to be seen why something is said to be sensible *per accidens.*

164–174. So it is important to know that for something to be sensible *per accidens,* the first thing that is required is that it be an accident of something sensible *per se.* For example, being a human being applies accidentally *(accidit)* to what is white, as does being sweet. The second thing required is that it be apprehended by the thing that is sensing. For if there were some accident

5. Compare 68–70: "The defining character of any power consists in its relationship to its proper object."

of the sense object that was hidden from the thing sensing, that would not be said to be sensed *per accidens.* It must then be cognized *per se* by some other cognitive power belonging to the thing sensing; this will, of course, be either another sense, intellect, or the cogitative/estimative power.

175–181. I speak of "another sense" as if we were to say that sweet is visible *per accidens* insofar as sweet is accidental to white, which is apprehended by sight, whereas sweet is apprehended *per se* by taste. /396/ But, to speak strictly, this is not something altogether sensible *per accidens,* but rather something visible *per accidens* and sensible *per se.*

182–190. What is not cognized by a proper sense is, if it is something universal, apprehended by intellect. Still, not everything that can be apprehended by intellect in something that has been sensed can be called sensible *per accidens,* but [only] that which is apprehended by intellect right when the thing that has been sensed is encountered. For example, right when I see someone speaking or moving, apprehending through intellect his being alive, I can say on this basis that I see that he is living.

191–205. If, however, [the object] is apprehended as an individual—e.g., when I see something colored I perceive this human being or this animal—then this sort of apprehension in a human being is produced through the cogitative power. This is also called particular reason, because it joins individual intentions in the way that universal reason joins universal concepts *(rationum).*[6] /397/ But all the same, this power is in the soul's sensory part. For the sensory power, at its highest level, participates somewhat in the intellective power in a human being, in whom sense is connected to intellect. In an irrational animal, on the other hand, the natural estimative power brings about the apprehension of an individual intention. It is in virtue of this that a sheep, through hearing or sight, recognizes its offspring or anything of that sort.

205–222. /398/ The cogitative and estimative powers stand differently in this regard.[7] For the cogitative power apprehends an individual as existing under a common nature. It can do this insofar as it is united to the intellective power in the same subject. Thus it cognizes this human being as it is this human being, and this piece of wood as it is this piece of wood. But the estimative power apprehends an individual, not in terms of its being under a common nature, but only in terms of its being the end point or starting point of some action or affection. It is in this way that a sheep recognizes the lamb not inasmuch as it is this lamb but inasmuch as it can nurse it. It recognizes this grass inasmuch as it is its food. Thus its natural estimative power in no way apprehends any individual to which its acting or being affected does not extend. For the natural estimative power is given to animals so that through it they are directed toward the proper actions or affections that should be pursued or avoided.

6. This use of the term 'intention' is drawn from Avicenna's *Liber de anima* I.5 (85.88–86.6), where he distinguishes two kinds of sensory representations: forms and intentions. Whereas forms are apprehended by the five external senses and passed on to the inner senses, intentions are perceived only by inner senses, such as the cogitative power.

7. As the above remarks suggest, the cogitative power is found only in human beings, whereas (some) nonrational animals have the estimative power. These so-called inner senses have similar functions, although Aquinas is now going to point to an important difference in their operations.

Chapter 14

The Proper Object of Sight

DE ANIMA II.7.418A26–B26

418a26–28. That concerning which there is sight, this is what is visible. Color is of course visible, and [so is] that which is expressible by an account, even though as it exists it has no name. This will become quite clear, however, as we go forward.

418a29–b3. For color is visible.° This is so, however, in respect of its being visible in its own right.° [It is visible] in its own right not by its account but because it has in itself the cause of its being visible. For every color is capable of moving what is actually diaphanous, and this is its nature. So it is not visible without light, of course, but every color of anything is visible in light. As a result, something ought to be said first about light.

418b4–9. There is, then, something diaphanous. I call that diaphanous, however, which is visible yet not visible in virtue of itself, speaking unconditionally, but rather because of an outside color. Things of this sort, however, are air, water, and many solids. For they are not diaphanous in virtue of being water or in virtue of being air, but because the same nature is in each of them and in the everlasting higher body.

418b9–13. Light, however, is the actuality of this diaphanous medium considered as diaphanous. But wherever this is, darkness is too, in potentiality. Light, however, is as a color of the diaphanous medium inasmuch as [the medium is made] actually diaphanous by fire or by a thing of that sort—for instance, some higher body. For that one same thing inheres in it too.

418b13–16. So we have said what a diaphanous medium is and what light is. For it is neither fire, nor a body at all, nor the outpouring *(defluxus)* of any body. For that too would be a body of some kind, and so [light would be] the presence of fire or of something of that sort in the diaphanous medium.°

418b17. For neither is it possible that two bodies coexist *(simul esse)* in the same [place].

418b18–20. It seems, however, that light is the contrary of darkness. But darkness is the privation of this sort of possession from a diaphanous medium. For this reason it is plain, too, that its presence is light.

418b20–26. And Empedocles was not right, nor was anyone else who said in this way that light is carried and spread through the medium of earth and what surrounds it, this being hidden from us. [This is wrong,] because

it goes beyond the truth [perceived] by reason, first, and also beyond the things we see. For over a short distance it might be hidden from us. But to be hidden from the east to the west—that, to be quite sure, is highly questionable.

1–11. *Analysis.* /399/ Now that the Philosopher has drawn a distinction between proper, common, and *per accidens* sense objects, he here presents his account of the proper sense objects with respect to each sense. And first he presents his account of the proper object of sight; second, of the proper object of hearing (beginning at **Now then first let us present,** etc. {II.16.419b4}); third, of the proper object of smell (beginning at **With respect to smell,** etc. {II.19.421a7}); fourth, of the proper object of taste (beginning at **Now what can be tasted,** etc. {II.21.422a8}; and fifth, of the proper object of touch (beginning at **Concerning touch and what can be touched,** etc. {II.22.422b17}).

12–14. In connection with the first he does two things. First, he presents his account of what is visible. Second, he shows how what is visible is seen (beginning at **Now, however, this much is clear,** etc. {II.15.419a7}).

15–18. In connection with the first he does two things. First, he makes it clear what things are visible, distinguishing the visible into two kinds. Second, he presents his account of each kind (beginning at **For color is visible,** etc. {418a29}).

{418A26–28} WHAT THINGS ARE VISIBLE

19–31. So first, because Aristotle had said that the proper sense objects are those that each sense properly perceives [II.13.418a11–17, a24], he says that that sense object of **which sight is** properly perceptive, **this is what is visible.** But 'being visible' covers two areas. For **color is visible, and** so is something else **that** can be designated **by an account** but that does not have its own name assigned to it. This way of being visible characterizes things that are seen at night—such as fireflies, oak fungus, and things like that.[1] We **will become clear** about these as this treatise progresses [cf. II.15.419a1–7], after we have made inroads into cognizing what is visible through cognizing color, which is more clearly visible.

32–35. *Analysis.* /400/ Next, when Aristotle says **For color is visible,** {418a29 ff.}, he presents his account of each of the two things that are visible.

1. Unlike Latin, English does have a word for this way of being visible—such objects are called phosphorescent.

First comes his account of color; second, his account of what he had said to "have no name" [418a27] (beginning at **Not all things are visible in light,** etc. {II.15.419a1}).

35–39. In connection with the first he does two things. First, he shows how color is such as to be visible. Second, he presents his account of the things that are required for color to be seen (beginning at **There is, then, something diaphanous,** etc. {418b4}).

{418a29–b3} HOW COLOR IS VISIBLE

40–59. Aristotle says first, then, that since **color** is something that **is visible,** being visible applies to it **in its own right** *(secundum se).* For color is **visible** just in respect of its being color. /401/ But something is said to be *per se* in two ways. In one way a proposition is said to be *per se* when its predicate is present in the subject's definition. So in the case of the proposition *A human being is an animal, animal* is present in the definition of *human being.* And because what is in the definition of something is in a way its cause, in cases that are said to be *per se* in this way the predicate is the cause of the subject. In another way a proposition is called *per se* whose subject is, conversely, found in the predicate's definition. An example would be if it were said that *a nose is snub* or *a number is even.* For the only thing that is snub is a curved nose, and the only thing that is even is a number that has a half. In these cases it is the subject that is the cause of the predicate. /402/ We should understand, then, that color is visible *per se* in the second of these ways and not the first. For visibility is a kind of state *(passio)* of color—just as snub is a state of a nose.[2]

59–74. This is why he says that color is visible **in its own right not by its account** *(non ratione)*—i.e., not so that visible is contained in its definition, **but** since **in itself it has the cause** of its being **visible,** just as a subject in itself has the cause of a state proper to it. /403/ He proves this through the fact that **every color is capable of moving what is actually diaphanous.** (A diaphanous medium is the same as a transparent one—e.g., air or water.) It is of its **nature** that color has **this,** that it can actually move a diaphanous medium. But that which actually moves a diaphanous medium is visible. Hence it follows that color as regards its nature is visible. And because a diaphanous medium is actualized only through light, it follows that color is **not visible**

2. This distinction between two ways of speaking *per se* is commonly employed in scholastic philosophy. The distinction can be found in both the *Posterior Analytics* (I.73a34–b5) and the *Metaphysics* (V.1022a24–36). For further discussion, see Aquinas's commentaries on both passages (I.10, V.19).

without light. And hence before it is indicated how color is seen, **something ought to be said about light.**

THE THINGS REQUIRED FOR COLOR TO BE SEEN

75–82. *Analysis.* /404/ Next, when Aristotle says **There is, then, something diaphanous** {418b4 ff.}, he presents his account of the things without which color cannot be seen—namely, a diaphanous medium and light. This account is divided into three parts. First, he shows what a diaphanous medium is. Second, he presents his account of light, which is the actuality of that medium (beginning at **Light, however, is the actuality,** etc. {418b9}). Third, he shows how a diaphanous medium is able to take on color (beginning at **Now something is capable,** etc. {II.15.418b26}).

{418b4–9} WHAT A DIAPHANOUS MEDIUM IS

83–91. Aristotle says first, then, that since color is by its nature capable of moving a diaphanous medium, it is necessary that there be **something diaphanous.** The **diaphanous,** however, is **that which** does **not** have its own color so as to be able to be seen **in virtue of** it. The diaphanous is, **rather,** able to take on **outside color,** in virtue of which it **is** in a way **visible.** Diaphanous media **of this sort, however,** are **things** like **air, water, and many** solid bodies (e.g., certain stones and glass).

91–108. But although other accidents that are attached to elements and compounds are attached to them in virtue of the nature of the elements (such as hot and cold, heavy and light, and others of this kind), being diaphanous is **not** attached to the things just mentioned because of the nature of air or water, **in virtue of being** such. Rather, [being diaphanous] is the result of a certain **nature** that is common not just to air and water, which are corruptible bodies, but also to a heavenly **body,** which is **everlasting** and incorruptible. For it is clear that some heavenly bodies are diaphanous: we could not see the fixed stars, which are in the eighth sphere, unless the lower spheres of the planets were transparent or diaphanous.[3] And so it is clear that being diaphanous is

3. In the *Summa theologiae* (first part), q. 68, a. 4, Aquinas distinguishes three heavenly bodies (i.e., regions of the heavens): the Empyrean, the crystalline or aqueous, and the sidereal. This last heaven, which is the one closest to earth, consists of eight spheres: those of the seven planets and the sphere of the fixed stars. See Edward Grant, "Cosmology," in *Science in the Middle Ages,* edited by D. C. Lindberg (Chicago: University of Chicago Press, 1978).

not a distinguishing characteristic *(proprietas)* that follows from the nature of air or water. Instead, it follows from some more common nature, from whose distinguishing characteristic we have to assign the cause of its being diaphanous. We will see this later [325–340].

109–112. *Analysis.* /405/ Next, when Aristotle says **Light, however, is the actuality,** etc. {418b9 ff.}, he shows what light is. First, he makes the truth clear. Second, he rules out a mistake (beginning at **So we have said what,** etc. {418b13}).

{418b9–13} WHAT LIGHT IS

113–131. He says first, then, that **light is the actuality of** a **diaphanous medium considered as diaphanous.** It is clear that neither air nor water nor anything of this sort is actually transparent unless it is illuminated. But a diaphanous medium is in its own right **in potentiality** with respect both to light and to **darkness,** the privation of light—just as prime matter exists as a potentiality with respect to form and the privation [of form]. Light, however, is related to a diaphanous medium in the way in which color is related to a body with determinate surfaces: each is the actuality and form of what is able to take it on. For this reason Aristotle says that **light** serves as a kind of **color of the diaphanous medium inasmuch as** the diaphanous medium is made **actually diaphanous by** some illuminating body, whether that be **fire or** something else **of that sort,** such as **some** heavenly **body.** For actually illuminating and being capable of illuminating are common to fire and to a heavenly body, just as being diaphanous is common to air, water, and a heavenly body.

A MISTAKE RULED OUT

132–138. *Analysis.* /406/ Next, when Aristotle says **So we have said what,** etc. {418b13 ff.}, he rules out a false view about light. And in this connection he does two things. First, he shows that light is not a body. Second, he disproves one solution to a particular argument by which one can prove that light is not a body (beginning at **And Empedocles was not right,** etc. {418b20}).

{418b13–16} LIGHT IS NOT A BODY

138–152. In connection with the first Aristotle does three things. First, he introduces his purpose. He says that he has said **what a diaphanous medium is and what light is.** Thus it is clear from this that light **neither is fire** (as some said who postulated three species of fire: coal, flame, and light),[4] **nor** is it **at all a body, nor** something pouring out of some **body.** (In this last way Democritus claimed that light consists of particles of some kind—i.e., some sort of atoms—pouring out of luminous bodies.) **For** if these were outpourings of some kind from a body, then it would follow that they **would be a body of some kind, and so** light would be nothing other than **the presence of fire or of** some body **of that sort** in a diaphanous medium. Therefore there is no difference between saying that light is a body and that it is "the outpouring of a body."

{418b17} THE PROOF OF HIS PROPOSAL

153–158. /407/ Second, beginning at **For neither is it possible,** etc., Aristotle proves what he had proposed, by the following argument. **It is** impossible **that two bodies coexist** [in the same place]. Therefore, if light is a body, it is impossible for light to coexist with a diaphanous body. But this is false. Therefore light is not a body.

{418b18–20} LIGHT COEXISTS WITH A DIAPHANOUS MEDIUM

159–169. /408/ Third, beginning at **It seems, however, that light,** etc., Aristotle proves that light coexists with a diaphanous medium. For contraries have the same subject. **Light** and **darkness,** however, are contraries—in the way in which privation and possession *(habitus)* is a kind of contrariety, as *Metaphysics* X says [1055a33]. It is clear, however, that **darkness is** a sort of **privation of this sort of possession**—that is, of light—**from a diaphanous medium.** And thus the subject of darkness is a diaphanous medium. And thus **too the presence** of the aforesaid possession—that is, the presence of a light source *(lux)*—**is light.** Therefore it coexists with the diaphanous medium [in the same place].

4. Compare Aristotle, *Topics* V.134b28–135a8.

{418B20–26} A REPLY REFUTED

170–183. /409/ Next, when Aristotle says **And Empedocles was not right,** etc., he refutes one reply to a certain argument that can be made against those who claim that light is a body. For one can argue against them in the following way: if light is a body, illumination must be the local motion of light coming into the diaphanous medium. But no local motion of any sort of body can be immediate or instantaneous. Therefore the illumination would occur not immediately but successively. /410/ We see the opposite of this. For at the same instant at which a luminous body appears, the whole diaphanous medium is illuminated all at once—not one part of it after another.

183–198. Empedocles, however, **was not right, nor was** anybody **who said that light is carried** by local motion, like a body, **and spread** successively in the space that is **the medium** between **earth and what surrounds it**—that is, the heavens. This successiveness, they said, is **hidden from us;** it seems to us that the whole is illuminated at once, immediately. /411/ This claim is wrong, **because it** is contrary **first** to **the truth that** can be perceived **by reason.** For all that is required for the illumination of a diaphanous medium is the direct contraposition, without an intervening obstacle, of an illuminating body and something that can be illuminated. /412/ This claim is also contrary to appearances. **For** it could be suggested that the successiveness of local motion **over a short distance** is **hidden from us.** But that the successiveness in the motion of light **from the east to the west** of our horizon is **hidden** from us, this is **highly questionable,** being incredible or entirely impossible.

201–203. /413/ Since we are dealing here with (i) the nature of light, (ii) the nature of a diaphanous medium, and (iii) the necessity of light for seeing, we ought to look into these three things.

i. The Nature of Light: Four False Views

205–213. With respect to the nature of light, different men have formed different views.[5] As is said in the text [418b14–15], some have been of the view that light is a body. They were moved to say this by certain expressions that we use in speaking about light. For we have become accustomed to saying that a ray passes through air, or that it is deflected *(reverberatur),* or that rays intersect one another. All of these seem to be features of bodies.

213–225. /414/ This view cannot stand, of course, for the reasons that Aristotle brings out in the text. We might easily bring out many others as well. For it would not be easy to account for how a body of this sort may be immediately multiplied or generated or corrupted throughout the whole hemisphere, or how the mere opposition of an opaque body may be the cause of the corruption of this body in some part of the diaphanous medium. Talk about the motion of light, however, or about its deflection is metaphorical. In this way we can say as well that heat advances when it newly heats something or that it is deflected when it meets an obstacle.

5. The following discussion of the nature of light (207–323) is substantially dependent on Albert the Great's treatment in his *De anima,* 111.

226–240. /415/ Some others have said that light is a kind of spiritual nature, taking as their argument the fact that we use the name 'light' in connection with intellectual things.[6] For we say that there is a certain intelligible light in intellectual substances. This [view], however, is also impossible. /416/ For it is impossible for some spiritual and intelligible nature to come under the apprehension of a sense that, since it is a corporeal power, can have cognition only of corporeal things. But if someone were to say that spiritual light is different from the light that sense perceives, we will not want to argue with him—just as long as it is granted that the light sight perceives is not a spiritual nature. For there is nothing to prevent one name from being assigned to several things, however much they differ.

Sight Is the Most Spiritual Sense

241–245. /417/ The fact that in intellectual matters we use 'light' and [terms] pertaining to sight is a result of the sense of sight's lofty status. It, among all the senses, is more spiritual and refined *(subtilior).* This is clear for two reasons.

246–261. First, because of its object. For things come under sight in virtue of characteristics that lower bodies have in common with heavenly ones. Touch, however, is perceptive of characteristics that are distinctive of the elements—hot, cold, and the like. Also, taste and smell are perceptive of characteristics that are suited to mixed bodies in respect of mixing hot and cold, wet and dry, in different ratios. Sound, finally, is caused by local motion. This too is common to heavenly and lower bodies. But the species of motion that causes sound is not, in Aristotle's view, suited to heavenly bodies. So it is apparent from the very nature of sight's object that it is the highest of the senses; hearing is closer to it, and the other senses are more distant.

262–273. /418/ Second, it is apparent from its manner of alteration *(immutationis)* that the sense of sight is more spiritual. For in no other sense is there a spiritual alteration without a natural one. I speak of a "natural alteration" inasmuch as a quality is received in the thing affected in keeping with the being

6. The targets here seem to be Augustine (*De genesi ad litteram,* bk. IV, chap. 28) and Bonaventure (*Commentary on the Sentences,* bk. II, dist. 13, a. 1, q. 1). See Aquinas's *Commentary on the Sentences,* bk. II, dist. 13, q. 1, a. 2.

of nature—for example, when something is cooled, heated, or moved locally. A "spiritual alteration," on the other hand, occurs in virtue of a *species'* being received in a sense organ or the medium in the manner of an intention, not in the manner of a natural form.[7] For a *species* received in a sense in this second way is not received in keeping with the being that it has in the sensible object.

273–282. It is clear in the cases of touch and taste (a kind of touch) that natural change *(alteratio)* occurs. For through the contact of what is hot and cold something is heated and cooled; a spiritual alteration is not all that is produced. Likewise, too, the alteration of smell occurs along with a certain odorous evaporation, and the alteration of sound occurs along with local motion. But the alteration of sight is solely a spiritual alteration. Thus it is clear that, among all the senses, sight is the most spiritual and next comes hearing.

283–286. This is why these two senses are the most spiritual and uniquely instructive, and why in intellectual matters we use [terms] pertaining to them, especially pertaining to sight.

The Nature of Light (Continued)

287–290. /419/ Some, however, have said that light is nothing other than the appearance of color. But this can readily be seen to be false in the case of things that are luminous at night while their color is still hidden.

291–304. /420/ But others have said that light *(lux)* is the sun's substantial form and that the light *(lumen)* emanating from that light *(lux)* has intentional being,[8] like the *species* of colors in air. But each of these is false. The first is false because no substantial form is sensible *per se;* such forms can be grasped only by intellect. And if someone were to say that what we see in the sun is not light *(lux)* but brilliance, then we should not argue about the name, provided that what we call light *(lux)*—viz., what we apprehend by sight—is not a substantial form. The second is also false, because something that has only

7. The natural form of some quality, when received in any subject, actually makes that subject take on the quality. For the eye to take on the natural form of red, the eye would actually have to become red. In contrast, a *species* received "in the manner of an intention" does not actually make the subject become red. In this example the *species* has intentional being in the subject—the eye—and it is because of this sort of being in the eye that an animal will have the visual experience of red. See I.10.174–215, with note.

8. Here Aquinas is taking advantage of the fact that Latin has two words, *lux* and *lumen,* to refer to different kinds of light. As the next paragraph explains, the former refers to being a source of light, whereas the latter refers to the illumination emitted by that source. English ordinarily uses just the one word, 'light,' for both meanings: thus we would speak of a light emitting light, whereas Aquinas would speak of *lux emittens lumen.*

This translation indicates in parentheses where Aquinas uses *lux,* and hereafter leaves it unnoted when he uses *lumen.*

intentional being does not bring about a natural transformation. But rays from the heavenly bodies transform all of lower nature.

The True Nature of Light

305–323. Thus we say that just as the elemental bodies have active qualities on the basis of which they act, so light *(lux)* is an active quality of a heavenly body on the basis of which it acts. Light *(lux)* is, further, classified in the third species of quality, along with heat.[9] /421/ But light *(lux)* differs from heat in that it is a quality of the first body that brings about change[10]—a body that has no contrary. Thus neither does light *(lux)* have a contrary, whereas there is a contrary of heat. But since there is no contrary of light *(lux),* there cannot be a contrary disposition in something able to take it on. For this reason the thing light *(lux)* affects, a diaphanous medium, is always perfectly disposed *(in ultima dispositione)* for that form; hence it is illuminated at once. Something capable of being heated, in contrast, is not heated at once. Thus the participation or effect of light *(lux)* in the diaphanous medium is called light. If it is directed to a luminous body in a straight line it is called a ray. If it is caused by the ray's deflection to a shining body it is called brilliance. All the same, light is common to every effect of light *(lux)* in a diaphanous medium.

ii. The Nature of Diaphanous Media

325–340. /422/ Now that we have seen all this in connection with the nature of light, we can easily see the reason why some bodies are actually luminous, some diaphanous, and some opaque. For light *(lux)* is a quality of the first body that brings about change, the thing most complete and formal among bodies. Hence those bodies that are the most formal and lofty *(nobilia)* are actually luminous. Bodies close to these are receptive of light, as diaphanous things are. The most material bodies neither have light in their nature nor can receive it. They are opaque. This is clear in the case of the elements themselves. For Fire has light *(lux)* in its nature, although its light *(lux)* becomes apparent to us only in some other nature, on account of its density. Air and Water, however, which are less formal, are diaphanous, whereas Earth, which is the most material, is opaque.

9. In the *Categories* Aristotle distinguishes ten classes of being, one of which is quality. He further identifies four species of quality (9a28–10a10).

10. Light, in other words, is a quality of the sun (and the other heavenly bodies). In contrast, the science of Aquinas's day held that the sun is not hot (see *Summa theologiae* [first part], q. 13, a. 5, obj. 1).

iii. The Necessity of Light for Seeing

342–352. /423/ As regards the third subject, it is important to know that some have said that light is necessary for seeing on account of color itself.[11] For they say that it is only through light that a color is capable of moving a diaphanous medium. As an indication of this they cite the fact that someone in the dark sees things that are in the light, but not vice versa. They also add an argument to this [observation]: because sight is one thing [only], there is no more than one explanation *(rationem)* for a thing's being visible. This would not be the case if (a) color were visible through itself *(per se)* rather than through light's power and if (b) light were also visible through itself.

353–362. /424/ But this clearly goes against what Aristotle says here, that "it has in itself the cause of its being visible" [418a30–1]. So in keeping with Aristotle's view we should not say that it is on account of color that light is necessary for seeing. (The reason for saying this would be that light makes colors become actualized; some say that colors exist only potentially when they are in the dark.) Instead, light is necessary on account of the diaphanous medium, inasmuch as it makes that medium become actualized (as is said in the text [418b9–10]).

362–380. /425/ To make this more clear, consider that every form taken as such is a principle for bringing about things like itself. So, since color is a kind of form, it has the capacity, through itself, to cause a likeness of itself in the medium. But yet it is important to know that there is a difference between a complete and an incomplete power. For the form of a complete power for acting can not only introduce its likeness into something that can take it on but can also dispose the thing being affected so that that thing is able on its own to take it on. This form could not do that, of course, if it were the form of an incomplete power. So we should say that color's power for acting is incomplete in comparison to the power of light. For color is nothing other than a kind of light *(lux)* that is somehow obscured as a result of being mixed into an opaque body. Thus color does not have the power to put a medium into the disposition by which it becomes able to take on color. Pure light *(lux)*, however, can do this.

380–387. /426/ On this basis it is also clear that, since light *(lux)* is in a way the substance of color, everything visible comes down to the same nature. Nor must color be made actually visible through an extrinsic light. But when illuminated colors are seen by someone in the dark, this happens as a result of the medium's being illuminated to the extent required for sight's alteration.

11. Averroes, *De anima* II.67 (231), attributes this view to the Arab philosopher Avempace.

Chapter 15

The Proper Object of Sight (Continued)

DE ANIMA II.7.418B26–419B3

418b26–419a1. Now, something that is without color is capable of taking on color, whereas [what is capable of taking on] sound is soundless. But a diaphanous medium is without color and is invisible or barely seen—as what is dark is seen.° A diaphanous medium is indeed, then, of this sort, although not when it is actually diaphanous but when it is potentially so. For the same nature is sometimes darkness, sometimes light.

419a1–7. Not all things are visible in light, however, but only the proper color of each single thing. For some things are not seen in light, whereas in the dark they bring about sensation *(sensum)*—like those that are seen as fiery and shining. These are not referred to by a single name: for example, oak fungus, horn, fish heads and scales, and eyes. But we do not see the proper color of any of them. And there is another account for why these are seen.

419a7–15. Now, however, this much is clear: that it is surely color that is seen in light. Hence it is not seen without light. For this was the being for color itself: to be capable of moving an actually diaphanous medium. The actuality of a diaphanous medium, however, is light. And there is a clear indication of this; for, if one places something with color on the sense of sight itself, it will not be seen. But color moves the diaphanous medium (e.g., air), and then by that [medium], when it is continuous, the sensory capacity is moved.

419a15–22. For Democritus speaks wrongly in holding that if the medium were void, then if there were even an ant in the sky it surely would be clearly discerned. This is impossible. For seeing is brought about when the sensory capacity is affected by something. So it is impossible [for it to be affected] by that very color that is seen. Yet it remains that [it is affected] by the medium, and for this reason it is necessary that there be some medium. But if [the medium] were made void, then it will not be the case that something is seen clearly, but that nothing at all is seen. The reason has been stated, then, why it is necessary for color to be seen in light.

419a23–25. Fire, however, is seen both in the dark and in light, and this [is so] out of necessity. For by this [fire] a diaphanous medium is made luminous.

419a25–31. The account is the same, however, for sound and smell. For none of these brings about sensation *(sensum)* **while touching the sensory capacity. But media are indeed moved by smell and sound, whereas by this each of the sensory capacities [is moved]. When, however, someone positions something that has a smell or sound on the sensory capacity itself, this will not bring about a single sensation. Things hold in much the same way, however, for touch and taste, but this is not evident. The reason for this will be clear later.**

419a32–b3. The medium for sound, however, is air, whereas [the medium] for smell has no name. For a certain state *(passio)* **is common on the part of air and water; what is [common] to each is [related] to something with smell just as being diaphanous [is related] to color. For among animals the aquatic seem to have a sense of smell, whereas a human being and all the things that walk on feet and breathe are not able to smell except through breathing. But the reason for these things too will be discussed later.**

{418b26–419a1} HOW A DIAPHANOUS MEDIUM IS ABLE TO TAKE ON COLOR

1–14. /427/ Above, the Philosopher showed what color is, what a diaphanous medium is, and what light is. Here he shows how a diaphanous medium is related to color. Now it is evident from his preceding remarks that a diaphanous medium is able to take on color. For color is capable of moving a diaphanous medium (as he then said [418a31–b1]). But what **is capable of taking on color** must be **without color,** just as also what is capable of taking on **sound** must be without sound. For nothing takes on what it already has. In this way it is clear that **a diaphanous medium** must be **without color.** /428/ But because bodies are visible through their colors, it follows that a diaphanous medium is in its own right **something invisible.**

14–27. Now since the same power is capable of cognizing opposites, it follows that sight, which has cognition of light, also has cognition of darkness. So although a diaphanous medium in its own right lacks the color and light that it is capable of taking on, and so is not in its own right visible in the way in which luminous and colored objects are visible, still it can be called visible: just as the **dark is seen—something that is barely seen.** For **a diaphanous medium is of this sort**—dark—**when it is not actually diaphanous but** only **potentially so. For the same nature is** the subject **sometimes** of **darkness, sometimes** of **light.** And so a diaphanous medium that lacks light, which occurs when it is potentially diaphanous, must be dark.

{419a1–7} THE OTHER, NAMELESS VISIBLE OBJECT

28–47. /429/ Next, when Aristotle says **Not all things are visible,** etc., since he has already presented his account of color, which is seen in light, he presents his account of the other visible object, which he had earlier said to be "nameless" [II.14.418a27]. And he says that **not all things are visible in light, but only the proper color of each single** body is visible in light. **For some things are seen not in light** but in the dark—for instance, things **that** in the dark **are seen as fiery and shining.** There are many of these, although they do not have **a single name** in common: **oak fungus,** the **horn** of a certain animal, the **heads and scales** of certain **fish,** the **eyes** of certain animals, and so on. **But** although we see these in the dark, still **we do not see the proper color of any of them** in the dark. So we see these in the dark and in light, but in the dark as shining, in light as colored. /430/ But **there is another account for why** they seem to shine in the dark in this way. For this subject is introduced here only *per accidens,* so to speak, in order to reveal the relationship of visible objects to light.

Why Some Things Are Visible in the Dark

48–63. The account of their visibility in the dark, however, seems to run as follows. Things of this sort have some amount of light *(lux)* due to their composition, inasmuch as the luminosity of Fire and the translucency of Air and Water are not completely suppressed by the opacity of Earth. But because they have [only] a small amount of light *(lux),* this light is concealed by the presence of a greater light *(lumen).* Hence in that light *(lumen)* they are seen not as shining but only as colored. Their light *(lux),* however, cannot on account of its weakness completely bring a diaphanous medium to actuality with respect to its being suited to be moved by color. So by their light *(lux)* one sees neither their color nor the color of any other things, but only their light *(lux).* For light *(lux),* since it is more capable of moving a diaphanous medium than is color, is also more visible. For it can be seen with less of a modification of the diaphanous medium.[1]

64–70. *Analysis.* /431/ Next, when Aristotle says **Now, however, this much,** etc. {419a7 ff.}, he shows how color arrives at sight. And in this connection he does two things. First, he shows what is necessary for sight to be moved by color. Second, he shows that something similar is necessary in the case of the other senses (beginning at **The account is the same,** etc. {419a25}).

1. In this paragraph Aquinas is drawing on various earlier commentaries, including Themistius, 61.21–33 (141.10–22), and Albert the Great, *De anima,* 119.20–23. On the distinction between *lux* and *lumen,* which is crucial here, see II.14.291–387.

70–72. In connection with the first he does two things. First, he shows how color is seen; second, how luminous objects are seen (beginning at **Fire, however** {419a23}).

72–74. In connection with the first he does two things. First, he presents his account of the truth. Second, he rules out a mistake (beginning at **For Democritus speaks wrongly,** etc. {419a15}).

{419a7–15} HOW COLOR IS SEEN

75–92. Aristotle says first, then, that through what was said earlier **this much is now clear,** that **it is color that is seen in light,** and that it cannot be **seen without light.** For, as was said earlier [II.14.418a31–b1], it is part of the defining character *(de ratione)* of **color** that it be **capable of moving an actually diaphanous medium.** This, of course, is brought about by **light,** which **is the actuality of a diaphanous medium.** Thus without light color cannot be seen. /432/ An **indication** of this is that **if** someone **places** a colored body **on the** organ **of sight, it** is **not seen.** For there is no actual diaphanous medium there to be moved by color. And even if the pupil is a kind of diaphanous medium, still it will not be actually diaphanous if a colored body is placed on it. **Color** must, however, actually **move the diaphanous medium (e.g., air** or something else of that sort) and **by that the sensory capacity** (the organ of sight) **is moved,** as by a body made **continuous** with it. For bodies alter *(immutant)* one another only if they touch one another.

{419a15–22} A MISTAKE RULED OUT

93–109. /433/ Next, when Aristotle says **For Democritus speaks wrongly,** etc., he rules out a mistake, saying that **Democritus** spoke **wrongly.** He held that **if the medium** that is between the thing seen and the eye **were void** *(vacuum),* then something as small as you like could be seen through as great a distance as you like—for instance, **if there were an ant in the sky.** But **this is impossible.** For in order for something to be seen, the organ of sight must be affected by what is visible. It has been shown, however, that it cannot be affected **by that** visible object immediately, since a visible object placed on the eye is not seen. **It remains,** then, **that** the organ of sight must be affected by the visible object through some **medium.** Therefore **it is necessary that there be some medium** between what is visible and sight. **But** if it is **void,** then there is no medium able to alter and be altered. It remains, then, that if the medium were void, **nothing at all** would be **seen.**

Why Distance Impedes Vision

110–117. /434/ Democritus arrived at this view because he thought that the reason why distance impedes the vision of some thing is that the medium resists alteration by the visible object. But this is false. For a diaphanous medium contains nothing contrary to light or color; it is, instead, in the perfect condition for receiving these things. An indication of this is that it is immediately altered by light or color.

118–135. The reason, then, why distance impedes sight is that every body is seen under the angle of some triangle (or, more accurately, pyramid). The base of this [pyramid] is located in the thing seen; the angle is located in the eye of the one seeing. /435/ And it does not matter here whether sight is brought about through extramission (so that the lines comprising the triangle, or pyramid, would be visual lines advancing *from* sight *to* the thing seen) or vice versa, just as long as it occurs under the already mentioned configuration of a triangle (or pyramid). This is necessary because, given that the thing seen is larger than the pupil, the alteration by the visible object must be proportionally diminished to reach all the way to sight. It is clear, however, that to the extent that the sides of the triangle (or pyramid) are longer, then (as long as the base stays the same) the angle is that much less. Hence what is seen from far away is seen less *(minus videtur),* and the distance can be so great that it is not seen at all.[2]

{419a23–25} HOW LUMINOUS OBJECTS ARE SEEN

136–145. /436/ Next, when Aristotle says **Fire, however,** etc., he shows how fire and luminous bodies are seen. He says that they are **seen** not only **in light,** like things that are colored, but also in the dark, like the things he discussed earlier [419a1–7]. **And this** occurs **out of necessity,** because fire has light enough to actualize **a diaphanous medium** entirely, so that both it and other

2. In this paragraph Aquinas is drawing on a rich history of medieval optical theory. Perspectivist theories of vision, as they were called, calculated the angles at which impressions from external objects would be transmitted into the eye; such mathematical analyses led to theories of perception and mental representation.

The extramission theory of perception, according to which the eye emits rays that reach out to objects and then bounce back, dates back to Plato's *Timaeus* 45a–e. It was not decisively refuted until the Middle Ages, most successfully by the Arab philosopher and scientist Alhazen (c. 965–c. 1039). Aquinas discusses the theory further at II.20.24–88.

On both topics, see D. C. Lindberg's *Theories of Vision from Al-Kindi to Kepler* (Chicago: University of Chicago Press, 1976).

things are seen. Nor is its light so weak as to be overshadowed by the presence of a greater light, as occurs with the things discussed earlier [419a1–7].

{419a25–31} THE SAME ACCOUNT HOLDS FOR OTHER SENSES

146–156. /437/ Next, when Aristotle says **The account is the same,** etc., he shows that things hold for the other senses much as they do for sight. He says that **the account is the same for sound and smell** as for color. **For** none of these is sensed if it touches the sense organ; **but media are moved by smell and sound, whereas each** of the organs—viz., of hearing and of smell—[is moved] **by** the medium. But **when someone** places a body **that has a smell or sound on** the sense organ, it is not sensed. And it is **much the same** in the case of **touch and taste,** although **this is not evident,** for **the reason** that will be discussed below [II.22.422b34–423a6, II.23.423b17–26].

{419a32–b3} THE MEDIUM FOR THESE OTHER SENSES

157–173. /438/ Next Aristotle shows what the medium is in the case of these senses. He says that **the medium** moved by **sound is air, whereas** the medium moved by **smell** is something common to air and water. Similarly, color moves each of these media, although each is moved by color in respect of being diaphanous. But the **state** *(passio)* **common** to **air and water** in respect of which they are moved by smell **has no name.** For they are not moved by smell in respect of being diaphanous. That each of these is moved by smell is made clear by the fact that **aquatic animals have a sense of smell,** from which it is clear that water is moved by smell. **A human being,** however, and animals that can walk and breathe do not **smell except** by **breathing.** In this way it is clear that air is the medium for what is smelled. **But the reason** for **these things will be discussed later** [II.20.421b13–422a6].

Chapter 16

The Proper Object of Hearing
The Generation of Sound

DE ANIMA II.8.419b4–33

419b4–9. Now, then, first let us present an account of sound and the sense of smell.° There are, however, two kinds of sound. One is something actual, whereas the other is potential. For there are certain things that we do not say have a sound, like a sponge or wool. Some things, however, have it, like bronze and anything solid and smooth. For they can make a sound. To actualize sound, this belongs to the medium itself, and to the sense of hearing.°

419b9–13. An actual sound, however, is always made of something, relative to something, and in something. For what makes it is a striking. Hence it is impossible for a sound to be made when there is [only] one thing. For that which hits and that which is hit are different, and thus that which makes a sound does so relative to something, for it touches something. And when, through impact, it has touched, it makes a sound.° The impact, however, is not brought about without motion.

419b13–18. As we have said, however, sound is not the impact of just any chance things. For hair makes no sound, even if struck. But bronze [does], as well as everything that is smooth and hollow. Bronze [does] because it is smooth; hollow things, by reverberation, make many impacts after the first, because what has been set in motion is unable to get out.

419b18–25. A thing is heard more in air, and in water too, but less. Neither air nor water is associated with its own sound;° instead, firm things must be made to strike one another and the air. But this happens when the air that is struck remains and is not split up. Hence it makes a sound if it is struck swiftly and strongly. For the movement of what beats it must take hold before the air breaks. It is just as if someone, moving quickly, were to cut through a collection or pile of pebbles.

419b25–27. An echo, however, occurs when from air made one by a vessel limiting and preventing it from diffusing, the air is once again repelled—like a sphere.

419b27–33. It appears, however, that an echo is always made, but not a definite one. For it happens in the case of sound just as it does in the case of light, since light is always reflected. For [if it were not], neither would light occur throughout; instead [there would be] darkness outside the sun.

But [light] is not [always] reflected in just the way it is by water or air° or by any other smooth things. For this reason it produces a darkness, by means of which we demarcate light.°

1–7. *Analysis.* /439/ Now that the Philosopher has presented his account of what can be seen, he here presents his account of what can be heard—i.e., sound. This account is divided into two parts. In the first part he presents his account of sound in general. In the second he presents his account of one species of sound, namely, vocal sound (beginning at **Vocal sounds, however,** etc. {II.18.420b5}).

7–9. The first part is divided into two more parts. In the first of these he presents his account of sound, in the second his account of the differences among sounds (beginning at **The differences, however,** etc. {II.17.420a26}).

9–12. The first of these is divided into two parts. In the first he presents his account of sound. In the second he raises a question about things already established (beginning at **But is it that which hits,** etc. {II.17.420a19}).

12–15. The first is divided into two parts. In the first of these he presents his account of sound's generation, in the second of hearing's alteration *(immutatione)* by sound (beginning at **A void, however, is rightly said,** etc. {II.17.419b33}).

Why an Account of Sound's Generation Is Presented Here

17–30. One might ask why he here presents an account of sound's generation, when earlier he presented an account, not of color's generation, but only of the sense's and the medium's alteration by color. In reply to this we should say that color, smell, flavor, and tangible qualities have a permanent and fixed existence in their subject. So there are different considerations associated with these qualities in their own right and insofar as they alter a sense; that is why there is a separate treatment for each. Hence Aristotle presents his account of the generation of color, flavor, and smell in his *De sensu et sensato* [439a6–445b2], whereas he presents his account of tangible qualities in his *De generatione* [II.329b6–330a29] and, as regards some of the details, in his *Meteora* [IV.381b23–389b22].

30–37. In this work, however, Aristotle plans to present an account of things that can be sensed only insofar as they are capable of altering the senses. Sound, however, is caused by motion. It does not have a fixed and stable existence in its subject, but consists in a certain alteration.[1] So at the same time he presents an account of it as regards its generation (as a *species*) and as regards its altering sense.

1. Compare Avicenna, *Liber de anima* II.5 (154.36–38).

38–41. *Analysis.* The first part is divided into two more parts. In the first of these parts Aristotle presents his account of sound's first generation. In the second he presents his account of sound's second generation, which is produced by reflection (beginning at **An echo, however, occurs,** etc. {419b25}).

41–45. In connection with the first he does two things. First, he shows that sound is sometimes actual, sometimes potential. Second, he shows how sound is actualized (beginning at **An actual sound, however,** etc. {419b9}).

{419B4–9} SOUND IS SOMETIMES ACTUAL, SOMETIMES POTENTIAL

46–60. /440/ Aristotle says first, then, that before an account is presented of touch and taste, something must be said about **sound and the sense of smell,** but first about sound, since it is more spiritual (as was shown earlier [II.14.241–282]). **There are, however, two kinds of sound.** For sound is spoken of as **actual** and as **potential.** For we say that a thing has a sound both when it actually makes a sound and when it has the potential for doing so. In this way we say that this bell makes a good sound, even though it is not actually doing so. And in this way **we say** that some things **have** no **sound** because they have no potential for making a sound—such as **a sponge, wool,** and soft things of this sort. But **some things** are said to **have** sound because **they can make a sound**—such as **bronze and** other **solid and smooth** things of this sort. In this way, then, it is clear that we sometimes speak of sound as potential.

60–76. /441/ But as for the actualization of **sound, this** pertains to **the medium and** to **the sense of hearing.** For everything that can be sensed is said to be actual in two ways.[2] It is actual in one way when it is actually sensed—i.e., when its *species* is in the sense—and a sound is actual in this way in virtue of being in the sense of hearing. It is actual in a second way in virtue of being of the proper kind *(speciem)* so as to be able to be sensed, as it is in its subject. Other qualities are actually sensible in this way inasmuch as they are in bodies that can be sensed: color, for instance, as it is in a colored body, or smell and flavor, as they are in a body with a smell or flavor. This is not the case for sound, however. For in a body making a sound there is no sound except potentially; the sound is made actual in the medium, which is moved by the striking of the body making the sound. This is why Aristotle says that actual **sound belongs to the medium and to the sense of hearing,** but not to the subject capable of sound.

2. See below, III.2.425b25–426a27.

HOW SOUND IS ACTUALIZED

77–82. *Analysis.* /442/ Next, when Aristotle says **An actual sound, however,** etc. {419b9 ff.}, he shows how sound is actualized. And in this connection he does two things. First, he indicates how many things act together to actualize a sound. Second, he indicates the sorts of things these must be (beginning at **As we have said, however,** etc. {419b13}).

{419B9–13} THREE THINGS ACT TOGETHER

83–98. He says first, then, that for **sound** to be made **actual** three things must act together. For sound **is always made of something, relative to something, and in something.** So if there were only **one thing,** it could not make **a sound.** And the explanation for this is that the cause of a sound **is a striking;** therefore there must be something striking and something struck. This is why he said that sound is of something **relative to something**—i.e., of what is striking relative to what is struck. **For** the thing that makes the sound must **touch something.** And **when it has touched through** its **impact,** a sound is generated. **The impact** of what strikes it, **however, is not brought about without** local **motion.** And local motion is not produced without a medium. So it follows that there must be a medium for sound to be actualized. And this is why he said that there must be actual sound not only **of something** and **relative to something** but also **in something.**

99–104. *Analysis.* /443/ Next, when Aristotle says **As we have said, however,** etc. {419b13 ff.}, he indicates what sorts of things these must be that are required for the generation of sound. And first he indicates the sorts of things that what strikes and what is struck must be. Second he indicates the sort of thing the medium must be (beginning at **A thing is heard more,** etc. {419b18 ff}.

{419B13–18} WHAT STRIKES AND WHAT IS STRUCK

105–116. So he says first that, **as** was **said** earlier [419b6–8], **sound** is **not** produced by the striking **of just any chance** bodies. **For** it was said earlier that **hair** and sponges and soft things of this sort have no potential for making a sound; hence they **make no sound, even if struck.** The explanation of this is that soft things yield to what strikes them. So when such a thing is struck the air is not forced out in such a way that a sound can be formed in it through the impact of what strikes and the resistance of what was struck. But if soft things of this sort were compressed so as to have some hardness and to resist what strikes them, then a sound would follow, albeit a dull one.

116–132. But bronze as well as smooth and hollow bodies make a sound when struck. For, necessarily, things that give off a sound when struck are hard, with the result that air is forced out. This air's being forced out is indeed the cause of sound's generation. It is also required that such things be **smooth,** so that the air is one, as will be discussed below [II.17.419b35–420a2]. /444/ **Hollow things** that are struck also do well at giving off a sound. For in their case the air is enclosed within and, since **what has been set in motion first** cannot at once **get out,** this air strikes other air. In this way **many impacts** are made from the **reverberation,** and the sound is multiplied. And for this reason, too, things that, in their composition, contain Air that is well arranged are well suited to make a sound—such as bronze and silver. But those things in which Air is not well disposed, in terms of their composition, are badly suited to make a sound—such as lead and other things of that sort, which are coarser *(feculenta)* and more earthy.

{419B18–25} THE MEDIUM

133–162. /445/ Next, when Aristotle says **A thing is heard more,** etc., he indicates what sort of thing is the medium in which sound is generated. And he says that the medium in which sound **is heard** is **air and water,** although it is heard **less** in water than in air. Thus air is the most proper medium both for the generation of sound and for hearing. And it is clear that neither **air nor water** has **its own sound.** This is because the medium for any sense, in order for it to be able to receive everything, is lacking the qualities that are sensible as regards that sense. It is **instead** necessary for the generation of sound in air or water that bodies that are **firm**—i.e., solid and hard—**strike** each **other and** strike **the air.** /446/ **But** that solid things are made to strike each other and the air at the same time occurs **when the air** maintains its integrity so that it can be **struck and is not** divided before being struck. For this reason we see that if one thing touches another with a slow motion, no sound is made, for the air recedes and is dissolved before the two solid bodies make contact. But **if** the striking is **swift** and **strong,** then a sound is made, for in order for a sound to be made **the movement of what** strikes **it must** come **before the air** divides, so that while the air is still united and gathered together it can be struck and sound can be generated in it. This is **just** like a case where something* is propelled **quickly** and can **cut through** a heap of stones before the heap falls apart. This could not happen if it were moved slowly. For this reason, too, when something is quickly propelled through the air, it makes a sound by its

movement. For the air is still united and plays the role not just of medium but also of thing struck.

163–168. *Analysis.* /447/ Next, when Aristotle says **An echo, however,** etc. {419b25 ff.}, he presents his account of sound's second generation, which is brought about through deflection. This sound, of course, is called an echo. First, then, he presents his account of how it is generated. Second, he shows that there are different ways in which it is generated (beginning at **It appears, however, that an echo,** etc. {419b27 ff.}).

{419B25–27} HOW AN ECHO IS GENERATED

169–183. In connection with the first, then, we should be aware that sound's generation in air is the result of a movement of air—as was stated [116–120]. The alteration of air at the generation of sound is like water's alteration, when something is thrown into it. For it is apparent that a series of circular motions are made in the area around the water that has been struck. The circles near the place that was struck are small, and their movement is strong. But the circular motions farther away are greater, and their movement is weaker. In the end the movement totally subsides, and the circular motions cease. But if, before the movement's force runs out, the circular motions were to meet some obstacle, then a movement circling back the opposite way would be produced. This movement would be more forceful in proportion to how close it was to where the water was first struck.

183–194. /448/ In this same way, then, we should understand that at the striking of bodies making a sound, air is moved in a circle, and sound is diffused in all directions. The circular motions nearby are smaller, but their movement is stronger; hence the sound is perceived more definitely. Farther away, however, the circular motions are greater, their movement is weaker, and the sound is heard less distinctly. In the end the whole thing fades. But if the air moving in this way and carrying sound to a body is deflected before these circular motions fade, then backward-circling motions would be returned the opposite way. Thus a sound is heard as if from the other direction; this is called an echo.[3]

195–204. /449/ **An echo occurs** especially when the thing standing in the way and sending back the air being moved is some sort of hollow body—serving as a kind of **vessel** restricting and containing the air as a unity **and**

3. The account in the last two paragraphs of this chapter draws heavily on Boethius, *De institutione musica,* bk. I, chap. 14.

hence **preventing** it from dividing. For then that air united and stirred in this way, because it cannot further extend its motion on account of the body standing in the way, **once again** strikes the air by which it was struck. Movement in the opposite way is then produced. Something **like** this happens when someone throws a ball—here called **a sphere**—and the ball, meeting an obstacle, bounces back.

{419B27–33} ECHOES ARE MADE IN DIFFERENT WAYS

205–239. /450/ Next, when Aristotle says **It appears, however, that an echo,** etc., he shows how echoes are made in different ways. And he says that **an echo is always made, but** there is **not** always **a definite one** made—i.e., a clearly perceptible one. He makes this clear through an analogy. For he says that **it happens in the case of sound just as it does in the case of light, since light is always reflected.** Sometimes, however, it is a clear reflection, whereas sometimes it is not. Light's reflection is clear when reflected by some shining body so that it is produced with a certain clarity—like the way in which the light was first sent out. Light's reflection is not clear, on the other hand, when reflected by some dull *(opaco)* body, because a reflection of this sort occurs without clarity and without rays' being sent out. **For** if the sun's rays were not reflected by dull bodies, then **light would** not **occur throughout**—i.e., in each part of the upper hemisphere's air. **Instead,** there would be **darkness** everywhere **outside the sun**—i.e., outside the places to which the sun's rays directly reach. Still, light **is not reflected** by dull bodies **in just the way it is by water, air,**[4] or any smooth and polished body; a reflection from these comes about with clarity and with rays' being sent out. So the reflection made by dull bodies is not like the reflection made by shining ones. Hence the reflection made by dull bodies **produces a darkness**—i.e., a shadow—out of that part where clear **light** is demarcated, the light that comes when the sun's rays are directly sent out. Likewise, too, when a sound is reflected by a hollow body in which sound is suited to be multiplied, then a definite echo is produced—i.e., one that can be clearly discerned. But when sound is deflected by other bodies that are not suited to multiply sound, then a clear echo is not produced.

4. The manuscripts indicate that Aquinas took the text here to refer to "by . . . air" *(aëre)*—but in fact the correct words are "by . . . bronze" *(aere* or *ere),* as indeed the context would lead one to expect.

Chapter 17

Hearing's Alteration by Sound

DE ANIMA II.8.419B33–420B5

419b33–420a4. A void, however, is rightly said to be a special feature° of hearing. For air seems to be a void, and it is what brings it about that [something] hears when [the air], continuous and one, is moved. But because it is easily broken, it does not make a sound unless the object that is struck is smooth. Then, however, it is made one all at once because of [that object's] face—for the face of what is smooth is one. So what is capable of sound is capable of moving air that is one continuously up to the sense of hearing.

420a4–7. The sense of hearing, however, is naturally connected *(connaturalis)* **to air. And because of its being in air, what is beneath° is moved by something external's being moved. It is for this reason, indeed, that an animal does not hear everywhere, nor does the air penetrate everywhere. For what has soul°—and the part that is to be moved—does not have air everywhere, and likewise for the pupil and the humor it has.°**

420a7–11. So air is incapable of sound on its own, because it is easily made to yield. But when it is prevented from escaping, then this sort of movement is sound. This [air] is built into the ears along with its being immobile, in order for it to sense clearly all the differences among movements.

420a11–15. For this reason, moreover, we also hear in water, because [the water] does not get into the naturally connected air or into the ear, because of its spirals. If this were to happen, however, then one would not hear. Nor [does one hear] if the eardrum is strained—just as [would happen if] the skin in the pupil [were damaged].

420a15–19. But an indication of [whether there is] hearing or not is that the ear always makes a sound, just as with a horn. For the air in the ears is always moved by a certain movement of its own. But sound is outside [the ear] and not its own. And for this reason they say that [we] hear by means of a void and what makes the sound, because we hear by means of what has air that is limited.

420a19–26. But is it that which hits or that which is hit that makes the sound? Or is it both, but in different ways? For sound is the movement of what can be moved, in the way that things hop back from smooth objects, when someone propels [them]. So, as was said, not everything that is hit and is hitting makes a sound—e.g., if one needle were tossed against another.

But what is struck must be regular, so that the air immediately breaks apart and is moved.°

420a26–29. The differences, however, among things that make a sound are revealed in actual sound. For just as colors are not seen without light, neither are sharp and flat [heard] without sound.

420a29–30. These [terms] are assigned metaphorically, however, from things that are touched.

420a30–31. For what is sharp moves the sense a great deal in a slight time, whereas what is flat does so slightly over a great [time].

420a31–33. It is not, however, that the sharp is swift and the flat slow, but that the one's movement occurs because of its swiftness, the other's because of its slowness.

420b1–5. Also, things associated with touch seem to be like the sharp and the dull. For something sharp pierces, so to speak, whereas something dull pushes, so to speak. The reason for this is that the one moves [our hearing] in a slight [time], the other over a great one. This is why the one happens to be swift, the other slow. For sound, then, let this be the account.

1–6. *Analysis.* /451/ Now that the Philosopher has presented his account of sound's generation, he here presents his account of sense's alteration by sound. He does so first with respect to the medium's alteration, second with respect to the instrument's alteration (beginning at **The sense of hearing, however,** etc. {420a4 ff.}).

{419B33–420A4} THE MEDIUM'S ALTERATION

7–32. He says first, then, that because the medium in sound's case is air, it **is rightly said** by some that **a void** is **a special feature of** the sense of **hearing,** because it **seems** to them that **air** is **a void.** Air, however, **brings it about that [something] hears** a sound **when [the air],** existing as **continuous and one, is moved,** so that a sound can be formed in it. And since for a sound to be formed the air's unity and continuity is necessary, so a sound is **not** produced **unless** the thing capable of sound **that is struck is smooth.** For something is smooth when no one part of it rises above another; something is rough, on the other hand, when one part of it does rise above another. Thus it is clear that the surface of a **smooth** body **is** fully **one.** And for this reason air is **made one,** existing **all at once, because of** the unity of **[that object's] face**—i.e., its surface. If the body is not smooth, however, but rough, then the surface is not one. And because air **is easily broken**—i.e., easily divisible—it follows as well that the air would not be one and continuous, and so a sound could not be

formed in it. /452/ **So** in this way it is clear that **what is capable of sound**—i.e., what makes a sound—moves **air that is one** and that exists **continuously up to the sense of hearing.** In this way, then, it is plain that those who say that a void is a special feature of the sense of hearing say this rightly. For to be a special feature of hearing does characterize air, which is believed to be a void. But they do not speak rightly in saying that air, which is what *fills* space *(plenum aerem),* is a void.

THE INSTRUMENT'S ALTERATION

33–41. *Analysis.* /453/ Next, when Aristotle says **The sense of hearing, however,** etc. {420a4 ff.}, he presents his account of hearing's alteration by sound as regards the organ itself that belongs to the sense of hearing. And in this connection he does three things. First, he shows that air is ascribed to the organ of hearing. Second, he shows what the air is like that characterizes the organ of hearing (beginning at **So air is incapable,** etc. {420a7}). Third, he shows how hearing is or is not impeded due to an impediment in the organ (beginning at **For this reason, moreover,** etc. {420a11}).

{420A4–7} AIR IS ASCRIBED TO THE ORGAN OF HEARING

42–55. He says first, then, that **the sense of hearing is naturally connected to air,** so that just as a liquid humor is suited to the instrument of sight, so air is suited to the instrument of hearing. This is so because if air is attributed to the instrument of hearing, then it will follow that the same state *(passio)* of sound will be in the air **moved** externally and in the air **moved** internally (the instrument of hearing). And so **an animal does not hear** in every part of its body, **nor does the air** making a sound **penetrate** every part of an ensouled body. For **what has soul does not have air** in every part of itself, so that each **part** of it would be able **to be moved** by sound. **Likewise,** too, what has soul does not have a liquid **humor** everywhere, but [only] in a certain limited part—namely, in **the pupil.**

{420A7–11} WHAT THAT AIR IS LIKE

56–76. /454/ Next, when Aristotle says **So air is incapable,** etc., he shows what the air ascribed to the instrument of hearing is like. And he says that, since

everything that of itself has sound is something naturally suited to resist what strikes it, it is clear that **air on its own** *(per se)* does not have sound: for it is not, in itself, naturally suited to resist what strikes it. Instead, it quite **easily** yields. But its yielding or escaping **is prevented** by a solid body, and so when this happens the air's **movement** gives off **sound.** (For it was said that for sound to be generated two solid things must be made to strike "one another and the air" [II.16.419b19–20].) But the air naturally connected to hearing **is built into**—i.e., firmly instated in—**the ears along with** the distinguishing characteristic *(proprietate)* of **being immobile,** the point of which is to enable the animal **to sense** with clarity *(per certitudinem)* **all the differences among movements.** For just as the liquid humor in the pupil lacks all color so that it can have cognition of all the differences among colors, so the air beneath the eardrum must lack all motion so that it can discern all the differences among sounds.

HOW HEARING IS IMPEDED

77–82. *Analysis.* /455/ Next, when Aristotle says **For this reason, moreover,** etc. {420a11 ff.}, he shows how hearing is impeded due to an impediment in the organ. He presents two impediments relative to the two things he said were necessary for the organ of hearing (first, that air be present; second, that that air be immobile).

{420A11–15} THE FIRST IMPEDIMENT

83–101. The first impediment, then, is a result of the corruption of the air itself. And so he says that it is clear from what was said earlier [420a7–11] that **we hear in water,** at least insofar as water **does not get into the naturally connected air** (the air that he said is "built into the ears" [420a9]). Nor does it even get **into the ear;** this can be prevented **because of its spirals,** which prevent water from coming into the ear. /456/ Still, if **this were to happen**—namely, that water got into that naturally connected air—then the animal **would not hear,** because of the corruption of the air necessary for hearing. Likewise, too, vision would be impeded if the eye's moisture were corrupted by the introduction of something foreign. Hearing is impeded not just by air's corruption but also **if the eardrum** (i.e., the skin enclosing the air) or some connected part **is strained** (i.e., weakened) **just as** vision, too, is impeded if **the skin** of **the pupil,** which covers the liquid humor, is impeded.

101–108. /457/ Some books, however, read, "we do *not* hear in water,"[1] which goes against what was said, that we hear "in air and in water" [II.16.419b18], and also goes against what Aristotle says in *Historia animalium* [IV.533b4–534a11], that animals hear in water. For although water does not get into the ear's inner air, it can still move that air and in this way impress on it a *species* of sound.

{420A15–19} THE SECOND IMPEDIMENT

109–130. /458/ Aristotle introduces the second impediment to hearing beginning at **But an indication,** etc. This impediment stems from air's not being immobile in the ears. So he says that **an indication** by which it can be discerned whether someone has good hearing or **not** is that that person **always** hears ringing and sound in his ears (**just as** he hears [such a noise] when someone puts **a horn** up to his ear, because of the air's movement in the horn). When this occurs the person does not have good hearing. For **the air in the ears** of someone who hears ringing in this way **is always moved by a certain movement of its own. But sound** should be **outside** the instrument of hearing, **not its own,** as is the case with the instrument of sight, which receives outside color and has no color of its own. If sight were to have its own color, then vision would be impeded. Likewise, if the air in the ears has its own movement and sound, then hearing is impeded. So because hearing is made by air, some **for this reason,** believing that air is a void, **say that** we **hear by means of a void and what makes the sound.** This is, in fact, **because** the part **by means of** which **we hear** has **air that is limited**—i.e., immobile and distinct from the external air.

{420A19–26} A QUESTION REGARDING SOUND'S GENERATION

131–145. /459/ Next, when Aristotle says **But is it that which hits,** etc., he raises a question regarding sound's generation—namely, whether the active cause of the sound is **that which hits or that which is hit.** And he establishes that **both** are causes, but in different **ways.** For because sound is the result of movement, it is necessary that just as something is the active cause of movement, so something is the cause of sound. **Sound,** however, is generated by

1. In fact, many of the Latin manuscripts have this version of the text. But Aquinas's reading is the one preferred by modern editors of the *De anima.*

movement, by which the thing striking bounces back as a result of the resistance of what is struck. So **in** that **way, things** that **hop back** (i.e., things that bounce back) are moved [away] **from smooth** and hard **objects when someone propels** them (i.e., pushes them forcefully). It is clear, then, that the first thing that strikes produces the movement and so, too, does the thing struck, insofar as it makes the thing that strikes bounce back. And in this way each is the active cause of the movement.

145–153. /460/ And because it is necessary in the case of sound's generation that some kind of bouncing back occur as a result of the resistance of what is struck, **not everything that is hit and** hits **makes a sound, as was said** earlier [II.16.419b13–15]. For instance, **if one needle were tossed against another,** then no sound would be made. **But** for a sound to be made, that which **is struck must be regular** (i.e., arranged in a certain way) **so that the air immediately breaks apart** because of its resistance **and is moved** (with the result that sound is generated by such movement).

THE DIFFERENCES AMONG SOUNDS

154–158. *Analysis.* /461/ Next, when Aristotle says **The differences, however,** etc. {420a26 ff.}, he presents his account of the differences among sounds. And in this connection he does two things. First, he shows how [these differences] are perceived, second how they are named (beginning at **These [terms] are assigned,** etc. {420a29}).

{420A26–29} HOW THESE DIFFERENCES ARE PERCEIVED

159–166. So he says first that different things making a sound produce different sounds. But these sorts of **differences among things that make a sound,** in virtue of which [those things] are naturally suited to make different sounds, are exhibited not when the sound is potential but only when it is actual. **For just as colors are not seen without light,** so **sharp and flat** in things capable of sound are not perceived unless the **sound** is actualized.

167–169. *Analysis.* /462/ Next, when Aristotle says **These [terms] are assigned,** etc. {420a29 ff.}, he shows how the differences among sounds are named. And in this connection he does four things.

{420A29–30} WHERE THEIR NAMES ARE TAKEN FROM

170–174. First, he shows from where the names of sounds are taken. And he says they are taken **metaphorically from** tangible qualities. For it is clear that sharp and flat are counted among tangible qualities.

{420A30–31} THE BASIS FOR THEIR NAMES

175–179. /463/ Second, beginning at **For what is sharp,** etc., he establishes the basis for the names. And he says that a **sharp** sound is one that **moves the sense** of hearing **a great deal in a slight time, whereas** a **flat** sound is one that over **a great** time moves [it] a little.

{420A31–33} THE RELATION TO SWIFT AND SLOW MOVEMENT

180–198. /464/ Third, beginning at **It is not, however, that the sharp,** etc., Aristotle shows how sharp and flat in sound are related to swift and slow in movement. For the preceding accounts seem to pertain to swift and slow, given that the swift is what is much moved in a short time, whereas the slow is what is little moved in much time.[2] And he says that **the swift is not** the same as the **sharp,** nor is **the flat** (in sound) the same as the **slow.** In the same way, too, sound (which is differentiated in terms of flat and sharp) is not the same as movement (which is differentiated in terms of swift and slow). **But,** as movement is the cause of sound, so **swiftness** of movement is the cause of a sharp sound and **slowness** of movement is the cause of a flat sound. We should understand the problem this way when the sound is caused by one movement. On the other hand, when it is caused by more than one movement, then the high frequency *(frequentia)* of the movements is the cause of a sharp sound, whereas their low frequency *(raritas)* is the cause of a flat one (as Boethius says in *De institutione musica* [I.3]). And thus a tauter string makes a sharper sound, because it is moved at a higher frequency as the result of being struck one time.

2. Compare Aristotle, *Physics* IV.218b15–17.

{420B1–5} SOUNDS LIKENED TO TANGIBLE QUALITIES

199–207. /465/ Fourth, beginning at **Also, things associated with touch,** etc., Aristotle likens the differences among sounds to the tangible qualities by which they are named. And he says that these **things** that are **associated with touch** are **like the sharp and the dull** in sound. For a **sharp** sound **pierces** our hearing, **so to speak,** because it **moves** it **in a slight** time. **Something dull,** on the other hand, **pushes, so to speak,** since it moves [our hearing] **over a great** time. For that reason the first of these **happens** with swiftness in movement, the second with slowness.

207–208. Finally, Aristotle concludes that, **for sound, let this be the account.**

Chapter 18

Vocal Sound

DE ANIMA II.8.420B5–421A6

420b5–9. Vocal sounds *(vox),* however, are a certain kind of sound belonging to what has soul. For nothing without soul makes vocal sounds; rather, it is said to do so in virtue of a likeness—the flute, for instance, and the lyre, and whatever other things without soul have extension,° melody, and speech *(locutionem).* For they are likened [to vocal sound] because vocal sound also has these things.

420b9–13. Among animals, however, many do not make vocal sounds, like those that are bloodless and, of those that have blood, fish. And this is reasonably [so]—if, that is, sound is the movement of air. But those [fish] that are said to make vocal sounds, like those in the Achelous, make a sound with their gills or with something else of this sort.

420b13–16. A vocal sound, then, is the sound of an animal, and not by means of just any part. But because everything makes a sound by means of something's forcing both toward something and in something (the latter of these being air), it is reasonable that only those [animals] that take in air will make vocal sounds.

420b16–22. For nature now uses what is breathed in for two tasks—like the way [nature uses] the tongue for taste and speech. Of these taste is necessary and consequently is in many [animals], whereas expression *(interpretatio)* is for the sake of well-being. In the same way, too, [nature uses] wind both for interior heat, as [is] necessary (the reason has been stated elsewhere), and for vocal sound, for being well.

420b22–27. The organ of breathing is the windpipe. But the lungs are the reason why this part exists. For things that go on foot have more heat with this part than others. The first place around the heart, however, requires breathing. So it is necessary that air get inside by breathing.

420b27–29. For this reason a vocal sound is the striking of the air breathed in against the windpipe by the soul that is in these parts.

420b29–421a1. For not every sound belonging to an animal is a vocal sound, as we said. For there are also the tongue's making sound and those who cough. But what forces [the air against the windpipe] must have a soul, along with some imagination. For a vocal sound is a certain significant sound and is not [the sound] of air breathed in, as a cough is. Rather, by

means of this [air], one forces that [air] in the windpipe against that [windpipe].

421a1–6. An indication [of this], however, is that someone cannot make a vocal sound while inhaling or exhaling, but [only] while holding [his breath]. For in this way the one who retains [his breath] produces movement. This is also clear, however, because fish are without vocal sound. For they do not have a throat; they do not have this part because they neither receive air nor breathe. Those who say they do are mistaken.° There is a different account, then, of the reason why.

1–6. *Analysis.* /466/ Now that the Philosopher has presented his account of sound, he here presents his account of vocal sound *(voce),* which is a species of sound. This account is divided into two parts. In the first part he sets out a number of things that are necessary for a definition of vocal sound. In the second part he defines vocal sound (beginning at **For this reason a vocal sound** {420b27}).

6–9. In connection with the first he does two things. First, he shows the things to which vocal sound belongs. Second, he shows what the proper organ of vocal sound is (beginning at **A vocal sound, then** {420b13}).

9–12. In connection with the first he does two things. First, he shows that vocal sound belongs to things with souls. Second, he shows which things with souls it belongs to (beginning at **Among animals, however,** etc. {420b9}).

{420B5–9} VOCAL SOUND BELONGS TO THINGS WITH SOULS

13–31. So Aristotle says first that **vocal sounds** are a certain species of sound. For they **are a sound belonging to what has soul**—not just any sound, however, but **a certain kind** of sound, as will be clear later [420b29–421a1]. /467/ **Nothing without soul** makes vocal sounds, however. And if sometimes one of those things **is said** to make a vocal sound, this is **in virtue of a likeness**—as when **the flute and the lyre and** instruments of that sort are said to make vocal sounds. For their sounds **have** three [respects] in which they **are likened** to vocal sound. The first of these is **extension.** For it is clear that sound is caused in bodies without souls by a simple striking. Hence, when this striking passes at once, the sound also passes soon and is not continued. But vocal sound is caused by air's being struck against the windpipe, as will be said later [420b27–29]. This striking is continued according to the soul's appetite, and in this way vocal sound can be extended and continued. Therefore these instruments of which we have been speaking, by the mere fact that they have some kind of continuousness in their sound, have a likeness to vocal sound.

31–43. /468/ The second [respect] in which [these instruments] are likened to vocal sound is **melody**—that is, a pleasing combination of sounds *(consonantia)*. For the sound of a body without soul, when it comes from a simple striking, is uniform: in itself it does not have any variety of flat and sharp. So in it there is no pleasing combination of sounds, which is caused by the balance of these [flats and sharps]. Vocal sound, however, is varied by flat and sharp, because the striking that causes the vocal sound occurs differently according to the appetite of the animal issuing the vocal sound. So because in the case of the above instruments there is a variety of flat and sharp sounds, their sound occurs with a certain melodiousness, which makes it like a vocal sound.

43–55. /469/ The third [respect] in which the sound of these instruments bears a likeness to vocal sound is **speech**—i.e., the breaking up of sounds, likening it to speech. For it is clear that human speech is not continuous. (For this reason, too, the *Categories* [4b22–23] presents discourse pronounced in vocal sounds as a species of discrete quantity. For discourse is split up into words [*dictiones*], and words into syllables.) This occurs because of the soul's striking air [against the windpipe] in various ways. And the sound of the above-mentioned instruments is likewise varied in virtue of being variously struck—that is, the strings, or the breathings, or things of this sort.

{420B9–13} WHICH ENSOULED THINGS MAKE VOCAL SOUNDS?

56–77. /470/ Next, when Aristotle says **Among animals, however,** etc., he shows which ensouled things make vocal sounds. And he says that even **many animals do not make vocal sounds**—such as those entirely lacking **blood.** (Of these there are four kinds, as Aristotle says in *Historia animalium* [I.490b9–14]: mollusks, which have a soft exterior flesh, such as squid and cuttlefish; animals with a soft shell, such as crabs; animals with a hard shell, such as oysters; and animals with a segmented body, such as bees, ants, and others of this sort. For none of these have blood or make vocal sounds.) /471/ Likewise, too, even some of the animals **that have blood** do not make vocal sounds, such as **fish. And this is reasonably** so, because **sound is** a certain **movement of air,** as was said earlier [II.17.420a8–9]. Animals of this sort, however, do not breathe in air, and so do not have a distinct sound that is vocal. **But,** as for the fact that some fish **are said** to make vocal sounds, such as **those** that are **in the Achelous** (the proper name of a place)[1]—they do not make vocal sounds,

1. Actually, the Achelous is a river in Greece—but Aquinas gives what help he can. Aristotle goes into greater detail regarding such cases at *Historia animalium* IV.535a28–536b24.

strictly speaking, but make a kind of sound **with their gills** (by which they expel water and draw it in) **or** with some other instrument **of this sort** for movement.

78–84. *Analysis.* /472/ Next, when Aristotle says **A vocal sound, then,** etc. {420b13 ff.}, he indicates what the organ of vocal sound is. And in this connection he does three things. First, he shows that the organ of vocal sound and of breathing is the same. Second, he shows what breathing is useful for (beginning at **For nature now,** etc. {420b16 ff.}). Third, he shows what the organ of breathing is (beginning at **The organ of breathing,** etc. {420b22 ff.}).

{420B13–16} THE SAME ORGAN BELONGS TO VOCAL SOUND AND BREATHING

85–91. So Aristotle says first that, although **a vocal sound is the sound of an animal,** still it is not the sound of just any **part** of the animal. **But** because the generation of sound requires that there be something striking **toward something and in something,** which is **air,** it is reasonable that **only** those animals that **take in air** by breathing make vocal sounds, through the same part with which they breathe.

{420B16–22} WHAT BREATHING IS USEFUL FOR

92–103. /473/ Next, when Aristotle says **For nature now uses,** etc., he says that **nature uses** the air **breathed in** for **two tasks—like the way** it uses **the tongue** for **taste and** for **speech. Of these** two, **taste is necessary,** because it is capable of distinguishing suitable food, by which an animal is sustained. **And** for this reason it **is in many** animals. But the **expression** *(interpretatio)* produced by speech **is** for **well-being.** And, likewise, nature uses the air breathed in to lessen natural **heat,** which is **necessary** (**the reason** for this **has been stated** in *De respiratione* [474a25–b24]), **and** it uses the air breathed in **for** the formation of a **vocal sound,** which is for **well**-being.

{420B22–27} WHAT THE ORGAN OF BREATHING IS

104–129. /474/ Next, when Aristotle says **The organ of breathing,** etc., he indicates what the organ of breathing is. And he says that **the organ of breathing is the windpipe,** which has been matched with **the lungs** so as to serve them

by drawing in air. It is necessary that air be received in the lungs, because animals that walk **have more heat** in **this part than** in **other** parts. For the lungs are connected to the heart, in which the source of natural heat is located. So **the place** that is **around the heart requires breathing** in order to cool its natural heat. /475/ (He speaks of "the first place," however, either because the lungs are first around the heart, in the sense of being next to it, or because the heart is the animal's first part, both with respect to generation and with respect to causing movement.) For this reason **it is necessary** that **air get** into the lungs in order to cool down our natural heat. Alternatively, when he says that in **this part** animals **that go on foot have more heat than others,** this should be understood as meaning *more than other animals.* For it is clear that animals that have blood have more natural heat than those lacking blood. And within the genus of things that have blood, fish have less natural heat. Thus fish and animals lacking blood do not breathe—as was said earlier [420b9–13].

130–133. *Analysis.* /476/ Next, when Aristotle says **For this reason a vocal sound,** etc. {420b27 ff.}, he derives a definition of vocal sound from things set out earlier. And in this connection he does two things. First, he introduces the definition; second, he clarifies it (beginning at **For not every sound,** etc. {420b29}).

{420B27–29} THE DEFINITION OF VOCAL SOUND

134–144. So first, because a vocal sound is the sound of something with soul and it comes from the part by means of which one breathes in air, whereas every sound comes from air's being struck, Aristotle says it follows that **sound is the striking of the air breathed in against the windpipe.** This striking is produced **by the soul that is in these parts**—i.e., chiefly in the heart. For although the soul is in the whole body, since it is the animal's form, nevertheless its motive force is chiefly in the heart. This definition, however, is given in terms of the cause. For it is not that sound *is* striking, but that sound is *caused* by striking.

145–155. *Analysis.* /477/ Next, when Aristotle says **For not every,** etc. {420b29 ff.}, he clarifies the definition just given: first, as far as his having said that a vocal striking comes from soul; second, as far as his having said that it is the air breathed in that is struck (beginning at **An indication,** etc. {421a1}). For he had introduced three things in his definition of vocal sound: the thing that does the striking (the soul), the thing struck (the air breathed in), and the thing against which it is struck (the windpipe). Earlier he clarified the third of these [420b22–27]; what was left, then, was to clarify the first two.

{420B29–421A1} THAT A VOCAL STRIKING COMES FROM SOUL

156–174. So Aristotle says first that, **as** was **said** earlier [420b5, 420b9–16], **not every sound belonging to an animal is a vocal sound. For the tongue** may make some sounds that are nevertheless not instances of vocal sound—just as **those who cough** make a sound that is not a vocal sound. For if there is to be vocal sound, **what forces** the air [against the windpipe] **must be** something with **a soul, along with some imagination** intending to signify something. **For a vocal sound** must be **a certain significant sound,** either naturally or by convention. This is why it was said that a striking of this sort is "by the soul" [b28]. For animal operations are said to proceed from imagination.[2] **And** so it is plain that vocal sound is **not** the striking **of air breathed in, as** happens in the case of **a cough. Rather,** we chiefly attribute the cause of vocal sound to the soul that uses that air (the air breathed in) in order to **force** the air **in the windpipe against that** windpipe. Therefore the principal source of a vocal sound's formation is not air, but is rather the soul that uses the air as an instrument in forming the vocal sound.

{421A2–6} THE AIR BREATHED IN IS STRUCK

175–189. /478/ Next, when Aristotle says **An indication [of this],** etc., he clarifies the other part of the definition—namely, that vocal sound is the striking of the air breathed in. And he says that there are two indications of this. One is that an animal **cannot** form a vocal sound either while it draws air in, by **inhaling,** or while it expels it, by **exhaling, but [only]** while it retains air. For while [the animal] retains it, that retained air brings about the motion that leads to a vocal sound's formation. The other indication is that **fish** do not make a **vocal sound. For they do not have a throat**—i.e., a windpipe—and **they do not have this part because they neither receive air nor breathe. But those who say** that fish breathe **are mistaken.** As to why fish do not breathe, that is another **account.**[3] For this concerns the science in which the particular accidental features of animals are considered.

2. See below, III.15–16.

3. See *De respiratione* 476a1–15, 478a32–34, and *De partibus animalium* III.669a1–5.

Chapter 19

The Proper Object of Smell

DE ANIMA II.9.421A7–B8

421a7–16. With respect to smell and what can be smelled, however, we are less well able to present an account than we were in the cases already discussed. For it is not clear what sort of thing smell is, as it was for sound or the visible—whether it is light.° The reason, however, is that this sense, as we have it, is not exact *(certum);* instead it is worse than in many animals. For human beings smell poorly, and smell none of the things that can be smelled in the absence of joy and sadness—inasmuch as what we sense with* is not exact. It is reasonable, however, that just as things with firm eyes sense colors, even though the differences among the colors are not thoroughly clear to them (unless [those colors are] frightening or not frightening), so too, then, for smells and the human race.

421a16–26. For [smell] also seems to have an analogy with taste and, likewise, the kinds of moistness to those of smell. But we have a more exact sense of taste because it is a kind of touch, and a human being has the most exact form of this sense. For we are inferior to many animals as regards the other [senses], whereas with respect to touch we achieve exactness of a different kind.° Thus human beings are the smartest of animals. An indication [of this] is that even among the human race it is in virtue of this sense and no other that some are intelligent, some not intelligent. For those with hard flesh are mentally unfit, whereas those with soft flesh are well fit.

421a26–b3. But just as one moistness is sweet, another bitter, so too are smells. Some, however, have smell and moistness proportionally (I am speaking of a sweet smell and a sweet moistness), whereas others are contrary. Likewise, however, smell is acerbic and sour, and sharp and dull. But, as we have said, because smells are not very thoroughly clear, as moistness [is], they take their names from these [kinds of moistness], in keeping with an agreement° among things. For sweet comes from saffron and honey, whereas bitter comes from thyme and the like. And it is the same way in other cases.

421b3–8. But just as hearing and any of the other senses concern what can and cannot be heard, or what can and cannot be seen, [so] too smell concerns what can and cannot be smelled. Among things that cannot be smelled, however, some [are so] because it is entirely impossible for them

to have a smell; others have a small and feeble [smell]. And it is much the same for what is said to be tasteless.

1–7. *Analysis.* /479/ Now that the Philosopher has presented his account of what can be seen and heard, he here, thirdly, presents his account of what can be smelled. This account is divided into two parts. In the first part he shows, concerning what can be smelled, what it is. In the second part he presents his account of what can be smelled insofar as it alters the sense of smell (beginning at **Smell, however, comes,** etc. {II.20.421b8}).

7–10. In connection with the first he does two things. First, he presents his account of what can be smelled in its own right. Second, he presents his account of things that cannot be smelled, insofar as they are perceived by smell (beginning at **But just as hearing,** etc. {421b3}).

10–14. In connection with the first he does two things. First, he points out the difficulty of presenting an account of what can be smelled. In the second he shows how a cognition of things that can be smelled is acquired (beginning at **For [smell] also seems,** etc. {421a16}).

{421A7–16} THE ACCOUNT'S DIFFICULTY

15–23. Aristotle says first, then, that we cannot **present an account** of what can be smelled as **well** as we could of the sense objects **discussed** earlier—viz., the audible and the visible. For **it is not clear** to us **what smell is, as it was for** what **sound** is **or** what **the visible** is—**whether it is light** or something of that sort. /480/ And Aristotle gives as **the reason** for this **that we** do **not have** a good **sense** of smell, one with an acute and exact cognition of its object. Instead, we have one that is **worse than in many animals.**

24–34. The explanation of this is that, first, the instrument of sense ought to be proportioned to its sense object. So just as a smell is caused by the hot and the dry, so the well-being of the instrument of smell requires the dominance of the hot and the dry. Human beings, however, have a brain that is greater than that of all other animals in terms of brain-body proportion (as the Philosopher says in *De partibus animalium* [II.653a27–28]). Now our instrument of smell is located in the vicinity of the brain. So because the brain is cold and wet, considered in itself, human beings are prevented from smelling well.

35–46. For this reason **human beings smell poorly, and** perceive **none of the things that can be smelled** unless it is something that, in virtue of its importance, leads to pleasure or the opposite. This occurs because the sense is not acute enough to discern its object exactly. For this reason it is **reasonable**

that **the human race** is disposed to perceive **smells just as** animals with hard **eyes,** such as locusts and some fish, are disposed to perceive **colors.** These animals, because of the weakness of their sight (which comes from the organ's unfitness), perceive only in certain prominent cases, insofar as some fright or the opposite is impressed upon them.

HOW THE DIFFERENCES AMONG SMELLS BECOME KNOWN

47–53. *Analysis.* /481/ Next, when Aristotle says **For [smell] also seems,** etc. {421a16 ff.}, he shows how the differences among smells become known to us. And in this connection he does two things. First, he shows that the differences among smells become known to us through comparison to the differences among flavors. Second, he shows how the differences among smells correspond to differences among flavors (beginning at **But just as one,** etc. {421a26}).

{421A16–26} THROUGH COMPARISON TO FLAVORS

54–82. So Aristotle says first that the sense of smell in human beings **seems to have** a kind of agreement and correspondence **with taste and, likewise, the kinds of moistness**—i.e., flavors—with the kinds of **smell.** Whatever we are unfamiliar *(ignotum)* with, however, we cognize through something more clear. Hence, because the kinds of flavors are the most clear to us, the kinds of smells—which we are unfamiliar with and which have a link with the kinds of flavors—are cognized by us through their likeness to those flavors. /482/ The kinds of flavors, however, are extremely clear to us, because a human being has a sense of **taste** that is **more exact** than that of other animals. For taste **is a kind of touch, and a human being has the most exact** sense of touch among animals—even though **as regards the other** senses **we are inferior to** certain **animals.** For there are certain animals that see, hear, and smell better than humans do, although **with respect to touch** a human being differs greatly from other animals as regards the **exactness** of his cognition. /483/ **Thus,** because humans have the best sense of touch, it follows that they **are the smartest** *(prudentissimum)* of all **animals.** For **even among the human race** we gather from the **sense** of touch, and not **in virtue of** any **other** sense, that some **are intelligent** and some **not intelligent.** For those that have **hard flesh,** and consequently have a bad sense of touch, are mentally **unfit.** Those, on the other hand, with **soft flesh,** who consequently have a good sense of touch, are mentally **well fit.** That is why other animals also have harder flesh than a human being does.

Why Mental Fitness Corresponds to Touch, Not to Sight

85–88. /484/ It seems, however, that fitness of mind corresponds more to good vision than to a good sense of touch. For sight is the more spiritual of the senses and reveals more of the distinguishing characteristics of things.

89–103. But it must be said that there are two reasons why a good mind corresponds to a good sense of touch. The first reason is that touch is the basis for all the other senses. For it is clear that the organ of touch is spread throughout the whole body, that each instrument of sense is also an instrument of touch, and that something is called sensory as a result of the sense of touch. Thus it follows from something's having a better sense of touch that it unconditionally has a better sensory nature and consequently a better intellect. For having good senses disposes one for having a good intellect. It does not, however, follow from something's having better sight or hearing that it has a better sensory capacity unconditionally, but only in a certain respect.

104–114. /485/ The other reason [why a good mind corresponds to a good sense of touch] is that having a good sense of touch results from a good constitution or harmony *(temperantiam).* For because the instrument of touch is composed of the elements, it cannot be free of the genus of tangible qualities. So it must be in potentiality for the extremes [of this genus]—at least by its being a mean between them.[1] Now the soul's lofty stature results from the body's good constitution, because every form is proportioned to its matter. It follows, then, that those who have a good sense of touch have a loftier soul and an acuter mind.

Why Smells Are Not Named After Tangible Qualities

116–124. /486/ One might ask further, however, since touch is the most exact of the senses, why the kinds of smells are named after the kinds of flavors rather than after tangible qualities. It must be said that smell and flavor are caused by a determinate mixture of elemental qualities. Thus the kinds of smells correspond to the kinds of flavor rather than to simple tangible qualities.

1. Compare II.23.218–266.

{421A26–B3} HOW SMELLS CORRESPOND WITH FLAVORS

125–154. /487/ Next, when Aristotle says **But just as,** etc., he shows how the kinds of smell correspond to the kinds of flavor. And he says that **Just as** some **moistness**—i.e., flavor—is **sweet** and some **bitter, so too** are **smells** distinguished. It is important to know, **however,** that some **have smell and** flavor **proportionally** (viz., **sweet smell and sweet** flavor), whereas some do so conversely (i.e., an enjoyable flavor but not an enjoyable smell, or the reverse). /488/ The reason for this is that flavor consists in watery moist stuff that is broken up somehow, whereas smell consists in airy dry stuff that is somehow blended. Sometimes, then, it happens that each substance—namely, the fine airy stuff and the denser watery stuff—is mixed in the right proportion, and in this way there is an enjoyable smell and flavor. But if there is the right proportion in one and not in the other, then the enjoyableness will occur in one and not the other. And, just as was said about sweet and bitter (extremes of flavor that are transferred to smells), so too acidic **and sour**—i.e., acrid or astringent—**and sharp and dull** are attributed to smells. /489/ **But** although smells do not always correspond to flavors in all cases, still, **as we have said, because smells are not very clear, as** flavors are, smells **take their names from** flavors, **in keeping with an agreement among things.** For, as is often the case, smells correspond with flavors: **for** a **sweet** smell and flavor **comes from saffron and honey, whereas bitter comes from thyme and the like. And** much the same is true for **other** smells and flavors.

{421B3–8} HOW WHAT CANNOT BE SMELLED IS PERCEIVED BY SMELL

155–166. /490/ Next, when Aristotle says **But just as hearing,** etc., he shows how even things that cannot be smelled are perceived by smell. And he says that **just as hearing concerns what can and cannot be heard,** and sight **what can and cannot be seen,** likewise **smell concerns what can and cannot be smelled.** For the same power is capable of cognizing opposites, and privation is cognized only through possession *(habitum).* But there are two ways in which it is said that a thing **cannot be smelled:** either it is **entirely** unable **to have a smell,** like simple bodies, or it has little smell or an inferior smell. **And** we should understand **much the same** regarding what can be tasted and **what is tasteless.**

Chapter 20

The Sense of Smell's Alteration

DE ANIMA II.9.421B8–422A7

421b8–13. Smell, however, comes through a medium, such as air or water. For indeed, even aquatic things seem to sense smells—likewise for both things with blood and things without blood—just as, also, things [that live] in air. For some of these also come for their food from far off, moved by the smell.

421b13–21. And so there seems to be a problem about whether all things smell in a similar fashion. Now a human being [smells when] breathing, whereas when not breathing, but instead exhaling or holding in breath, he smells neither at a distance nor up close, not even if [the object] were to be placed inside his nose. And this indeed is common to all, that something placed on the very [organ] by which it is sensed cannot be sensed. But it is distinctive of human beings not to sense without breathing; this is clear to those who try it. For this reason things not having blood, since they do not breathe, have some different sense other than those that have been discussed.

421b21–26. But that is impossible, if in fact they sense smells. For the sense of smell is the sense of what can be smelled—of what has a bad odor and what has a good odor. In addition, however, [these animals] also seem to be harmed by the strong smells by which a human being is harmed—e.g., by asphalt and* sulphur and things of that sort. So it is necessary that they have smell, even though they do not breathe.

421b26–422a6. It seems, however, that for human beings this sensory capacity differs compared to those of other animals—just as their eyes [differ] compared to those that have hard eyes. For the former of course have a screen and, as it were, a veil: eyelids. Someone neither moving them nor drawing them back does not see. Those with firm eyes have nothing like this; instead, they see right away things that occur in a luminous medium. In this way as well, then, for some the sensory capacity for smell lacks a cover, like the eye. But for others who take in air it has a covering which is uncovered in breathing, a result of the enlargement of the veins and pores. And for this reason, things that breathe do not smell in water. For breathing is necessary if they are to be affected by smell. It is impossible, however, for this to occur in something wet.

422a6–7. Smell, however, belongs to the dry, just as moistness belongs to the wet. The sensory capacity for smell, however, is of this sort potentially.

1–5. *Analysis.* /491/ Now that the Philosopher has presented his account of what can be smelled, he here presents his account of the sense of smell's alteration by what can be smelled. He does so first with respect to the medium, second with respect to the sense's organ (beginning at **Smell, however, belongs,** etc. {422a6}).

5–8. In connection with the first he does two things. First, he shows what the medium is for the sense of smell. Second, he raises a certain question in connection with the account presented (beginning at **And so there seems** {421b13}).

{421b8–13} WHAT THE MEDIUM IS

9–22. So Aristotle says, first, that the sense of **smell** is altered by what can be smelled **through a medium,** namely, **air or water.** Now air's being a medium for smell is of course clearly apparent, since we smell through air. So it had to be made clear that water is a medium for smell. That is made clear through this fact, that **aquatic** animals **sense smells** (not only those animals that have **blood** but also those that lack **blood**),[1] **just as also** do animals that live **in the air.** The latter is apparent from the fact that **some** of them come great distances for **food,** which could happen only inasmuch as they are stirred **by the smell.** This is clear in the case of vultures, which are said to converge on a carcass from many miles away.

How Smell Is Spread to Such a Remote Area

24–43. There is a question, however, about how smell is spread to such a remote area.[2] /492/ It is therefore important to know that some claimed that every sense is completed by some sort of touch: for they said that the sense and what it senses must touch each other for the latter to be sensed. Still, they held that this happens differently in the case of sight than in the case of the other senses. For they said that visual lines running up to the thing seen emerge from sight.[3] In the case of the other senses, however, they said that,

1. Fish have blood; squid, shellfish, and various other sea creatures do not (see II.18.56–77).

2. Albert the Great raised this question in his *Summa de homine* q. 30 and later in his *De anima* (135–136).

3. See II.15.110–135, with note, for this so-called extramission theory of vision.

in contrast, the sense object arrives at the sense. And, to be sure, this does clearly seem to happen in the case of touch and taste. For things that can be touched and tasted are sensed by some kind of contact. The same seems to be true for hearing as well, since air when moved extends up to hearing.[4] The same was also said to be true in connection with smell. For they claimed that some kind of odorous evaporation dissolves off of a body that can be smelled. This evaporation is the underlying subject of the smell, and it reaches up to the sense of smell.

44–62. /493/ The reason for this distinction [between sight and the other senses] seems to be that the ancients did not perceive the medium's spiritual alteration *(immutatione),* but only its natural alteration. Now, in the case of the other senses, some kind of natural alteration is apparent in the medium. But this is not so in the case of sight. For it is clear that sounds and smells are conveyed or impeded by wind, whereas this in no way happens to colors. It is also clear that the *species* of opposite colors are conveyed to sight through the same part of the air—e.g., when one person sees white and another sees black, both existing at the same time and using the same air as their medium. This certainly does not happen in the case of smell. For opposite smells are found to impede one another even in the medium. And thus [the ancients], not perceiving the alteration by which something visible alters the medium, claimed that sight is conveyed up to the thing seen. But because they perceived the alteration by which other sense objects alter the medium, they believed that these other sense objects are conveyed to the senses.

63–76. /494/ But it is clear that this account cannot apply in the case of smell. For since the smell of a carcass is sensed by vultures from fifty miles away or more, it is impossible for any physical evaporation of the carcass to be spread to such an area—especially since the sense object alters the medium for the same distance each way, unless hindered. But even if the whole carcass were dissolved into an odorous evaporation, this would not be enough to occupy such an area. For there is a definite end point to how rarified a natural body can become (that end point is fire's degree of rarefaction). Also, above all, a carcass does not appear to the senses to be altered by this sort of smell.

77–88. /495/ And so we should say that an odorous evaporation certainly can be dissolved off of something that can be smelled. Still, this evaporation does not extend to the farthest point at which the smell is perceived; rather, the medium is altered spiritually beyond where the evaporation just mentioned can extend. But the reason why a spiritual alteration is produced by something visible more than by other sense objects is that visible qualities are in perishable bodies in virtue of what they have in common with imperish-

4. Compare II.17.420a3–4.

able bodies.[5] Thus they have a more formal and lofty existence than do the remaining sensible qualities, which are specific to perishable bodies.

89–93. *Analysis.* /496/ Next, when Aristotle says **And so there seems,** etc. {421b13 ff.}, he raises a puzzle in connection with what we have been discussing. First he raises an objection on one side, then on the other (beginning at **But that is impossible,** etc. {421b21}). Third, he solves the puzzle (beginning at **It seems, however, that,** etc. {421b26}).

{421b13–21} AN OBJECTION ON ONE SIDE

94–109. Aristotle says first, then, that since even aquatic animals engage in smelling, **there seems to be a problem about whether all things smell in a similar fashion,** as if they have the same sense. And it seems that they do not, because **a human being** smells by **breathing** when he draws in air. When, **however,** he does **not** breathe by drawing in air, **but** exhales by releasing it **or** holds **in breath, he smells neither at a distance nor up close**—even **if** the thing to be smelled **were placed inside his nose.** But **this is common to all** animals, **that** a sense object **placed** right on a sense is not sensed. **But** this **is distinctive of human beings,** that smell is **not** sensed **without breathing;** this **is clear** if someone would like to **try it.** Thus, since animals **not having blood do not breathe,** it seems that they **have** a **different sense other than** smell and the other senses **discussed** in the case of humans.

{421b21–26} OBJECTIONS ON THE OTHER SIDE

110–126. /497/ Next, when Aristotle says **But that is impossible,** etc., he raises two arguments in objection to the other side. The first argument is this: senses are distinguished in terms of their sense objects. Hence, since **the sense of smell is the sense of what can be smelled**—viz., **of what has a good odor and what has a bad odor**—and this is commonly sensed both by humans and by nonbreathing animals, it follows that the same sense of smell is in humans and in these [others]. /498/ The other argument is that the same sense will have the same things capable of harming it. For sounds do not cause sight

5. Here Aquinas is referring to the heavenly bodies, which were thought to be imperishable and of an entirely different nature than terrestrial bodies (see III.17.207–211). Despite this difference in nature, visible qualities result from something shared by these two kinds of bodies. See II.14.246–261.

to be affected by something, nor do colors cause hearing to be affected. But the senses of nonbreathing animals **seem to be harmed by the** exceedingly harsh **smells by which** the human sense **is harmed**—for instance, **by asphalt** (which is a product from the juice of herbs) **and** by **sulphur and things of that sort.** Hence these animals **have** a sense of **smell** just as human beings do, although **they** do **not** breathe.

{421b26–422a6} THE PUZZLE SOLVED

127–145. /499/ Next, when Aristotle says **It seems, however, that for human beings,** etc., he solves the question. For this difference in manner of breathing is the result not of a difference in sense but of a difference in the organ's structure. For the organ of smell in a **human being differs** from the organs **of other animals, just as** the **eyes** of human beings differ from the **hard eyes** of certain animals. **For** human eyes **have a** kind of **screen,** i.e., a covering sheet—the **eyelids.** Thus a human being cannot **see** unless the eyelids are drawn **back** by some movement. This is not the case for animals with hard **eyes. Instead, they** immediately **see** those things whose *species* **occur in** a diaphanous medium. So too, then, in the case of other nonbreathing animals, the organ of smell **lacks a cover.** But in the case of breathing animals [the organ] **has** a kind of cover that must be opened, **a result of the enlargement of the pores** by **breathing. And** so animals **that breathe do not smell in water,** because they must be **affected by smell** while **breathing.** This cannot happen in water.

{422a6–7} AN ACCOUNT OF THE SENSE ORGAN

146–151. /500/ Next, when Aristotle says **Smell, however, belongs,** etc., he presents his account of the instrument of smell. And he says that **smell** is based on **the dry, just as** flavor is based on **the wet.** But the organ of smell must be in potentiality for smell and for the dry—just as the organ of sight is in potentiality for colors and for light.

Chapter 21

The Proper Object of Taste

DE ANIMA II.10.422A8–B16

422a8–11. Now what can be tasted is a kind of tangible thing. And this is the reason why it is not sensible through a medium [that is] an outside body. For neither is touch. And a body in which there is moistness, something tasteable, is in something wet as in its matter; this, however, is a kind of tangible thing.

422a11–17. And for this reason, if we lived in water we would indeed sense something sweet dropped in [the water]. The sensation *(sensus),* **however, would come to us not through the medium but by its being mixed with something wet, as in the case of drink. Color, however, is not seen in such a way as a result of being mixed or by releasing [something]. So therefore there is nothing that is the medium [for taste]. Moistness is tasteable, however, in the way that color is visible.**

422a17–19. But nothing brings about a sensation of moistness without moisture. Instead it has moisture either actually or potentially, like saliva.° For it is quite wet, and wets the tongue.

422a20–34. Sight, however, is concerned with the visible *and* the invisible. Darkness is invisible, but sight makes judgments about even it. [Sight] is also concerned with what is extremely bright. For that too is invisible, although in a different way from darkness. And likewise, too, hearing is concerned with sound and silence (the first being audible, the second inaudible) and with a great sound, just as sight is concerned with something bright. For just as a faint sound is inaudible, so in a certain way is a great and piercing *(violentus)* **one. One thing is said to be entirely invisible, just as in other cases [a thing is spoken of as] impossible. Another, however, despite having the nature, does not have [the ability], or has it badly. In this way something that is without feet is said to be unable to walk, and also what [has feet but] is unable to take a step.° Now just as in these cases, so too taste is concerned with what can and what cannot be tasted—the latter being what has little or poor moistness or harms the sense of taste. It seems that the basis [for this] is being drinkable and nondrinkable. For both are a kind of taste, but the latter as something bad for and harmful to taste, the former in keeping with nature. What is drinkable, however, is common to touch and taste.**

422a34–b5. But because that which can be tasted is wet, it is necessary that what is capable of sensing it neither be actually wet nor lack the possibility of becoming wet. For taste is affected in some way by what can be tasted insofar as it can be tasted. It is therefore necessary that the sensory capacity capable of taste, which can be made moist while kept intact and yet *is* not wet, be made moist.

422b5–10. An indication [of this], however, is that neither a tongue that is dry nor one that is very wet senses. For in the latter case a [sensation of] touch is produced of what is first wet, much the same way as when someone who before tasted a strong moistness tastes another, and just as to those who are afflicted all things seem bitter. The reason is that they sense with a tongue filled with this sort of moisture.

422b10–16. But [as for] the kinds of moistness, as in the case of colors, the simple ones are contraries, such as sweet and bitter. Associated *(habitae)* **[with these], then, are fatty (with the first) and salty (with the second). In between these, however, are acrid, sour and astringent, and sharp. For these seem to be most of the distinctions involving moistness. Therefore the capacity for taste is potentially of this sort, and what can be tasted is capable of making [it be] actually so.**

1–6. *Analysis.* /501/ Now that the Philosopher has presented his account of what can be seen, heard, and smelled, he here, fourthly, presents his account of what can be tasted. This account is divided into two parts. In the first part he presents his general account of what can be tasted. In the second he presents his account of the kinds of things that can be tasted—that is, the kinds of flavor (beginning at **But [as for] the kinds of moistness,** etc. {422b10}).

7–15. In connection with the first he does three things. First, he asks whether something tasteable is perceived through a medium. Second, he shows what is perceived through taste—both tasteable and untasteable (beginning at **Sight, however, is concerned,** etc. {422a20}). Third, he shows what state the sense of taste's organ must be in (beginning at **But because that which,** etc. {422a34}). For he dealt with these three issues in connection with the other senses—viz., the medium in which something is sensed, that which is perceived by the sense, and the organ of sense.

15–21. In connection with the first he does three things. First, he shows that something with taste is not perceived through an outside medium. Second, he rules out one objection (beginning at **And for this reason if,** etc. {422a11}). Third, he shows what is required for something with taste to be actually perceived (beginning at **But nothing brings about,** etc. {422a17}).

{422A8–11} TASTE IS NOT PERCEIVED THROUGH AN OUTSIDE MEDIUM

22–39. /502/ He says first, then, that **what can be tasted is a kind of tangible thing**—viz., something discerned by touch. **And this is the reason why it is not** sensed **through a medium** that is **an outside body.** Something is spoken of as *outside* that* is not part of the animal. For the sense objects dealt with earlier are sensed through air and water that are not parts of the animal. But **touch** does not sense its object through an outside medium, but through a connected medium. For flesh is the medium for the sense of touch (as will be clear below [II.22.422b34–423a21]). And so, since taste is a kind of touch and since what can be tasted is a kind of tangible thing, what can be tasted will not be perceived through an outside medium. /503/ And that what can be tasted is a kind of tangible thing is made clear through the fact that **moistness** (i.e., flavor), which is **something tasteable,** is grounded **in something wet as in** the **matter** proper to it. Something wet, **however, is a kind of tangible thing.** Thus it is clear that what can be tasted is a kind of tangible thing.

Why Taste Is Distinguished from Touch

40–44. /504/ But taste is a kind of touch. Therefore it seems that taste should not be distinguished from touch, since a species is not separated from its genus by being contrasted with it. So it follows that there are not five senses, but only four.

45–68. But it ought to be said that taste and touch can be considered in two ways. In one way they can be considered with respect to their manner of sensing. And it is in this way that taste is a kind of touch, for it perceives by touching its object. In another way they can be considered with respect to their object, and in this way one has to say that just as the object of taste is related to the object of touch, so the sense of taste is related to the sense of touch. It is clear, however, that flavor—the object of taste—is not one of the qualities of simple bodies by which an animal is made up.[1] These are the proper objects of the sense of touch. Flavor, instead, is caused by these [qualities] and based in one of them "as in its matter"—specifically, "in something wet" [422a11]. So it is clear that taste is not the same as the sense of touch but is in a way grounded in it. And for this reason it is customary, with regard to taste, to make this distinction: it can be taken as taste insofar as it discriminates flavors; and it can be taken as a kind of touch insofar as it distinguishes tangible qualities—namely, food, with which the sense of touch is concerned (as was said earlier [II.5.414b7]). That is why the Philosopher says in *Ethics* III [1118a26–31], in

1. The hot, cold, wet, and dry. See I.5.25–45 and the first note there.

connection with the pleasures of taste, that temperance is at issue not when taste is taken in the first way but only insofar as it is a kind of touch.

{422A11–17} AN OBJECTION RULED OUT

69–77. /505/ Next, when Aristotle says **And for this reason,** etc., he rules out one sort of objection. For it is clear that if some flavored body soluble in water were placed in water (e.g., honey or something like that) and **if we lived in water,** then, even while distant from that flavored body, still **we would sense** its flavor in the water. And so it seems that taste would take on its object through the water, an outside medium.

77–104. /506/ And so in order to rule out this objection he concludes from the things already said that, since what can be tasted is not perceived through an outside medium, it follows that **if we lived in water we would indeed sense** a **sweet** body **dropped** into the water, even while distant from us. Still, **the sensation would not come through the medium, but by** means of that flavor's **being** completely **mixed with** the watery **moisture.** The same occurs **in the case of drink**—e.g., when honey or something of that sort is completely mixed with water or wine. For the water is altered through a natural alteration by the body having a flavor; thus taste perceives the distant body's flavor not as it is the flavor of such a body but as it is [the flavor] of the water altered by such a body. /507/ An indication of this is that taste would not be altered by the water to the extent to which it would be naturally suited to be altered by the distant body's flavor; for that flavor is weakened by being mixed with water. But **color is not seen** through a medium **in such a way** that the colored body is **mixed** in with the medium or else in such a way that some of that [body] pours out in the direction of sight (as Democritus claimed); instead, color is seen through the medium's spiritual alteration. This is why sight does not perceive color as belonging to the air or to the water, but as belonging to the distant colored body, according to the same proportion *(mensuram).* Therefore, if we wish to compare taste to sight, **there is nothing** in the case of taste like that which is **the medium** for sight. But **moistness** (i.e., flavor) **is tasteable** (i.e., the object of taste) **in** just **the way that color is visible** (i.e., the object of sight).

{422A17–19} WHAT IS REQUIRED FOR ACTUAL TASTE

105–117. /508/ Next, when Aristotle says **But nothing brings about,** etc., he shows what is required for taste, given that a medium is not required. And he

says that nothing that has flavor **brings about a sensation of** its **moistness**—i.e., its flavor—**without moisture.** For just as color is made actually visible through light,[2] so flavor is made actually tasteable through something wet. Thus something that can be tasted must either **actually** have watery **moisture,** such as wine or something of that sort, **or** be **potentially** able to be made moist, such as what is consumed as food. And so there must be **saliva** in the mouth, which **is quite wet and wets the tongue.** Through this [saliva], things consumed are made moist so that their flavor can be perceived.

{422A20–34} WHAT IS PERCEIVED THROUGH TASTE

118–139. /509/ Next, when Aristotle says **Sight, however,** etc., he shows what is perceived through taste. And he says that **just as** it is for sight and hearing, **so** it is for taste. For **sight** has cognition of **the visible and the invisible,** as was said earlier [II.15.418b26–419b1]. For **darkness,** concerning which **sight makes judgments, is invisible.** And likewise something **extremely bright,** like the sun, is called **invisible,** but **in a different way** than **darkness.** For darkness is called invisible on account of too little light, whereas the bright is called thus on account of too much light harming the sense. **And likewise hearing is concerned with** the **audible (sound) and** the **inaudible (silence,** which is the privation of sound). A sound that is unsuitable for hearing *(male audibilis)* is also inaudible; it either harms the sense because of its magnitude or insufficiently alters the sense because of its faintness. And so it is for everything spoken of in terms of potentiality and nonpotentiality. /510/ For in every case a thing is spoken of as **impossible** that either **does not have** what it is its **nature** *(natum est)* to have **or** has it **badly.**[3] **In this way** an animal **that is** entirely lacking **feet is said to be unable to walk, and also what** is lame or weak-footed.

139–160. Now likewise **taste,** too, **is concerned with what can and what cannot be tasted.** That is said to be untasteable, however, which either **has** a slight flavor **or** a bad flavor **or** one so strong that it harms the sense. And since what is tasteable is a watery fluid, which is drinkable, and this (a watery fluid) is the basis of flavor, **it seems that the basis** for things perceived by taste **is being drinkable and nondrinkable. For taste** perceives **both, but** one

2. See II.14.342–387.

3. Here 'impossible' means *incapable,* but it is worth preserving the underlying Latin because of the frequency with which '(im)possible' is used in this sense. The possible intellect, for example, derives its name from its *capacity* for taking on intelligible species (see III.7–9).

as something bad for and harmful to the senses (namely, the nondrinkable), the other as agreeable **in keeping with nature** (namely, the drinkable). But just as what can and cannot be tasted is perceived by taste insofar as taste is a sense distinct from touch, so the drinkable and nondrinkable are perceived by taste insofar as taste is a kind of touch. For **what is drinkable is common to** both **touch and taste:** to touch inasmuch as it is something wet; to taste inasmuch as it is something wet with flavor. /511/ It is clear, therefore, that the pleasures in food and drink (*qua* eatable and drinkable) pertain to taste inasmuch as it is a kind of touch, as he says in *Ethics* III [1118a26–31].

161–164. *Analysis.* /512/ Next, when Aristotle says **But because that which,** etc. {422a34 ff.}, he shows what state the instrument of taste must be in. And, first, he establishes the truth; second, he gives an indication that makes it clear (beginning at **An indication,** etc. {422b5}).

{422A34–B5} THE STATE OF THE SENSE OF TASTE

165–178. So he says first that since **that which can be tasted** must be **wet** and have flavor, **it is necessary that** the organ of taste **neither be actually wet** in its own right **nor** be of the sort that cannot become **wet.** (In the same way, the instrument of sight does not have color, but is capable of taking on color.) And this is so because **taste is affected by what can be tasted insofar as it can be tasted,** just as is every sense by its sense object. Hence since what can be tasted, inasmuch as it can be tasted, is wet, **it is necessary** for the organ of taste, inasmuch as it is now being affected, to **be made moist.** Now this [organ] has its nature **kept intact** so that it is **capable of taste** (i.e., so that it can taste). For it **can be made moist** and still is **not** actually **wet.**

{422B5–10} AN INDICATION

179–191. /513/ Next, when Aristotle says **An indication,** etc., he gives an indication that makes clear what he had said. He says that **an indication** of what we have been discussing **is that neither a tongue that is dry nor one that is** extremely **wet** can **sense.** For when it is extremely wet as a result of some earlier moisture, then what **is produced** in it is **touch** and a sensation of the earlier **wet** thing, not the one coming after. In **much the same way, when someone* before tasted** some **strong** flavor and* later **tastes another,** he does not perceive the later flavor. For the sense **of the first** fluid still remains on his

tongue. **And,** likewise, **to those who are afflicted**—i.e., who are feverish—**all things seem** to be **bitter. The reason is** this: **that they sense** through **a tongue filled with this sort of moisture**—namely, bitter bile.

{422B10–16} THE KINDS OF FLAVORS

192–203. /514/ Next, when Aristotle says **But [as for] the kinds,** etc., he presents his account of the kinds of flavors. And he says that **just as in the case of colors** the simple colors are contraries, like white and black, so in the case of flavors **the simple ones are contraries,** like **sweet and bitter.** The kinds of flavors **associated** with these, **then**—i.e., immediately following from the simple kinds—**are fatty,** which follows sweet, **and** salty, which follows bitter. **In between these, however,** are acidic, **sour and astringent** (these two amounting to the same thing), **and sharp.** And to these seven kinds of flavors **most** all the others **seem** to be reduced.

204–217. /515/ It is important to consider in connection with these kinds, however, that although flavors are caused by hot and cold, wet and dry, and although the contraries are those that are the most distant, still the opposition among kinds of flavors does not occur in virtue of the greatest distance between hot and cold, wet and dry. Rather, it occurs in virtue of their relationship with taste, inasmuch as taste is naturally suited to be altered by a flavor with either disgust or enjoyment. Hence it is not necessary that sweet or bitter be either the most hot or cold, or wet or dry, but that it be maximally disposed with respect to the state relating it to the sense of taste. An account of the generation of flavors, however, is presented in *De sensu et sensato* [440b28–442b26].

218–221. /516/ Finally, then, Aristotle concludes that **the capacity for taste**—i.e., the sense of taste or its organ—**is** in potentiality for flavor and its kinds. **And what can be tasted is** what can bring that capacity from potentiality to actuality.

Chapter 22

The Proper Object of Touch

DE ANIMA II.11.422B17–423A21

422b17–23. Concerning touch and what can be touched the account is the same. For if touch is not one sense but many, then the sense objects that can be touched are necessarily many. There is a puzzle, however, regarding whether there are many [senses of touch] or one, and what the sensory capacity is for what can be touched: whether [it is] flesh and something comparable in others, or whether instead this is the medium, while the first sensory capacity is something else inside.

422b23–27. For every sense seems to be concerned with a single pair of contraries, as sight is with white and black, hearing with flat and sharp, and taste with bitter and sweet. In the case of the tangible, however, many contraries are present: hot-cold, wet-dry, hard-soft, and whatever others are of that sort.

422b27–32. Now there is one solution to this puzzle: that in the case of the other senses, too, there are many contraries, as in vocal sound there are not only the sharpness and flatness but also the greatness and smallness, and the smoothness and harshness, of the vocal sound, and other similar [qualities]. And in the case of color, too, there are other differences of this sort.

422b32–34. But what the one subject is for touch, as sound is for hearing, is not clear.

422b34–423a6. Now as to whether the sensory capacity is inside, or instead flesh is right away [this capacity], it seems to be no indication that a sensation is produced right when [the flesh is] touched. For even as things are, if someone would stretch [something] around the flesh, as if forming a membrane, that would likewise transmit the sensation, as soon as it is touched. And* still it remains the case that the sensory capacity is not in this [membrane]. And if it were naturally connected, the sensation would reach through still more quickly.

423a6–16. For this reason that part of the body seems to stand just as the air would, if that air were naturally attached to us all around. For we would seem to sense sound, smell, and color by one particular [organ], and [there would seem] to be one particular sense of hearing, sight, and smell. As things are, however, because that through which the movements are made is delimited, the sensory capacities just mentioned are clearly different. Cer-

tainly, however, in the case of touch this is now unclear. For it is impossible that a body with a soul consist of Air or Water: for it must be firm. The result then is that it is mixed out of Earth and these [other elements], as flesh (and what is comparable) demands. Thus it is necessary that the body that is the medium be naturally associated with touch; sensations, since they are many, are produced through it.

423a17–21. What demonstrates this is that there are many kinds of touch in the tongue.° For [the tongue], with the same part, senses all tangible qualities and moistness. So if the rest of our flesh also were to sense moistness, then taste and touch would seem to be one and the same sense. As things are, however, they are two, since they are not interchangeable.

1–10. *Analysis.* /517/ Now that the Philosopher has presented his account of the sense objects for the other senses, here lastly he presents his account of the sense object for touch. For touch, among all the senses, seems to be the least spiritual, although it is the basis for all the other senses. This part, however, is divided into two parts. In the first of these parts he presents his account of certain puzzles in connection with the sense of touch. In the second part he makes the truth clear concerning this sense (beginning at **Now it seems in general,** etc. {II.23.423b17}).

10–12. In connection with the first he does two things. First, he raises the questions; second, he presents his account of them (beginning at **For every sense seems,** etc. {422b23}).

{422B17–23} TWO PUZZLES RAISED

13–28. So Aristotle says first that, as regards the things into which we need to inquire, **the account is the same** whether we speak **concerning touch** or **what can be touched.** For what is said about one must be said about the other, since **if touch is not one sense but many,** it is necessary that the things **that can be touched** are not one genus of sense objects but **many.** He says this, however, because his plan is first to present an account of sense objects, whereas later he will present an account of sense [II.24]. Now he will raise questions about the sense of touch in the context of what needs to be said about what can be touched, because these questions can be handled more readily if they are raised concerning touch than if they are raised concerning what can be touched. For this reason, then, he first set out this justification, showing that it does not matter whether we speak about touch or what can be touched.

28–40. /518/ So Aristotle raises two puzzles concerning touch and what can be touched. The first of these is **whether there are many** senses of touch

or only **one.** The second puzzle is **what the sensory capacity**—i.e., the organ of sensing—**is** in the case of touch: **whether,** namely, **flesh** is the organ of the sense of touch in animals with flesh (animals with blood) **and** something comparably matching flesh **in others** lacking blood, **or** whether this is **not** so but **instead** flesh and what comparably matches it **is the medium** for the sense of touch, whereas **the first** organ of the sense of touch **is** some other inner thing around the heart, as Aristotle says in *De sensu et sensato* [439a1–2].

41–43. *Analysis.* /519/ Next, when he says **For every sense seems,** etc. {422b23 ff.}, he presents his account of the puzzles just set out: first, the first one; second, the second (beginning at **Now as to whether,** etc. {422b34}).

44–47. In connection with the first Aristotle does three things. First, he shows that there is not one sense of touch but many. Second, he solves the argument he had introduced (beginning at **Now there is one solution,** etc. {422b27}). Third, he disproves the solution (beginning at **But what the one,** etc. {422b32}).

{422B23–27} THERE ARE MANY SENSES OF TOUCH

48–55. So the argument that Aristotle first introduces runs as follows: **every** single **sense seems to be concerned with a single pair of contraries,** just **as sight is with white and black, hearing with flat and sharp, taste with bitter and sweet.** But **in the case of the tangible,** which is the object of touch, there are **many contraries,** namely **hot** and **cold, wet** and **dry, hard** and **soft, and** various **others of that sort** (such as heavy and light, sharp and dull, and the like). Therefore, touch is not one sense but many.

{422B27–32} A SOLUTION TO THE ARGUMENT

56–72. /520/ Next, when Aristotle says **Now there is one solution,** etc., he introduces one apparent solution to the argument just set out. He says that someone can maintain a **solution to** the **puzzle** we have been discussing in this way: **that** even **in the case of the other senses there** seem to be **many contraries**—for instance, in the case of hearing. For with regard to audible **vocal sound, not only** can the contrary pair sharp and flat be present, **but also the greatness and smallness of the vocal sound,** its **smoothness and harshness, and** various **other similar [qualities]. And** likewise **in the case of color** we can find some other **differences** beyond the contrary pair white and black: for instance, that one color is more intense and another less so, and that one

is beautiful and another ugly. Still, this does not prevent hearing from being one sense, and likewise for sight. Hence the multiple contrary pairs of tangible qualities do not seem to keep touch from being one sense.

{422B32–34} THE SOLUTION DISPROVED

73–80. /521/ Next, when Aristotle says **But what the one subject,** etc., he rules out the solution introduced. He says that there is **one subject**—namely, **sound**—for all the contrary pairs connected to things that can be heard; likewise, there is color in connection with things that can be seen. But we cannot find **what the** common **subject is** of all the contrary pairs connected to things that can be touched. As a result, there does not seem to be one genus of tangible qualities, and so neither is touch one sense.

Whether Touch Is One Sense or Many

81–105. /522/ In order to clarify the things that are said here, we must consider that the distinction of powers and objects is proportional. Therefore, since one sense is one power, the sense object corresponding to it must be one genus. The Philosopher showed in *Metaphysics* X [1055a23–33], however, that in one genus there is one first contrary pair. So it must be that in connection with the object of one sense, only one first contrary pair is present. Thus he says here that one sense is "concerned with a single pair of contraries" [422b23]. /523/ In one genus, nevertheless, there can be many contraries after the first. This can occur, first, through subdivision. In the genus of bodies, for instance, the first contrary pair is that with soul and that without soul. Body with soul is divided into the sensory and nonsensory; then the sensory is divided into the rational and nonrational. So the contraries in the genus of body are multiplied. Second, there are many contraries in one genus *per accidens.* In the genus of body, for instance, there is the contrary pair black and white, and others with respect to all the things that can be accidental to a body. And in this way we should understand, regarding sound and vocal sound, that beyond the first contrary pair of flat and sharp, which is *per se,* there are other contrary pairs—i.e., those *per accidens.*

105–129. /524/ In the genus of tangible qualities, however, there are many first contrary pairs *per se.* Still, all of these are, in a way, reduced to one subject; and in a way they are not. For in one way the subject of a contrary pair can be taken as the genus itself that is related to contrary differences like potentiality to actuality. In another way the subject of a contrary pair can be taken as the substance that is the subject of the genus to which the contraries belong: if, for instance, we say that a colored body is the subject of white and black. Therefore, if we were to speak of the subject that is the genus, then there is clearly not the same subject for all tangible qualities. If, however, we were to speak of the subject that is the substance, then there is one subject for all of them—namely, the body pertaining to the animal's constitution. (For this reason the Philosopher will say below [II.23.423b26–27] that tangible qualities belong to a body insofar as it is a body—the qualities, that is, by which the elements of a body are distinguished from one another.) For the sense of touch discriminates between things that pertain to the constitution of the animal's body.[1] So, formally speaking and conceptually *(secundum rationem),* the sense of touch is not one, but many. It is, however, one in subject.

130–134. *Analysis.* /525/ Next, when Aristotle says **Now as to whether,** etc. {422b34 ff.}, he takes up the second question. And in this connection he does two things. First, he presents his account of the truth; second, he makes it clear (beginning at **For this reason that part,** etc. {423a6}).

{422B34–423A6} THE TRUTH ABOUT THE SECOND PUZZLE

135–154. In connection with the first we should know that through the following argument it could seem to someone that flesh is the organ for sensing by touch: that straightaway when our flesh is touched we sense tangible qualities. /526/ So to rule out this argument Aristotle says that to assess **whether** the organ of touch **is inside or instead flesh** is straightaway the organ of touch, **it** does not **seem to be** a sufficient **indication** that **right when** the flesh is **touched,** a **sensation** *(sensus)* of the tangible quality **is produced**—i.e., it is sensed. For, **even as things are, if someone** were to **stretch** some sort of skin or fine web **around the flesh,** then straightaway, at the touch of what was stretched over the flesh, the tangible quality would be sensed. But **still it remains the case that** the organ of the sense of touch would **not** be **in** that stretched-over skin. **And,** further, it is clear that **if** that stretched-over skin were made to be **naturally connected** *(connaturalis)* to that person, then [the quality] would be sensed through it **more quickly.** So even though the tangible quality is sensed straightaway when the flesh that is naturally connected to a human being is touched, it follows, not that flesh is the organ of touch, but that it is a kind of naturally connected medium.

1. For clarification, see below, 202–206.

is beautiful and another ugly. Still, this does not prevent hearing from being one sense, and likewise for sight. Hence the multiple contrary pairs of tangible qualities do not seem to keep touch from being one sense.

{422B32–34} THE SOLUTION DISPROVED

73–80. /521/ Next, when Aristotle says **But what the one subject,** etc., he rules out the solution introduced. He says that there is **one subject**—namely, **sound**—for all the contrary pairs connected to things that can be heard; likewise, there is color in connection with things that can be seen. But we cannot find **what the** common **subject is** of all the contrary pairs connected to things that can be touched. As a result, there does not seem to be one genus of tangible qualities, and so neither is touch one sense.

Whether Touch Is One Sense or Many

81–105. /522/ In order to clarify the things that are said here, we must consider that the distinction of powers and objects is proportional. Therefore, since one sense is one power, the sense object corresponding to it must be one genus. The Philosopher showed in *Metaphysics* X [1055a23–33], however, that in one genus there is one first contrary pair. So it must be that in connection with the object of one sense, only one first contrary pair is present. Thus he says here that one sense is "concerned with a single pair of contraries" [422b23]. /523/ In one genus, nevertheless, there can be many contraries after the first. This can occur, first, through subdivision. In the genus of bodies, for instance, the first contrary pair is that with soul and that without soul. Body with soul is divided into the sensory and nonsensory; then the sensory is divided into the rational and nonrational. So the contraries in the genus of body are multiplied. Second, there are many contraries in one genus *per accidens.* In the genus of body, for instance, there is the contrary pair black and white, and others with respect to all the things that can be accidental to a body. And in this way we should understand, regarding sound and vocal sound, that beyond the first contrary pair of flat and sharp, which is *per se,* there are other contrary pairs—i.e., those *per accidens.*

105–129. /524/ In the genus of tangible qualities, however, there are many first contrary pairs *per se.* Still, all of these are, in a way, reduced to one subject; and in a way they are not. For in one way the subject of a contrary pair can be taken as the genus itself that is related to contrary differences like potentiality to actuality. In another way the subject of a contrary pair can be taken as the substance that is the subject of the genus to which the contraries belong: if, for instance, we say that a colored body is the subject of white and black. Therefore, if we were to speak of the subject that is the genus, then there is clearly not the same subject for all tangible qualities. If, however, we were to speak of the subject that is the substance, then there is one subject for all of them—namely, the body pertaining to the animal's constitution. (For this reason the Philosopher will say below [II.23.423b26–27] that tangible qualities belong to a body insofar as it is a body—the qualities, that is, by which the elements of a body are distinguished from one another.) For the sense of touch discriminates between things that pertain to the constitution of the animal's body.[1] So, formally speaking and conceptually *(secundum rationem),* the sense of touch is not one, but many. It is, however, one in subject.

130–134. *Analysis.* /525/ Next, when Aristotle says **Now as to whether,** etc. {422b34 ff.}, he takes up the second question. And in this connection he does two things. First, he presents his account of the truth; second, he makes it clear (beginning at **For this reason that part,** etc. {423a6}).

{422B34–423A6} THE TRUTH ABOUT THE SECOND PUZZLE

135–154. In connection with the first we should know that through the following argument it could seem to someone that flesh is the organ for sensing by touch: that straightaway when our flesh is touched we sense tangible qualities. /526/ So to rule out this argument Aristotle says that to assess **whether** the organ of touch **is inside or instead flesh** is straightaway the organ of touch, **it** does not **seem to be** a sufficient **indication** that **right when** the flesh is **touched,** a **sensation** *(sensus)* of the tangible quality **is produced**—i.e., it is sensed. For, **even as things are, if someone** were to **stretch** some sort of skin or fine web **around the flesh,** then straightaway, at the touch of what was stretched over the flesh, the tangible quality would be sensed. But **still it remains the case that** the organ of the sense of touch would **not** be **in** that stretched-over skin. **And,** further, it is clear that **if** that stretched-over skin were made to be **naturally connected** *(connaturalis)* to that person, then [the quality] would be sensed through it **more quickly.** So even though the tangible quality is sensed straightaway when the flesh that is naturally connected to a human being is touched, it follows, not that flesh is the organ of touch, but that it is a kind of naturally connected medium.

1. For clarification, see below, 202–206.

{423A6–16} THE FIRST PUZZLE MADE CLEAR

155–171. /527/ Next, when Aristotle says **For this reason that part,** etc., he draws a conclusion that serves to make the first question clear. And he says that, just as flesh is like a naturally connected medium for the sense of touch, it **seems** that this **part of the body stands** relative to that sense **just as the air** around us **would, if that air were** naturally connected to **us.** For then it would seem that that air is the organ of sight, hearing, and taste—although it is the medium—and so **we would seem to sense sound, smell, and color by one** organ. **And,** consequently, there would seem **to be one sense of hearing, sight, and smell.** But **as things are,** since the medium **through which the movements** of the just-mentioned sense objects **are made is delimited**—i.e., distinct from us—it is clear that it is not an organ; so it is clear that the organs of the three senses under discussion are distinct and consequently that these senses are distinct.

171–186. But **this is** not clear **in the case of touch,** because the medium is naturally connected to us. /528/ And he gives a reason for this difference: for air and water, which are the media for the other senses, cannot be naturally connected to us, since **it is impossible** for **a body with a soul** to be made up out **of** pure **Air** and pure **Water.** For since they are wet and fluid, they are neither firm nor easily limited in their own right, but only by some extraneous limit. A body with a soul, however, **must be firm** and limited in itself; hence **it** must be **mixed out of Earth,** Air and Water, just as **flesh demands** *(vult)* to be disposed in animals with flesh. In this way, then, that **body that is the medium** for touch (that is, flesh) can **be naturally associated with**—i.e., naturally united to—**touch,** so that **through** it, as through a medium, the **many sensations** *(sensus)* of touch **are produced.**

{423A17–21} FURTHER CLARIFICATIONS

187–206. /529/ Next, when Aristotle says **What demonstrates this,** etc., he establishes something else so as to make the same point clear. And he says that this same point is demonstrated by the fact that **in the tongue there are many kinds of touch** *(plures tactus).* **For** we sense through the tongue **all** the **tangible qualities** that we sense through other parts of the body. **And,** further, we sense **moistness**—i.e., flavor—through it, something that we do not sense through any other part of the body. **If,** however, **the rest of our flesh were to sense** flavor, **then** we would not discern between **taste and touch,** just as we do not, as things are, discern between touch that discriminates dry and wet

and touch that discriminates hot and cold. But **as things are** it is evident that taste and touch **are two** senses, because **they are not** mutually **interchangeable.** For it is not the case that taste is produced by each one of the parts that produce the sensation *(sensus)* of touch. The reason for this is that flavors are not qualities of the elements, and it is out of these elements that an animal's body is built up. As a result, flavors do not pertain to an animal's constitution in the way that tangible qualities do.

Chapter 23

The Proper Object of Touch (Continued)

DE ANIMA II.11.423A21–424A16

423a21–b1. Now someone will indeed wonder: if every body has depth (this is the third magnitude), then when some body is the medium for certain bodies, these cannot touch one another. Nothing is wet or moist, however, without a body; instead, it is necessary that it be water or have water. Now things that touch one another in water, unless their extremities are dry, necessarily have water as a medium, with which their exteriors are covered. If this is true, however, then it is impossible for one thing to touch another in water. But this holds in the same way for air, too. For air stands to things in air like water to things in water. This is more hidden from us, just as also [it is hidden from] animals that exist in water whether one moist thing touches another.

423b1–12. Does the sensation of all things, then, occur in much the same way? Or [does the sensation] of different ones [occur] in different ways? For instance, as things are, it seems that taste and touch involve touching, whereas the others occur from far off. This, however, is not the case; rather, we sense hard and soft through other things, just as also what can make a sound, be seen, and be smelled. But these of course occur from far off, and the others up close; for this reason [the medium] is hidden. For we do indeed sense all things through a medium, but this is hidden in these [latter] cases. And just as we said earlier, even if we were to sense everything tangible through a skin, unaware that it stood in the way, we would be in a position like we are now in water and air. For as things are we suppose that we touch those things and that there is no medium.

423b12–17. But what can be touched differs from things that can be seen and that produce sound. For we sense the latter by the medium's moving us in some way, whereas [we sense] tangible things not by the medium but concurrently with the medium, like someone struck through a shield. For it is not that the shield, once struck, struck [the man]. Rather, it happens that the two are struck concurrently.

423b17–26. Now it seems in general that, just as air and water are related to sight, hearing, and smell, so flesh and the tongue are related to [their] sensory capacity as each of those is. If the sensory capacity is touched, however, then sensation will take place in neither one nor the other: for instance, if someone places a white body on the eye's exterior. Through this it is clear

that the sensory capacity for the tangible is inside. For what happens in the case of the others will so happen [here]: for they do not sense things placed on the sensory capacity, whereas they do sense things placed on the flesh. For this reason flesh is the medium of the capacity for touch.

423b26–424a10. Tangible qualities, then, are the different characteristics of a body considered as body. Now I speak of the different characteristics by which the elements divide—the hot, the cold, the wet, the dry; these have already been discussed in connection with the elements. The sensory capacity for these things, however, which is the capacity for touch and in which the sense named touch exists first, is the part that is potentially of this sort. For to sense is a kind of being affected. Thus what makes [the sense] be as it [itself] is actually, makes it be of that sort, since it is in potentiality. Thus we do not sense what is likewise hot and cold, or hard and soft, but rather the extreme instances—inasmuch as [this occurs] by means of a sense existing in, as it were, a certain mean-state between contraries in the sense objects. And it is because of this that sensory capacities discern sense objects. For the mean discriminates: relative to each of these it is made the other of the ultimate [contraries]. And it must be that, just as what should sense white and black is neither of these actually yet both potentially, so also in the case of the others: and in the case of touch, neither hot nor cold.

424a10–16. Further, just as sight was concerned in a certain way with the visible and the invisible, and likewise too the rest are concerned with opposites, so too touch is concerned with the tangible and the intangible. But the intangible [is] what has very little of the distinguishing characteristic of tangible qualities, as happens with air, and the extreme instances among tangible qualities—for example, those that are capable of harming [the sense]. We have indeed, then, spoken in outline with respect to each of the senses.

1–8. *Analysis.* /530/ Having shown that a naturally connected medium is required for the sense of touch, the Philosopher here investigates whether an outside medium is required for it. And in this connection he does two things. First, he shows that touch is not produced without an outside medium. Second, he shows in what respect touch and taste differ from the other senses that sense through an outside medium (beginning at **Does the sensation,** etc. {423b1}).

{423A21–B1} TOUCH INVOLVES AN OUTSIDE MEDIUM

9–31. So Aristotle says first that with regard to touch **someone** can **wonder** whether, since it was shown to have a naturally connected medium, it has

an outside medium. This puzzle arises **if every body has depth,** which **is the third** dimension. (For it is clear that every body has three dimensions: length, width, and depth.) From this it follows that **when some body is the medium** between any given **bodies, these** do **not touch one another** immediately. For they are distant from each other, because there is some dimension between them. /531/ It is clear also that wherever there is **wet** or **moist,** there must be some **body.** For moisture, since it is a kind of quality, exists only in an underlying *(subiecto)* body. Therefore either [the moisture] exists in some body in its own right, and then it is wet (like water), or it has moisture in virtue of some body belonging to it. In this latter way [that body] is called moist, because it has water either on its surface only or on its surface and inside. And this is why he says that **it is necessary** for every wet or moist body to **be water or have water.**

31–52. It is clear, however, that bodies **that touch one another in water necessarily have** between themselves **water as a medium, with which their exteriors are covered—unless** perhaps it is said that **their extremities are dry** in water, which is impossible. For it is necessary that things in water be moist, and so they must have water on their surface. So the result is that between two things touching each other in water, water is the medium. And, **if this is true,** it follows that **it is impossible** that **one** body **touch another in water** immediately. And, likewise, things hold **in the same way** for **air,** which is naturally wet, just like water. /532/ **For air stands to** the moistening of **things in air** in just the way that **water** stands **to** the moistening of **things in water.** But the fact that air is a medium **is more hidden from us** than the fact that water is; the reason for this is that we exist in air all the time, and so it adheres to us imperceptibly. And in much the same way it is hidden from **animals that exist in water whether** two **moist** bodies **touch** one another through water. For because they exist in water all the time, they do not perceive the water that is between them and the bodies touching [them].

53–55. There is, moreover, another reason why this is more hidden from us in the case of air than in the case of water: for air is more subtle and less perceptible to the senses.

56–58. When we touch something, then, it follows that air or water is always a medium between us and the things we touch.

Can Air and Water Be the Media for Touch?

60–66. /533/ But here a question arises. For that which is a medium for any sense must be free of the qualities that are sensible by that sense—just as a diaphanous medium has no color. It is clear, however, that air and water have tangible qualities. Therefore the sensation *(sensus)* of touch cannot occur with them as the medium.

Averroes' Position

67–80. /534/ Now Averroes replies to this that we are not affected by pure Air or Water.[1] For things are affected only by their contraries, as regards the source of their being affected. Air and Water, however, are not contrary to us, but rather like us; for they are related to us as place is related to what is in that place *(sicut locus ad locatum).*[2] Thus our sense of touch is not affected by the qualities of Air or Water, but by outside qualities. For what is sensed of the tangible qualities in Air and Water comes from outside bodies' being mixed in (or so Averroes says). For just as Fire never loses its heat, so neither does Water lose its cold; but it sometimes seems hot as the result of an outside thing's being blended in.

How Averroes Is Mistaken

81–92. /535/ There is, however, more than one mistake in this reply. First, [Averroes is mistaken] inasmuch as he says that our bodies are not affected by Air or Water because they are like us, as place is like what is in that place. For it is clear that our bodies obtain their natural place, just like their natural motion, from the nature of their predominant element. Therefore they are related to place and to the bodies enclosing our bodies in the same way as are the elements themselves in that place. But elements alter *(alterant)* one another at their extremities, as Aristotle makes clear in *Meteora* [I.340b4–29]. Therefore our bodies are naturally suited to be altered by the elements.

92–101. /536/ Also, everything in potentiality is naturally suited to be affected by what is in actuality. Our bodies, however, since they are made to be in a kind of mean-state between the extremes of the tangible qualities that are in the elements, are related to the elemental qualities as potentiality to actuality. For the mean is in potentiality for the extremes, as will be said later [424a6–10]. Therefore it is clear that our bodies are naturally suited to have an impression made on them *(immutari)* by the qualities of the elements and to sense those qualities.

101–123. /537/ This mistake, however, comes from Averroes' not knowing to distinguish between elements insofar as they are contraries of one another and insofar as they contain one another and are like one another, much as

1. Averroes, *De anima* II.115 (308.43–309.81); cf. Albert the Great, *De anima,* 145–46.

2. Aquinas is referring to the Aristotelian doctrine of place, described in the first part of *Physics* IV. Aristotle describes an object's place as the limiting boundary of what surrounds the object. It is "the boundary of the containing body at which it is in contact with the contained body" (212a6–7). To form an initial image of this, think of the eggshell as the place of the egg white and yolk inside. But Aristotle defines place as a *limit,* which means that the place of the egg white and yolk would be, not the whole shell, but the innermost boundary of the eggshell—i.e., the set of points at which the shell is in contact with the egg white.

place relative to what is in that place. /538/ So we should say that elements can be considered in two ways: in one way in terms of their active and passive qualities, and in this way they are contraries of one another and make an impression on one another at their extremities; in another way in terms of their substantial forms, which depend on *(consequuntur)* the influence of a heavenly body. Hence the nearer some elemental body is to a heavenly body, the more form it has. And because it pertains to form to contain that relative to which it is whole, it follows that a higher body contains a lower one and is related to it as whole to discrete part, which is the relationship of place to what is in that place.[3] And for this reason the power of placing and containing is issued to the elements from what first contains [them]—namely, a heavenly body. And on this account place and local motion are not attributed to the elements in virtue of their active and passive qualities, but depend on the substantial forms of the elements.

124–136. /539/ Another mistake comes when Averroes says that Water and Air are altered only through an outside object's being mixed in. For it is clear that Air and Water are in part corruptible. In the case of the elements, however, corruption and generation can occur without mixing; they follow alteration, as is clear in the *De generatione* [cf. I.315b16–317a31]. Thus it is clear that Water, while still enduring in its species, can receive an impression from its own natural quality without an outside object's being mixed in. But Fire, since it is more formal, is the more active of the elements, all of which are related to it as material (as *Meteora* IV [379a16] says). Thus there is no similarity between this case and the others.[4]

How Air and Water Are Media for Touch

137–148. /540/ So air and water can easily be transformed by outside qualities—especially when there is a small quantity of them, as is the case for the air and water between two bodies touching one another. Thus we should say that there is no impediment to the sense of touch's being able to function through the medium of air and water. And air impedes it even less than water, because air has tangible qualities that are hardly sensible. So if the tangible qualities of air or water are intensified, then touch is more impeded—as, for instance, when air or water has taken on an intense cold or heat.

3. Compare Aristotle, *Physics* IV.211a29-34.

4. Compare lines 77–78 above, where Averroes is reported as arguing that "just as Fire never loses its heat, so neither does Water lose its cold." Here Aquinas maintains that the two cases are not entirely analogous, and that water—even pure, elemental Water—can receive the impression of something cold and therefore can transmit that impression to the sense of touch. This removes the principal difficulty in treating Air and Water as media for the sensation of tangible qualities.

HOW TOUCH AND TASTE DIFFER FROM THE OTHER SENSES

149–153. *Analysis.* /541/ Next, when Aristotle says **Does the sensation,** etc. {423b1 ff.}, he shows what the difference is between taste and touch and the other senses. And first he rules out one imagined difference; second, he introduces the true difference (beginning at **But what can be,** etc. {423b12}).

{423b1–12} ONE IMAGINED DIFFERENCE RULED OUT

154–176. So he says first that, given that touch has an outside medium, this should be considered: **Does the sensation** *(sensus)* **of all** sense objects take place **in much the same way? Or [does the sensation]** of different ones [take place] in different ways? **For instance,** the difference offhand **seems** to be **that touch and taste** sense as a result of immediately **touching, whereas the others** sense their sense objects **from far off** without touching them. /542/ But **this is not** true, that they differ in this way. **Rather, we sense hard and soft** and different tangible qualities **through other things** (i.e., through outside media) **just as** we do **also** the objects of the other senses (viz., **what can make a sound, be seen, and be smelled**). **But** these sense objects are sometimes **far** from the senses, whereas the tasteable and tangible are **close** inasmuch as the medium is nearly imperceptible, being so tiny. And thus the medium **is hidden:** for **we sense all** sense objects **through** an outside **medium, but this is hidden in** the case of things that can be tasted and touched. For, **as we said earlier** [II.22.423a2–4], **if we were to sense everything tangible through** some **skin** pulled around us, **unaware that** there was something standing **in the way, we would be in a position** as regards sensing through [that] medium **like** the one we are **now** in when sensing **in water and air. For as things are we suppose that we touch those** sense objects **and that there is no medium.**

{423b12–17} THE TRUE DIFFERENCE

177–187. /543/ Next, when Aristotle says **But what can be touched,** etc., after having ruled out a false difference, he introduces the true one. And he says that things that **can be touched differ from things that can be seen and that produce sound.** The reason is that **we sense the latter** sense objects through their moving the medium and then **the medium's moving us.** But we sense **tangible things** through an outside medium: **not** as if moved **by the** outside **medium, but concurrently with the medium** we are moved by the sense object. This is plainly **like** the case of **someone struck through a shield. For** this

does **not** happen in such a way **that the shield, once struck,** strikes [the man]. **Rather, it happens that** each is **struck concurrently.**

The Order Is Causal, Not Just Temporal

187–198. /544/ When Aristotle says here "concurrently" *(simul),* this should not be understood in terms of temporal order only. For even in sight's case the medium is moved by the object and the sense by the medium concurrently. For vision occurs without succession, whereas the perception of sound and smell occurs with some succession, as Aristotle will say in *De sensu et sensato* [I.446b25–28, 447a8–11]. Instead, this phrase should be taken as referring to causal order. For in the case of the other senses the medium's alteration *(immutatio)* is the cause of the sense's alteration. But this is not so in the case of touch. For in the case of the other senses there is a medium out of necessity, whereas in touch's case it is, as it were, accidental—inasmuch as bodies touching one another happen to be moist.

THE CORRECT ACCOUNT OF TOUCH

199–204. *Analysis.* /545/ Next, when Aristotle says **Now it seems in general,** etc. {423b17 ff.}, he presents his account of the sense of touch as regards the truth. He does so first as regards the medium, second as regards the organ's qualities (beginning at **Tangible qualities, then,** etc. {423b26}), third as regards the object perceived by the sense (beginning at **Further, just as,** etc. {424a10}).

{423B17–26} THE MEDIUM

205–217. So he says first that **flesh and the tongue seem related** to the organ of the sense of touch **just as air and water are related to** the organ of **sight, hearing, and smell.** For **sensation** can **take place** in none of these senses if the organ is **touched. For instance, if someone places** some **white body on the eye's** surface, it is not seen. Thus **it is clear** in the case of the sense of touch that the organ of the **sensory capacity is inside. For** it **so happens** in the case of this sense just as **in the case of the others: for they do not sense** other sense objects **placed on** the sensory organ, **whereas they do sense** sense objects **placed on the flesh. For this reason** it is clear that **flesh** is not the organ of the sense of touch, but **the medium.**

{423B26–424A10} THE ORGAN'S QUALITIES

218–225. /546/ Next, when Aristotle says **Tangible qualities, then,** etc., he shows what the organ of the sense of touch is. And he says that **tangible** qualities **are the different characteristics of a body considered as body**—that is, **the different characteristics by which the elements** are distinguished from one another, namely, **the hot, the cold, the wet,** and **the dry; these have been discussed in connection with the elements,** namely, in Aristotle's *De generatione* [II.329b7–331a6].

225–252. /547/ It is clear, however, that the organ that is **the capacity for touch, and in which the sense** called **touch** is **first** based, **is** a certain **part that is** in potentiality for qualities **of this sort.** For a sense organ is affected by its sense object, since **to sense is a kind of being affected.** Thus the sense object that is the agent **makes** the sense be **actually** such **as** the sense object is, **since it is in potentiality** for this. And for that reason, the organ of touch does not sense a quality with respect to which it is actual. For **we do not sense** that which is **hot** or **cold, hard** or **soft,** with respect to the way that they exist in the organ of touch; **rather,** we sense **the extreme instances** *(excellentias)* among tangible qualities, using an organ of touch made to be in a certain **mean-state** between contrary tangible qualities. **And it is because of this that** the organ of touch **discerns** the extremes of what can be touched. **For the mean discriminates** extremes: for it can be affected by **each** extreme inasmuch as when it is related to one it takes on the aspect of the **other.** In this way lukewarm is cold in comparison to hot, and it is hot in comparison to cold. Hence the mean is affected by each extreme, since it is in a way the contrary of each. **And it must be that, just as** the organ that **should sense white and black** has **neither of these actually** but **both potentially** (and likewise **in the case of the other** senses), **so** too do things stand **in the case of** the sense of **touch.** For the organ is **neither hot nor cold** actually, but both potentially.

How the Organ of Touch Is in Potentiality

253–266. /548/ Still, this happens in different ways with respect to touch and to the other senses. For in the case of sight the organ of sight is in potentiality for white and black inasmuch as it is free of the entire genus of white and black. For it completely lacks color. But the organ of touch cannot be free of the entire genus of hot and cold, wet and dry. For it is composed of elements of which these are the qualities. The organ of touch nevertheless is brought to a potentiality for its objects insofar as it is a mean between contraries: for the mean is in potentiality relative to the extremes. And for that reason, the more an animal has its constitution brought down to the mean, the better touch it

has. Thus among all animals, a human being has the better sense of touch, as was said earlier [II.19.421a19–20].

{424a10–16} THE OBJECT PERCEIVED

267–277. /549/ Next, when Aristotle says **Further, just as,** etc., he presents his account of what is perceived through touch. And he says that **just as in a way sight** is **concerned with the visible and the invisible, and** just as other senses are **concerned with opposites** (as hearing is concerned with sound and silence), **so too touch is concerned with the tangible and the intangible. But the intangible** is spoken of in two ways: either **what has** a slight **tangible** quality, like **air,** or what has it to an **extreme** degree *(excellenter),* so that it harms the sense, as does fire. For each is called intangible, as if unsuitable for being perceived *(male perceptibile)* by the sense of touch.

278–282. /550/ Finally, summarizing, Aristotle concludes that **with respect to each** sense, **we have spoken** of its sense objects **in outline**—i.e., in a kind of *summa.* For he presents his specific account of these things in his book *De sensu et sensato.*

Chapter 24

The Senses

DE ANIMA II.12.424A17–B18

424a17–24. Now universally, regarding every sense, we must hold that sense is capable of taking on *species* without matter, as wax without the iron and gold receives the ring's seal. It acquires the gold or bronze seal, then, but not as gold or bronze. And likewise, the sense of any one thing is affected by something having color, moistness, or sound, but not as any one of those is spoken of, but rather as such and as regards its defining character *(secundum rationem).*

424a24–28. The first sensory capacity, then, is that in which [there is] a power of this sort. They are indeed the same, then, but they are different in being. For what is affected by sensation *(sensum)* **will of course be some sort of magnitude, but still neither the being in the sensory capacity nor the sense** *(sensus)* **is the magnitude; it is instead a certain defining character and power of that [magnitude].**

424a28–b3. It is clear from these remarks, however, why the extremes of sensible qualities harm the sensory capacities. For if the motion is too forceful for the sensory capacity, then [the capacity's] defining character, which is its sense, is broken up—just as harmony and tone is, if [an instrument's] strings are hit too forcefully. It is also clear why plants, having some animal° part and being affected by tangible qualities (for they are both cooled and heated), do not sense. The reason [is that] they do not have the mean-state or a principle of the sort that is able to receive the *species* of sense objects. Instead, they are affected along with the matter.

424b3–5. Some will wonder, however, whether what is unable to have the sense of smell is affected in any way by smell, or [whether] what is not able to see [is affected] by color, and likewise in other cases.

424b5–9. If, however, a smell is something that can be smelled, then smell, if it brings about anything, brings about a sensation of smell *(olfactum).* **Thus none of the things unable to have a sensation of smell are able to be affected by smell. The same argument holds in the other cases too; nor [can any] of the things able [to sense do so], except to the extent that each [has] a sensory capacity.**

424b9–12. But at the same time, this is clear in the following way: for neither light and darkness nor sound nor smell produces anything in

bodies, but [the things] that they are in [do so]—like the air that splits wood when there is thunder.

424b12–13. But tangible and moist qualities have an effect: for if not, then by what would nonliving things be affected and altered?

424b14–16. Therefore do they not have an effect? Or is not every body affected by smell and sound—those being affected that are unlimited and do not persist, like air? For it smells bad, as if affected in some way.

424b16–18. What then is smelling, beyond being affected in some way? Or is to smell to sense? Air, then, when affected by this, right away becomes sensible.

1–9. *Analysis.* /551/ Now that the Philosopher has presented his account of the sense objects for each sense, he here presents his account of sense. And in this connection he does three things. First, he shows what sense is. Second, he derives, from the definition of sense he introduced, the solution to several questions (beginning at **It is clear from these remarks,** etc. {424a28}). Third, he raises a number of puzzles regarding sense's being affected by sensible qualities *(sensibilibus)* (beginning at **Some will wonder,** etc. {424b3}).

9–12. In connection with the first he does two things. First, he shows what sense is. Second, he shows what the organ of sense is (beginning at **The first sensory,** etc. {424a24}).

{424A17–24} WHAT SENSE IS

13–16. So Aristotle says first that **We must universally** and generally **hold** this to be true of **every sense:** that **sense is capable of taking on** *species* without matter, just **as wax receives the ring's seal without the iron and gold.**

How a Sense Takes on Sensible Species

18–26. But this seems common to everything that is affected. For everything affected receives something from its agent, considered as its agent. An agent, however, acts through its form and not through its matter. Therefore everything affected receives a form without matter. This is apparent even to the senses. For air does not receive matter from the fire acting on it but instead receives a form. Therefore it does not seem to be special *(proprium)* to sense that it can take on *species* without matter.

27–45. /552/ We should say, then, that although it is common to everything affected to receive a form from its agent, still there is a difference as regards the manner of receiving. For sometimes the form that the thing affected receives from its agent has the same manner of being in the thing affected and in the agent. This happens when the thing affected has the same disposition for the form that the agent has. For everything is received in another according to the manner of the recipient. So if the thing affected is disposed in the same manner in which the agent is, then the form is received in the thing affected in the same manner as it existed in the agent. In that case, form is not received without matter. For although matter numerically the same as the agent's matter is not produced in the thing affected, still [the thing affected] is in a certain way made the same inasmuch as it acquires a material disposition for the form similar to the agent's. And it is in this manner that air is affected by fire, and so too for anything else affected naturally.

45–59. /553/ Sometimes, on the other hand, a form is received in the thing affected according to a manner of being different from the agent's, because the thing affected's material disposition for receiving is not like the agent's material disposition. In that case, a form is received in the thing affected without matter, insofar as the thing affected is made like the agent with respect to form and not matter. And this is how sense receives form without matter. For the form has a different manner of being in the sense and in the sense object: for in the sense object it has natural being, whereas in the sense it has intentional or spiritual being. /554/ And Aristotle provides an appropriate example, that of the signet ring and the wax. For the wax's disposition for the image is not the same as what was in the iron and gold.

60–75. *{424a17–24, Continued}* And so he continues that the wax **acquires the seal**—i.e., the **gold or bronze** image or shape—**but not as** it is **gold or bronze.** For the wax is made like the gold signet as regards the image but not as regards the gold's disposition. **And likewise sense is affected by** a sense object **having color, moistness** (flavor)**, or sound, but not as any of those is spoken of**—i.e., it is not affected by a colored stone as stone, or by sweet honey as honey. This is because no disposition for the form like [the disposition] that was in those subjects is produced in the sense; **rather,** it is affected by them **as such,** i.e., as colored or flavorful, **and as regards its defining character** *(secundum rationem)*, i.e., as regards its form. For the sense is made like its sense object as regards form, not as regards its material disposition.

{424A24–28} WHAT THE ORGAN OF SENSE IS

76–95. /555/ Next, when Aristotle says **The first sensory capacity,** etc., he presents his account of the organ of sense. For because he just said that sense is capable of taking on *species* without matter, which also applies to intellect,

someone might believe that sense is not a power in a body, as intellect is not.[1] So to rule this out he assigns an organ to it. And he says that **the first sensory capacity**—i.e., the first organ of sense—**is that in which** there is **a power of this sort** (a power, namely, that is capable of taking on *species* without matter). Therefore the sensory organ, along with the power itself (for example, the eye), **are the same** in subject, **but they are different in being,** because the power differs from the organ in defining character *(ratione).* For the power serves as *(est quasi)* the organ's form, as was established earlier [II.2.412b17–22]. And so he adds that **what is affected by sensation** *(sensum),* i.e., what is capable of taking on sensation without the form's matter, is a **magnitude,** i.e., a corporeal organ. **Still,** the defining character of **a magnitude** and of **the sensory capacity** or **the sense** *(sensus)* is not the same. **Rather,** the sense **is a certain defining character**—i.e., proportion and form[2]—**and power of that** (of the magnitude).

{424a28–b3} THE SOLUTION TO TWO QUESTIONS

96–110. /556/ Next, when Aristotle says **It is clear from these remarks,** etc., he derives from the foregoing remarks the solution to two things that might be asked. And he says that **It is clear from** what we have been discussing **why the extremes of sensible qualities harm** the sensory organs. For in the organs of sensing, if they are to sense, there must be "a certain defining character"—i.e., a proportion—as was just said [424a27–28]. Therefore, **if the motion** of a sensible quality is made more **forceful** than what the organ is naturally suited to be affected by, **then** its proportion **is broken up,** and **the sense,** which (as was said) consists in the organ's having a certain proportion, is harmed. And this is **just** like what happens when someone **hits [an instrument's] strings too forcefully:** the **harmony and tone** of the instrument, which consist in a certain proportion, are broken up.

1. Compare III.7.429a24–27.

2. Here, as elsewhere, 'defining character' translates *ratio,* a term that is notoriously difficult to render in English. Indeed, Aquinas himself offers two suggestions here: think of it as proportion, he suggests, and think of it as form. (Notice that he offers these not as alternatives but as aspects that are jointly required for understanding the term.) 'Proportion' gets at the sense of *ratio* as somehow literally the ratio between various component parts. (For this usage, see III.2.426a27–b8.) 'Form' suggests a more abstract reading of *ratio,* as perhaps something like functional description.

When Aquinas speaks of a difference in "defining character" (lines 87–88), he is thinking of something like a conceptual difference, a difference in how we describe or think about something. Elsewhere I simply translate this as "conceptual difference."

111–125. /557/ And from what we have been saying the explanation of another question is also clear: **why,** that is, **plants do not sense,** even though they have **some part** of the soul **and** are **affected by** some sensible qualities—by **tangible qualities,** that is, since it is clear that **they are heated** and made cold. **The reason,** then, why they do not sense is that the proportion required for sensing is not in them. For with respect to their constitution **they do not have the mean-state** among tangible qualities that is required for the organ of touch, without which no sense can exist. Thus they do not have in themselves **a principle of the sort that** can **receive** a *species* without matter—viz., a sense. It is **instead** the case that **they are affected along with the matter**—viz., in terms of a material change.

{424b3–5} A PUZZLE OVER HOW SENSIBLE QUALITIES AFFECT THINGS

126–134. /558/ Next, when Aristotle says **Some will wonder,** etc., he raises one particular puzzle regarding how sensible qualities affect things. For he just said that plants are affected by tangible qualities. Therefore he first raises a puzzle about whether something could **be affected by** the other sensible qualities without having the sense: for instance, what does not **have the sense of smell, by smell;** what does **not** have sight, **by color;** or what does not have hearing, by sound.

{424b5–9} ONE REPLY

135–143. /559/ Second, beginning at **If, however, a smell,** etc., Aristotle introduces two arguments to show they could not. The first of these is that it is a special feature of what can be smelled that it brings about the sensation of smell. But **a smell is something that can be smelled.** Therefore, **if it brings about anything,** it **brings about a sensation of smell.** Therefore what does not **have** a sense **of smell** cannot **be affected by smell.** And **the same argument** seems to hold for **the others:** that it does not belong to any given thing to be able to be affected by sensible qualities, but belongs only to things that have sense.

{424b9–12} A SECOND REPLY

144–152. /560/ Aristotle presents a second argument beginning at **But at the same time,** etc. And he says that the same conclusion that the first argument

reaches **is clear** from experience. For **light and darkness, smell,** and **sound produce** no effect **in** nonsensory **bodies**—unless perhaps *per accidens,* inasmuch as bodies with these sorts of qualities do something. An example would be **the air that splits wood** when **there is thunder.** Here the wood is affected not by the sound, speaking *per se,* but by the air that is moved.

{424B12–13} TANGIBLE QUALITIES ARE DIFFERENT

153–164. /561/ Third, beginning at **But tangible and moist,** etc., Aristotle shows that the case is different for tangible qualities. And he says that **tangible and moist qualities**—i.e., flavors—**have a** certain **effect** in nonsensory things. (This, however, should be understood of flavors not insofar as they are flavors, but insofar as what can be tasted is a kind of tangible quality, and taste a kind of touch.) **For if** nonsensory bodies were **not** affected by things that are tangible, then there would be no saying **by what nonliving things** are **affected and altered** *(alterarentur).* For things that are tangible are the active and passive qualities of elements in virtue of which alteration universally takes place in bodies.

{424B14–16} OTHER SENSIBLE QUALITIES ACT ON THE NONLIVING

165–186. /562/ Fourth, beginning at **Therefore do they not,** etc., Aristotle shows that other sensible qualities also act on some nonliving things, although not on all. He says **Therefore do they**—viz., other sensible qualities as well—**not have** some **effect** in nonliving things? This is as if to say, "Yes, they do." But still, **not every body** is **affected by smell and sound,** in the way that every body is affected by heat and cold. Rather, only bodies **that are unlimited and** that **do not persist** can be **affected** by these sensible qualities—**like air** and water, which are wet and not well defined by a distinct limit. And that air could be affected by smell is clear because air **smells bad, as if affected in some way** by a smell. (Another text has "will carry," because the media for the other senses carry the *species* up to the senses.)[3] The reason there is a difference, however, is that tangible qualities are the causes of the other sensible qualities, and thus they have more active power and can act on any bodies whatsoever. But the other sensible qualities, since they have less active power,

3. James of Venice's twelfth-century translation had *feret,* "will carry"; Moerbeke rightly revised the translation to read *fetet,* "smells bad."

can act only on bodies extremely prone to be affected. And the same account holds for the light of heavenly bodies, which alters lower bodies.

{424B16–18} THE FIRST REPLY REJECTED

187–195. /563/ Fifth, beginning at **What then is smelling,** etc., Aristotle dispels an argument introduced earlier [424b5–9]. He says that if something that does not smell is somehow affected by a smell, then **what is smelling** if not **being affected in some way** by smell? And he answers that **to smell is** to be affected by a body in such a way as **to sense** the smell. **Air, then,** is not affected in such a way that it senses, because it does not have a sensory power. Instead, it is **affected** in such a way that it is **sensible**—inasmuch, that is, as it is the medium in sensation.

Book III

Chapter 1

The Internal Senses
There Are No Further Proper Senses

DE ANIMA III.1.424B22–425B11

424b22–24. Someone might believe on the following basis that there is no further sense beyond the five [already mentioned]. (I am speaking of these: sight, hearing, smell, taste, and touch.)

424b24–425a2. For if we have a sensation of every [quality] of which there is a sensation of touch (for we can sense through touch all the states *[passiones]* of what is tangible, considered as tangible), then it is necessary that if we lack any sensation we lack the organ. And, indeed, whatever things we sense while touching them are sensible by means of touch, which we exist in possession of. But whatever things [we sense] through media and not while touching them [are sensible] through simple things (I am speaking now of things like air and water). The situation, then, is as follows: if through one [capacity] there are a number of sensible qualities different from one another in kind, then, necessarily, someone with a sensory capacity of this sort is capable of sensing each (if, for example, the sensory capacity comes from air, and air is for sound and for color). But if there is more than one [capacity] for the same [object], as both air and water are for color (for each is a diaphanous medium), then anything that has either one of these will sense what [can be sensed] through each (or by both).°

425a3–13. Of simple things, the sensory capacities come from these two only—from Air and Water. For the pupil involves Water, and hearing Air, whereas the sense of smell involves one or the other of these. Fire, however, belongs either to no [sense] or is common to all; for nothing is capable of sensing without heat. Earth, on the other hand, either belongs to no [sense] or is mixed in with touch, above all. Thus it remains that there is no sensory capacity outside Air and Water. But, as things are, certain animals have these. Therefore all of the senses are possessed by those [animals] that are not incomplete or deformed. (For it seems that even the mole has eyes under its skin.) So unless there is some other body and state that belongs to none of the bodies that are here, we will not lack a single sense.

425a13–16. Nor can there be any proper capacity for sensing the common objects that we sense through each sense nonaccidentally,° such as motion, standing still, shape, size, number, and unity.

425a16–21. For we sense all of these by motion—size, for instance, by motion, and hence also shape. (For shape too is a kind of size.) Now what is at rest [is sensed] inasmuch as it is not moved, and number by the negation of continuity and by its identifying properties. For each sense senses unity. Thus it is clear that it is impossible for there to be a sense proper to any one of these.°

425a21–b3. For if there is, then it will be just as now when we sense something sweet through sight. This, however, is because we exist so as to have a sense of both; because of this, when they coincide, we cognize [in this way]. Yet if not, then [we would] not in any way at all [have this cognition], or rather, we would sense by accident, as [we sense] the son of Cleon: not because he is the son of Cleon, but since he is white, whereas being the son of Cleon is accidental to this. For common objects, however, we in fact have a common sense, which is nonaccidental; therefore, there is not a proper [sense]. For [if there were, then] we would not in any way at all sense [these objects], or rather [we would do so] just as we were said to see the son of Cleon. For the senses sense the proper [objects] of one another accidentally: not with respect to how they are, but rather with respect to being one, because the sense occurs concurrently in connection with the same [object]—bile, e.g., that it is bitter and reddish. For it does not belong to another [sense] to say that both are one. And this explains why [the sense] is deceived: for if it is reddish, it is believed to be bile.

425b4–b11. Now someone will ask why we have many senses and not only one. Is it inasmuch as the things that follow and are common are less hidden, like motion, size, and number? For if there were only sight, and it were concerned with white, then they would indeed be more hidden, and they would all seem to be the same, because color and size follow concurrently from one another. As things are, however, since the common [sense objects] occur in another sense object, that makes it clear that each one of them is something different.

1–12. *Analysis.* /564/ For the Greeks, Book III begins here, and reasonably so, because from this point on Aristotle takes up his inquiry into intellect.[1] For there were some who claimed that sense and intellect are the same.[2] It is clear, however, that intellect is not one of the external senses we have been discussing, because it is not confined to having cognition of one kind of sense object. This leaves an inquiry into whether there is any other cognitive power

1. It is unclear where *Aquinas* places the beginning of Book III; see the Introduction.
2. See below, III.4.427a21–26.

in the soul's sensory part, so that on this basis we can see whether intellect is in any way a sense.

13–20. /565/ This part, then, is divided into three parts. In the first Aristotle asks whether there is another sense beyond the five external senses we have already discussed. In the second part he shows that intellect and sense are in no way the same (beginning at **But now because they define,** etc. {III.4.427a17}). In the third, after having shown that intellect is not a sense, he presents his account of the soul's intellective part (beginning at **Now regarding the part of soul,** etc. {III.7.429a10}).

20–24. The first of these parts is divided in two. In the first he shows that there is no other proper sense beyond the five already discussed. In the second he shows that beyond the proper senses there is a common sense (beginning at **Now because we sense,** etc. {III.2.425b12}).

25–28. In connection with the first of these he does two things. First, he shows that there is no other [proper] sense beyond the five; second, he shows why there are many senses and not just one (beginning at **Now someone will ask,** etc. {425b4}).

28–33. In connection with the first he does two things. First, he shows that beyond the five there is no other sense that has cognition of proper sense objects. Second, he shows that beyond the five there is no other sense whose object is common sense objects (beginning at **Nor can there be,** etc. {425a13}).

34–41. /566/ In connection with the first of these Aristotle uses an argument of this sort: whatever has an organ of sense through which certain sensible qualities *(sensibilia)* are naturally suited to be cognized has cognition of all the sensible qualities that are naturally suited to be cognized through that organ [424b24 ff.]. But complete animals have all the organs of sense [425a3 ff.]. Therefore they have cognition of all sensible qualities. Therefore, since they have only five senses, there will be no other sense, as regards the proper sensibles, beyond the five.

{424B22–24} HIS PLAN

42–46. /567/ Aristotle sets his argument out in the following way. First, he puts forward his plan, saying that **on** the **basis** of what follows **someone** can be sufficiently moved to **believe that there is no** other **sense beyond the five** discussed already.

{424B24–425A2} THE ARGUMENT'S FIRST PREMISE

47–70. /568/ Second, beginning at **For if we have,** etc., he makes clear the first premise of the argument being introduced, namely, that an animal having some organ of sense has cognition of all the sensible qualities that can be sensed through that organ. He makes this clear for the sense of touch, because it is clear how many tangible qualities there are. For he said earlier [II.23.423b26–27] that the tangible qualities are the different characteristics of a body composed of the elements and considered as such. (These [characteristics] have been made clear from the accounts that have been given of the elements.)[3] In this way, it can be made clear to us that we sense all tangible qualities, /569/ and from this he concludes through the similarity in other cases that, if we have a particular organ, then we have the sensation *(sensum)* of the qualities naturally suited to be cognized through that organ. This, then, is what he says: that **if we have the sensation of every** quality that **touch is** capable of perceiving (which is apparent from the fact that **all tangible states considered as** such are sensed by us), then it is **necessary** to say in every case that **if we lack** the **sensation** of any sensible qualities then **we lack the organ** by which those sensible qualities are naturally suited to be cognized. For if we had the organ we would have cognition of the qualities.

70–97. And now this claim, since it was stated generally, is made clear through individual examples: /570/ first, as regards things that are cognized without an outside medium. And this is why he says that **whatever things we sense while touching**—i.e., without an outside medium—can be sensed through the organ of **touch which we** possess. But as regards the sensible qualities that we sense **through** the outside **media,** which are **simple** bodies (namely, **air and water),** qualities that we do **not** sense by **touching them, the situation is as** I have said: viz., **if through one** organ **a number of sensible qualities** differing **from one another in kind** can be sensed, then it is **necessarily** the case that one who has an organ **of this sort** senses **each** kind. For example, **if** some organ **comes from air and air** can be altered *(immutari)* by **color and sound,** then it follows that anyone who has an organ of this sort can perceive both sound and color. **But if,** on the contrary, **more than one** organ **is** capable of taking on **the same** sensible quality, just **as air and water (each** of which **is a diaphanous medium) are** receptive *(perceptiva)* of **color,** then it follows that an animal **that has either of** these can perceive **what** is perceptible **through each** (that is, through the media) **or by both** (that is, by both instruments). (He speaks in this way because the organs of the senses that sense through an outside medium conform to the media.) Aristotle laid

3. See Aristotle, *De generatione et corruptione* II.329b7–331a6.

down these conditions because the same sense object is sensed by one animal through water and by another through air, as is evident regarding smell.

{425A3–13} THE SECOND PREMISE

98–135. /571/ Third, beginning at **Of simple things,** etc., Aristotle introduces the second premise along with his exposition—namely, that complete animals have all the organs of sensing. So he says that the organs of sensing are naturally suited to be constituted **from only two of** the **simple** bodies—namely, **from Air and Water.** For these are more able to be affected, and the sensory organ's condition requires that it be easily altered by its sense object. **For** there is **Water** in **the pupil,** since it is through the pupil's liquid humor that the eye receives a *species* of the visible object. The organ of **hearing,** however, is **Air,** as was said earlier [II.17.420a4–7]. And in some [animals] **the sense of smell** is attributed to Air, in some to Water, as was said earlier [II.20.421b8–13]. **Fire, however,** is in its own right the organ of **no** sense, because Fire is the most capable of acting and the least capable of being affected. But because they all share in its quality, it is **common to all** the senses; **for nothing is capable of sensing without heat,** since nothing senses that is not alive. /572/ Pure **Earth, on the other hand,** is the organ of **no** sense, but when **mixed** in it is ascribed to **touch, above all.** For the organ of touch must be constituted as a mean, as was said earlier [II.23.423b26–424a15]; consequently it must be composed of all the elements. **Thus it remains that there is no** sensory organ without **Air and Water. But certain animals** (namely, complete animals) **have these** organs of Air and Water. So Aristotle concludes that **all of the senses are possessed by** animals **that are not incomplete** as regards their nature (there are, for instance, incomplete animals that are unable to move and that have only touch) /573/ and by animals that are not **deformed,** i.e., not lacking a sense because of some non-natural cause, like human beings that are blind or deaf. Thus **even the mole,** which belongs to the class of complete animals, **seems** to have **eyes under its skin** and so is made like its genus.[4] But because it dwells underground, sight was not necessary for it; also, if it were to have exposed eyes, the earth would harm them.

135–150. /574/ As is clearly apparent, this argument is based on there being a limited number of elements; on this basis Aristotle proved that the sensory organs that work through outside media are made from Air and Water only. The argument is also based on limiting the states *(passionum)* that belong to the elements; these states are the tangible qualities. In this way, it becomes

4. Compare Aristotle, *Historia animalium* IV.533a1–11.

known through them that we have cognition of all tangible qualities. And so Aristotle concludes that we **lack** no **sense—unless** someone wants to say that there is **some** elemental **body** beyond the four elements **and** that there are other **states that** could be discerned by touch and **that** do not **belong to** any **of the bodies** existing **here** and known to us. But this seems unacceptable. The result of all this is that there are only the five senses that we have.

THERE IS NO FURTHER SENSE FOR COMMON OBJECTS

151–160. *Analysis.* /575/ Next, when Aristotle says **Nor can,** etc. {425a13 ff.}, because someone could say that there is some other sense capable of cognizing common sense objects, he rules this out with the following argument: whatever is cognized by one sense as its proper sense object is not cognized by other senses, unless *per accidens* [425a21–b3]; but common sense objects are not sensed *per accidens* by any of the senses, but rather *per se* by more than one [425a16–21]; therefore common sense objects are not the proper objects of any sense [425a13–16].

{425A13–16} THE ARGUMENT'S CONCLUSION

160–165. /576/ Aristotle sets the argument out in the following way. First, he presents the conclusion, saying that **there** cannot **be any proper** organ of sense capable of cognizing **the common** sense **objects that we sense through each sense** *per se* and not *per accidens.* These are **motion, standing still,** etc.

{425A16–21} COMMON OBJECTS ARE SENSED *PER SE*

166–197. /577/ Second, beginning at **For we sense,** etc., Aristotle proves that these common sense objects are sensed *per se* and not accidentally. For all things that are sensed through the fact that they alter sense are sensed *per se* and not accidentally. (For this is what sensing is: to be affected in some way by a sense object.) But all of these common sense objects are cognized through a kind of alteration *(immutationem).* And this is why he says that **we sense all of these by motion**—i.e., by a kind of alteration. For it is clear that **size** alters sense, since it is the subject of a sensible quality—of color, for instance, or of flavor—and qualities do not act without their subjects. It is apparent from this that our cognition even of **shape** comes with a kind of alteration; for **shape is** something that belongs to **size,** since it consists in the limitation of size. (For

"a shape is what is enclosed by a limit or limits," as Euclid's first book says [*Elements,* def. 14].) /578/ It is clear also that **rest** is grasped on the basis of motion, just as darkness is through light; for rest is the privation of motion. **Number,** too, is cognized through **the negation of continuity,** which is size; for the number of sensible things is caused by a division in continuity. And thus the distinctive properties of number are cognized through the distinctive properties of continuity: for since what is continuous is infinitely divisible, number too can increase infinitely (as is evident from *Physics* III [207b10–15]). It is clear also that **each sense** has cognition *per se* of **unity,** since it is altered by one object. Thus it is clear that these common sense objects are sensed *per se* and not *per accidens.* From this he concludes that **it is impossible for there to be a sense proper** to any **of these.**

{425A21–B3} A PROPER SENSE WOULD SENSE THEM *PER ACCIDENS*

198–216. /579/ Third, beginning at **For if there is,** etc., Aristotle shows that if [these objects] were sensed properly by any sense, then they would be sensible *per accidens.* And this is what he says: regarding common sense objects, **if** they were the proper objects of any sense, **then it** would **be just as** it is **now when we sense something sweet through sight.** For **this is** because we **have a sense** of each—viz., of white and of sweet—and so when they **coincide** at one [object], that which belongs to the one sense is cognized *per accidens* by the other. /580/ **If,** however, it is **not** sensible by any sense, **then** this will **not at all** be something sensed *per accidens* as a result of two senses coinciding at the same [object]. It is, **rather,** sensible *entirely* **by accident,** as was said earlier [II.13.418a20–25]. In this way we sense **the son of Cleon** accidentally: **not because he is the son of Cleon, but** because **he is white, to** which **being the son of Cleon is accidental.** But being the son of Cleon is not a sense object *per accidens* for sight in such a way as to be a sense object *per se* for something else, as would be the case for something sweet.

216–244. For common sense **objects, however, we have a common sense which is nonaccidental.** In other words, the common sense objects are commonly sensed by the different senses *per se* and not accidentally. For this reason it follows that **there is not a proper** sense for them, because [if there were, then] **we would not sense** them *per se* through the other senses. **Rather,** we would sense them *per accidens* **just as we** sense **the son of Cleon.** /581/ **For the senses sense the proper** sense objects **of one another accidentally**—e.g., sight senses the object of hearing, and vice versa. For sight does **not** have cognition of hearing's sense object, nor does hearing of sight's sense object, **with**

respect to how they are (since sight is in no way affected by the audible nor hearing by the visible), **but rather with respect to** there **being one** sense occurring—i.e., one actualized sensation, as we say—**in connection with the same** sense object. And I speak of the same actualized sense because the action of each **sense occurs concurrently** with respect to the same sense object. In this way, regarding **bile, that it is bitter** is perceived through taste, **and** that it is **reddish** through sight, concurrently; hence right away at the sight of something reddish we judge that it is bitter. There is **not,** however, any other sense to which it is proper to cognize that red[5] and bitter are **one.** For this unity is one only *per accidens,* and what is *per accidens* cannot be the object of any power. So because sight perceives something that has to do with taste only *per accidens,* the sense **is** frequently **deceived** in such cases, and we judge that **if** something **is** red, then it is **bile.**

{425B4–11} WHY THERE IS MORE THAN ONE SENSE

245–266. /582/ Next, when Aristotle says **Now someone will ask,** etc., he asks why there is more than one sense. This, however, is something connected with the whole species, and in these cases a final cause should be given, as Aristotle teaches at the end of *De generatione animalium* [V.778a29–b1]. (This is not so in the case of an individual's accidents; the explanation for these should be given in terms of the matter or the agent.) For this reason he gives here the final cause; he says that **someone** can investigate **why we have many senses and not** just **one.** And there is an answer to this: so that things **are** not **hidden** from us that **follow** from proper sense objects **and** that are **common** to different senses, such as **motion, size, and number. For if there were only** a sense of **sight,** then since **it** is concerned only with color, and since **color and size follow from** one other (for sense is altered by size and color **concurrently**), we could not distinguish between color and size; instead, **they would seem to be the same.** But **as things are,** since size is sensed by a different sense than sight, whereas color is not, this in itself **makes it clear that** color and size are **different.** And it is the same for the other common sense objects.

267–286. /583/ The following explanation *(ratio)* can also be given for the distinction among senses. For because powers are spoken of relative to their objects, it is clear that the sensory powers must be distinguished in terms of a difference among their objects. An object is sensible, however, insofar as it is capable of altering sense. So the senses must be distinct in terms of

5. The manuscripts here have *album* (white). Aquinas seems to have fallen into using his stock example here, forgetting for a moment that Aristotle's example involves the color red.

the different kinds of alteration of sense by sense object. In one way, then, a sense object alters sense by contact. This is how we have the sense of touch, which discriminates between the things out of which an animal is constituted. So, too, we have the sense of taste, which is capable of perceiving qualities that indicate the suitability of the nourishment by which an animal's body is maintained. In another way, sense is altered through an outside medium. This alteration is accompanied either by a change on the part of the sensible thing (smell in this way alters sense by somehow releasing the thing that can be smelled), by some sort of local motion (sound alters in this way), or by no alteration on the part of what is sensible but by a purely spiritual alteration of the medium and organ (color alters in this way).

Chapter 2

The Common Sense
What Perceives the Actions of the Proper Senses?

DE ANIMA III.2.425B12–426B8

425b12–13. Now because we sense that we see and hear, it is necessary to sense that one sees either through sight or else through a different [sense].

425b13–15. Now if [this occurs] through a different [sense], then it will be either through that [sense] that one sees or else through a different one.° If [this is] the same [sense], then it will be concerned with sight *and* with the color that is its subject. For this reason, there will be either two [senses] concerned with the same [object] or the same concerned with the same.

425b15–17. Further, if the sense concerned with sight is different, then either this goes on ad infinitum or something will itself be the judge° of itself; so this ought to be maintained in the first case.

425b17–19. There is, however, a puzzle. For if to sense through sight is to see, whereas what is seen is color or what has it, then if someone is to see that he is seeing,° what is first seeing° will have color.

425b20–22. It is clear, therefore, that to sense through sight is not one thing [only]. For even when we do not see, we distinguish through sight both darkness and light, but not in the same way.

425b22–426a1. Further, the thing that is seeing is as if colored. For each sensory capacity is capable of taking on something sensible without the matter. Thus, after the sense objects are gone, the senses and acts of phantasia *(sensus et phantasiae)* by which they sense° are present. The actuality of sense and sense object, however, is one and the same, even though their being is not the same. I speak, however, of actual sound, for instance, and actual hearing. For there is something having hearing that does not hear, and something having sound does not always make a sound. But when what can hear does so, and when what can make a sound makes a sound, then the actual sound and actual hearing occur concurrently. One might call the latter of these listening, the former, sounding.

426a2–15. So if movement, acting, and being affected are in that which is acted on, then it is necessary for sound and hearing, both actual, to be in that which is in potentiality. For the actuality of the thing that can act and produce movement is brought about in the thing affected; thus it is not necessary that what produces movement be moved. Therefore the actuality of

sound or of what is capable of sound is sounding, whereas [the actuality] of hearing or of what is capable of hearing is listening.° For there are two kinds of hearing and two kinds of sound. The account is the same, then, in the case of the other senses and sense objects. For just as acting and being affected are in the thing affected but not in the thing acting, so too the actuality of the sense object and that of the sensory capacity are in the sensory capacity. But in some cases [each] has been given a name, e.g., sounding and listening, whereas in other cases one or the other has not been given a name: for the actuality of sight is called seeing, but that of color has not been given a name. And of the capacity for taste there is taste, whereas [the actuality] of moistness has not been given a name.

426a15–19. Now since the actuality of the sense object and that of the sensory capacity are one, whereas their being is different, it is necessary that hearing and sound so spoken of be corrupted together and sustained together, and therefore likewise moistness, taste, and the others. This is not necessary, however, for those spoken of as potential.

426a20–27. But earlier naturalists spoke wrongly regarding this matter; they thought that nothing is either white or black without sight, nor moist without taste. For in a way they spoke rightly, but in a way they did not. For because sense and sense object are spoken of in two ways—some as potential, others as actual—what was said applies to the latter but does not apply to the former. Yet they spoke unconditionally about things not spoken of unconditionally.

426a27–b8. But if harmony is a kind of vocal sound,° whereas vocal sound and hearing are as one (and they are as not one) or the same,° and moreover harmony is a proportion, then it is necessary for hearing to be a kind of ratio. And for this reason, anything excessive does harm: the sharp and flat [harm] hearing; [excessive] moistness [harms] taste; in the case of colors, something strongly shining and opaque [harms] sight; and in the case of smelling, a strong smell [does harm], whether sweet or bitter. It is as if sense is a kind of ratio. And so things are pleasant when, being clear and mixed,° they are brought into a ratio—the sharp, for instance, or the sweet or salty. For at that point they become pleasant. In general, then, what is mixed is more [pleasant]: harmony [is more pleasant] than the sharp and flat; [in] touch, things that can be heated and cooled [are more pleasant]. Sense, then, is a ratio, and things that are extreme are unpleasant° or harmful.

1–17. *Analysis.* /584/ Now that the Philosopher has shown that there is no other proper sense beyond the five, he proceeds to ask whether there is some sensory power common to these five senses; he investigates this on the basis of several actions that do not seem to be proper to any sense but do seem

to require some common sensory power. There are two actions of this sort: one occurs when we perceive the actions of the proper senses, sensing, for instance, that we see and hear; the other occurs when we distinguish between the sense objects of different senses, distinguishing, for instance, that one thing is sweet and another white. So he asks, first, what the first of these actions should be attributed to and, second, what the second should be attributed to (beginning at **So indeed, each sense,** etc. {III.3.426b8}).

18–21. In connection with the first he does three things. First, he raises the question {425b12–13}.[1] /585/ Second, he objects to each side (beginning at **Now if [this occurs],** etc. {425b13}).

{425b13–15} THAT SIGHT SEES THAT IT SEES: A FIRST ARGUMENT

22–43. And first, to show that sight sees that it sees, Aristotle introduces two arguments. The first of these is as follows: **if** a human being senses that he sees **through a** sense other than sight, this **will be either** (i) because that person **sees** color **through** this other sense **or else** (ii) it is **through** entirely **different** senses that he sees color and senses the seeing of color. **If,** however, (i) he senses the seeing of color through the same sense by which he senses color, it will follow that one and **the same** sense **will be concerned** both **with** actual **sight**—i.e., with seeing—**and with the color that is its subject. For this reason** one of two things will follow. For if (i)(a) that sense that senses seeing and color is a different sense than sight, then there will have to be **two** senses concerned with one subject (that is, with color). **Or** if (i)(b) that sense through which we sense seeing and color is the same sense as sight, it will follow that **the same** is **concerned with the same**—i.e., that sight has the sensation *(sensus)* of its own self, which was denied from the start.[2] On the other hand, it is entirely irrational to say that (ii) this other sense through which someone

1. At this point, earlier editions printed the following six lines of commentary on 425b12–13: "First he raises the question, saying that **because we sense that we see, and** likewise we sense that we **hear** (and so too for each one of the senses), **it is necessary to sense that one sees either** by means of **sight, or else** by means of **a different** power. And the same holds for the other senses." Gauthier excludes this passage on the grounds that it is found in only one subfamily of manuscripts. The passage seems to be a later addition to the commentary, added to fill a perceived lacuna in Aquinas's exposition.

2. In fact, this possibility was never explicitly ruled out. Aquinas seems to mean that Aristotle implicitly assumes from the start of the discussion that it is paradoxical for one thing to sense itself. It will emerge in the commentary to 425b20–22 that Aristotle proposes evading this paradox by distinguishing two kinds of visual sensation.

senses that he sees does not sense color. For if it were not to have cognition of color, it could not have cognition of what it is to see: for to see is nothing other than to sense color.

{425b15–17} A SECOND ARGUMENT

44–59. /586/ Aristotle presents a second argument beginning at **Further, if the sense,** etc. This runs as follows: **if the sense concerned with sight**—i.e., with seeing (through which, in other words, we sense that we see)—**is different** from sight, then we need to ask once more about this [second] sense: whether, namely, this [second] sense senses itself sensing. And, if it does not, we will have to ask once more for the sense that senses this [second sense] sensing. Therefore **either this goes on ad infinitum,** which is impossible, since it is impossible for an action to be completed that depends on an infinite number of agents[3] (nor also can one thing have an infinite number of powers); **or** we will have to reach some sense that is **the judge of itself**—i.e., that perceives itself sensing. By the same reasoning, then, [this latter option] could have been **maintained in the case** of the **first** sense, with the result, namely, that sight would sense that it sees. Therefore there is not a different sense for perceiving color and for perceiving the seeing of color.

{425b17–19} THAT SIGHT DOES NOT SEE THAT IT SEES: A PUZZLE

60–72. /587/ Next, when Aristotle says **There is, however, a puzzle,** etc., he objects to the opposite side. And since the first arguments in a way contain the truth, he presents this argument in the manner of **a puzzle,** and for that reason he also resolves it. The argument, then, is as follows: **if** through sight we sense ourselves seeing and yet **to sense through sight is** nothing other than **to see,** then we see ourselves seeing. But nothing **is seen** except **color or what has** color. Therefore, **if someone** sees regarding himself **that he is seeing,** it follows that **what is first seeing,** which is made seen by the second, is something that has **color.** This seems unacceptable given that it was said earlier that sight, since it is capable of taking on color, exists without color [cf. II.15.418b26–27].

3. Compare Aristotle, *Physics* VIII.256a4–b3.

{425B20–22} THE PUZZLE RESOLVED IN ONE WAY

73–88. /588/ Next, when Aristotle says **It is clear, therefore,** etc., he resolves in two ways the puzzle that was introduced. First, he concludes from what was just stated that to sense through sight is spoken of in more than one way. For he showed earlier [425b15–17] that through sight we sense ourselves seeing; he also showed that through sight we sense only color. Therefore **to sense through sight** is spoken of in two ways: in one way inasmuch as through sight we sense ourselves seeing; in another way when we see color through sight. And that to sense through sight is spoken of in more than one way is apparent from the fact that we are sometimes said to sense through sight when sight is altered *(immutatur)* by the presence of what is visible, namely, by color, whereas sometimes **we distinguish through sight both darkness and light,** even **when we do not see** (not, that is, via alteration by an external sense object). **But** to sense through sight is **not** spoken of **in the same way** in each case.

88–97. So the solution comes to this: the action of sight can be considered on one hand inasmuch as it consists in the organ's alteration by an external sense object. In this way only color is sensed, and so through this action sight does not see itself seeing. The other action of sight occurs inasmuch as, after the organ's alteration, it makes a judgment concerning the organ's own perception of the sense object, even after the sense object is gone. In this way sight senses not only color but also the seeing of color.

ANOTHER SOLUTION TO THE PUZZLE

98–104. *Analysis.* /589/ Next, when Aristotle says **Further, the thing that is seeing,** etc. {425b22 ff.}, he presents another solution. This solution is in fact necessary because color has two kinds of being: one is natural and in the sensible object, the other is spiritual and in the sense. The first solution proceeded on the basis of color's first kind of being, whereas this second solution proceeds as regards color's second kind of being.

104–110. In connection with this latter solution Aristotle does three things. First, he presents the solution. Second, he proves something he had presupposed in the solution (beginning at **So if movement,** etc. {426a2}). Third, on the basis of this solution, he points out the solution to a number of other questions as well (beginning at **Now since the actuality,** etc. {426a15}).

{425B22–426A1} THE SOLUTION

111–126. /590/ So Aristotle says first that, although the puzzle just discussed was solved by maintaining that the thing seeing is not colored, it can be solved **further** by saying that **the thing that is seeing is as if** *(tanquam)* **colored,** since there is a likeness of color in the thing seeing. Hence the thing seeing is like what is colored, and hence the power that sees that something is seeing is not outside the genus of *visual power.* And that the thing seeing is in a way colored, he proves on the basis of things said earlier [II.24.424a18–19]. For **each** organ of sense **is capable of taking on** the **sensible species without the matter.** This is the reason why, **after the sense objects are gone,** sensations **and acts of phantasia**—i.e., appearances—occur in us. Animals somehow **sense** in virtue of these. And thus it is plain that the thing seeing is "as if colored" insofar as it has a likeness of color.

126–145. And not only is the thing seeing as if colored and like something colored, but also **the actuality of** any **sense is one and the same** with the actuality of the **sense object,** although they are **not** one conceptually *(ratione).* /591/ And **I speak** of the actuality of sense, such as **actual hearing,** and the actuality of a sense object, such as **actual sound.** For they are not always actual, since it happens that **something having hearing does not hear and something having sound does not always make a sound.** But **when** something able to **hear** is engaged in its operation **and** something able to **make a sound makes a sound, then** both **the actual sound** (which is called **sounding**) **and actual hearing** (which is called **listening**) **occur concurrently.** Therefore, since sight perceives its sense object and its actuality, since the thing seeing is like its sense object, and since the actuality of the thing seeing is the same as the actuality of the sense object that is its subject (although not conceptually the same), it follows that it belongs to the same capacity to see color and the alteration that comes from color, the thing seen in actuality and the seeing of that thing. Therefore the power through which we see ourselves seeing is not outside the visual power but differs from it conceptually.

{426A2–15} A SUPPOSITION PROVED

146–163. /592/ Next, when Aristotle says **So if movement,** etc., he proves what he had presupposed—namely, that the actuality of the sense object and the thing sensing is one and the same, although they differ conceptually. He proves this on the basis of things he showed in *Physics* III [202a13–b22], that **movement** as well as **acting and being affected are in that which is acted on**—i.e., in the thing affected and movable. It is clear, however, that hear-

ing is affected by sound. Hence **it is necessary** that **actual sound** (which is called sounding) as well as **actual hearing** (which is called listening) are **in that which is in potentiality**—namely, in the organ of hearing. And this is so because **the actuality of the thing that can act and produce movement is brought about in the thing affected** and not in the thing acting and producing movement. This is the reason why **it is not necessary** for everything that **produces movement** to **be moved.** For if there is movement in any given thing, that thing is moved. So if movement and action, which is a kind of movement, were in the thing producing movement, then it would follow that the thing producing the movement would be moved.

163–184. Now just as Aristotle said in *Physics* III [ibid.] that acting and being affected are one actuality in subject, although they differ conceptually (insofar as *acting* signifies being from the agent, whereas *being affected* signifies being in the thing affected), so he said above that the actuality of the sense object and the thing sensing is the same in subject but not conceptually [425b26–27]. **Therefore the actuality** of **sound** or **of what is capable of sound is sounding,** whereas the actuality **of what is capable of hearing is listening.** /593/ **For two kinds of hearing and sound** are spoken of: actual and potential.[4] And what he said about hearing and sound holds by **the same account in the case of the other senses and sense objects. For just as acting and being affected are in the thing affected** and **not in the thing acting** (not as in a subject, but only as in a source from which), so both **the actuality of the sense object and** the actuality **of the sensory capacity are in the sensory capacity** as in a subject. **But in** the **case** of **some** sense objects and capacities, each actuality **has been given a name, e.g., sounding** (for the sense object) **and listening** (for the sensory capacity). Yet **in other cases** only one **has been given a name**—the actuality, that is, of the sensory capacity. **For the actuality of sight is called seeing,** but the actuality **of color has not been given a name. And taste**—i.e., tasting—**is** the actuality **of the capacity for taste;** but the actuality of flavor **has not been given a name** by the Greeks.

THE SOLUTION TO TWO OTHER QUESTIONS

185–187. *Analysis.* /594/ Next, when Aristotle says **Now since the actuality,** etc. {426a15 ff.}, he goes on from the solution just given to point out the truth as regards two questions.

4. Compare II.16.62–74.

{426a15–19} SENSE AND OBJECT CORRUPTED AND SUSTAINED TOGETHER

188–197. The first of these questions concerns whether sense and sense objects are corrupted together and sustained together. To settle this question Aristotle says that because **the actuality of the sense object and that of the sensory capacity are one** in subject, although they differ conceptually (as was said [426a2–15]), **it is necessary** that **hearing spoken of** as actual **and sound** spoken of as actual **be sustained together and corrupted together. And** it is **likewise** for flavor, **taste, and the other** senses and sense objects. But if they are **spoken of as potential,** then it **is not necessary** that they are corrupted together and sustained together.

{426a20–27} AN ANCIENT VIEW RULED OUT

198–210. /595/ On the basis of this solution, then, Aristotle rules out the view of the ancient natural philosophers (beginning at **But earlier naturalists,** etc.). He says that **earlier** natural philosophers **spoke wrongly** in **this matter,** because **they thought that nothing is white or black** except when it is seen, **nor** is there flavor except when it is tasted, and likewise for the other senses and sense objects. And since they did not believe that there are any beings except sensible beings, nor any cognitive capacity except sense, they believed that the whole existence and truth of things is in appearances. And from this they were led to believe that contradictory claims are true at the same time, since people hold distinct contradictory claims.

210–218. /596/ Now in one way **they spoke rightly,** and in another **they did not. For sense and sense object are spoken of in two ways**—namely, **as potential** and **as actual.** So **what** they **said**—that there is no sense object without sense—**applies to** sense and sense object as actual. But this is **not** true for sense and sense object as potential. **Yet** these men talked **unconditionally**—i.e., without drawing distinctions—**about** things that are **spoken of** in more than one way.

{426a27–b8} WHY SOME SENSE OBJECTS HARM SENSE

219–245. /597/ Next, when Aristotle says **But if harmony,** etc., he indicates on the basis of the above remarks his solution to another question—namely, why some sense objects harm sense and others are pleasant for it. And he says that since **harmony** (i.e., vocal sound that is consonant and proportioned) **is a kind**

of vocal sound, and since **vocal sound** is in a certain way **the same** as **hearing,** and since **harmony is** a kind of **proportion, it is necessary** that **hearing be a kind of** proportion. And since any proportion is harmed by overabundance, so an **extreme** sense object **does harm** to a sense. For instance, what is extremely **flat and sharp** harms **hearing, something strongly shining** or obscure harms **sight, and a strong smell** harms the sense of smell, in that *(quasi)* **sense is a kind of** proportion. /598/ But if pure sense objects **are brought** down **into** a proportioned mixture, then they are made **pleasant.** This happens in the case of flavors, when something is **sharp, sweet, or** salty in the proper proportion. **For at that point they become pleasant.** And, **in general, what is mixed is more** pleasant than what is simple: **harmony,** for instance, is more pleasant **than** vocal sound that is only **sharp** or only **flat;** and in the case of **touch,** that which is composed of **things that can be heated and cooled** [is more pleasant]. For sense takes pleasure in things that are proportioned; these things are similar to it, because **sense is** a kind of proportion. But **things that are extreme are harmful** to sense, or at least **unpleasant** for it.

Chapter 3

What Distinguishes Sense Objects from One Another?

DE ANIMA III.2.426B8–427A16

426b8–b12. So indeed, each sense is concerned with the sense object subject [to it], which is in the sensory capacity considered as such. And [each sense] distinguishes the differences within the sense object subject [to it]—such as white and black, for sight, or sweet and bitter, for taste; and so likewise for the others as well.

426b12–17. But since we distinguish both white and sweet, and any one of the sense objects relative to any other, by some means, and we sense that they differ, this, then, necessarily occurs by means of sense, for they are sensible things. From this it is also clear that flesh is not the ultimate sensory capacity. For it would then be necessary that what distinguishes does so while touching that [object].

426b17–23. And indeed we cannot by means of things separated distinguish that sweet is different from white. Rather, both must be made clear by means of some one thing. For otherwise *(sic enim),* **even if I sense this while you sense that, it will still be clear that these are different relative to one another. There must, however, be one [person] asserting that they are different; for sweet is different from white. The same one, then, asserts it. Hence, just as he asserts it, so also he intellectively cognizes and senses. So it is clear that it is not possible to judge separated things by means of separated things.**

426b23–29. But that they are not [judged] at a separate time [is clear] from the following. For just as the same [person] asserts that good and bad are different, so also he asserts that they are different then—when they are different. And this *when* [at which] they are different [is asserted] not accidentally (I mean, for instance, that I now assert that things are different, and yet [do] not [assert] that they are different now), but rather as he asserts both now and that [they are different] now: therefore, at the same time. Thus [this power] is inseparable and [judges] in an inseparable time.

426b29–427a1. But now it is impossible at the same indivisible time for the same thing, or° an indivisible thing, to be moved by contrary movements. For if sweet, it moves sense or intellect in one way, whereas bitter [does so] in the contrary way, and white in a different way.

427a2–5. Therefore what judges exists at the same time and is numerically indivisible and inseparable, whereas it is separated in being. In one way,

then, it is what is divisible that senses divided things, whereas it is [also] what is indivisible.° For it is divisible in being, but indivisible in location and number.

427a5–9. Or is this not possible? For what is the same and indivisible [can have] contraries potentially, of course, but not in being. Yet it is divisible in acting. And it is impossible to be white and black at the same time, and for that reason also [impossible] to be affected by *species* of those [colors], if sense and understanding are like this.

427a9–14. But just as what some call a point is either one or two, so likewise is [this sensory capacity] divisible.° So in virtue of its being indivisible, that which distinguishes is one thing, distinguishing at the same time. But in virtue of its being divisible, it twice uses the same sign at the same time. So inasmuch as [someone] uses this terminus for two [purposes], he judges two things, and they are separated, [cognized] as by something separated. But inasmuch as [the terminus is] one, [they are cognized] by one thing, at the same time.

427a15–16. In this way, then, an account has been presented of the principle in virtue of which we say that an animal is sensory.

1–13. *Analysis.* /599/ Aristotle set out earlier to investigate the common sense on the basis of the operation by which we sense ourselves seeing and hearing. On the basis of this operation, he arrived at the conclusion that the visual power senses seeing, although in a different way than it senses an external sense object. What has not yet been established, however, is that the power capable of judging the senses' acts is single and common. So Aristotle now goes on further to investigate this sort of capacity through another operation, one that shows that there is a single common power related in a certain way to all five senses. This operation is to distinguish sense objects from one another.

13–18. And in this connection he does two things. First, he shows how far a proper sense's discrimination can extend. Second, he investigates the kind of discrimination between sense objects that exceeds the capacity of a proper sense (beginning at **But since we distinguish,** etc. {426b12}).

{426b8–12} HOW FAR A PROPER SENSE'S DISCRIMINATION EXTENDS

19–27. /600/ Aristotle says first, then, that it is clear from the things said that **each sense is** cognitive of **the sense object subject** to it, whose *species* is produced **in** its organ **considered as such.** (For the organ of each sense is altered *[immutatur]* by the sense's proper object *per se,* not accidentally.) **And** each sense **distinguishes the differences within** its proper **sense object—as,** for example, **sight** distinguishes **white and black; taste, sweet and bitter;** and **so likewise for the other** senses.

28–34. *Analysis.* /601/ Next, when Aristotle says **But since we distinguish,** etc. {426b12 ff.}, he shows to what we should attribute the discrimination that exceeds proper sense—viz., distinguishing the sense object of one sense from the sense object of another. And in this connection he does two things. First, he works out the correct view. Second, he makes an objection against that view and then resolves the objection (beginning at **But now it is impossible,** etc. {426b29}).

34–40. In connection with the first he does three things. First, he shows that there is a sense that distinguishes between white and sweet. Second, he shows that this is not two powers of sense, but one (beginning at **And indeed we cannot,** etc. {426b17}). Third, he shows that that power perceives at the same time each sense object that it distinguishes between (beginning at **But that they are not,** etc. {426b23}).

{426b12–17} WHAT DISTINGUISHES WHITE FROM SWEET

41–65. So Aristotle says first that **we distinguish, by means** of **some** capacity, not only white from black or sweet from bitter but also **white** from **sweet.** Also, we distinguish **any one sense object** from **any other, and we sense that they differ.** Hence this must occur through **sense,** because it belongs to sense to have cognition of **sensible things** inasmuch as they are sensible. For we have cognition of the difference between white and sweet not only with respect to the what-it-is of each thing, which pertains to intellect, but also with respect to sense's different alterations. This can occur only through a sense. /602/ And, if it does occur through some sense, then it seems most of all that it would occur through touch, which is the first of the senses and in a way the source *(radix)* and basis of all the senses; from this an animal is called capable of sensing. So **it is clear that flesh is not the ultimate** organ for the sense of touch. For since discrimination occurs through the sense of touch, **it would then be necessary** for the discrimination between a tangible object and other sense objects to occur in the contact between flesh and the tangible object. But this discrimination is attributed to touch not in virtue of touch's being a proper sense, but in virtue of its being the basis of all the senses and its standing closer to the fundamental source of all the senses, which is the common sense.[1]

1. The common sense was thought to be "the fundamental source *(fontalem radicem)* of all the senses" in both a functional and a physiological way. Functionally, the *power* of sensa-

{426B17–23} IT IS NOT TWO SENSORY POWERS, BUT ONE

66–101. /603/ Next, when Aristotle says **And indeed we cannot,** etc., he shows that it belongs to the same sense to distinguish white from sweet. For someone could believe that we distinguish white from sweet not through any one power but through several—inasmuch, for instance, as we have cognition of something sweet through taste and something white through sight. He rules this out when he says that **we cannot distinguish that sweet is different from white by means of separated** powers—i.e., distinct ones. **Rather,** in order to distinguish between them they **must be made clear** to us in virtue of **some one** power. **For** if we were to sense sweet and white by distinct powers, it would be as if distinct human beings were sensing: one sensing sweet, another white—e.g., **if I** sense **this** and **you that.** Now if we suppose this, then **it will be clear** that sweet and white **are different** from **one another,** since I am affected by sweet differently than you are by white. /604/ But all the same, the distinction itself will not be clear; rather, **there must be one [person] asserting** that sweet is **different** from white. For this is a single truth, namely, that **sweet is different from white.** Therefore this one thing must be asserted by the same [person]. But an assertion is the expression *(interpretatio)* of an interior apprehension. So **just as** there is one who **asserts,** so there must be one who **intellectively cognizes and senses** that sweet is different from white. (He says "intellectively cognizes and senses" because he has not yet shown that intellect is not the same as sense, or else because both sense and intellect have cognition of this difference.) Therefore, just as the one person who asserts that white is different from sweet must be a person who has cognition of both, so there must be one power by which both are cognized; for it is only through a power that someone cognizes. This is why he concludes further that it is **clear that it is not possible to judge separated things** (i.e., to judge that certain things are distinct) **by means of separated things** (i.e., distinct things). Instead, the same power must have cognition of both.

tion was thought to derive from the common sense. (It's not obvious precisely how Aquinas understood this claim, but see 169–178 below.) Physiologically, nerves were thought to extend from the common sense out to the various external senses. (See 195–204, below, for a remark on how this could be true for the sense of touch.) For the Aristotelian basis of this doctrine, see in particular *De somno* 455a13–27, b8–12; for earlier medieval sources, see Gauthier's notes to this passage.

{426B23–29} BOTH PERCEIVED AT THE SAME TIME

102–124. /605/ Next, when Aristotle says **But that they are not,** etc., he shows that both must be cognized at the same time. So he says that it is also clear, on the basis of what is about to be said, **that** [this power] does not have cognition of both **at a separate time**—i.e., at a distinct time. **For just as** someone who judges that several things are distinct **asserts** something that is one and **the same,** such as **that good and bad are different, so too he asserts when they are different.** For [this person] asserts **that things are different then,** when he judges. **And this** very *when* [at which] they are different is **not accidentally** asserted, in such a way that 'when' refers to the speaking—so, **for instance,** that [this person] **now** asserts **that things are different** if he would **not** assert **that they are different now.** (For this would be *per accidens* with respect to what is said.) **Rather, as he asserts now** that they are different, so he asserts that they are different **now.** This could not be, however, if he did not apprehend them **at the same time**—i.e., at that instant with reference to which he judges that they are different. It is clear, then, that he has cognition of both at the same time. Therefore, just as the power having cognition of both of the things judged different is **inseparable**—i.e., one and the same—so it must apprehend both **in an inseparable time.**

{426B29–427A1} AN OBJECTION INTRODUCED

125–135. /606/ Next, when Aristotle says **But now it is impossible,** etc., he raises an objection on the opposite side. And in this connection he does four things. First, he introduces the objection: **it is impossible for the same indivisible thing to be moved by contrary movements at the same indivisible time.** But intellect and sense, insofar as they sense and intellectively cognize, are moved by what is sensible and intelligible. Yet distinct and contrary sense objects move by means of distinct and contrary movements. Therefore it is impossible for the same sensory or intellective force to cognize contrary or distinct things at the same time.

{427A2–5} ONE SOLUTION TO THAT OBJECTION

136–147. /607/ Second, beginning at **Therefore what judges,** etc., Aristotle introduces one solution. He says that **what judges** that there is a distinction between contraries or distinct things **exists at the same time and is numeri-**

cally indivisible and inseparable, i.e., one in subject, but is **separated in being,** i.e., it is conceptually distinct. So it is, **then,** that **in one way what is divisible senses divided,** i.e., distinct, **things, whereas** in another way **what is indivisible** senses distinct things. For **it is divisible in being,** i.e., it is conceptually distinct, but it is **indivisible in location and number,** i.e., it is one in subject. And he says "in location" because different powers are found to have organs in different parts of the body.

{427A5–9} THIS SOLUTION DISPROVED

148–160. /608/ Third, beginning at **Or is this not possible,** etc., Aristotle disproves this solution, saying that it **is not possible** for the position just described to stand. For something that is **the same and indivisible** in subject but **not in being**—that is, not conceptually—can **of course** have **contraries potentially. Yet** something that has contraries **in acting**—that is, in actuality—must be **divisible. And it is impossible** for what is the same and indivisible **to be white and black at the** very **same time. For that reason** it is also not possible for something that is one and indivisible **to be affected by *species* of those [colors]** at the same time, and so neither to cognize intellectively and to sense, **if** cognizing intellectively **and** sensing **are like this**—i.e., are a sort of being affected.

{427A9–14} THE CORRECT SOLUTION

161–178. /609/ Fourth, beginning at **But just as what some,** etc., Aristotle introduces the correct solution. This solution is drawn from an analogy *(similitudine)* with a point. For a point that is between two parts of a line can be taken as one or two. It can be taken as one insofar as it connects parts of a line as a common terminus. It can be taken as two insofar as we use the point twice: as the origin of one line, and as the end of the other. In this way we should understand that the capacity for sensing is spread into the organs of the five senses from one common source: from this source the capacity for sensing goes into all of the organs, and at this source all of the alterations of the single organs have their terminus. Therefore this capacity can be considered in two ways: in one way as it is a single origin and a single terminus of all sensory alterations; in another way as it is the origin and the terminus of this sense and that one.

179–194. This is why Aristotle says that **just as a point is one or two, so likewise** the common sensory principle is **divisible. But** it is **divisible** in that

way inasmuch as **at the same time it twice uses the same sign**[2]—i.e., the same sensory principle, as origin and as terminus of sight and hearing. /610/ **So inasmuch as** someone **uses** the sensory principle as if using a single **terminus for two [purposes],** to that extent **he judges two things, and they are separated,** taken just **as** they are cognized **by** a **separated**—i.e., divisible—principle. **But inasmuch as** [this principle] is in itself **one,** the person has cognition, as through **one** principle, of the difference between the two, **at the same time.** Therefore this common sensory principle, inasmuch as it is taken twice as the terminus of two sensible alterations, is capable of cognizing more than one thing at the same time. But inasmuch as it is one it can judge the difference between one thing and another.

The Organ for This Common Sensory Principle

195–204. /611/ This common sensory principle must have some organ, however. For the sensory part has no operation without an organ. Now since the organ of touch is spread through the whole body, it seems necessary that the organ of this common sensory principle should be located where the first source of the organ of touch is.[3] This is why he said earlier [426b15–17] that if flesh were the ultimate organ of touch, then by touching with our flesh we would distinguish one sense object from another.

Which Is Superior, the Common or Proper Senses?

205–228. /612/ It is important to consider as well that although this common principle is altered by a proper sense (for the alterations of all the proper senses arrive at the common sense as at their common terminus), still no proper sense is superior *(nobilior)* to the common sense, even though a mover is superior to what it moves and a thing that acts superior to what it acts upon. Similarly, an external sense object is not superior to a proper sense, even though that object moves the sense. For the object is superior in a certain respect—insofar, namely, as it is actually white or sweet, whereas the proper sense is in potentiality in this respect. But unconditionally the proper sense is superior, on account of its sensory capacity, and consequently it receives in a superior manner—without matter. For everything that receives does so in its own manner, and thus too the common sense receives in a manner superior to that of the proper sense. This is because we consider the sensory capacity

2. The Greek word *sêmeion* is standardly translated by 'sign' *(signum)*. But the Greek word can also mean *point*, as it does in this context. Aquinas is aware of that usage: thus at III.11.175–176 he writes, "**a point,** which is a kind of sign of division between parts of a line."

3. Aristotle supposed that the organ of touch is located near the heart (see II.22.38–40).

in the common sense as being at its source and less divided. Nor is any action on the part of the common sense needed for a *species* received in an organ to be produced in it.[4] For all the powers of the sensory part are passive, and it is not possible for one power to be active and passive.

How a Proper Sense Distinguishes Between Objects

229–236. /613/ It is also important to consider that a proper sense distinguishes between contrary sense objects insofar as it shares something of the capacity of the common sense. For even that proper sense is a single terminus of the distinct alterations produced through the medium by contrary sense objects. Still, the ultimate judgment and ultimate discrimination belongs to the common sense.

{427A15–16} SUMMARY

237–239. /614/ Finally, then, in summary, Aristotle concludes that we have spoken **of the principle in virtue of which an animal** is said to be **sensory** or able to sense.

4. It is unclear here whether "in it" refers to the organ or to the common sense. Gauthier takes the passage in the former way. He separates this and the next sentence from the preceding material and takes them to be directed against the doctrine of an agent sense. Aquinas does in various places criticize that doctrine, which postulates an agent sense analogous to agent intellect (see, e.g., his *Questions on the Soul*, q. 4, ad 5).

It seems at least as likely, however, that "in it" refers to the common sense. On this reading of the passage Aquinas is warning against a natural misconception about the common sense. For although common sense is superior to the external senses, it is nevertheless entirely passive, even as regards its own reception of *species*. This would explain why Aquinas continues by remarking that "*all* the powers of the sensory part are passive."

Chapter 4

Intellect and Sense Are in No Way the Same

DE ANIMA III.3.427A17–B27

427a17–21. But now because they define soul most of all by two distinguishing characteristics: by local motion, and in terms of cognizing intellectively, distinguishing,° and sensing, it seems that cognizing intellectively and being wise are like a kind of sensing: for in each of these the soul makes judgments about and cognizes something of what there is.

427a21–26. And the ancients held that to be wise and to sense are the same. Empedocles, in this way, said, "By the present the will is enlarged in human beings, and in others: hence it always provides them with a different wisdom."° These have the same meaning as the following, from Homer: "Such is the understanding in earthly human beings as during the day the father of men and of gods directs."°

427a26–29. For these men all think that intellective cognition is corporeal just like sensing, and that sensing and being wise are of like by like, as we established in our initial account.

427a29–b5. Yet still they needed at that point to talk about deception: for it is more proper to animals, and soul spends a great deal of time in it. Hence it is necessary either that, as some say, all appearances are true or that deception is contact with what is unlike. For the latter is the contrary of one's cognizing what is like oneself.*°

427b5–6. It seems, however, that one's deception and knowledge about contraries are the same.

427b6–8. So it is clear that being wise and sensing are not the same. For the latter is in all animals, whereas the former is in few.

427b8–14. But neither is intellectively cognizing—which is done both rightly and not rightly (rightly, on the one hand, [covers] prudence and knowledge or true opinion; not rightly, on the other hand, [covers] the contraries of these)—neither is this the same as sensing itself. For a sensation of the proper objects is of course always true, and it is in all animals, whereas intellective cognition occurs falsely as well, and it is in nothing in which there is not also reason.

427b14–16. Now phantasia is different from both sense and intellect, and it does not occur without sense, and without it there is no opinion.

427b16–21. But that phantasia and opinion are not the same is clear.° For

the first state is up to us, when we want: for it consists in composing [something] in front of our eyes—just like, in recollection, things are positioned and an image is composed.[1] Forming opinions, however, is not up to us: for it is necessary that it asserts what is false or true.

427b21–24. Moreover, when we form an opinion that is difficult or terrible, we are immediately affected in the corresponding way. This occurs likewise, too, if a thing is encouraging. Through phantasia, however, we are disposed just as if we were looking at difficult or encouraging things in a picture.

427b24–27. Concerning this acceptance, however, there are different kinds: knowledge, opinion, prudence, and the contraries of these. Let there be another account of the difference between these.[2]

1–8. *Analysis.* /615/ The Philosopher has shown that the two operations regarding which there seemed to be a puzzle (viz., perceiving the acts of the proper senses and distinguishing between the sense objects of distinct senses) do not exceed the capacity of the sensory principle. Now, after this, he wants to investigate whether being wise and intellectively cognizing exceed the capacity of that same principle.

8–14. And in this connection Aristotle does two things. First, he shows that being wise and intellectively cognizing do not pertain to sense, which is to show that sense and intellect are not the same. Second, he shows as well that

1. Aristotle is referring to the ancient practice of remembering a speech by associating each of its parts with a room in a large house. As the orator imagines walking through the house, the parts of the speech are recalled to memory, section after section. See Frances Yates, *The Art of Memory* (London: Routledge, 1966).

2. The Latin translation of the Greek obscures a great deal in this chapter and the next, as is particularly clear in this last paragraph. First, 'acceptance' (427b25) translates *acceptio,* which in turn translates *hupolêpsis.* (As the context suggests, this is a general term for cognitive states.) But a few paragraphs earlier (427b16–17), that same Greek term gets translated into Latin as *opinio* (opinion). Yet *opinio* is also used in this last paragraph (427b25) to translate the Greek *doxa.* And, adding to the confusion, the verb *opinari* is used to translate *doxazein* (427b20)—just a few lines after *opinio* was used to translate *hupolêpsis.* (These same confusions occur in the next chapter as well.)

As if that weren't enough, *prudentia* (prudence) here translates *phronêsis* (427b26; also 427b10). But the corresponding verb, *phronein,* gets translated throughout this chapter as *sapere* (having wisdom).

As discussed in the Introduction, such confusions are unusual for medieval Latin translations. It is typically a strength of these works that they preserve the original word structure, to the point of being painfully literal.

phantasia, which pertains to sense, is not the same as opinion, which pertains to intellect (beginning at **Now phantasia is different,** etc. {427b14}).

14–17. In connection with the first he does two things. First, he presents the view of those who claim that sense and intellect are the same. Second, he disproves this view (beginning at **Yet still they needed,** etc. {427a29}).

17–19. In connection with the first he does two things. First, he presents the view; second, he gives the reason for it (beginning at **For these men all think,** etc. {427a26}).

19–23. In connection with the first he does two things. First, he presents the view in general. Second, he introduces the words of some philosophers, words that seem pertinent to this same view (beginning at **And the ancients held,** etc. {427a21}).

{427A17–21} THE VIEW THAT SENSE AND INTELLECT ARE THE SAME

24–31. /616/ So Aristotle says first that, since the ancient philosophers defined **soul** in terms of **two** things—namely, in terms of **local motion and** in terms of cognition (which includes intellective discrimination and sense)—**it seems** from this that on their view **cognizing intellectively and being wise are a kind of sensing:** for in both intellectively cognizing and sensing, **the soul makes judgments and cognizes.**

{427A21–26} THE WORDS OF SOME PHILOSOPHERS

32–54. /617/ Next, when Aristotle says **And the ancients held,** etc., he shows not only that this follows from what they said in general but that **the ancients** expressly said that **to be wise** through intellect **and to sense are the same.** And so that we may understand how the words of the philosophers he introduces have a bearing on this issue, it is important to recognize that no body *(corpus)* can directly act on what is in no way corporeal. Therefore, since the sensory powers are in a way corporeal, since they are capacities within corporeal organs, they can be altered *(immutari)* by the action of the heavenly bodies (altered *per accidens,* since neither soul nor [any] capacity of soul is moved by a body that is moved, except *per accidens).* For this reason it is possible that phantasia and sensory appetite be made to vary by a heavenly body's impression. Hence nonrational animals, which carry out their motions through appetite alone, for the most part, are guided by impressions from the heavenly bodies. Therefore, to claim that heavenly bodies have an impression

directly on the intellective part, with respect to intellect and will, is to claim that intellect and will are corporeal powers.

55–65. This is what the words of certain ancients claim. /618/ For **Empedocles said** that **in** both **human beings** and **in other** animals **the will is enlarged** (i.e., incited to act) **by the present** (i.e., by the state of the present hour). This state, of course, depends on the state of the heavenly bodies. **Hence** the present time or hour **always provides them**—i.e., human beings and other animals—**with a different wisdom.** For humans and other animals are found, at different hours and times, to make different judgments on things in different ways.[3]

65–82. /619/ The words of **Homer** pertain to this **same** point: **such is the understanding in earthly human beings as the father of men and of gods**—i.e., the sun—**directs during the day.**[4] The sun is called "the father of men" because it is one of the causes of human generation. ("Humans engender humans, and so does the sun.")[5] It is called "the father of gods," however, either because of the heavenly bodies, which the ancients called gods and which (according to astronomers) the sun somehow regulates, or because of the humans whom they believed to be deified and who are generated through the sun's power. Further, the sun's power is "during the day," because it appears to us during the day, when it is moved in the higher hemisphere. (And hence astronomers call it the daytime planet.) Homer, therefore, meant to say that earthly human beings attain their understanding from the sun's action and that it is in virtue of the variety of solar movements, positions, and aspects that men are disposed for intellective cognition in various ways.

A Note on the Original Greek Text

83–91. /620/ We should know, moreover, that Aristotle presented not all of this passage from Homer but only the beginning. Hence all that is in the Greek and Arabic is this: "For such is the understanding." The point is that this phrase would be understood in the way we have become accustomed: we, in introducing a passage from some authority, present only the beginning, if the passage is well known. But since this passage from Homer was not known among Latin speakers, Boethius presented the whole thing.[6]

3. Aquinas here misconstrues the text from Empedocles, reading it as a single connected passage when in fact it is two separate fragments, linked by the phrase "and in others"—i.e., in another passage. In his later commentary on *Metaphysics* IV (lec. 12, sec. 675), Aquinas comes much closer to getting the meaning right.

4. *Odyssey*, bk. 18, lines 136–137.

5. Aristotle, *Physics* II.194b13.

6. Aquinas thought that it was Boethius who had originally translated the *De anima* into Latin and that Moerbeke's revisions were to this translation. But although Boethius did translate and write commentaries on many of Aristotle's logical works, it was James of Venice, in the twelfth century, who made the original Latin translation of the *De anima*. (See Introduction.)

Aquinas would have acquired this information about the original Greek text not from his own research (he did not know Greek) or directly from Moerbeke (they were not in close contact), but most likely from a marginal note attached to the translation (see Gauthier, pp. 207*–210*).

How Heavenly Bodies Can Make an Impression on Intellect and Will

92–107. /621/ It is clear, then, that this claim—that heavenly bodies make a direct impression on intellect and will—is no different than claiming that intellect is the same as sense. But an impression of the heavenly bodies can involve intellect or will indirectly, insofar as intellect and will are connected to the sensory powers in their operation. For when the organ of phantasia is damaged, intellect is impeded in its operation. Also, the will is inclined by sensory appetite toward willing for or against a thing. Yet the will is not pulled along by sensory appetite out of necessity; instead, it always remains free to follow or not follow sensory appetite's inclination. For this reason, then, the heavenly bodies introduce no necessity for human bodies.

{427A26–29} THE REASON FOR THIS VIEW

108–131. /622/ Next, when Aristotle says **For these men all think,** etc., he shows the reason for the claim just discussed. Now it is clear that if we take away the differentia by which things differ from one another, then they are left the same [as one another]. For instance, if *rational* is taken away from *human being*, then what will be left is one of the nonrational animals. But the differentia by which intellective cognition differs from sensory is that sensing is something corporeal: for sense's operation does not occur without a bodily organ. Intellective cognition, however, is not something corporeal, because intellect's operation does not occur through a corporeal organ (as will be shown later [III.7.429a24–27]). So the ancients claimed that sense and intellect are the same for this reason: that they thought that **intellectively cognizing is** something **corporeal, just like sensing** is. /623/ Now, as for how they claimed that each is something corporeal, Aristotle shows this in the following way. They claimed that both **being wise** through intellect and also **sensing** occur in virtue of a likeness, **as** was said **in** Book I [I.4.404b17–18, I.12.409b25–410b2]. Also, they understood 'likeness' in terms of corporeal being—that earth, for instance, is cognized through earth, and water through water, and so on in

other cases. So it followed that sensing and intellectively cognizing were the result of corporeal nature, in the same way; thus it follows that sensing and intellectively cognizing are the same.

132–135. *Analysis.* /624/ Next, when Aristotle says **Yet still they needed,** etc. {427a29 ff.}, he disproves the claim just discussed: first, as regards the reason for it; second, as regards the claim itself (beginning at **So it is clear,** etc. {427b6}).

{427A29–B5} THE REASON FOR THE CLAIM DISPROVED

136–153. So Aristotle says first that the philosophers, when they gave as the cause of cognition the likeness of cognizer to cognized, had to give as well the cause of **deception,** since deception seems to be **more proper to animals** than does cognition—given the state of their nature. For we see that human beings, on their own, can be deceived and mistaken; to have cognition of the truth they need to be taught by others. **And,** further, **soul** passes more **time in** deception than in the cognition of truth. For it is with difficulty, after long periods of study, that a soul reaches a cognition of the truth. And this argument certainly is effective against the ancient philosophers who claimed that soul has cognition due to its very nature—as if soul, due to its being made up out of basic principles, were not only in potentiality for cognizable things, but were actually cognizant.[7]

153–169. /625/ One can reply to this in two ways: first, inasmuch as it is said that the ancient philosophers did not believe there to be any deception. For they claimed that all appearances are true (as was said earlier [I.3.404a27–31, III.2.204–210]); hence there was no need for them to give a cause of deception. /626/ It can be replied in a second way that, because they said that the cause of cognition is a soul's making contact with *(tangit)* what is like it, it is given to be understood that the cause of deception is a soul's making contact with what is unlike it. This is how Aristotle concludes: that, because the ancient philosophers did not give a cause of deception, it is therefore **necessary** that **either all appearances** *(omnia quae videntur)* **are true, as some said, or** that **the contact** *(tactus)* by which soul makes contact with an **unlike** thing **is** the cause of **deception. For** to make contact with what is unlike seems to be **contrary** to **cognizing what is like oneself.**

7. Compare I.4.404b8–18.

{427B5–6} AGAINST THE SECOND REPLY JUST MADE

170–182. /627/ Now the first of these replies was rejected in *Metaphysics* IV [1009a38–1012b31]. /628/ So Aristotle proceeds to investigate the second, saying **It seems, however,** etc. For it is clear that like and unlike are contraries. But with respect to contraries a human being has cognition and deception in the same way: for he who cognizes one of two contraries cognizes the other, and he who is mistaken regarding one is mistaken regarding the other. This is why he says, **it seems that one's knowledge and deception about contraries are the same.** Therefore it is not possible for the contact with what is like [one's soul] to be the cause of a true cognition and the contact with what is unlike [one's soul] to be the cause of deception. For then there would be knowledge regarding one of the contraries and deception regarding the other.

THE CLAIM ITSELF DISPROVED

183–189. *Analysis.* /629/ Next, when Aristotle says **So it is clear,** etc. {427b6 ff.}, he disproves the claim, showing that neither being wise nor intellectively cognizing is the same as sensing. Now these two are attributed to intellective cognition: for intellect has the capacity to make judgments, which is here called "being wise," and to apprehend, which is here called "intellectively cognizing."

{427B6–8} BEING WISE IS NOT THE SAME AS SENSING

190–198. First, then, Aristotle shows that **sensing** is **not the same** as **being wise,** for the following reason: sensing **is in all animals, whereas** being wise is not in all but **in few.** Therefore to be wise is not the same as to sense. He says that being wise "is in few animals," however, and not that it is in humans only, because certain other animals also have a share in prudence and some wisdom, inasmuch as through natural estimation they judge rightly about what should be done.

{427B8–14} INTELLECTIVELY COGNIZING IS NOT THE SAME AS SENSING

199–215. /630/ Second, beginning at **But neither is,** etc., Aristotle proves through two means that intellectively cognizing is not **the same** as **sensing.**

The first of these is as follows: **intellectively cognizing** occurs **rightly and not rightly.** It occurs **rightly, on the one hand,** (i) as regards **knowledge,** which is concerned with things available for theoretical consideration and with necessary things; (ii) as regards **prudence,** which is right reason concerning contingent things that can be done; and (iii) as regards **true opinion,** which is related to both opposites, yet related, not determinately to one or the other (in the way that knowledge and prudence are), but to one with misgivings regarding the other. Intellective cognition occurs **not rightly, on the other hand,** as regards **the contraries** of those—i.e., (i) as regards false knowledge,[8] (ii) as regards imprudence, and (iii) as regards false opinion. Sensing not rightly does not occur, however, because **a sensation** *(sensus)* **is always true** with respect to its **proper** sense **objects.** Therefore sensing and intellectively cognizing are not the same.

215–225. /631/ And because someone could say that right intellective cognition is the same as sensing, Aristotle thus adds another means of argument to rule this out, as follows. Sensing **is in all animals, whereas intellective cognition** is not; intellective cognition is only in those in whom there is **reason**—viz., in human beings, who through reason's investigation attain an apprehension of intelligible truth. (Separated substances, however, which are of a higher intellect, immediately cognize the truth without investigation.)[9] Therefore even right intellective cognition is not the same as sensing.

PHANTASIA IS NOT OPINION

226–231. *Analysis.* /632/ Next, when Aristotle says **Now phantasia,** etc. {427b14 ff.}, he shows that opinion, which follows intellect, is different from phantasia, which follows sense. And in this connection he does two things. First, he shows that phantasia is not opinion. Second, he asks what phantasia is (beginning at **Now regarding what,** etc. {III.5.427b27}).

8. It is peculiar that Aquinas would speak of false knowledge here. This seems to be not just a contradiction in terms but also contrary to III.5.428a16–18, where knowledge is said to be "always asserting things that are true."

9. Aquinas is referring to angels, a distinct and higher kind of rational being. Angels do not acquire their knowledge empirically, through investigation, but possess knowledge innately, from God.

{427b14–16} HIS PLAN

231–248. In connection with the first Aristotle does three things. First, he introduces his plan. He says that we can see that sense and intellect differ from the fact that **phantasia is** something **different from sense and intellect, and** yet phantasia **does not occur without sense,** since it results from sense (as will be said later [III.6.428b11–17]). **And without** phantasia **opinion** does not occur. For phantasia seems related to sense in just the way that opinion is related to intellect. But with respect to sensible things, when we sense something, we affirm that it is so. When something appears *(videtur)* through phantasia, however, then we affirm not that it is so but that it appears or seems *(apparere)* so to us. For the term 'phantasia' is taken from vision or appearance, as will be said below [III.6.127–136]. And likewise in connection with intelligible things, when we intellectively cognize something we affirm that it is so. When we form an opinion, however, we say that it appears or seems so to us. Therefore, just as intellective cognition requires sense, so forming an opinion requires phantasia.

{427b16–21} A FIRST ARGUMENT

249–261. /633/ Second, beginning at **But that phantasia and opinion,** etc., Aristotle proves through two arguments that **phantasia and opinion are not the same.** The first of these arguments is this: **the state** of phantasia **is up to us, when we want,** because **it is** in our power to form something that appears *(apparens)* before **our eyes,** so to speak—such as golden mountains or whatever we want to appear. This is plain in the case of people who remember **and** form for themselves **images** of things, which they see at will. But **forming opinions is not** in our power: for it is **necessary** that the one forming opinions have reason, through which he forms either **true** or **false** opinions. Therefore opinion is not the same as phantasia.

{427b21–24} A SECOND ARGUMENT

262–284. /634/ Aristotle presents a second argument beginning at **Moreover, when we form,** etc. The argument is that, immediately following opinion, our appetites are affected. For **when we form an opinion** that is serious or **terrible, we are immediately affected in the corresponding way,** being sad or fearful. And, **likewise, if** something is **encouraging**—i.e., if someone should

be encouraged and hopeful regarding something—then hope or joy immediately follows. But our appetites are not affected by phantasia. For when something appears to us **through phantasia, we are disposed just** as **if we were** to look at something terrible or hopeful **in a picture.** Therefore opinion is not the same as phantasia. /635/ The reason for this difference, however, is that appetite is neither affected nor moved at the simple apprehension of a thing, as phantasia presents [it]; rather, it must be apprehended under the aspect of the good or bad, suitable or harmful. Opinion brings this about in human beings by compounding and dividing,[10] when we form the opinion that this is terrible or bad, that is hopeful or good. Phantasia, however, neither compounds nor divides. Still, the appetite of animals is affected by natural estimation, which does for animals what opinion does for human beings.

{427b24–27} DIFFERENCES AMONG ACCEPTANCE

285–289. /636/ Third, beginning at **Concerning this acceptance,** etc., Aristotle says that many things pertain to intellectual **acceptance**—namely, **knowledge, prudence, opinion, and the contraries of these.** As a result, **the difference between these** should be taken up not here but elsewhere (namely, in *Ethics* VI [1139b14–1140b30]).

10. On intellect's act of composition and division, see III.11.

Chapter 5

Phantasia
What It Is Not

DE ANIMA III.3.427b27–428b9

427b27–29. Now regarding what cognizing intellectively is, since this is not the same as what sensing is, whereas phantasia seems to be one of this [pair], opinion the other,° we give an account of phantasia as follows; about the other we must speak [shortly].

428a1–5. If, then, phantasia is that in virtue of which we say that some phantasm is produced in us, and if we are not speaking in terms of a metaphor, then [phantasia seems to be] some one power or disposition among those in virtue of which we discern or say something true or false. Now of this sort there are sense, opinion, knowledge, and intellect.

428a5–8. That it is not sense is indeed clear, then, on the basis of these [arguments]: for a sense is either potential or actual, like sight and seeing. But one has the image of something in phantasia *(phantasiatur aliquid)* **when neither of these exists, such as things [appearing] in sleep.**

428a8–9. Further, sense is always present, whereas phantasia is not.

428a9–11. But if it is the same as what is in actuality, then it would be possible for phantasia to be in all beasts. But it seems that it is not—for instance, in an ant, a bee, or a worm.

428a11–12. Further, these [senses] are always true, whereas many acts of phantasia are false.

428a12–15. Moreover, we do not say, when we function with certainty regarding some sense object, that this *seems* to us a human being; instead, [we say this] when we are not sensing clearly, and then it is either true or false.

428a15–16. And of course there is what we have already said, that visions appear to those sleeping° as well.

428a16–18. Moreover, neither will [phantasia] be one of those things always asserting things that are true, like knowledge or intellection. For phantasia is also false.

428a18–22. It remains, then, to see whether it is opinion. For opinion is also both true and false. But belief *(fides)* **inheres in opinion, since it does not seem possible to have an opinion and not to believe in it. Belief, however, is in none of the beasts, whereas phantasia is in many.**

428a22–24. Moreover, if belief follows from every opinion, while being

persuaded [follows] belief, and reason [follows] suasion, then although phantasia is in some beasts, reason is not.

428a24–27. So on this basis it is clear that phantasia will be neither opinion with sense, nor [opinion] through sense, nor a mixture of opinion and sense.

428a27–b2. And it is clear that [this kind of] opinion is not any other but is [the kind] that is concerned with what sense is also concerned with.° I am then speaking of phantasia as a mixture of an opinion and a sensation *(sensu)* **about something white. For it does not come from an opinion about something white° and a sensation of something good.° To appear, therefore, is to form an opinion regarding what is sensed, nonaccidentally.**

428b2–9. False things also appear, regarding which one has at the same time a true acceptance. The sun, for instance, seems to be one foot wide, but is believed to be greater than where we live. It is the case, then, either that one discards the true opinion that he had of it, while the object endures, neither forgetting nor ceasing to believe; or, if he still has it, then the same [appearance] is necessarily true and false. But it is *made* false when the object's being transfigured is hidden.

428b9. So phantasia is not any one of these, nor does it come from them.

1–5. *Analysis.* /637/ Now that the Philosopher has shown that phantasia is not opinion, he here begins to ask what it is. And first he says what his plan is; second, he pursues it (beginning at **If, then, phantasia is,** etc. {428a1}).

{427b27–29} HIS PLAN

6–12. So Aristotle says first, since it was shown that **cognizing intellectively is** different than **sensing** and that **opinion** pertains to one of these (intellect), **whereas phantasia** pertains to **the other** (sense), that **we** should now, after the account of sense has been presented, say something about **phantasia.** In turn, an account will be given shortly **about the other**—i.e., about intellect and opinion.

13–18. *Analysis.* /638/ Next, when Aristotle says **If, then, phantasia,** etc. {428a1 ff.}, he asks what phantasia is. And in this connection he does two things. First, he shows that it is not any of the more well known powers or dispositions that discern or assess what is true or false. Second, he shows what it is (beginning at **But since, when something,** etc. {III.6.428b10}).

18–24. In connection with the first he does three things. First, he distinguishes the powers and dispositions by which a thing is discerned. Second, he shows that phantasia is not any of them (beginning at **That it is not sense,** etc. {428a5}). Third, he shows that it is not anything composed from them (beginning at **So on this basis,** etc. {428a24}).

{428a1–5} FOUR POWERS AND DISPOSITIONS

25–38. So Aristotle says first that, since **phantasia is that in virtue of which we say that some phantasm**—i.e., something that can appear—**is produced in us,** then (unless we are perhaps to take 'phantasia' metaphorically) it seems necessary for phantasia to be one of several cognitive **dispositions** or **powers** by which one thing is discerned from another **or** by which **we say something true** or **false** regarding something (that is, we are or are not mistaken). The reason for this is that a thing's appearing is [our] discerning and saying what is either true or false. Now there seem to be four powers or dispositions by which we discern and say what is true or false: **sense, intellect, knowledge,** and **opinion.** It thus seems that phantasia is one of these four.

A Note on This List of Four

39–63. /639/ Aristotle introduces these four as if they had already been identified. For others that pertain to cognition seem not yet to have been known in his time with certainty.[1] He himself, however, has already distinguished intellect from sense, above [III.4.427b8–14]. So in addition to sense he lists three others: intellect, knowledge, and opinion. And it seems that here 'intellect' is not taken as a power, since then knowledge and opinion, which pertain to the intellective power, would not be separated from intellect. Instead, 'intellect' is taken as the certain apprehension of things that become known to us without investigation, like first principles.[2] Knowledge, then, is taken as the cognition of things about which we are made certain through reason's inquiry, while opinion is taken as the cognition of things about which we lack certain judgment. /640/ Thus Aristotle also says that phantasia is a disposition or power numbered among these [428a3]: this shows that among these, some are powers, some dispositions. That the ancients knew only these sources of apprehension we can recognize also through Plato's view, as introduced earlier in Book I [4.173–190]. Plato reduced to numbers just these four, attributing intellection to the One, knowledge to the Duality, opinion to the Trinity, sense to the Quaternity.

1. Albert the Great claimed that the complete list would include craft, prudence, and wisdom (*De anima* 172.69–81).

2. To capture this meaning of *intellectus,* here and elsewhere, the word will be translated as *intellection.*

PHANTASIA IS NOT ANY OF THESE

64–69. *Analysis.* /641/ Next, when Aristotle says **That it is not sense,** etc. {428a5 ff.}, he shows that phantasia is not any of those mentioned. And in this connection he does three things. First, he shows that it is not sense; second, that it is not intellection or knowledge (beginning at **Moreover, neither will,** etc. {428a16}); third, that it is not opinion (beginning at **It remains, then,** etc. {428a18}).

{428A5–8} IT IS NEITHER POTENTIAL NOR ACTUAL SENSE

69–79. In connection with the first Aristotle does three things. First, he shows **that** phantasia **is not sense,** neither in potentiality nor in actuality. The argument is as follows: while asleep **one has the image of something in phantasia** *(aliquid phantasiatur);* but this does not happen in virtue of sense in potentiality, since nothing appears to a sense existing in potentiality, nor does it happen in virtue of sense in actuality, since **in sleep** there is no sense in actuality. Therefore phantasia is sense neither in potentiality nor in actuality.

{428A8–9} IT IS NOT SENSE IN POTENTIALITY

80–85. /642/ Second, beginning at **Further, sense,** etc., Aristotle shows that phantasia is not sense in potentiality. The argument is as follows: **sense** in potentiality **is always present** to an animal, **whereas phantasia is not** always present, since something does not always appear to an animal. Therefore phantasia is not sense in potentiality.

{428A9–11} IT IS NOT SENSE IN ACTUALITY: A FIRST ARGUMENT

86–96. /643/ Third, beginning at **But if it is the same,** etc., Aristotle shows through four arguments that phantasia is not actualized sense. The first of these is as follows: actualized sensing is suited to **all beasts**—i.e., all nonrational animals. Therefore, **if** phantasia were **the same** as actualized sense, it would follow that **it would be in all** nonrational animals. **But** this is **not** true, for it is not **in an ant, a bee, or a worm.** Therefore phantasia is not actualized sense.

On Phantasia in Animals

97–115. /644/ It is important to consider, however, that all animals have phantasia in a way; but incomplete animals have an indeterminate phantasia, as the Philosopher will say below [III.16.433b29–30, 434a1–10]. This does not seem to be true of the ant and the bee, however, in whose works the highest level of prudence appears.[3] But we should know that the ant and the bee carry out works of prudence through natural inclination and not because they have a determinate phantasia distinct from sense. For they have an image of something in phantasia only while moved by a sense object. But the fact that they act for an end, as if being provident for the future, is not the result of their having some imagination of that future; instead, it is through natural inclination more than through apprehension that they imagine their present acts, directed to an end. The Philosopher, however, speaks of those animals having phantasia to whom something appears in virtue of phantasia, even when not actually sensed.

{428A11–12} A SECOND ARGUMENT

116–122. /645/ Aristotle introduces a second argument beginning at **Further, these,** etc. This runs as follows: the actualized senses **are always true,** for a sense is not deceived with respect to its proper sense object. But **acts of phantasia** *(phantasiae)* are most often *(ut plurimum)* **false;** for it most often happens that no thing corresponds to the imagination. Therefore phantasia is not actualized sense.

{428A12–15} A THIRD ARGUMENT

123–140. /646/ Aristotle introduces a third argument beginning at **Moreover, we do not say,** etc. This runs as follows: **when we function** with certainty **regarding some** actual **sense object**—viz., when sensing it—**we do not say that this *seems* to us a human being.** We **instead** say this **when we are not sensing clearly,** as when we see something at a distance or when we see something in the dark. **And then** the actualized sense is **either true or false.** For with respect to a *per accidens* sense object (the sort of sense object that a human being

3. Albert the Great was so puzzled by Aristotle's denial that ants and bees have phantasia that he contended—wrongly—that the translation must be at fault. The translator, Albert hypothesized, must have encountered Greek animal names that he did not recognize, and in their place substituted 'ant' and 'bee' (*De anima,* 173.40–45).

is), sense is not always true but is sometimes deceived.[4] Now he adds this argument to show the correspondence between unclear sense and phantasia, which is also sometimes true and sometimes false. For when we clearly have an image of something in phantasia, we say that this seems to us a human being, not that it is with certainty a human being. Therefore phantasia is not the same as actualized sense.

{428a15–16} A FOURTH ARGUMENT

141–145. /647/ Aristotle introduces a fourth argument beginning at **And of course there is,** etc. This runs as follows: **visions** associated with phantasia *(phantasticae visiones)* **appear to those sleeping;** but in them there is no actualized sense. Therefore a vision associated with phantasia is not actualized sense.

{428a16–18} PHANTASIA IS NOT INTELLECTION OR KNOWLEDGE

146–152. /648/ Next, when Aristotle says **Moreover, neither,** etc., he shows that phantasia is neither **intellection** nor **knowledge.** For intellection of first principles and the knowledge of conclusions that is acquired through demonstration are always concerned with what is true. **Phantasia,** however, **is** sometimes **false.** Therefore phantasia is neither knowledge nor intellection.

{428a18–22} PHANTASIA IS NOT OPINION: A FIRST ARGUMENT

153–163. /649/ Next, when Aristotle says **It remains, then,** etc., he shows that phantasia is not opinion. This possibility seemed more likely, because **opinion** too is sometimes **false,** like phantasia. But he shows through two arguments that they are not the same. The first of these is as follows. **Belief** *(fides)* follows from **opinion;** for **it does not seem** to be **possible** for someone **not to believe** the **opinion** he forms. And thus, since no **beasts** have **belief,** opinion will not be in any beasts. But **phantasia is in many** of these beasts, as was said [97–115; cf. II.4.413b22]. Therefore phantasia is not opinion.

4. On *per accidens* sense objects, see II.13.418a20–25 and Aquinas's extended discussion there.

{428a22–24} A SECOND ARGUMENT

164–178. /650/ Aristotle introduces a second argument beginning at **Moreover, if belief follows,** etc. This runs as follows. **Belief follows from every opinion,** since each one believes the opinion he forms (as was said [428a20–21]). But it follows from **belief** that someone is **persuaded:** for we believe the things of which we are persuaded. **Reason,** however, follows from persuasion (in terms of inferential order): for someone is persuaded of something through some reasoning. Therefore, from start to finish, whoever has opinion has reason; but no beast has **reason,** even though **some** have **phantasia.** Therefore phantasia is not opinion. And it is clear that this second argument is introduced to confirm the first, inasmuch as the first presupposed that no beast has belief.

PHANTASIA IS NOT ANYTHING COMPOSED FROM THESE

179–183. *Analysis.* /651/ Next, when Aristotle says **So on this basis,** etc. {428a24 ff.}, he shows that phantasia is not something composed from the things just mentioned—and especially not from sense and opinion, which it could most seem to be composed from.

{428a24–27} WHAT HE MEANS

183–196. In this connection he does three things. First, he explains what he means, as if drawing a conclusion from the preceding remarks. He concludes that since phantasia is neither sense nor opinion it can be **clear on this basis** that **phantasia** is not **opinion with sense** (so that it would be opinion essentially, and would have sense accompanying it), **nor** is it opinion **through sense** (so that it would be opinion essentially, but would have sense causing it), **nor** is it **a mixture of opinion and sense** (so that it would be essentially composed from both). But Aristotle does not add that phantasia is not sense with opinion, the reason being that phantasia seems to correspond more to opinion, which can be false, than to sense, which is always true.

{428a27–b2} A POSSIBLE POSITION

197–211. /652/ Second (beginning at **And it is clear,** etc.), Aristotle shows how opinion would have to be taken if phantasia were a mixture of opinion

and sense. For because phantasia is concerned with one and the same thing [at a time], **it is clear that** the **[kind of] opinion** linked to sense (this is phantasia) **is not any other** opinion, **but is [the kind] that** has to do with the same thing that **sense also** has to do with. It is as if we were to say that **phantasia** is a kind of **mixture of an opinion about something white and a sensation** *(sensu)* of the same. **For** it cannot be composed **from an opinion about something white and a sensation of something good,** since then phantasia would not be concerned with one and the same thing. **Therefore,** if phantasia comes from a mixture of opinion and sense, it must be that for something **to appear** in virtue of phantasia is nothing other than **to form an opinion regarding** the same thing that **is sensed,** in its own right and **nonaccidentally.**

{428b2–9} THIS POSITION OVERTURNED

212–220. /653/ Third (beginning at **False things also appear,** etc.), Aristotle overturns the position just discussed, with this argument. It sometimes happens (i) that **false things appear** in virtue of phantasia (which comes from sense) and (ii) that **regarding** these very same things a human being **has a true** opinion. In this way it appears in virtue of sense that **the sun** is no larger than **one foot wide,** which is false, whereas in terms of the true opinion it **is believed to be greater than where we live**—i.e., than the whole earth in which we live.

221–240. If **then** this false appearance is the same as an opinion with sense, we must say one of two things. The first of these is that in this composition of opinion and sense someone **discards the true opinion that he** once **had, while** (i) **the object** the opinion is about **endures**—i.e., continues in the same way—and (ii) he who discards the opinion has **neither** forgotten **nor** ceased **to believe.** This is impossible. For there are three ways in which someone gives up a true opinion: first, when the object is changed (as when someone truly forms the opinion that Socrates is sitting while he is sitting; after Socrates has ceased to be sitting, if that person holds onto the same opinion, then the true opinion is changed to a false one); second, when he ceases to hold the opinion that earlier he was holding, because he forgot the original opinion; third, when he ceases to hold an opinion that earlier he was holding, because, swayed by some argument, he stops believing what he earlier believed. But if none of these happens then it is impossible for someone to give up a true opinion, which is what would happen in the case proposed.

241–252. /654/ Now the other thing that we have to say, if we do not say the first, is that someone would maintain the true opinion with the false appearance. And thus, if that appearance *is* that opinion (which one has to assert, if

phantasia is opinion), then it would follow that **the same** appearance **is true and false. But** if **it is** *made* false and is not true, then it must be that **the object's being transfigured**—i.e., transformed from what it had been—**is hidden** from the one who forms the opinion. For if this were not hidden from him then he would change his opinion at the same time that the object is changed, and so his opinion would not be false. (Aristotle added this point in order to elaborate on what he had said earlier about the object's endurance [428b6].)

253–254. So Aristotle concludes that **phantasia is not** any of the four things mentioned earlier, **nor** is it composed **from them.**

Chapter 6

What Phantasia Is

DE ANIMA III.3.428B10–429A9

428b10–17. But since, when something is moved, something else can be moved by it; and since phantasia seems to be movement, and seems not to happen without sense, but seems to be in those [animals] that sense and to be concerned with the things sense is concerned with; and since movement can be produced by a sensory act, and this [movement] is necessarily like the sense—[thus] phantasia will indeed be that very movement,° not occurring without sense nor in things nonsensory; and something having [phantasia] can do and be affected by many things in virtue of it; and it is true and false.

428b17–429a2. Now that is the case for this reason: a sense is of course true concerning its proper objects, or else has what is false to the slightest degree. Secondly, moreover, [there is the sensation of] these as accidental,° and here at this point [a sense] can lie. For it does not lie about something's being white, whereas it does lie about whether the white thing is this or something else. Thirdly, however, [there is the sensation] of common objects which depend on the accidents in which the proper objects exist. (I am speaking, now, of how movement and extension are accidents in sensible things.) In connection with these, above all, one can at this point be deceived in virtue of sense. Now [phantasia's] movement, brought about by an act that comes from sense, differs from these three senses: the first [movement of phantasia], concerning a present sensation *(sensus),* **is true; but the others, concerning present and absent [sensations], certainly will be false, and above all when the sense object is far off. If then only phantasia possesses the things discussed, while this is what we said, then phantasia will indeed be movement by a sense made actual.**

429a2–4. But because sight is a sense above all [others], [phantasia] takes its name from light, because without light there is no seeing.

429a4–8. And because [acts of phantasia] remain within and are like the senses, animals do many things in virtue of them: some because they do not have intellect, as in the case of beasts; others as the result of a veil over intellect at times, due to passion, sickness, or sleep, as in the case of human beings.

429a8–9. Regarding phantasia, then, what it is and why, let this be enough.

1–8. *Analysis.* /655/ Now that the Philosopher has shown that phantasia is not any of the four things that the ancients claimed pertain to cognition, he here asks what phantasia is. And this account is divided into two parts. In the first part he shows what phantasia is. In the second part he gives the reason for the characteristics that pertain to phantasia (beginning at **Now that is the case,** etc. {428b17}).

{428B10–17} WHAT PHANTASIA IS

9–25. So in order to investigate what phantasia is, he proceeds in this way. First he claims that if one thing is **moved,** it is possible for another thing to **be moved by** that first one. For *Physics* VIII [256a4–13] showed that there are two kinds of movers—namely, an immovable mover and a moved mover, the second of which moves another insofar as it is moved. /656/ Next he proposes that **phantasia** is a kind of **movement.** For just as a soul that is sensing is moved by its sense objects, so too, when exercising phantasia, a soul is moved by certain appearances, called phantasms. /657/ Further, he presents the relationship that phantasia has to sense. For phantasia cannot **happen without sense, but** is only **in** things that have sense—in animals, that is—**and** is **concerned** only **with the things sense is concerned with,** namely, with things that are sensed. For things that are solely intelligible do not fall to phantasia.

25–37. /658/ Next, Aristotle proposes that it is possible for a certain **movement to be produced by a sensory act;** this is then made clear on the basis of what was first claimed—namely, that by means of what has been moved, it is possible for something to be moved. But a sense is actualized as the result of being moved by its sense objects. It remains, then, that actualized sense will cause some movement. Also, it is clear on this basis that the movement caused by a sensory act **is necessarily like the sense,** given that every agent carries out something like itself. Hence what produces movement, insofar as it is moved, causes a movement like the one that moves it.

37–48. /659/ From all of this, then, Aristotle concludes that **phantasia** is a kind of **movement** caused by actualized sense and that this **movement** does **not** exist **without sense, nor** can it be **in** things that do not sense. For if some movement is brought about by actualized sense, a movement like the movement of sense, and if nothing else but phantasia alone is found to be such, then the result is that phantasia is this sort of movement. And from the fact that it is a movement caused by a sense and like it, it follows that **something having** phantasia can **do and be affected by many things in virtue of** it, **and it** can be **true and false,** as will now be shown.

49–57. *Analysis.* /660/ Next, when Aristotle says **Now that is the case,** etc. {428b17 ff.}, he gives the reason for the characteristics that apply to phantasia, based on what has been said. And in this connection he does three things. First, he gives the reason why phantasia is sometimes false and sometimes true. Second, he gives the reason for its name (beginning at **But because sight,** etc. {429a2}). Third, he gives the reason for something he had said [428b16–17]: that animals do many things in virtue of phantasia (beginning at **And because [acts of phantasia],** etc. {429a4}).

{428b17–429a2} WHY IT IS SOMETIMES FALSE, SOMETIMES TRUE

58–85. So Aristotle says first that **that**—namely, phantasia's being sometimes true and sometimes false—**is the case for this reason** that he is going to give: namely, because sense (which is the cause, through its act, of phantasia) is disposed toward truth and falsity in different ways, according to how it is related to different things. /661/ For firstly, **of course,** a sense **is** always **true** with respect to **its proper** sense **objects, or else has** little falsity. For just as natural powers are deficient with respect to their proper operations only on rare occasions *(in minori parte),* because of some damage, so too the senses are deficient with respect to a true judgment concerning their proper sense objects only on rare occasions, because of some damage to the organ. This is evident in the case of the feverish, to whom sweet things seem bitter because of their tongue's disorder. /662/ **Secondly, moreover,** there is sensation in connection with *per accidens* sense objects, **and here at this point** sense is deceived. **For** sense **does not lie about something's being white,** when it is seen. But **whether the white thing** is **this or** that—e.g., snow or flour, or something else of that sort—here at this point it can **lie,** especially at a distance. /663/ **Thirdly,** then, there is the sensation **of common** sense **objects;** these **depend on** the subjects **in which the accidents** that are **the proper** sense **objects exist.** In this way **extension and movement,** which are common sense objects, **are accidents in** corporeal **sensible things.** And deception occurs **above all in connection with** this sort of thing, because judgment concerning these varies relative to different distances. For what is seen from farther away is seen [as] less *(minus videtur).*[1]

85–116. /664/ **Now** the **movement** of phantasia that is **brought about by an act** of **sense differs from** those **three senses**—i.e., from these acts of sense—

1. Compare II.15.118–135.

in the way that an effect differs from its cause. And for this reason, too, falsity (which consists in a sense's being unlike its sense object) can occur in phantasia more easily than in sense. This is because (i) an effect is weaker than its cause, and (ii) insofar as something is extended farther from its first agent, to that extent it receives less of that agent's force and likeness. For there is falsity when the sense object's form is received in the sense differently from how it exists in the sense object. (I mean differently with respect to species, not with respect to matter—e.g., if the flavor of sweet were received on the tongue as bitter. With respect to matter a sense always receives differently than how the sense object has it.) **The first** movement of phantasia, then, which is brought about by a sensation of proper sense objects, is **true** for the most part; I am saying this as regards the presence of the sense object, when the movement of phantasia occurs at the same time as the movement of sense. /665/ Yet when phantasia's movement occurs in the absence of sensation *(sensus),* then it is possible to be deceived even with respect to proper sense objects: for we sometimes imagine absent things as white, even though they are black. But **other** movements of phantasia—viz., those that are caused by the sensation *(sensus)* of *per accidens* sense objects and by the sensation of common sense objects—can **be false** whether the sense object is **present** or not. But they are **above all** false in the absence of **the sense object,** when it **is far off.** /666/ So on the basis of this reason just given, Aristotle goes on to derive his main thesis, saying that **if** these **things discussed** apply to **only phantasia,** and phantasia has **what we said, then** it remains that **phantasia** is **movement by a sense made** actual.

Does Phantasia Require a Power Different from the Sensory One?

118–126. /667/ Now Aristotle does not establish here whether this movement requires a power different from the sensory one. But since powers are distinguished in terms of the difference between acts, and a difference in movement requires different objects that can be moved *(diversa mobilia)*—since that which is moved moves not itself but another—it seems necessary for there to be a phantasm-producing *(phantastica)* or imaginative power different from sense.

{429a2–4} THE REASON FOR ITS NAME

127–136. /668/ Next, when Aristotle says **But because sight,** he gives the reason for this name. In this connection we should know that *phaos* in Greek is the same as 'light.' From this comes *phanos,* which is an appearance or illu-

mination, and *phantasia*.[2] So he says that, since **sight is** foremost among the other senses—being more spiritual (as was shown earlier [II.14.242–282]) and capable of cognizing more things—thus phantasia, which is caused by actualized sense, **takes its name from light, without** which **seeing** is not possible, as was said earlier [II.14.418b2–3].

{429a4–8} WHY ANIMALS ACT IN VIRTUE OF PHANTASIA

137–161. /669/ Next, when Aristotle says **And because [acts of phantasia],** etc., he shows the reason why animals act and are affected in virtue of phantasia. And he says that acts of phantasia *(phantasiae)* **remain within**—i.e., they persist—even once the sense objects are gone, **and are like the** actualized **senses.** Hence, just as an actualized sense moves our appetite in the presence of a sense object, so does phantasia in the absence of the sense object. For this reason he says that **animals do many things in virtue of** these acts of phantasia. But this occurs due to a deficiency in intellect. For when intellect, which is superior, is present, its judgment prevails in action. /670/ Thus when intellect is not in charge, animals act in virtue of phantasia: **some because they do not have intellect** at all, such as **beasts; others,** such as **human beings,** because their **intellect** is veiled. The latter happens in three ways: (i) sometimes as the result of some **passion** (one of anger, concupiscence, fear, or any such thing) that is so strong as to cloud intellect; (ii) at other times, however, as the result of some illness, as is clear in the case of the mad and insane; (iii) at still other times, because of **sleep,** in those at rest. For through these causes it happens that intellect does not prevail over phantasia, and as a result one follows an appearance from phantasia as if it were true.

{428b9} CONCLUSION

162–163. Finally, then, Aristotle concludes that it has been said **regarding phantasia what it is and** what its cause is.

2. Aquinas did not know Greek (see Introduction). The reference to *phaos* was probably drawn from the Latin translation of Themistius, III 93.26 (213.75–76), which included the Greek word. The Greek noun *phanos* does not have the meaning supplied by Aquinas; it refers instead to a lamp or torch. But construing the word as *light*, as Aquinas did, seems to have been commonplace in thirteenth-century treatments of the subject; see the references supplied at this point by Gauthier.

Chapter 7

Soul's Intellective Part
The Nature of Possible Intellect

DE ANIMA III.4.429a10–b5

429a10–13. Now regarding the part of soul by which soul has cognition and wisdom (whether it is separable, or not separable in extension but conceptually), we have to consider what differentia it has and, indeed, how having intellective cognition *(intelligere)* comes about.

429a13–18. If, then, intellectively cognizing is like sensing, it will, at least, be either something's being affected by what is intelligible or it will be something else of that sort. It must, then, be unaffectable and yet capable of taking on a *species*, and potentially such as it although not it. And as what is sensory is related to things that are sensible, so must intellect be related to things that are intelligible.

429a18–24. And so it is necessary, since intellect cognizes all things, that it be unmixed, as Anaxagoras says, in order to command—i.e., in order to have cognition; for something appearing within it will prevent and block what is outside it.° That is why it has no nature at all except in this, that it is potential *(possibilis)*. And so what is called soul's intellect (I call intellect that by which soul forms opinions and intellectively cognizes) is, before it has cognition, not in actuality any of the things that exist.

429a24–27. For that reason, too, it is reasonable that it not be mixed with a body; for it will of course come to be of a certain sort, either hot or cold, if there is an organ (as there is for what is sensory); but in fact there is none.

429a27–29. Now those who say that soul is the location of *species* are right, except that it is not the whole soul but the intellective part, and it is not [these] *species* in actuality, but in potentiality.

429a29–b5. That the unaffectability of what is sensory and what is intellective is not alike is clear from [a consideration of] organs and sense. For a sense cannot sense immediately after [sensing] what is extremely liable to be sensed—e.g., [it cannot sense] a sound immediately after [extremely] loud sounds, or either see or smell immediately after [extremely] strong odors and colors. Intellect, on the other hand, when it intellectively cognizes something extremely intelligible, does not cognize the lowest things less but cognizes them more. For it is separated, whereas what is sensory does not exist without a body.

1–4. *Analysis.* /671/ Now that the Philosopher has presented his account of soul's sensory part and has shown also that sensing and intellectively cognizing *(intelligere)* are not the same, he here begins to present his account of soul's intellective part.

5–9. The account is divided into two parts. In the first he presents his account of the intellective part of soul. In the second he shows, on the basis of the accounts he has presented regarding sense and intellect, what should be observed regarding soul (beginning at **Now, however, summing up,** etc. {III.13.431b20}).

9–12. The first of those parts is divided into two parts. In the first he presents his account of intellect. In the second he compares it to sense (beginning at **Now a sense object evidently,** etc. {III.12.431a4}).

12–15. The first of those parts is divided into two. In the first he presents his account of intellect; in the second, his account of its operation (beginning at **The understanding of indivisibles, then,** etc. {III.11.430a26}).

15–19. The first of those parts is divided into three. In the first he presents his account of possible intellect; in the second, his account of agent intellect (beginning at **Now since just as in every,** etc. {III.10.430a10}); in the third, his account of actualized intellect (beginning at **Now knowledge actualized,** etc. {III.10.430a19}).

19–23. In connection with the first of those parts he does three things. First, he presents his account of possible intellect; second, his account of its object (beginning at **Now extension and the being,** etc. {III.8.429b10}); third, he raises a question about things that he has already presented an account of (beginning at **If intellect is simple,** etc. {III.9.429b22}).

24–26. In connection with the first of these he does two things. First, he shows the nature of possible intellect; second, he shows how it is brought to actuality (beginning at **But when [intellect] becomes,** etc. {II.8.429b5}).

27–29. In connection with the first of these he does two things. First, he says what his plan is; second, he sets out his thesis (beginning at **If, then, intellectively cognizing,** etc. {429a13}).

{429a10–13} HIS PLAN

30–38. /672/ So Aristotle says first, now that his account of soul's sensory part has been presented and it has been shown that being wise and intellectively cognizing are not the same as sensing, that we now have to consider **the part of soul by which soul has cognition**—i.e., intellective cognition—**and wisdom.** Now it was said earlier [III.4.187–189] that there is a difference between being wise and intellectively cognizing: being wise pertains to intellect's judgment, whereas intellectively cognizing pertains to its apprehension.

38–47. /673/ Regarding this part there is something he sets aside, however, something that was a problem for the ancients—viz., whether this part of soul is separable in subject from the other parts of soul, or is not separable in subject but only conceptually *(ratione).* By his expression "separable in extension" [429a12] he means separable in subject, [and he uses that expression] because of Plato, who, positing parts of soul separated from one another in subject, attributed to them organs in various parts of the body.[1] And so that is what he sets aside.

48–54. /674/ But there are two things he plans to investigate. The first of them is this: if this part of soul **is conceptually separable** from the others, then **what differentia** does it have relative to the others? And, since we have cognition of the distinguishing characteristic *(proprietas)* of a power on the basis of the character of [its] act, the second thing he intends to investigate is **how having intellective cognition comes about**—i.e., how the intellectual operation is achieved.

55–62. *Analysis.* /675/ Next, when Aristotle says **If, then, intellectively cognizing,** etc. {429a13 ff.}, he sets out his thesis. And in this connection he does three things. First, he introduces a likeness between intellect and sense; second, based on this sort of likeness he derives the nature of possible intellect (beginning at **And so it is necessary,** etc. {429a18}); third, on the basis of things he had proved regarding intellect, he indicates a difference between intellect and sense (beginning at **That the unaffectability,** etc. {429a29}).

{429a13–18} A LIKENESS BETWEEN INTELLECT AND SENSE

63–75. So the first hypothesis on the basis of which he proceeds to set out his thesis is that **intellectively cognizing is like sensing.** This likeness is clear from the fact that just as sensing is a kind of cognizing, and sometimes we sense potentially, sometimes actually, so also intellectively cognizing is a kind of cognizing, and sometimes we have intellective cognition potentially, sometimes actually. Now it follows from this that, since sensing is a kind of being affected *(pati)* by a sense object or is something like an affection *(passioni),* having intellective cognition is either **something's being affected by what is intelligible** or **something else of that sort**—like an affection, in other words.

1. Compare III.14.269–273.

75–90. /676/ The second of these two alternatives is more correct, for sensing (as was said earlier, in Book II [10.416b32–417a2]) is not being affected, strictly speaking (for something is affected by a contrary, strictly speaking).[2] But it does have something like a being affected insofar as a sense is in potentiality to a sense object and is capable of taking on sense objects. Therefore, if intellectively cognizing is like sensing, then the intellective part, too, **must be unaffectable,** when being affected is taken strictly. And yet it must have something like affectability, because such a part must be **capable of taking on** an intelligible *species* and must be in potentiality to a *species* **such as it, although not it** in actuality. **And** accordingly, **as what is sensory is related to things that are sensible, so must intellect be related to things that are intelligible;** for each of them is in potentiality to its object and capable of taking it on.

91–97. *Analysis.* /677/ Next, when Aristotle says **And so it is necessary,** etc. {429a18 ff.}, he shows the nature of possible intellect on the basis of the preceding considerations. And in this connection he does two things. First, he shows that possible intellect is not anything corporeal or anything mixed together out of corporeal things; second, he shows that it does not have a corporeal organ (beginning at **For that reason, too,** etc. {429a24}).

{429a18–24} POSSIBLE INTELLECT IS NOT CORPOREAL

98–105. In connection with the first, then, we should be aware that the ancients had two views regarding intellect. Some claimed that intellect was composed of the principles of all things so that it might have cognition of all things. He said earlier [I.4.404b11–15] that this was Empedocles' view. Anaxagoras, on the other hand, said that intellect is simple and unmixed, and that it has nothing in common with any corporeal things.[3]

105–120. So on the basis of the claim that intellect is not actually but only potentially the intelligible things, Aristotle concludes that because intellect **cognizes all things** in potentiality, **it is necessary that it** not be mixed together out of corporeal things, as Empedocles claimed, but rather **be unmixed,** as Anaxagoras said. /678/ Anaxagoras was led to say this, however, because of the following argument. For he posited intellect as the first principle of all movement, by which all things are moved in accordance with its command. But if it were mixed together out of corporeal natures or had any one of them determinately, it could not move all things by its command, because it

2. See II.11.92–109.

3. See I.5.405b19–21.

would be determined to one. And that is why Aristotle says that Anaxagoras claimed that intellect is unmixed **in order to command**—i.e., in order to move all things by its command.

120–130. /679/ But since we are now speaking not of the intellect that moves all things but of the intellect that intellectively cognizes all things, that middle term *(medium)* is not well suited to our showing that intellect is unmixed.[4] Instead, we must take a different middle term to show the same thing, one drawn from the fact that intellect has cognition of all things. That is why he adds, **i.e., in order to have cognition**—as if to say that just as Anaxagoras posited intellect as unmixed so that it might command, we must posit intellect as unmixed so that it may have cognition.

131–159. /680/ This is apparent on the basis of the following sort of argument. For everything that is in potentiality to something and is receptive of it is lacking in that to which it is in potentiality and of which it is receptive. For instance, the pupil of the eye, which is in potentiality to colors and receptive of them, lacks all color. But our intellect cognizes intelligible things in such a way that it is in potentiality to them and capable of taking them on in just the way that a sense is, relative to its sense objects. Therefore, intellect lacks all those things that it is naturally suited to cognize. Therefore, since our intellect is naturally suited to have intellective cognition of all sensible and corporeal things, it must lack every corporeal nature, just as the sense of sight lacks color because it is capable of cognizing color. (If it had any color, that color would prevent other colors from being seen.) Just as a feverish patient's tongue that has a bitter humor cannot perceive a sweet taste, so if intellect had any determinate nature, the nature that was natural to it would prevent it from having cognition of other natures. That is why he says **for something appearing within it will prevent and block** the cognition of **what is outside it**—i.e., will hamper intellect, veil it in a certain way, and close it off from contemplating other things. **Something appearing within it** is what he calls anything intrinsic that is naturally connected to intellect; this hampers intellect from intellectively cognizing other things for as long as it intrinsically appears to intellect—as if we were to say, in the case of the feverish patient's tongue, that the bitter humor was "something appearing within."

159–170. /681/ Now Aristotle concludes from this that it is not possible for intellect to have any **nature at all**—i.e., no determinate nature. Instead, it has this nature only, **that it is potential** *(possibilis)* with respect to all things. And

4. In other words, an argument for the conclusion that intellect is unmixed cannot be constructed on the basis of intellect's *commanding,* because that would pick out the wrong intellect. (Aquinas takes Anaxagoras to be speaking here of a single separated intellect that is in some sense divine; see I.3.163–179 and 181–188 below.)

this can be true of intellect, of course, because it is capable of cognizing not only one kind of sense object (like sight or hearing) or only common or proper accidental sensible qualities but instead, universally, the entirety of sensible nature. Thus, just as sight is lacking in a certain kind of sense object, so intellect must lack sensible nature entirely.

170–180. /682/ From this he concludes further that **what is called soul's intellect is, before it has cognition, not in actuality any of the things that exist,** which is contrary to what the ancients claimed. For they used to say that it was composed of all things so that it might have cognition of all things. But if it were capable of cognizing all things because it had all things in it, intellect would always be in actuality, never in potentiality (as he said earlier [II.10.417a2–9] about the senses, that if they were composed of sensible qualities, then in order to sense they would not need external sensible qualities).

181–188. /683/ So that no one should believe that it is true of *every* intellect that before it cognizes it is in potentiality to the things it can cognize, Aristotle interjects that he is now talking about the intellect **by which soul forms opinions and intellectively cognizes.** He says this in order to avoid [talking about] God's intellect, which is not in potentiality but is in some manner the actuality of all things. Regarding this intellect Anaxagoras said that it is unmixed **in order to command.**

189–193. *Analysis.* /684/ Next, when Aristotle says **For that reason, too,** etc. {429a24 ff.}, he shows that intellect does not have a corporeal organ. First, he sets out the thesis; second, he accommodates to it a certain saying of the ancients (beginning at **Now those who say,** etc. {429a27}).

{429a24–27} INTELLECT DOES NOT HAVE A CORPOREAL ORGAN

194–207. First, then, drawing a conclusion from things that were said before [429a18–24], Aristotle says that if in order to have cognition of all things our intellect must not have any determinate nature drawn from the natures of the corporeal things of which it has cognition, in the same way **it is reasonable that it not be mixed with a body**—i.e., that it have no corporeal organ in the way that the soul's sensory part has. For if there is any corporeal organ for intellect in the way that there is for the sensory part, then it will follow that it has a determinate nature drawn from the natures of sensible things. That is why he says that it will follow that it will be **of a certain sort**—i.e., having some sensible quality, such as **either hot or cold.**

207–221. For it is clear that a power of the soul that is the actuality of an organ is in conformity with that organ in just the way that an actuality is in conformity with what is capable of taking it on. /685/ And as far as the actuality of the power is concerned, it does not matter whether the power itself has a determinate sensible quality or the organ does, since it is not the power alone that is actualized but the composite of the power and the corporeal organ. For the seeing of colors would be hindered in much the same way if either the visual power or the pupil had a determinate color. That is why he says that we have the same reason for claiming that intellect does not have a corporeal organ and that it does not have any determinate corporeal nature. And so he adds that there is no organ of the intellective part as there is of the sensory.

{429a27–29} A SAYING OF THE ANCIENTS

222–236. /686/ Next, when Aristotle says **Now those who say,** etc., he accommodates a view of the ancients to what has been said. And he says that because the intellective part does not have an organ as the sensory part has, we can now confirm the statement of those who said that soul is **the location of** *species* (which is said metaphorically, in virtue of its being receptive of *species*). That statement would of course not be true if each part of the soul had an organ, because in that case *species* would not be received in soul alone but in the [soul-body] compound; for it is not sight alone that is capable of taking on *species* but the eye.[5] And so we must say that the location of *species* is not **the whole soul but** only **the intellective part,** which does not have an organ. Nor is it the location of *species* in such a way that it has the *species* in actuality, but in potentiality only.

{429a29–b5} A DIFFERENCE BETWEEN INTELLECT AND SENSE

237–270. /687/ Next, when Aristotle says **That the unaffectability,** etc., he indicates a difference between sense and intellect as regards unaffectability. For it was said earlier [75–90] that just as sensing is not being affected, in the strict sense of being affected, so neither is intellectively cognizing; and on that basis he concluded earlier [429a15–18] that intellect was unaffectable. Therefore, so that no one should believe that sense and intellect are at the same level of unaffectability, he adds here that **the unaffectability of what is**

5. Aquinas thinks of the eye as the whole compound of visual power (sight) and corporeal organ (the pupil).

sensory and what is intellective is not alike. For sense, even though it is not affected *per se* by a sense object (in the strict sense of being affected), still it is affected *per accidens* insofar as the organ's balance is damaged by an excessive sense object. This cannot happen to intellect, however, because it lacks an organ; and so it is affectable neither *per se* nor *per accidens.* /688/ That is why he says that the dissimilarity of **the unaffectability of what is sensory and what is intellective** is **clear from [a consideration of] organs and sense,** because a sense is rendered incapable of sensing **immediately after [sensing] what is extremely liable to be sensed.** For example, hearing cannot **sense a sound** in virtue of having been moved by **[extremely] loud sounds,** nor can sight **see** or the sense of smell **smell** in virtue of those senses' having been earlier moved by **[extremely] strong odors and colors,** which damage the organ. **Intellect, on the other hand,** does not have a corporeal organ that can be damaged by an excess of its proper object, and thus **when it intellectively cognizes something extremely intelligible,** it **does not** subsequently **cognize the lowest things less but cognizes them more.** The same thing would happen to a sense if it did not have a corporeal organ. Nevertheless, intellect is weakened indirectly by an injury to a corporeal organ, insofar as for its own operation it requires the operation of a sense that has an organ. Therefore, the reason for this discrepancy is that **what is sensory does not exist without a body,** but intellect **is separated.**

270–274. /689/ From the things said here, then, we can see the falsity of the view of those who have said that intellect is the imaginative power or some arrangement in human nature that is the result of the body's constitution.

The Possible Intellect Is Not a Separated Substance

275–280. Some people have been so deceived by this passage [429b5], however, that they have posited a possible intellect separated in existence from the body, like one of the separated substances.[6]

280–290. Of course that is altogether impossible, /690/ for it is clear that an individual human being has intellective cognition. If *that* is denied, then the person maintaining this view has no intellective cognition of anything and is not to be listened to. Now if he does have intellective cognition, then there must be something by which, formally speaking, he has such cognition. This something is possible intellect, about which the Philosopher says, "I call intellect that by which soul intellectively cognizes and forms opinions" [429a23].

6. Averroes was considered the most notorious proponent of this view; see Aquinas, *Summa contra gentiles,* bk. II, chap. 59. The proposal considered below (306–316) is due to Averroes (*De anima* III.5 [404.501–520]).

Possible intellect, then, is that by which, formally speaking, an individual human being has intellective cognition.

290–305. Now that by which something operates *as by an active principle* can be separated in existence from that which operates—e.g., if we say that the bailiff operates by the king because the king moves him to operate. But it is impossible for that by which something operates *formally* to be separated from it in existence. That is so because something acts only insofar as it is in actuality. Therefore, something operates formally by something as it is made actual by it. But a thing is not made actually existent by anything if it is separated from it in existence. That is why it is impossible that that by which something acts formally be separated from it in existence. It is impossible, therefore, that the possible intellect by which a human being has intellective cognition—sometimes potentially, to be sure, but other times actually—be separated from that human being in existence.

306–316. /691/ And so, with this in mind, those who came up with this position have tried to find some means by which the separated substance that they call possible intellect is continuous and united with us, so that *its* engaging in intellective cognition might be *our* engaging in intellective cognition. For they say that an intelligible *species* is the form of possible intellect (since it becomes actualized by means of a *species),* but that the phantasm, which is in us, is a kind of subject for this *species.* In this way, therefore, they say that possible intellect is linked with us through its form.

317–329. /692/ But what they say shows absolutely no continuity between [that] intellect and us. This becomes clear in the following way. For possible intellect is one with what is intelligible only insofar as the latter is actually cognized, just as a sense is not the same as the sense object potentially, as was maintained earlier [II.10.417a18–20, 12.418a3–5]. Therefore, the intelligible *species* is the form of possible intellect only insofar as it is actually intelligible, and it is not actually intelligible except insofar as it has been abstracted from the phantasms. It is clear, therefore, that insofar as it is united with intellect it has been removed from the phantasms. It is not, therefore, by this means that intellect is united with us.

329–338. /693/ It is clear, however, that the originator of this position was misled by the fallacy of accident, arguing in some such fashion as this: phantasms are in some way one with an intelligible *species,* but an intelligible *species* is one with possible intellect; therefore, possible intellect is united with the phantasms. That the fallacy of accident has been committed is clear because, as was said, insofar as an intelligible *species* is one with possible intellect, it has been abstracted from the phantasms.

339–352. /694/ Still, even if we granted that there is some union of [that]

possible intellect with us in this way, the union would render us not intellectively *cognizant* but rather intellectively *cognized.* For that of which a *species* existing in some cognitive power is a likeness is not in virtue of this made cognizant, but rather cognized. For in virtue of the fact that a *species* in the pupil is a likeness of the color on the wall, the color is not *seeing,* but rather *seen.* Therefore, in virtue of the fact that an intelligible *species* in [that] possible intellect is a kind of likeness of a phantasm, it does not follow that we are intellectively cognizant, but that we—or, rather, our phantasms—are cognized by that separated substance.

353–357. /695/ There are many other things that can be said against this position, things we have looked into more carefully elsewhere.[7] On this occasion, however, suffice it to say that from this position it follows that no individual human being has intellective cognition.

358–372. /696/ It is also clear that this position is contrary to Aristotle's teaching. First, because Aristotle is here inquiring into a "part of soul," for that is how this treatise begins [429a10]. And so it is clear that possible intellect is a part of soul, not a separated substance. /697/ Also, he goes on to inquire into intellect, "whether it is separable" in subject from the other parts of soul "or not" [429a11], from which it is plain that his argument stands even if intellect is *not* separable in subject from the other parts of soul. /698/ Also, he says that intellect is that "by which soul intellectively cognizes" [429a23]. All these things show that Aristotle did not say that intellect is separated in the way that separated substances are.

372–383. /699/ It is astonishing, though, how carelessly [the proponents of this position] went wrong because of his saying that intellect is "separated" [429b5], since the meaning of this word is available from his text: intellect is called separated because it does not have an organ as a sense does. And that can be true because the human soul in virtue of its superior status surpasses the capability of corporeal matter and cannot be wholly encompassed by it. That is why it is endowed with an action that corporeal matter has no share in, and because of this its power for that action has no corporeal organ. And *that* is how intellect is separated.

7. The reference is to *Summa contra gentiles,* bk. II, chaps. 49–75. Several years later Aquinas would devote an entire treatise to this subject: *On the Unity of the Intellect Against the Averroists.*

Chapter 8

How Possible Intellect Is Brought to Actuality

DE ANIMA III.4.429B5–22

429b5–9. But when [intellect] becomes the individual things in this way, as a knower, [it] is said to be that which [it is] in actuality. But this happens as soon as [a person] can operate by himself. Even then, therefore, it is in potentiality in a way, but not like it was before learning or discovering; and it can then intellectively cognize itself.

429b10–17. Now extension and the being that is appropriate to extension *(magnitudini esse)* **are different, also water and the being that is appropriate to water, and so on in many other cases (though not in all, for in connection with some things it is the same: the being that is appropriate to flesh and flesh [itself]). For this reason, then, [the soul] discerns [them]° either by different [powers] or by being differently disposed. For flesh does not exist without matter, but is, like snub, a this in a this. Therefore, it is of course by what is sensory that one judges the hot and the cold and [the other things] of which flesh is a kind of ratio. It is by something different, however—either by something separated, or just like a bent [line] is related to itself: when it is straightened out it discerns the being that is appropriate to flesh.**

429b18–22. Again, in connection with things that exist by abstraction, straight is like snub, since it involves a continuum. But the what-it-is-to-be-such [is discerned] by a different [power],° if the being that is appropriate to straight and straight [itself] are different. (For let it be duality.) And so [soul] judges by something else or by something differently disposed. In general, then, as things are separable from matter, so too [are they] things that concern intellect.

1–7. *Analysis.* /700/ Now that the Philosopher has presented his account of possible intellect, which is in potentiality to intelligible things, he here shows how it is brought to actuality. First, he shows how intellect sometimes becomes actualized; second, he shows what its proper object is in respect of its becoming actualized (beginning at **Now extension,** etc. {429b10}).

{429B5–9} HOW INTELLECT SOMETIMES BECOMES ACTUALIZED

8–19. First, then, he shows how intellect sometimes becomes actualized. It was said [III.7.429a27–29] that the intellective soul is not the *species* themselves in actuality but in potentiality only. **But when [intellect] becomes the individual things in this way** (i.e., when it is brought to the actuality of the intelligible *species* in this way) like **a knower** (i.e., one who has the disposition *[habitum]* of knowledge),[1] it has the *species* in actuality. Then it **is said to be** intellect **that** is **in actuality. But this happens** immediately when a person **can operate by himself**—[i.e., perform] the operation of intellect that is to have intellective cognition. In the same way a person has in actuality any given form when he can perform the operation belonging to that form.

20–31. /701/ But even though intellect is in some way in actuality when it has intelligible *species* just **as a knower, even then it is in potentiality in a way, but not** in the same way in which it was **before** it acquired knowledge by **learning or discovering.** For before [intellect] had the disposition of knowledge, which is its *first* actuality, it could not operate when it wanted to but had to be brought to actuality by something else. But when it already has the disposition of knowledge, which is its first actuality, it can go on, whenever it wants, to its *second* actuality, which is operating.

Avicenna's Mistaken View of Intelligible Species

32–42. /702/ Now on the basis of what is said here it is apparent that Avicenna's view of intelligible *species* is false and contrary to Aristotle's. For Avicenna claims that intelligible *species* are not preserved in possible intellect and that they are in it only when it intellectively cognizes in actuality. Instead, according to him, whenever it intellectively cognizes in actuality it must turn to a separated agent intelligence, from which the intelligible *species* flow into possible intellect.[2]

43–50. /703/ Against this the Philosopher clearly says here that intellect brought to the actuality of *species* (in the way that knowledge is an actuality) is still intellect in potentiality. For when intellect cognizes actually, the intelligible *species* are in it in respect of a completed act; but when it has the disposition of knowledge, there are *species* in intellect in a way that is between pure potentiality and pure actuality.

1. Aquinas employs the notion of a *habitus* or disposition in many different contexts. The virtues, for instance, are a kind of disposition, and here knowledge *(scientia)* is a disposition. This reflects the fact that we often regard a person as knowing a certain thing even though she is not actually thinking about it at the moment. What she has is a disposition: a readiness to assent to the proposition in question.

2. Compare Avicenna, *Liber de anima* V.6 (147.16–39).

51–59. *{429b5–9, Continued}* /704/ Aristotle said that intellect can cognize when it in some way becomes actualized with respect to the individual things to which it was in potentiality. But with respect to itself intellect was in no way in potentiality, and for these reasons someone could believe that intellect, when actualized, would not intellectively cognize itself. And so, in order to rule this out he adds that not only can intellect, when actualized, intellectively cognize other things, but also **it can then intellectively cognize itself.**

INTELLECT'S PROPER OBJECT

60–62. /705/ Next, when he says **Now extension,** etc., the Philosopher shows what the object of intellect is.

Quiddities as the Object of Intellect

63–91. In order to clarify this it is important to know that in *Metaphysics* VII [1034b20–1037b7] the Philosopher asks whether the what-it-is *(quod quid est)* —i.e., the quiddity or essence of a thing, which its definition signifies—is the same as the thing. And since Plato claimed that the quiddities of things, which he called Ideas or Species, are separated from the individual things, Aristotle shows that the quiddities of things are different from the things only *per accidens.* For example, the quiddity of a white man is not the same as a white man, because the quiddity of a white man contains within itself only what pertains to the species of man, but what I call *a white man* has within it something beyond what pertains to the human species. /706/ But this occurs in connection with all things that have a form in matter: there is in them something beyond the principles of the species. For the nature of the species is individuated by matter, and so the individuating principles and the individual's accidents go beyond the essence of the species. And so one can find under a single species a plurality of individuals that do not differ in the nature of their species but do differ in terms of their individuating principles. And it is for that reason that in all things that have a form in matter the thing and what-it-is are not entirely the same; for Socrates is not his humanity. But in things that do not have a form in matter but are simple forms there can be nothing beyond the essence of the species, because the form itself is the whole essence. And so where such things are concerned there cannot be a plurality of individuals belonging to one species, nor can the thing and what-it-is differ where they are concerned.

92–116. /707/ The fact that not only natural but even mathematical entities

have their species in matter must also be taken into consideration. For matter is of two kinds: *sensible,* from which mathematical entities abstract while natural entities involve it, and *intelligible,* which even mathematical entities involve. This has to be understood in the following way. For it is apparent that quantity inheres in substance immediately, whereas sensible qualities, such as white and black, hot and cold, are based on quantity. But when what is posterior has been removed, what is prior remains; and so, when sensible qualities have been removed intellectively, continuous quantity still remains in intellect. /708/ There are, then, some forms that require matter under a determinate arrangement of sensible qualities, and all natural forms are of this sort; and so natural entities involve sensible matter. There are, however, other forms that do not need matter under a determinate arrangement of sensible qualities but do require matter existing under quantity—e.g., the triangle, the square, and the like. These are called mathematical entities, and they abstract from sensible matter but not from intelligible matter, insofar as continuous quantity abstracted from sensible quality remains in intellect.

117–123. In this way, then, it is clear that mathematical entities have their form in matter as natural entities do. And for that reason the thing and what-it-is differ in connection with both natural and mathematical entities. That is why a plurality of individuals is found under a single species in connection with both; for just as there are many human beings belonging to a single species, so are there many triangles under a single species.

{429B10–17} NATURAL ENTITIES AS THE OBJECTS OF INTELLECT

124–133. /709/ Once these points have been established, the Philosopher's meaning is plain to see from the text. For he says that **extension and the being that is appropriate to extension are different,** i.e., extension and what-it-is are different (for he calls the quiddity of extension "the being that is appropriate to extension"), and, similarly, **water and the being that is appropriate to water, and so on in many other cases,** i.e., in the case of all mathematical and natural entities. That is why he expressly provided the two examples, for extension is something mathematical whereas water is something natural.

133–147. /710/ This does **not** happen **in all** [cases], however, for in those that are altogether separated from matter the thing [itself] is the same as what-it-is. And since we are unfamiliar *(ignotae)* with separated substances, he could not refer to them by their own names, as he referred to mathematical and natural things. Instead, he referred to them under an example of natural

things. That is why he adds **in connection with some things it is the same: the being that is appropriate to flesh and flesh [itself].** By this he does not mean that flesh [itself] is the same as the what-it-is of flesh. In that case he would not say that it is so **in connection with some things** but would simply say that flesh [itself] is the same as the being that is appropriate to flesh. He means instead that what is in this way said to be something and appropriate to something (like flesh [itself] and the being that is appropriate to flesh) is the same in connection with some things—viz., in connection with those that are separated from matter.

147–161. /711/ And because various cognitive powers are required in order to have cognition of various things, he draws the conclusion that the soul cognizes a thing and its quiddity **either by different [powers]** or by one and the same thing, **differently disposed.** It is obvious, however, that **flesh does not exist without matter** but, rather, that the form of flesh is a determinate form and in determinate sensible matter, just as **snub** has a determinate sensible subject, a nose. The soul, therefore, has cognition of this sensible* matter by means of sense. And that is why he adds that it is by a **sensory** power that the soul **judges the hot and the cold and** the other things of that sort **of which flesh is a kind of ratio**—i.e., a proportion; for the form of flesh requires a determinate proportion of the hot, the cold, and other such things.

161–195. /712/ But it must be **by a different** power that [the soul] discerns the being that is appropriate to flesh—i.e., the what-it-is of flesh. This happens, however, in two ways. In one way so that flesh itself and the quiddity of flesh are cognized by powers altogether divided from each other—e.g., that flesh is cognized by the sensory power and that the quiddity of flesh is cognized by the intellective power. This happens when soul *per se* has cognition of a particular thing and *per se* has cognition of the nature of the species. Flesh [itself] and the what-it-is of flesh can be cognized by different things in another way: not that there are two different powers, but rather that one and the same power cognizes flesh in one way and the what-it-is of flesh in another way. And this must be the case when soul compares the universal to the individual. For just as it was said earlier [III.3.426b17–23] that we would be unable to sense the difference between white and sweet if there were no common sensory power that had cognition of both, so we would also be unable to cognize the relationship of the universal to the individual if there were not one power that had cognition of both. Therefore, intellect has cognition of both, but in different ways. /713/ For it has cognition of the nature of the species (or what-it-is) by directly extending itself into it, whereas it has cognition of the individual itself by a kind of reflection, insofar as it returns to the phantasms from which the intelligible *species* are abstracted. That is why he says

that since it has cognition of flesh **by what is sensory, it discerns the being that is appropriate to flesh** (i.e., the what-it-is of flesh) **by something different** (i.e., by a different power) **either by something separated** (e.g., when flesh is cognized by sense and the being that is appropriate to flesh by intellect) or by the same thing **differently disposed.** That is, the intellective soul has cognition of flesh **just as a bent [line] is related to itself: when it is straightened out** the intellective soul **discerns the being that is appropriate to flesh**—i.e., it apprehends the quiddity of flesh directly, but flesh itself by reflection.

{429B18–22} MATHEMATICAL ENTITIES AS THE OBJECT OF INTELLECT

196–206. /714/ Next, when Aristotle says **Again, in connection with things,** etc., he explains in connection with mathematical entities what he has already said regarding natural entities. He says that **Again, in connection with things that exist by abstraction,** i.e., in connection with mathematical entities, whose defining account *(ratio)* abstracts from sensible matter, **straight is like snub**—i.e., mathematical entities have matter as natural entities do (for straight is mathematical and snub is natural). For the defining account of straight **involves a continuum** as the defining account of snub involves a nose, but the continuum is intelligible matter as the nose is sensible matter.

206–222. And so it is apparent that in mathematical entities the thing [itself] and **what-it-is-to-be-such** are **different**—e.g., **straight** and **the being that is appropriate to straight.** That is why [the soul] must have cognition of the things themselves by one [power] and have cognition of what-it-is-to-be-such-things **by a different [power].** /715/ (And, for the sake of example, let us suppose for the present that **duality** is the what-it-is-to-be of a straight line; for Plato claimed that numbers were the species and quiddities of mathematical entities: Unity of the point, Duality of the straight line, and so on.)[3] Therefore, the soul must have cognition of mathematical entities themselves and their quiddities either **by something else or by** the same thing **differently disposed.** And so just as in connection with natural entities it is shown that intellect, which has cognition of the quiddities of natural entities, is different from sense, which has cognition of individual natural entities themselves, so on the basis of mathematical entities it is shown that intellect, which has cognition of the what-it-is of such things, is different from the imaginative power, which apprehends the mathematical entities themselves.

3. Compare I.4.106–164.

222–238. /716/ And because someone could believe that mathematical and natural entities were intellectively cognized in the same way, Aristotle adds that **as things are separable from matter, so** are they disposed relative to **intellect.** Thus those that are separated from matter in reality can be perceived by intellect alone, whereas those that are separated from sensible matter not in reality but conceptually *(secundum rationem)* are intellectively cognized without sensible matter but not without intelligible matter. Natural entities, however, are intellectively cognized by means of abstraction from individual matter but not abstraction from sensible matter entirely. For a human being is intellectively cognized as made up of flesh and bones, but intellectively cognized by means of abstraction from *this* flesh and *these* bones. And that is why it is not intellect but sense, or imagination, that has cognition of individuals directly.

Intellect's Proper Object Is Not Separated from Sense Objects

239–263. /717/ Now from the things the Philosopher says here we can see that intellect's proper object is the quiddity of a thing—a quiddity that is not separated from the things, as the Platonists claimed. Thus that which is the object of our intellect is not something existing outside sense objects, as the Platonists claimed, but something existing in sense objects, although intellect apprehends the quiddities of things differently from the way they are in sense objects. For it does not apprehend them with the individuating conditions that are adjoined to them in sense objects. And intellect can attain this without any falsity, for nothing prevents one of two things conjoined to each other from being intellectively cognized without the other's being intellectively cognized. Sight, for example, apprehends color without apprehending smell, but not without apprehending extension, which is color's proper subject. Thus intellect, too, can intellectively cognize a form without its individuating principles but not without the matter on which the defining account *(ratio)* of that form depends. For example, it cannot intellectively cognize snub without [including] the nose, but it can intellectively cognize curved without the nose. It is because the Platonists did not draw this distinction that they claimed that mathematical entities and quiddities of things are separated in reality as they are separated in intellect.

264–279. /718/ It is apparent, furthermore, that the intelligible *species,* by which possible intellect becomes actualized, are not intellect's object; for they are related to intellect not as what is intellectively cognized but as that by which intellect cognizes. In the same way, too, the *species* that is in the sense of sight is not what is seen but that by which the sense of sight sees. What is seen is the color that is in a body. Similarly, what intellect cognizes is the

quiddity that is in things, but not the intelligible *species* (except insofar as intellect reflects on itself). For the sciences obviously are about what intellect cognizes; but the sciences are about *things,* not about intelligible *species* or concepts (with the sole exception of the science of reason). And so intellect's object is clearly not an intelligible *species* but rather the quiddity of the thing being intellectively cognized.

Against the Unicity of Possible Intellect

280–289. /719/ There are those who want to show that possible intellect is one [and the same] in all individuals, because what is intellectively cognized by all is the same. The above clearly shows that they have a hollow argument, since there must be numerically many intelligible *species* if there are many intellects. For the intelligible *species* is not the intellectively cognized thing itself but rather its likeness in the soul. And so, if there are many intellects that have a likeness of one and the same thing, the thing intellectively cognized will be the same for all of them.

289–297. And, furthermore, it is apparent that separated substances also intellectively cognize the quiddities of the natural things that we intellectively cognize, and their intellects are distinct. And so [even] if the argument those people put forward were effective, the unacceptability of their conclusion would not be avoided in virtue of their positing one intellect in all human beings. For they cannot posit one intellect in *all* beings that intellectively cognize.

Chapter 9

A Number of Puzzles

DE ANIMA III.4.429B22–430A9

429b22–26. If intellect is simple and unaffectable and has nothing in common with anything else, as Anaxagoras said, someone might well wonder how it has intellective cognition (if to have intellective cognition is a kind of being affected). For it seems that one thing acts and another is affected insofar as there is something common to both.

429b26–29. Furthermore, if [intellect], too, is itself intelligible, then there will be intellect in other [intelligible] things (if it is not intelligible in virtue of something else); but anything intelligible is one in species. If it is mixed, however, then, like other things, it will have something that makes it intelligible.

429b29–430a1. Alternatively, divisions have been made before regarding being affected with respect to something common, because before intellect cognizes it is somehow the intelligible things potentially but is nothing actually. Indeed it must be just as with a tablet [on which] nothing is actually written, which also happens with intellect.

430a2–5. Now it is also intelligible itself, like [other] intelligible things. For in connection with things that exist without matter what intellectively cognizes and what is intellectively cognized are the same; for theoretical knowledge and what is knowable in that way are the same.

430a5–9. Now we have to consider the reason why it is not always intellectively cognizing. In connection with things that have matter, each is only potentially one of the things that are intelligible. That is why there will be no intellect in them (for intellect is a potentiality for [being] such things without the matter). But that [which has matter] will be intelligible.°

1–6. *Analysis.* /720/ Now that the Philosopher has shown the nature of possible intellect and its object, he here raises a number of puzzles about things he has already given an account of. And this is divided into two parts. In the first he raises the puzzles; in the second he solves them (beginning at **Alternatively, divisions,** etc. {429b29}).

{429B22–26} A FIRST PUZZLE

7–17. He first raises two puzzles, the first of which is this: **if intellect is simple and unaffectable and has nothing in common with anything else, as Anaxagoras** says, then how can intellect have cognition? For **to have intellective cognition is** a certain **being affected,** and it seems to be part of the nature of whatever is affected that it have something common with whatever is acting [on it]. This is because **it seems that one thing acts and another is affected insofar as there is something common to both**—viz., to what is acting and to what is affected. For things that act and are affected relative to each other must have matter in common (as is said in *De generatione* I [314b26–27, 324a34–b7]).

{429B26–29} A SECOND PUZZLE

18–36. /721/ Aristotle raises a second puzzle at **Furthermore, if [intellect], too,** etc. And this puzzle arises on the basis of what he said earlier: that actualized intellect intellectively cognizes itself as well [III.8.429b9]. And the puzzle is this: that **if** intellect **is intelligible,** this can come about in two ways. In one way, that it is intelligible in its own right and **not in virtue of something else;** in the other way, that it has something associated with itself that **makes it intelligible.** Now if it is intelligible in its own right and not in virtue of something else, **but** the **intelligible** (considered as such) **is one in species,** then it will follow, if it is not only intelligible but also intellect, that other intelligible things are intellects, too; and so all intelligible things engage in intellective cognition. But if it is intelligible in virtue of having something **mixed** together with it, then it will follow that it has **something** else **that makes it intelligible,** just **like other things** that are intellectively cognized. And so, it seems, the same thing follows as before—viz., that that which is intellectively cognized is always engaging in intellective cognition.

{429B29–430A1} THE FIRST PUZZLE SOLVED

37–38. /722/ Next, when Aristotle says, **Alternatively, divisions,** etc., he solves the puzzles that have just been introduced.

39–53. First he solves the first, when he says that, just as he drew distinctions regarding passivity **before,** when it had to do with sense [II.11.417b2–5], **being affected** is spoken of **with respect to something common.** That is, being affected is common to (i) an affection *(passionem)* that is toward contrary states, like the first mutual affection in natural things that have matter

in common,[1] and to (ii) the being affected that is spoken of only in connection with receiving. Intellect, therefore, is said to be affected insofar as **it is somehow** in potentiality to **intelligible things** and is **nothing** of them **actually before it cognizes. Indeed it must be just as** happens with **a tablet** on which **nothing is actually written** although many things can be written on it. And this **happens with** possible **intellect** as well, because none of the intelligible things is in it actually, but only potentially.

Views Rejected on This Basis

53–60. /723/ On this basis are ruled out not only the view of the ancient natural philosophers who claimed that soul was composed of all things so that it might intellectively cognize all things,[2] but also Plato's view. Plato claimed that the human soul naturally has knowledge of all things, but that it is somehow overwhelmed by soul's union with body. Learning, he said, is nothing other than remembering.

61–64. *Analysis.* /724/ Next, when Aristotle says **Now it is also intelligible,** etc., {430a2 ff.}, he solves the second puzzle. First, he settles the question; second, he replies to an objection raised against his position (beginning at **Now we have to consider,** etc. {430a5}).

{430A2–5} THE SECOND PUZZLE SOLVED

65–86. Therefore, he says, first, that possible intellect is **intelligible** not through its essence but through an intelligible *species,* **like** other **intelligible things.** He proves this from the fact that what is actually intellectively cognized and what is actually intellectively cognizing are one, just as he said earlier that the thing that can actually be sensed and the actualized sense are one [III.2.425b25–26]. But something is actually intelligible in virtue of having been actually abstracted from matter. For, as he said earlier, "as things are separable from matter, so too are they things that concern intellect" [III.8.429b21–22]. And so he says here that **in connection with things that exist without matter**—i.e., if we take things that are actually intelligible—**what intellectively cognizes and what is intellectively cognized are the**

1. Aquinas has in mind cases where an object is being brought toward an opposite state by something that is itself in that opposite state—e.g., when fire heats water, changing it from cold to hot. See II.11.417b15; *Commentary on the Metaphysics,* bk. X, lec. 6, sec. 2050–2053 (re. 1055b14–17); *De generatione et corruptione* II.331a7–b37.

2. Compare III.7.98–103.

same, just as what is actually sensing and what is actually sensed are the same. **For theoretical knowledge** itself **and what is knowable in that way**—i.e., actually knowable—**are the same.** Therefore, the *species* of the actually intellectively cognized thing *is* the *species* of the very intellect [that is actually cognizing], and so it can intellectively cognize itself through that *[species].* That is why earlier, too, the Philosopher examined the nature of possible intellect by way of the very state of intellectively cognizing [III.7] and by way of that which is intellectively cognized [III.8.429b10–22]. For we have cognition of our intellect only in virtue of intellectively cognizing that we intellectively cognize.

Possible Intellect's Mode of Intellectively Cognizing Itself

87–106. /725/ Now the reason why it turns out this way with possible intellect—that it is intellectively cognized not through its essence but through an intelligible *species*—is that it is only potentially in the order of intelligible things. For in *Metaphysics* IX [1051a29–33] the Philosopher shows that something is intellectively cognized only insofar as it is in actuality. And the same sort of thing can be gathered in connection with sense objects. For that which is only in potentiality in connection with them—viz., prime matter—has no action through its essence but only through a form applied to it. But substances that can be sensed, which are in potentiality in one respect and in actuality in another, do have some action in their own right. Similarly, possible intellect as well, which is only in potentiality in the order of intelligible things, neither intellectively cognizes nor is intellectively cognized except through a *species* taken on by it. /726/ God, however, who is pure actuality in the order of intelligible things, and other separated substances, which are midway between potentiality and actuality, both intellectively cognize and are intellectively cognized through their essence.

{430A5–9} REPLY TO AN OBJECTION

107–123. /727/ Next, when Aristotle says **Now we have to consider,** etc., he replies to an objection that was raised against his position. He does so in saying that because possible intellect, like other things, has something that makes it intelligible, **the reason why it is not always intellectively cognizing** remains to be considered—i.e., why it is not always intellectively cognizing an intelligible thing. The reason is that **in connection with things that have matter** the *species* is not actually intelligible but only potentially; yet only what is actually intelligible, not what is potentially intelligible, is the same as intellect. Hence **in** things that have a *species* in matter **there will be no intellect** enabling them to cognize intellectively, because **intellect is a** kind of **potentiality for [being] such things**—i.e., intelligible things—**without the matter. But that** which exists in matter is **intelligible,** although only potentially. What is in intellect, however, is a *species* that is *actually* intelligible.

Chapter 10

Agent Intellect

DE ANIMA III.5.430A10–25

430a10–17. Now since just as in every nature there is something that serves as matter in each genus (and this is potentially all those things) and something else that is [the] cause and is productive in producing them all, as a craft stands to [its] matter, so it is necessary that these different things are in soul, too. And indeed there is intellect of the sort in which all things are brought about, and, on the other hand, [there is] that by which it serves to bring about all things, as a sort of condition *(habitus)*, **like light. For in a way light, too, makes colors that are in potentiality into actual colors.**

430a17–19. And this latter intellect is separable, unaffectable, and unmixed, being actual in substance. For an agent is always superior to what is affected [by it], and an [active] principle superior to [its] matter.

430a19–22. Now knowledge actualized is the same as the thing. Knowledge in potentiality, on the other hand, is temporally prior in one [individual], but in general it is not even temporally prior. But it is not the case that [this sort of intellect] intellectively cognizes at some times but does not intellectively cognize at other times.

430a22–23. Separated [intellect] is only that which truly is; and that alone is immortal and everlasting.

430a23–25. We do not remember, however, because it is of course unaffectable. Passive intellect, on the other hand, is perishable, and without this [our intellect] intellectively cognizes nothing.

1–7. *Analysis.* /728/ Now that the Philosopher has presented his account of possible intellect, he here presents his account of agent intellect. In this connection he does two things: first, he shows by argument and example that there is an agent intellect in addition to possible intellect; second, he shows the nature of this intellect (beginning at **And this latter intellect,** etc. {430a17}).

{430A10–17} THAT THERE IS AN AGENT INTELLECT

8–23. In connection with the first, then, he puts forward an argument of this sort. **In every nature** that is sometimes in potentiality and sometimes in actu-

ality we must posit **something** that is like **the matter in each genus**—i.e., that which is in potentiality to **all those things** that belong to the genus—and something else that is like an agent **cause and is productive,** which is related to **producing them all as a craft** is related **to [its] matter.** But as regards its intellective part, soul is sometimes in potentiality and sometimes in actuality. Therefore, it is **necessary that these different things are in** the intellective **soul**—with the result, namely, that there is one **intellect in which all** intelligible **things** can be **brought about** (possible intellect, which was discussed earlier [III.7–9]), and another intellect for the purpose of being able **to bring** to actuality **all** intelligible **things.** It is called agent intellect, and it is **as a sort of condition** *(habitus).*

Agent Intellect Is Not a Dispositional Knowledge of First Principles

24–28. /729/ On the basis of this passage, some people have claimed that agent intellect is the same as the intellect that has a dispositional knowledge of first principles *(habitus principiorum).*[1]

29–35. But that cannot be the case, because the intellect that has a dispositional knowledge of first principles presupposes some things that are already actually intellectively cognized—viz., the terms of the first principles. An understanding of these is the basis of our cognizing first principles. And so it would follow that agent intellect would not bring to actuality *all* intelligible things, as the Philosopher says here [430a15].

36–42. So it must be said that, in keeping with the Philosopher's regular practice, *habitus* is being used here to name every form and nature a *habitus.* In this way *habitus* is being distinguished from privation and potentiality. The point is that in so naming agent intellect a *habitus* he distinguishes it from possible intellect, which is in potentiality.

43–53. *{430a10–17, Continued}* /730/ That is why Aristotle says that it is a **condition like light,** which **in a way makes colors that are in potentiality** become **actual colors.** He says "in a way" because it was shown earlier [II.14.418a26–b13] that color is visible in its own right. Light makes it become actual color only insofar as it actualizes the diaphanous medium so that it can be moved

1. The Latin *habitus* has two different senses here and in the previous paragraph, and so it receives two different translations: "condition" and "dispositional knowledge." Standardly a cognitive *habitus* is a disposition for thinking a certain thing, which is what gives the view here under discussion its prima facie plausibility. But at 430a15 Aristotle is using *habitus* in a much broader sense, as Aquinas goes on to explain at 36–42.

See *Summa contra gentiles,* bk. II, chap. 78, for an earlier treatment of this and many other issues discussed in this chapter.

by color; in that way color is seen. Agent intellect, however, actualizes the intelligibles that previously were in potentiality by abstracting them from matter, for in that abstracted condition they are intelligibles in actuality, as was said [III.9.430a6–9].

Why Aristotle Posited Agent Intellect

54–63. /731/ Aristotle is led to posit agent intellect in order to rule out Plato's view. Plato claimed that the quiddities of sensible things are separated from matter and actually intelligible; that is why it was not necessary for him to posit agent intellect. But because Aristotle claims that the quiddities of sensible things are in matter and are not actually intelligible, he had to posit an intellect that would abstract them from matter and in that way make them actually intelligible.

{430A17–19} THE NATURE OF AGENT INTELLECT

64–74. /732/ Next, when Aristotle says **And this latter intellect,** etc., he lays down four conditions of agent intellect. The first of them is that it is **separable;** the second, that it is **unaffectable;** the third, that it is **unmixed** (i.e., not composed of corporeal natures or joined to a corporeal organ). In these three conditions it agrees with possible intellect. But the fourth condition is that it is in actuality as regards its **substance;** [and] in this it differs from possible intellect, which is in potentiality as regards its substance but in actuality only as regards a *species* it has taken on.

74–86. /733/ To prove these four conditions Aristotle introduces an argument, which is of this sort. **An agent is superior to what is affected [by it], and an** active **principle to its matter.** But agent intellect is related to possible intellect as an agent to its matter, as has already been said [430a11–13]. Therefore, agent intellect is superior to possible intellect. But possible intellect is separated, unaffectable, and unmixed, as was shown earlier [III.7.429b5, a15, a18]. Therefore, agent intellect is much more so. On this basis it is also clear that it is in actuality as regards its substance, since the agent is superior to its patient and its matter only insofar as it is in actuality.

Agent Intellect Is Not a Separated Substance

89–92. /734/ On the basis of the things said in this passage some people have claimed that agent intellect is a separated substance and that it differs in substance from possible intellect.[2]

2. This was and continues to be a widely held reading of the passage. As Aquinas says elsewhere, contrasting philosophers with Christian theologians like himself, "almost all the philosophers" subscribed to this view (*Commentary on the Sentences,* bk. II, dist. 17, q. 2, a. 1). Its early defenders included Alexander of Aphrodisias (*De intellectu,* edited by Gabriel Théry [Kain, 1926]), Avicenna (*Liber de anima* V.5), and Averroes (*De anima* III.17). See Franz Brentano, *"Nous Poiêtikos:* Survey of Earlier Interpretations," *Essays on Aristotle's "De anima,"* edited by M. Nussbaum and A. Rorty (Oxford: Clarendon, 1992), pp. 15–26.

93–100. But that does not seem to be true. For human beings would not have been adequately established by nature if they did not have in themselves principles by means of which they could carry out their operation, which is to cognize intellectively. This operation, of course, can be achieved only by means of possible intellect and agent intellect. That is why the fulfillment of human nature requires that each of them be something *in* a human being.

101–106. We also see that just as possible intellect's operation, which is to receive *(percipere)* what is intelligible, is attributed to a human being, so too is agent intellect's operation, which is to abstract the intelligibles. But that could be so only if the formal principle of that action were conjoined to [a human being] in its existence.

106–121. /735/ And the fact that the intelligible *species* made by agent intellect have as their subject in some way the phantasms that are in us is not a sufficient basis for attributing that action to a human being. For, as we said earlier in discussing possible intellect [III.7.317–338], *species* are not actually intelligible except insofar as they have been abstracted from the phantasms, and so the action of agent intellect could not be attributed to us by means of the phantasms. Furthermore, agent intellect is related to the actually cognized *species* as a craft is related to the species of the craft's products, and it is obvious that the craft's products do not have the craft's action through those species. Thus, even given that the *species* that have been made actually intelligible are in us, it would not follow [on this basis] that we could have the action of agent intellect.

122–127. /736/ The claim introduced earlier also runs contrary to Aristotle's position. He expressly says that "these (two) different things (agent intellect and possible intellect) are *in soul"* [430a12–14], by which he expressly lets it be understood that they are parts or powers of soul, not separated substances.

128–135. /737/ What seems especially contrary to this view, however, is the fact that possible intellect is related to intelligible things as being in potentiality to them, whereas agent intellect is related to them as being in actuality. Now it does not seem that the same thing can be in potentiality and in actuality with respect to the same thing, and so it does not seem possible that agent and possible intellect combine in the soul's single substance.

136–166. /738/ This is easily resolved, however, if one rightly considers how possible intellect is in potentiality to intelligible things and how intelligible things are in potentiality with respect to agent intellect. For possible

intellect is in potentiality to intelligible things as the indeterminate to the determinate: possible intellect does not have the nature of any sensible things determinately. But any intelligible thing whatever is a determinate nature of some species. That is why he said earlier [III.9.429b31–430a2] that possible intellect is related to intelligible things as a tablet is related to determinate pictures. In that respect, however, agent intellect is not in actuality. /739/ For if agent intellect had in itself the determination of all intelligible things, possible intellect would not need the phantasms but would be brought to the actuality of all intelligible things by agent intellect alone. And in that case agent intellect would not be related to intelligible things as maker to thing made, as the Philosopher says here, but as being the intelligible things themselves. Therefore, it is related as actuality with respect to intelligible things insofar as it is a kind of immaterial active power capable of making other things like itself—i.e., immaterial. And it is in this way that it makes things that are intelligible in potentiality actually intelligible. For so too light actualizes colors; it is not that light has within itself the determination of all colors. But an active power of this [latter] sort is a kind of participation in intellectual light by separated substances. And that is why the Philosopher says that it is "as a condition, like light" [430a15], which would not be appropriate to say of it if it were a separated substance.

167–172. *Analysis.* /740/ Next, when Aristotle says **Now knowledge actualized,** etc. {430a19 ff.}, he presents his account of intellect in a state of actuality. In this connection he does two things. First, he puts forward the conditions of actualized intellect; second, he shows the conditions of the whole intellective part insofar as it differs from other parts of soul (beginning at **Separated [intellect],** etc. {430a22}).

{430A19–22} THE CONDITIONS OF ACTUALIZED INTELLECT

173–176. As for the first, he lays down three conditions of intellect actualized. The first of them is that **knowledge actualized is the same as the thing** known, which is not true of intellect in potentiality.

176–192. Its second condition is that **knowledge in potentiality is temporally prior** to knowledge actualized **in one** and the same **[individual];** universally, however, it is **not prior** either naturally or **even temporally.** And this is what the Philosopher says in *Metaphysics* IX [1049b14–1050a3]: that actuality is naturally prior to potentiality although potentiality is temporally prior to actuality in one and the same [individual], because one and the same [individual] is in a state of potentiality first and afterward becomes actualized. Yet broadly speaking, actuality is prior even temporally, for what is in potentiality is not brought to actuality except by something that is in actuality. And so too someone is not brought from potentially knowing to actually knowing, either by discovering or by being taught, except on the basis of some actually preexisting knowledge; for "all intellective teaching and learning comes about on the basis of pre-existing cognition" (as is said in *Posterior Analytics* I [71a1–2]).

192–197. /741/ The third condition of intellect actualized is the one by which it differs from possible intellect and agent intellect. Each of these two sometimes **intellectively cognizes** and sometimes **does not intellectively cognize;** but that cannot be said of intellect actualized, which consists in the very [act of] intellectively cognizing.

198–201. *Analysis.* /742/ Next, when Aristotle says **Separated [intellect],** etc. {430a22 ff.}, he lays down the conditions of the whole intellective part. First, he presents the correct view; second, he rules out an objection (beginning at **We do not remember,** etc. {430a23}).

{430A22–23} THE WHOLE INTELLECTIVE PART

202–220. So he says, first, that **only separated** intellect **is that which truly is.** This claim, of course, must be understood, not as regards agent intellect or possible intellect alone, but as regards both; for it was in regard to each of them that he said earlier that "it is separated" [III.7.429b5; cf. 430a17]. And so it is clear that he is speaking here of the whole intellective part, which is called separated, of course, because it has its operation without a corporeal organ. /743/ Now at the beginning of this work [I.2.403a10–11] he said that if any operation of soul is special *(propria)* to it, then it can be the case that soul is separated. And thus he concludes that **that** part of soul **alone,** the intellective part, **is** imperishable **and everlasting.** This is what he presupposed earlier in Book II [4.413b25–27]: that this sort of soul is separated from the others "as the everlasting from the perishable." It is called everlasting, however, not because it always was but because it always will be. Thus the Philosopher says in *Metaphysics* XII [1070a21–26] that a form never exists before its matter, but soul remains after its matter—"not all of it, but intellect."

{430A23–25} AN OBJECTION RULED OUT

221–249. /744/ Next, when Aristotle says **We do not remember,** etc., he rules out a certain objection. For someone could believe, because part of the intellective soul is imperishable, that after death intellective knowledge of things

remains in the soul in the same way in which we have it now. He said the contrary of this in Book I [10.408b25]: that [the act of] intellectively cognizing perishes "when something internal has perished" and [408b28] that when the body has perished, [the soul] "does not remember or love." /745/ And so he says here that **we do not remember,** i.e., after death, the things we knew in life, **because it is unaffectable**—i.e., this part of the intellective soul is unaffectable. That is why it is not the subject of the soul's affections, such as love, hate, remembering, and the like, which occur along with some bodily affection. **Passive intellect, on the other hand, is perishable**—i.e., the part of soul that is subject to the aforementioned affections is perishable—because it pertains to the sensory part. (This [passive] part of soul is nevertheless called intellect, as it is also called rational, insofar as it to a certain extent participates in reason by obeying reason and following its movement, as is said in *Ethics* I [1102b13–1103a3].)[3] **Without this** perishable part of soul, however, our intellect **intellectively cognizes nothing,** because it does not intellectively cognize anything without a phantasm (as will be said below [III.12.431a16–17]). And so when the body is destroyed, the knowledge of things does not remain in the separated soul in the same way in which it now intellectively cognizes. (But to discuss the way it intellectively cognizes then is no part of the present plan.)

3. Aquinas generally calls this passive intellect the *cogitative power;* despite the name, it is one of the sensory powers, as he indicates here. Cf. *Summa contra gentiles,* bk. II, chap. 60, sec. 1371, and *Summa theologiae* (first part), q. 78, a. 4; q. 81, a. 3.

Chapter 11

Intellect's Operation

DE ANIMA III.6.430A26–7.431A4

430a26–b6. The understanding of indivisibles, then, is indeed among those things regarding which there is no falsity. On the other hand, regarding things in which there is both falsity and truth, there is already a kind of composition of intellections as of things that are one. As Empedocles said, "Truly, the heads of many germinated without a neck," and were later compounded by harmony. So, too, these things, separated, were compounded—e.g., the asymmetric and the diagonal, or the symmetric and the diagonal. If [the compounding is] of things already done or of things that will be, then one intellectively cognizes and compounds time along with them. For falsity always occurs in connection with composition, as indeed if someone compounded white and not-white, or not-white and white. (One can also call all these division.) So in this way it is false or true not only that Cleon *is* white, but also that he *was,* or *will be.* And the one thing bringing about each [of the intelligible things], this is intellect.°

430b6–14. Since the indivisible occurs in two ways, either potentially or actually, nothing prevents [intellect] from cognizing the indivisible when it cognizes length (for it is indivisible actually), and [doing so] at an indivisible time, for the time is divisible and indivisible similarly to the length. Therefore, it is not right to say that one intellectively cognizes each of them by halves; for if [the object] were not divided then that would not be the case, except potentially. But anyone who intellectively cognizes each of the halves separately at one and the same time divides the time as well then, as in connection with the length. But if it is [intellectively cognized] as made up of both, then it also is [intellectively cognized] at a time that is in both.

430b14–20. Now whatever is indivisible not quantitatively but in species [soul] intellectively cognizes at an indivisible time and by an indivisible [part] of soul. But [it intellectively cognizes them] accidentally, not insofar as they are divisible—that which is intellectively cognized and at what time—but insofar as they are indivisible. For there is in them something indivisible. So perhaps [there is something] not separable, which makes the time and the length one; but this occurs similarly in everything that is continuous, both time and length.

430b20–26. Now a point, a division, and everything indivisible in that way is revealed as a privation. And there is a similar account in connec-

tion with other things—e.g., how [intellect] has cognition of what is evil, or black—for it has cognition [of them] by [their] contraries somehow. But it must be cognizing in potentiality, and [their contraries] must be in it. But if in any there is no contrary, it has cognition of itself and exists in actuality and is separable.

430b26–431a1. Now, every assertion that is something about something—e.g., an affirmation—is true or false. Not every intellection [is so], however. But one that is of what a thing is in respect of what it was to be such a thing is true, whereas [one that is] something about something is not. But just as the seeing of a proper [object of sight] is true, whereas [seeing] that the white thing is a human being or not is not always true, so it is also as regards things that exist without matter.

431a1–4. Now knowledge actualized is the same as the thing. Knowledge in potentiality, on the other hand, is temporally prior in one [individual], but in general it is not even temporally prior. For all things that come to be are from actual being.

1–6. *Analysis.* /746/ Now that the Philosopher has presented his account of intellect, he here presents his account of intellect's operation. And this is divided into two parts. In the first he distinguishes between two operations of intellect; in the second he presents an account of each of them (beginning at **Since the indivisible occurs,** etc. {430b6}).

{430a26–b6} TWO OPERATIONS DISTINGUISHED

7–17. First, then, he says that there is one operation of intellect in which it intellectively cognizes indivisibles—e.g., when it intellectively cognizes human being, or cow, or anything else that is uncombined. And this **understanding** *(intelligentia)* **is among those things regarding which there is no falsity,** both because things uncombined are neither true nor false, and because intellect is not deceived as regards the what-it-is [of a thing], as will be said below [430b27–28]. /747/ But regarding those intelligible things **in which there is falsity and truth, there is already a kind of composition of intellections**—i.e., of things intellectively cognized—**as** when some **one** thing is made out of many.

17–35. And he provides an example drawn from the view of Empedocles, who thought that all things were generated by chance, not for any end but just as it happens, on the basis of a division of things through Strife and a conjunction of them through Friendship.[1] For that reason he said that from

1. Compare I.4.404b11–15; *Physics* II.198b10–199b31.

the beginning many **heads germinated without a neck,** and, likewise, many other parts of animals separated from other parts. (And he said "germinated" to suggest that they were produced out of the elements, without the seed of an animal, as earth germinates grass [Gen. 1.11].) Afterward, however, such parts, divided in that way, were **compounded** through **harmony,** and out of them was made a single animal having various parts, such as head, hands, feet, and the like. And when an animal was constituted having all the parts necessary for its preservation, that animal survived and generated another like itself. But if any of those parts was lacking, it could not survive, nor did it continue through generation in something like itself.

35–53. Therefore, just as Empedocles claimed that Friendship compounded many parts and constituted from them a single animal, so also intellect compounds many uncombined things that were previously separated and makes of them a single object of intellective cognition. In such a composition there is sometimes truth and sometimes falsity: /748/ truth, of course, when it compounds things that are in reality one or compounded together—as when it compounds **asymmetric** (i.e., incommensurable) and **diagonal** (for the diagonal of a square is incommensurable with its side). The composition is false, however, when intellect compounds things that are not compounded together in reality—as when it compounds **symmetric** with **diagonal,** saying that the diagonal of a square is symmetric (i.e., commensurable) with its side. /749/ Therefore, intellect sometimes cognizes the symmetric and the diagonal separately and distinctly, in which case there are two intelligible things; but when it compounds them, a single intelligible thing is formed and is intellectively cognized at one and the same time by intellect.

54–60. But because intellect does not always compound things that exist at present, but also things that were or will be, he adds that if intellect makes a composition **of things already done** (i.e., of past things) **or of things that will be,** it must intellectively cognize past and future **time along with** its composition; and it compounds in this way: forming a composition about the past or the future.

60–80. /750/ And Aristotle proves that this is true, because compositions about the past or the future can be false, but **falsity always occurs in connection with composition.** For **if not-white** is compounded with what is **white** (e.g., if one says, "A swan is not white") **or white** is compounded with what is **not white** (e.g., if one says that a crow is white), it is false. And because whatever it is possible to affirm it is also possible to deny, he adds that **all** the things mentioned can be done through **division.** /751/ For the soul can divide as regards present time and as regards past and future both truly and falsely. **So in this way** it is clear that since composition and division is brought about as regards not only present time but also past and future, while the true and the false consists in composition and division, it must be that the true and the false

are not only in propositions about the present, e.g., **that Cleon** *is* white, **but also** in those about the past and the future, e.g., **that** Cleon *will be* or *was* white.

81–89. Now we should take into consideration that the composition of a proposition is not a work of nature but a work of reason and intellect. And so he adds that what brings about* **each** of the intelligible things, by compounding propositions out of those intelligible things, **this is intellect.** And because the true and the false consists in composition, it is said in *Metaphysics* VI [1027b25–27] that the true and the false is not in things but in the mind.

THE UNDERSTANDING OF INDIVISIBLES

90–96. *Analysis.* /752/ Next, when Aristotle says **Since the indivisible,** etc. {430b6 ff.}, he presents an account of each of the aforementioned operations: first, of the one that is the understanding of indivisibles; second, of the one that is composition and division (beginning at **Now every assertion,** etc. {430b26}). In the third place, he introduces something that is common to both (beginning at **Now knowledge actualized,** etc. {431a1}).

{430b6–14} INDIVISIBILITY AS CONTINUITY

96–111. The first part is divided into three in keeping with the fact that 'indivisible' is used in three ways—the same number of ways in which 'one' is used, whose defining character comes from being undivided.[2] For something is called one in one way because of continuity. Thus what is continuous is called indivisible insofar as it is not actually divided, even though it is potentially divisible. This, then, is why he says that although **'indivisible'** is used **in two ways**—viz., **actually** and **potentially**—**nothing prevents** intellect **from cognizing the indivisible when it cognizes** something continuous, such as **length,** which is **indivisible actually** although it is divisible potentially. And for that reason it intellectively cognizes it **at an indivisible time,** since it intellectively cognizes it as indivisible. /753/ (And this runs contrary to Plato's position presented in Book I [7.406b25–8.407b12]—i.e., his claim that understanding takes place as if by a continuous movement of extension.)

111–134. Therefore, intellect can cognize extension in two ways: in one way, insofar as it is divisible potentially (the way it intellectively cognizes a line by counting part after part and thus cognizes it within a [period of] time); in the other way, insofar as it is undivided actually (the way it intellectively cognizes a line as a unity consisting of many parts, and thus cognizes it all at once *[simul]*). And so he adds that **the time** and **the length** are divided or not divided **similarly** in the process of intellectively cognizing. /754/ That is why **it is not right to say** that it is intellectively cognized according to a half of each—i.e., that a part that is a half is cognized in half the time. **For if** the line **were not** actually **divided then that would not be the case;** but it is divisible only **potentially.** If, however, intellect **cognizes each** half of the line **separately,** then it intellectively divides the line actually. Thus **at one and the same time the time** is divided **as well,** along with **the length.** But if it intellectively cognizes the line as a unity made up of two parts, it will also cognize it **at an** undivided **time,** but in accord with something **that is in both** parts of the time—viz., at an instant. Even if this consideration is continued over some time, the time will not be divided so that it intellectively cognizes one thing in one part of the time and another in the other, but the same in both.

2. Compare Aristotle, *Metaphysics* V.1016b3–6, 23–24.

{430b14–20} THE INDIVISIBLE IN SPECIES

135–155. /755/ Next, when Aristotle says **Now whatever is indivisible,** etc., he introduces another way of being indivisible. For 'one' is used in another way of what has one species, even if it is composed of noncontinuous parts—e.g., a human being, a house, or even an army. And what corresponds to this is the indivisible in species, regarding which he says that **whatever is indivisible not quantitatively but in species** the soul **intellectively cognizes at an indivisible time and** through **an indivisible** part **of soul**—not, as Plato maintained, that the cognizing intellect is like a kind of extension. And although what is indivisible in species has a division in parts, intellect cognizes those divided things *per accidens,* **not insofar as they are divisible,** both as regards **that which is intellectively cognized and** as regards the **time, but insofar as they are indivisible.** For in parts divided even actually **there is something indivisible**—viz., the very species, which intellect indivisibly cognizes. But if it intellectively cognized the parts as divided—e.g., flesh *per se,* bone *per se,* and so on—it would intellectively cognize in divisible time.

155–170. /756/ Next the Philosopher wants to show the resemblance of this way to the first way. For as there is something indivisible in this way (viz., the species that makes all the parts of the whole be one) **so perhaps** in continuous things as well there is something **not separable,** i.e., **indivisible, which makes the time** be **one and the length** one—whether this is said to be a point (in the case of length) and an instant (in the case of time) or the very species of length or of time. **But** it differs in that the former [sort of] indivisible **occurs similarly in everything that is continuous, both time and length,** whereas the

indivisible that is the species does not occur similarly in all things that have a species; for some are composed of homogeneous parts, others of heterogeneous parts, and they are composed of them in dissimilar ways.

{430B20–26} WHAT IS COMPLETELY INDIVISIBLE

171–182. /757/ Next, when Aristotle says **Now a point,** etc., he pursues the third way in which a thing is said to be indivisible. For whatever is completely indivisible, such as a point and a unit, is said to be one thing. And regarding this he now shows how it is intellectively cognized, saying that **a point,** which is a kind of sign of division between parts of a line, and everything that is **a division** between parts of a continuum (such as an instant between parts of time, and so on) **and everything** that is **indivisible in that way,** actually and potentially (like a point) **is revealed** (i.e., is made clear to intellect) **as a privation** (i.e., through the privation of the continuous and the divisible).

On the Sensory Origin of All Knowledge

183–192. /758/ The reason for this is that our intellect draws from sense, and so sense objects come first in our intellect's apprehension, and things of that sort are things that have extension. That is why *point* and *unit* are defined only negatively, and that is also why all the things known *(nota)* by us that transcend these sense objects are cognized by us only through negation. Regarding separated substances, for example, we cognize only that they are immaterial, incorporeal, and other things of that sort.

193–213. *{430b20–26, Continued}* /759/ **And there is a similar account in connection with other things** that we cognize through an opposite—**e.g., how** intellect **has cognition of what is evil, or black.** (These are related to their opposites as privations, since one of a pair of contraries is always a kind of imperfection and privation relative to the other.) And he adds, in the manner of a respondent [in a disputation], that intellect **has cognition** of both of them **by** their **contraries somehow**—i.e., of evil by good, and of black by white. **But** our intellect, which in this way cognizes one contrary through another, **must be cognizing in potentiality,** and there **must be in it** the *species* of the one opposite through which it cognizes the other, so that sometimes the *species* of white is in it and sometimes the *species* of black, enabling it to cognize one through the other. **But if** there is **any** intellect **in** which **there is** not one **contrary** for the cognition of another, then such an intellect must **have cognition of itself** first and cognize other things through itself; it must always **exist in actuality** and must be thoroughly **separable** from matter even in existence,

as *Metaphysics* XII [1075b21–24, 1074b33–35, 1072b26–30, 1073a4–5] shows regarding God's intellect.

{430B26–431A1} COMPOSITION AND DIVISION

214–225. /760/ Next, when Aristotle says **Now every assertion,** etc., he presents his account of the second operation of intellect, which is composition and division. And he says that an **assertion** by which intellect says **something about something,** as occurs in **an affirmation,** is always **true or false.** But **intellection** is **not** always true or false, because there is intellection of uncombined things which is neither true nor false as regards that which is cognized. For truth and falsity consist in a kind of comparison of one thing with another, a comparison that does occur in intellect's composition and division, but does not occur in what is intelligible and uncombined.

225–246. /761/ Nevertheless, even though what is intelligible and uncombined is not itself either true or false, intellect in cognizing it is true insofar as it is adequate to the intellectively cognized thing. And so he adds that intellection **that is of what a thing is in respect of what it was to be such a thing**—i.e., in that it intellectively cognizes *what* the thing is—**is** always **true,** and **is not** [always true] insofar as it intellectively cognizes **something about something.** /762/ The reason he gives for this is that intellect's proper object is the what-it-is [of a thing]. That is why, just as sight is never deceived in connection with its proper object, so neither is intellect in cognizing the what-it-is. Thus intellect is never deceived in cognizing what it is to be a human being. However, **just as** sight **is not always true** in judging things that are adjoined to its proper object—e.g., **that the white thing is a human being or not**—so neither is intellect always true in compounding something to something. **So, also,** for separated substances, which **exist** thoroughly **without matter,** intellectively cognizing is as it is for us when we intellectively cognize the what-it-is [of a thing]; and so falsity cannot occur in their intellection.

Deception in Cognizing the What-It-Is of a Thing

247–259. /763/ But it is important to know that in cognizing the what-it-is [of a thing] deception is possible *per accidens* in two ways, because of intervening composition. It is first possible insofar as the definition of one thing is false when applied to another thing, as the definition of a circle is false when applied to a triangle. It is possible in the other way insofar as the parts of a definition do not cohere with one another. In that case the definition is false unconditionally—e.g., if someone were to define something as a nonsensory animal. That is why there cannot be deception in connection with those things

in whose definitions there is no composition; instead, one must intellectively cognize them truly or not at all, as *Metaphysics* IX [1051b31–32] says.

{431a1–4} SOMETHING COMMON TO BOTH

260–269. /764/ Next, when Aristotle says **Now knowledge actualized,** etc., he takes up again something that was said earlier [III.10.430a19–21] regarding intellect actualized. For then, too, he was talking about the act of intellect. And he says that **knowledge actualized is the same as the thing** actually known and that **knowledge** that is **in potentiality is temporally prior in one** and the same **[individual], but** universally **it is not even temporally prior. For all things that come to be** actual come to be **from actual being.** And this was explained earlier [III.10.117–135].

Chapter 12

Intellect in Comparison with Sense

DE ANIMA III.7.431a4–b19

431a4–7. Now a sense object evidently brings what is sensory from potentiality to actuality; for it is neither affected nor altered. Thus this is another species of movement; for movement is the actuality of what is incomplete, whereas [this] actuality is unconditionally different and belongs to what is complete.

431a8–14. Sensing, then, is like mere speaking and intellectively cognizing. But when something is pleasant or sad, as if affirming or denying, [soul] seeks or avoids it. To take pleasure and to be sad is to act by the sensory middle relative to what is good or what is bad insofar as they are such; but both avoidance and appetite, which are in actuality, are this. And the appetitive and avoiding capacities are not different from each other or from what is sensory, but they do differ in being.

431a14–17. Now, for the intellective soul, phantasms are like sense objects. But when it affirms or denies what is good or bad, it also avoids or seeks it. For that reason soul never intellectively cognizes without a phantasm.

431a17–b1. For in a similar way air made the pupil [be] of this sort, whereas this [altered] something else. (Likewise in the case of hearing.) That which is last is one thing and a single middle; but the being that it has is more than one. We have, of course, already discussed how [soul] discerns how sweet and hot differ, but it must be discussed again now. For it is one thing, but in the same way also a terminus (and these proportionally or numerically); it has one being relative to each of them, just as they do to each other. For what difference does it make whether it judges things that are not homogeneous or those that are contraries, such as white and black? Therefore, as *A* (white) is to *B* (black), so let *C* be to *D* as they are to each other; and so also through permutation. Therefore, if *C,D* are existent in one thing, they will be like *A,B* as well—the same, but not the same in being—and likewise as regards the former. The relation is the same even if *A* is sweet and *B* white.

431b2–10. The intellective capacity therefore cognizes *species* in phantasms. And just as what may be sought after and what is to be avoided is determined for it in connection with those [sense objects], [so] too it is moved when it is in phantasms, apart from sense. For instance, sensing that some-

thing is to be avoided° because it is fire, seeing that it is being moved, one recognizes in general that there is fighting. But sometimes by means of the phantasms or intellections that are in soul, as if one is seeing, one reasons and deliberates about future matters in relation to those that are present. And when one has said, as in the former case, that there is something cheerful or sad, then in this case [too] one avoids or seeks it.

431b10–12. And [so] generally in connection with action and what is apart from action, true and false are in the same genus with good and bad. But they differ in [occurring] unconditionally and relative to someone.

431b12–17. Now intellect cognizes things spoken of in abstraction as it might [intellectively cognize] snub insofar as it is snub, not separately. But insofar as it is curved, if it intellectively cognized something actually, it does so without the flesh in which what is curved occurs. In this way, it intellectively cognizes nonseparated mathematical entities as if they were separated when it intellectively cognizes that. Generally, however, intellect that is actualized *is* the things.

431b17–19. Now whether or not it can intellectively cognize anything concerning separated things when it is itself not separated from extension is something we have to consider later.

1–4. *Analysis.* /765/ Now that the Philosopher has presented his account of intellect in its own right, he here presents his account of intellect in comparison with sense.

4–7. In this connection he does two things. First, he shows what sort of movement is associated with sense; second, he likens the movement of intellect to the movement of sense (beginning at **Sensing, then,** etc. {431a8}).

{431A4–7} THE SORT OF MOVEMENT ASSOCIATED WITH SENSE

8–17. First, then, Aristotle says that **a sense object evidently** is what actualizes the **sensory** part **from** what it was in **potentiality.** For a sense object does not act on a sense as a contrary on its contrary, so that it discards something from it in changing and altering *(alterando)* it; instead, it merely brings it from potentiality to actuality. That is why he adds that what is sensory **is neither affected nor altered** by the sense object, interpreting affection and alteration strictly (viz., insofar as it is a process from one contrary to another).[1]

17–36. /766/ And because the movement that occurs in corporeal things (his account of which was presented in the *Physics* [III.200b12–202b29]) is from contrary to contrary, it is apparent that if sensing is called a movement, it **is another species of movement** from that which is dealt with in the *Physics.* For that movement is the actuality of what is in potentiality. This is because what is withdrawing from one contrary while it is being moved does not reach the other contrary, which is the terminus of the movement, but is in potentiality relative to it. And because everything that is in potentiality is, considered as such, incomplete, therefore that **movement is the actuality of what is incomplete.** This movement, on the other hand, is the actuality of **what is complete** (for it is the operation of a sense already *[iam]* actualized through its *species,* since sensing occurs only in a sense that is actualized). And so it is a movement **unconditionally different** from the movement of physics. Moreover, movement of this sort is strictly called an operation—e.g., sensing, intellectively cognizing, and willing—and, according to Plato, it is with respect to this movement that soul moves itself, insofar as it has cognition of and loves itself.[2]

36–41. *Analysis.* /767/ Next, when Aristotle says **Sensing, then,** etc. {431a8 ff.}, he likens the movement of intellect to the movement of sense. And in this connection he does two things. First, he shows how movement proceeds in sense's case; second, he shows that it proceeds similarly in intellect's case (beginning at **Now for the intellective soul,** etc. {431a14}).

{431A8–14} HOW MOVEMENT PROCEEDS IN SENSE'S CASE

42–61. First, then, Aristotle says that since a sense object brings what is sensory to actuality without affection and alteration (just as was said about intellect earlier [III.7.429a13–18, III.9.429b29–430a2]), it is apparent from things already said that **sensing** itself **is like intellectively cognizing.** Nevertheless, it is so in such a way that when mere sensing is occurring (i.e., apprehending and judging by sense) it **is like mere speaking and intellectively cognizing** (i.e. when intellect only judges something and apprehends it)—which is to say that the simple apprehension and judgment of sense is like the theoretical operation of intellect. On the other hand, when a sense senses something **pleasant or sad, affirming or denying,** so to speak, that what is perceived by sense is pleasant or sad, then it pursues it through appetite, i.e., desires it, **or avoids it.** And he expressly says "as if affirming or denying," because forming affirmations and denials is an identifying property of intellect (as was said

1. See II.10.15–36, III.7.75–90.

2. On the way in which soul's operations should be regarded as movements, see I.10, especially 167–215. For the Platonic view, see 49–66.

earlier [III.11.430a26–b6]), while sense does something like that when it apprehends something as pleasant or sad.

61–75. /768/ So that we might know the nature of taking pleasure and being sad, Aristotle adds that **to take pleasure and to be sad is to act by the sensory middle**—i.e., it is a certain action of a sensory power that is called the middle insofar as the common sense is related to the proper senses as a kind of midpoint, just as a center is related to the lines terminating at it. Not every action of the sensory part involves taking pleasure or being sad, however, but only that which concerns **what is good or what is bad insofar as they are** of that sort; for the good of a sense (whatever is suited to it) causes pleasure, whereas the bad (whatever is repugnant and harmful) causes sadness.[3] And following from being sad or taking pleasure is **avoidance and appetite** (i.e., desire), **which are in actuality.**

75–89. /769/ It is clear, then, that the movement of a sense object relative to a sense proceeds in what amounts to *(quasi)* three stages. First, the sense object itself is apprehended as well suited or harmful; second, pleasure or sadness follows from this; third, desire or avoidance follows. And although having an appetite, avoiding, and sensing are different acts, their source *(principium)* is the same in subject although it differs conceptually *(ratione).* That is why he adds that **the appetitive and avoiding capacities,** i.e., the part of soul that avoids and desires, **are not different** in subject **from each other or from** the **sensory** part, **but they do differ in being,** i.e., they differ conceptually. He says this in opposition to Plato, who located the organ of the appetitive capacity in one part of the body and the organ of the sensory capacity in another.[4]

90–96. *Analysis.* /770/ Next, when Aristotle says **Now for the intellective soul** {431a14 ff.}, he likens the process of movement in intellect's case to what has been said about sense. And in this connection he does two things. He shows first how intellect is related to sense objects, and second how it is related to the things that have been separated from sense objects (beginning at **Now intellect cognizes,** etc. {431b12}).

96–100. In connection with the first he does two things. First, he shows how intellect is related to sense objects in connection with things that are to be done. Second, he compares active with theoretical intellect (beginning at **And [so] generally** {431b10}).

100–103. In connection with the first he does two things. First, he likens the process of intellect to the process of sense. Second, he clarifies the likeness (beginning at **For in a similar way,** etc. {431a17}).

3. The Latin *tristitia* has the primary sense of sadness but can also mean what is painful or even just unpleasant. So here the word is meant to extend to harsh and unpleasant tastes, sounds, etc.

4. Compare I.10.52–56, I.14.58–75.

{431A14–17} INTELLECT'S PROCESS LIKENED TO SENSE'S PROCESS

104–111. First, then, he says that **phantasms** are related to **the intellective** part of **soul** as **sense objects** to a sense. Thus just as a sense is moved by sense objects, so intellect is moved by phantasms. And just as when a sense apprehends something as pleasant or sad it pursues or avoids it, so **when** intellect apprehends something, affirming or denying that it **is good or bad, it avoids or** pursues **it.**

Two Differences Between Sense and Intellect

111–126. /771/ Because of the way Aristotle expresses himself here, it is important to take note of two differences between sense and intellect. [First,] in connection with sense there were three [stages]. From (i) the apprehension of what is good or what is bad, (iii) desire or avoidance did not follow immediately as it does here, in connection with intellect. Instead, (ii) pleasure or sadness followed, and on that basis, (iii) desire and avoidance followed subsequently. The reason for this is that just as sense does not apprehend the universal good, so the sensory part's appetite is moved not by the universal good or bad but by some determinate good that is pleasant for a sense and some determinate bad that brings a sense sadness. In the intellective part, on the other hand, there is apprehension of the universal good and bad. That is why the appetite of the intellective part is moved immediately by the apprehended good or bad.

126–129. /772/ The second difference is that regarding intellect, Aristotle says unconditionally that it affirms or denies, but regarding sense that it affirms or denies *so to speak* [431a9]. The reason for this is clear from things already said [42–61].

130–134. *{431a14–17, Continued}* Now from what he has said Aristotle concludes further that if phantasms are related to the intellective soul as a sense object to a sense, then, just as a sense cannot sense without a sense object, so **soul** cannot intellectively cognize **without a phantasm.**

135–141. *Analysis.* /773/ Next, when Aristotle says **For in a similar way,** etc. {431a17 ff.}, he clarifies the likeness he has presented: first, as regards his having said that "for the intellective soul phantasms are like sense objects" [431a14–15]; second, as regards his having said that "when it affirms or denies

what is good or bad, it avoids or pursues it" [431a15–16] (beginning at **The intellective capacity,** etc. {431b2}).

{431A17–B2} PHANTASMS ARE LIKE SENSE OBJECTS

142–172. First, then, Aristotle says that **air,** altered *(immutatus)* by color, makes **the pupil [be] of this sort,** i.e., makes it have a certain quality, impressing on it a *species* of color. And **this,** viz., the pupil altered in that way, alters **something else,** viz., the common sense. (**Hearing** altered by the air **likewise** alters the common sense, too.) And whereas there are multiple external senses, **that which is last,** at which those senses' alterations terminate, **is one thing and** serves as **a single middle** among all the senses, like a center at which all lines terminate as if at a single midpoint. /774/ And although this midpoint of all the senses is one in subject, nevertheless **the being that it has is more than one**—i.e., its aspect *(ratio)* varies as it is matched with the various senses. And this is **how** soul **discerns how sweet and hot differ,** which **we have already discussed** (when this topic was dealt with in its own right [III.3.427a9–14]). **It must be discussed again now,** in its relation to intellect. **For it is one thing** in respect of all sense objects—like a terminus, I say (this is what we already said); and **in the same way** intellect, too, is the **terminus** of all phantasms. (And just as in the former case there were several things that were assessed by one, so in the case of intellect **these** are related [to it] **proportionally** somehow—i.e., intellect corresponds proportionally to the one thing that does the assessing in connection with sense objects—**or** there is a similarity as well in the number of the things assessed.) This terminus, I say, which is intellect, is related as **one being to each of them** between which it distinguishes, **just as they** were related **to each other**—i.e., just as the one common sense was related to the various sense objects among which it distinguished.

172–195. /775/ And it makes no **difference** whether we take as an example either **things that are not homogeneous**—i.e., diverse sense objects that do not belong to a single genus (such as white, in the genus of color, and sweet, in the genus of flavor), among which the common sense distinguishes—**or** if we take **those that are contraries, such as white and black,** which belong to one genus, since the common sense distinguishes between the two. /776/ So let us take *A* for white and *B* for black, so that ***A* (white) is to *B* (black),** as ***C*** is **to *D***—i.e., as a phantasm of white is to a phantasm of black. **And so also,** by a permutation of the proportion, *A* is to *C* as *B* is to *D*—i.e., white is to a phantasm of white as black is to a phantasm of black. And so intellect is related to *C* and *D,* phantasms of white and of black, as sense is related to *A* and *B,* white and black. **Therefore, if *C,D,*** phantasms of white and of black, **are existent in one thing,** i.e., are assessed by one intellect, **they will be like *A,B* as well**—i.e., white and black, which were judged by one sense. Thus just as the sense assessing those two was one in subject, differing in aspect *(ratione),* so will it be as regards intellect. And **the relation is the same if** we take non-homogeneous things—e.g., so that ***A* is sweet and *B*** is **white.**

{431B2–10} WHEN INTELLECT AFFIRMS OR DENIES WHAT IS GOOD OR BAD

196–206. /777/ Next, when Aristotle says **The intellective capacity,** etc., he clarifies what he said earlier: that when intellect affirms or denies what is good or bad, it avoids or pursues [431a15–16]. Here he concludes on the basis of things said earlier that **the intellective** part of soul **cognizes** *species* in phantasms. And **just as** something **is determined for** intellect as **what may be sought after and what is to be avoided in connection with those** (i.e., in connection with sense objects when they are present) so **too it is moved** to seek and to avoid **when** they are **in phantasms, apart from sense** (i.e., when phantasms are represented in the absence of sense objects).

206–217. /778/ And Aristotle gives an example of each. First, when [intellect] is moved in the presence of sense objects, as in the case of someone **sensing** something that **is to be avoided,** i.e., something frightening, such as a roaring noise. And when he sees that a **fire** has been started in the city, **seeing that** the fire **is being moved,** he **recognizes in general**—i.e., by a general assessing power (or else, **in general,** i.e., on the basis of what generally tends to happen)—he **recognizes,** I say, that battles are going on or **that there is** some **fighting.**[5] And in this way intellect is sometimes moved to avoid or to seek because of a present sense object.

217–222. But sometimes on the basis of **the phantasms or intellections that are in soul, one reasons and deliberates about future matters in relation to those that are present, as if** one actually saw them. **And when one** judges

5. In this sentence Aquinas displays two kinds of uncertainty about the text. First, parenthetically, he offers a second interpretation of the phrase "in general" (431b5). Second, at the end of the sentence, he quotes from the older Latin translation ("that battles are going on") and then Moerbeke's revision ("that there is fighting"). It is unclear whether Aquinas recognized these as alternative versions of the same passage or thought that Aristotle's text contained both clauses.

Adding to the confusion is the fact that Aquinas's version of the text goes badly astray here: instead of "sensing that something is to be avoided *(phrukton),*" the text should read "sensing a beacon *(pheukton).*"

something to be **cheerful or sad, one avoids or seeks it in this case as in the former case**—i.e., as when one was moved by a present sense object.

{431B10–12} PRACTICAL COMPARED TO THEORETICAL INTELLECT

223–230. /779/ Next, when Aristotle says **And [so] generally,** etc., he compares the cognition belonging to practical intellect with that belonging to theoretical intellect, saying that **true and false** (i.e., true and false cognition) belonging to intellect **in connection with action** (i.e., concerning whatever pertains to practical intellect) **and apart from action** (i.e., concerning whatever pertains to theoretical intellect) **are in the same genus,** whether that genus is **good** or **bad.**

230–239. This can be understood in two ways. In one way, it can be understood so that the thing intellectively cognized, whether practically or theoretically, is sometimes good and sometimes bad, and one does not draw distinctions on that account in the genus of the thing being considered theoretically or practically. In the other way it can be understood that a true cognition is itself something good belonging to intellect (whether theoretical or practical intellect) and that a false cognition is itself something bad belonging to intellect (whether theoretical or practical).

239–250. /780/ So Aristotle does not intend to compare true and false to good and bad on the basis of an agreement of genus, but, rather, the true and false that occur in connection with action with the true and false that occur apart from action. And this is clear from the differentia he adds, saying that **they differ**—viz., what occurs in connection with action and what occurs apart from action—**in [occurring] unconditionally and relative to someone.** For theoretical intellect considers something true or false in general, which is to consider it unconditionally, whereas practical intellect does so by applying it to a particular possible action, since action occurs in connection with particulars.

HOW INTELLECT COGNIZES THINGS SEPARATED FROM SENSE OBJECTS

251–256. *Analysis.* /781/ Next, when the Philosopher says **Now intellect cognizes things,** etc. {431b12 ff.}, since he has already said that "soul never intellectively cognizes without a phantasm" [431a16–17], and since phantasms are

acquired from sense, he wants to show how our intellect cognizes things that have been separated from sense objects.

256–260. In this connection he does two things. First, he shows how it intellectively cognizes mathematical entities, which are abstracted from sensible matter; second, he asks whether it intellectively cognizes things that are separated from matter in being (beginning at **Now whether or not,** etc. {431b17}).

A Note on Abstraction

261–276. Regarding the first of these, we should be aware that, of things that are conjoined in reality, one can be intellectively cognized without another, and truly, as long as it is not the case that one of them is included in the other's defining character *(ratio).* For if Socrates is musical and white, I can intellectively cognize whiteness while cognizing nothing about music. On the other hand, I cannot intellectively cognize human being while cognizing nothing about animal, since *animal* is included in the defining character of *human being.* Therefore, when one is in this way intellectively separating things that are conjoined in reality in the first way, falsity cannot occur. /782/ But if intellect were to separate things that are conjoined while intellectively cognizing that they *are* separated, it would be false—as would be the case for instance if, in the first example, one were to say, 'The musician is not white.' Intellect, therefore, abstracts things that are in sense objects—*not,* of course, cognizing that they *are* separated but, rather, cognizing them separately and distinctly.

{431B12–17} MATHEMATICAL ENTITIES

277–297. And that is why Aristotle says that **intellect cognizes** those that are **spoken of** by means of **abstraction,** viz., mathematical entities, in this way, **as** when it intellectively cognizes **snub insofar as it is snub**: it does **not separately,** i.e., distinctly, cognize snub apart from sensible matter. For sensible matter—specifically, a nose—comes in the definition of snub. /783/ **But if** intellect **cognizes something actually, insofar as it is curved, it does so without the flesh in which what is curved occurs**—not, of course, so that it intellectively cognizes that what is curved exists without flesh, but because it intellectively cognized what is curved while not intellectively cognizing flesh, because flesh is not used in the definition of curved. And it is **in this way** that intellect **cognizes** all **mathematical entities** separately, **as if they were separated,** even though they are not **separated** in being. /784/ Intellect does not cognize natural entities in that way, however, since sensible matter is used in

the definition of natural entities, though not in the definition of mathematical entities. Nevertheless, in connection with natural entities, intellect does abstract the universal from the particular in a similar way, insofar as it intellectively cognizes the nature of the species without the individuating principles, which do not occur in the definition of the species.

297–304. And, **generally, actualized intellect is the things** that are intellectively cognized, since just as things in their nature have or do not have matter, so are they perceived by intellect. And because Plato did not consider this sort of abstraction, he was compelled to posit separated mathematical entities and species. In place of them Aristotle posited agent intellect to carry out that abstraction.

{431B17–19} THINGS SEPARATED FROM MATTER IN BEING

305–319. /785/ Next, when Aristotle says **Now whether or not,** etc., he raises a question about things that are separated from matter in being, saying that **we** will **have to consider later whether** our intellect, **when it is not separated from extension,** i.e., from body, **can intellectively cognize anything concerning separated things,** i.e., any separated* substance. For this question could not have been settled here, since it was not yet clear that there are any separated substances, or what they are, or of what sort they are. Thus this question pertains to metaphysics. And yet, Aristotle's solution to it is not found [there], because the rest of that science has not yet reached us, either because the whole book has not yet been translated or perhaps because he did not complete it, having been overtaken by death.[6]

320–325. /786/ In any case, we should be aware that he says here that intellect is "not separated" from the body insofar as it is a certain power of *soul,* which is the actualization of body, even though he said earlier [III.7.429b5, III.10.430a17] that it is separated from body since it has no organ assigned to its operation.

6. In his later *Commentary on the Metaphysics,* however, Aquinas was to write, in reference to 1051b33–1052a4, "Based on this it is evident that on Aristotle's view the human intellect *can* reach an intellective cognition of simple substances, which seems to have been left in doubt in *De anima* III" (bk. IX, chap. 11, sec. 1916).

Chapter 13

Observations Regarding Soul's Nature

DE ANIMA III.8.431B20–432A14

431b20–28. Now, however, summing up the things said about soul, let us say again that in a certain way soul is all the things that exist. For things that exist are either sensible or intelligible, but knowledge is in some way the knowable things, whereas sense is those that are sensible. But we must inquire how this is so. Knowledge and sense, then, are separated [according] to their objects *(res):* **that which is in potentiality to those that are in potentiality; that which is actualized to those that are in actuality. The sensory part of soul and the part that can know are these things in potentiality: the latter is what is knowable; the former, what is sensible.**

431b28–432a3. Now it is necessary that they be either those things themselves or the *species.* **So they are of course not the things themselves; for a stone is not in the soul, but a** *species.* **The soul, therefore, is like a hand; for the hand is the organ of organs, intellect the** *species* **of** *species,* **and sense the** *species* **of sensible things.**

432a3–10. But because no real thing *(res)* **exists apart from extensions, in the way that sensible things seem separated [from one another],° [thus] intelligible objects exist in sensible** *species*—**both those that are spoken of in abstraction and also whatever conditions and states** *(habitus et passiones)* **belong to sensible things. And for that reason one who senses nothing neither learns nor intellectively cognizes anything, and when one considers theoretically it is necessary at the same time to consider theoretically a phantasm. (Phantasms are like sensible things except that they exist without matter.)**

432a10–12. Phantasia, however, is different from assertion and negation; for a combination of intellections is true or false.

432a12–14. In what way are the first intellections different, so that they are not phantasms? Neither are the other [intellections] phantasms, but they do not occur without phantasms.

1–4. *Analysis.* /787/ Now that the Philosopher has presented his account of sense and intellect, he shows, on the basis of things included in his account of each of them, what should be observed regarding the nature of soul.

4–9. This account is divided into two parts. In the first he shows that in one way the nature of soul is as the ancients believed, in another way different.

In the second he shows intellect's dependence on sense (beginning at **But because no real thing,** etc. {432a3}).

9–12. In connection with the first he does two things. First, he shows that in a certain way soul is all things, as the ancients said; second, he shows that it is all things in a way different from what they said (beginning at **Now it is necessary,** etc. {431b28}).

{431B20–28} IN SOME WAY SOUL IS ALL THINGS

13–21. So first Aristotle says that **now summing up the things** that have been **said about soul,** so that on the basis of these things we may lay out this subject, **let us say that in a certain way soul is all things. For** all **things that exist are either sensible or intelligible,** but soul is in a way both sensible and intelligible. For there is sense and intellect (or knowledge) in soul, but **sense** in a way **is those that are sensible,** and intellect those that are intelligible, or **knowledge the knowable things.**

21–36. /788/ And **we must inquire how this is so.** For **sense** and **knowledge** are divided **[according] to their objects** *(res)*—i.e., they are divided into actuality and potentiality, as their objects are—but in such a way that the knowledge and sense **that** are **in potentiality** correspond to the knowable and sensible things **that are in potentiality,** whereas the knowledge and sense **that** are **actualized** correspond to the knowable and sensible things **that are in actuality.** They correspond differently, however; for sense actualized and knowledge (or intellect) actualized are also the knowable and sensible things in actuality, but the **sensory** power **of soul** and that which **can know**—i.e., the intellective power—is not the sensible or knowable thing itself but is, rather, **in potentiality** to them: the sensory to the **sensible,** and that which can know to the **knowable.** It remains, then, that in a certain way soul is all things.

{431B28–432A3} SOUL IS ALL THINGS, BUT NOT AS THE ANCIENTS SUPPOSED

37–48. /789/ Next, when Aristotle says **Now it is necessary,** etc., he shows that soul is all things in a way different from what the ancients supposed. And he says that if soul is all things, **it is necessary that** either it is the sensible and knowable **things themselves**—as Empedocles claimed that we have cognition of Earth by means of Earth, Water by means of Water, and so on[1]—

1. Compare I.4.404b11–14.

or that it is their *species.* Now, soul is not the things themselves, as they supposed, because **a stone is not in the soul, but a *species*** of a stone. And it is in this way that intellect actualized is said to be the actualized object of intellective cognition itself, insofar as the *species* of the object of intellective cognition is a *species* of actualized intellect.

48–61. /790/ On this basis it is clear that **the soul** is analogous to **a hand; for the hand is the organ of organs,** since hands are given to a human being in place of all the organs given to other animals for defense, attack, or cooperation. Human beings prepare all those [devices] for themselves by using their hands. Analogously, soul is given to a human being in place of all the forms. The result is that a human being is in a way the totality of being, insofar as in virtue of one's soul one is in a way all things, inasmuch as one's soul is receptive of all forms. For **intellect** is a sort of form receptive of all intelligible forms, **and sense** a sort of form receptive of all **sensible** forms.

62–71. *Analysis.* /791/ Next, when Aristotle says **But because no real thing,** etc. {432a3 ff.}, since he said that intellect is in a way its intelligible objects, just as sense is its sense objects, someone could believe that intellect does not depend on sense. And that would certainly be true if our intellect's intelligible objects were separated from sense objects in being, as the Platonists claimed. And so he shows here that intellect needs sense and, later, that intellect differs from phantasia, which also depends on sense (beginning at **Phantasia, however,** etc. {432a10}).

{432A3–10} INTELLECT'S DEPENDENCE ON SENSE

72–89. So Aristotle says, first, that since **no real thing** *(res)* intellectively cognized by us **exists apart from** sensible **extensions**—as if separated from them in being—**in the way that sensible things seem separated** from one another, it is necessary that our intellect's **intelligible objects exist in sensible *species,*** in being: **both those that are spoken of** through **abstraction,** viz., mathematical entities, **and also** natural things, which are **conditions and states** that **belong to sensible things.** And for that reason without sense a human being cannot **learn anything** (acquiring knowledge for the first time) or **intellectively cognize** (making use of knowledge it has). Instead, **when one** actually **contemplates** *(speculatur)* anything, one must **at the same time** form **a phantasm** for oneself. **Phantasms** are likenesses of **sensible things,** /792/ but they differ from them in that they **exist** outside of **matter,** for "sense is capable of taking on *species* without matter," as was said earlier [II.24.424a18–19], whereas phantasia is movement by an actualized sense [cf. III.6.429a1–2].

Avicenna's Mistaken View of Intellect and Sense

90–96. On that basis it is clear that Avicenna speaks falsely when he says that intellect has no need of sense after it has acquired knowledge.[2] For it is clear that even after someone has dispositional knowledge, he must use a phantasm in order to contemplate. It is for this reason that damage to an organ hampers the use of knowledge that one has already acquired.

INTELLECT DIFFERS FROM PHANTASIA

97–98. *Analysis.* /793/ Next, when Aristotle says **Phantasia, however,** etc. {432a10 ff.}, he shows what the difference is between phantasia and intellect.

99–104. *{432a10–12}* He does this first as regards intellect's operation of composition and division, saying that **phantasia is different from** intellect's affirmation **and negation,** since in the case of **a combination of concepts** there is then **true** and **false,** which is not in phantasia. For to have cognition of what is true and false belongs to intellect alone.

105–113. *{432a12–14}* /794/ Second, beginning at **In what way,** etc., Aristotle asks **in what way the first intellections**—i.e., the understandings of indivisibles—**are different,** that **they are not phantasms.** And he answers that **they do not occur without phantasms.** All the same, they are not **phantasms,** because phantasms are likenesses of particulars whereas intellections are universals abstracted from individuating conditions. Thus phantasms are indivisibles potentially and not actually.

2. Compare Avicenna, *Liber de anima* V.6 (150.59–60).

Chapter 14

The Part of Soul that Produces Movement

DE ANIMA III.9.432A15–433A8

432a15–22. Now since the soul of animals has been defined in terms of two powers—discrimination, which is the function of intelligence and sense, and, in addition, producing local movement—and since accounts regarding sense and intellect have been presented to such an extent, we should inquire, regarding moving, about what in soul it might be: whether it is some one part of it that is separable either in extension or conceptually, or all the soul; and, if it is some part, whether it is something distinct beyond those regularly discussed and discussed already, or one of these.

432a22–26. A puzzle arises right away: how must we speak of parts of soul, and how many are there? For there is a way in which there seem to be infinitely many, and not only the ones that some people mention in presenting accounts of them—the reasoning, the irascible, and the appetitive parts—or, as others say, the part that has reason and the irrational part.

432a26–31. For in accordance with the distinguishing characteristics by which they separate these, there are evidently other parts, too, having broader distinguishing characteristics than these, [other parts] which we have by now discussed. For there is the nutritional part, which is both in plants and in all animals,* and the sensory, which no one easily classifies either as irrational or as having reason.

432a31–b3. Moreover, there is the part concerned with phantasia, which is certainly different from all the others in being. Which of them it is the same as or different from involves a great puzzle, if one postulates separated parts of soul.

432b3–7. Moreover, there is the appetitive part, which certainly seems to be different from all [the others] both conceptually and in potentiality. And it surely is awkward to parcel it out; for in the reasoning part it becomes will, and in the irrational part concupiscence and anger. If the soul is three, however, there will be appetite in each.

432b7–13. And, again, regarding the subject of our present discussion, what is it that moves an animal locally? For movement with respect to growth and deterioration, which is in them all, will certainly seem to be produced by the generative and nutritional [principles] that are in all of them. (Later we will have to inquire carefully about breathing in and out, and about sleeping and waking; for they also involve a great puzzle.)

432b13–17. As for local movement, however, we have to look into what moves an animal with a progressive movement. It is obvious, then, that it is not the nutritional power. For movement of this sort is always for the sake of something and is accompanied by phantasia or appetite; for nothing that does not have an appetite or is not avoiding [something] is moved, unless by force.

432b17–19. Besides, plants would surely be capable of movement, too, and would surely have some part that served as an organ for this movement.

432b19–26. But, likewise, it is not the sensory power, since there are many animals that have sense but are stationary and immobile to the end. Therefore, if nature does nothing in vain and is not deficient in necessities, except where deformed and incomplete things are concerned, but there are complete animals of that sort that are not deformed (an indication of which is that they are capable of generation and have growth and deterioration), then they, too, would surely have parts that served as organs for progression.

432b26–433a1. But neither is it the reasoning part, also called intellect, that does the moving. For theoretical [intellect] does not consider theoretically anything that has to do with action, nor does it have anything to say about what is to be avoided and what is to be sought, whereas movement always belongs to one that is avoiding or seeking something. But even when it does consider theoretically something of this sort, it does not at once command either seeking or avoiding. For example, it often intellectively cognizes something frightening (or pleasant) but does not enjoin fear. Instead, the heart is moved (or, if it is something pleasant, some other part is).

433a1–6. Furthermore, even when intellect is commanding and intelligence is telling one to avoid or to seek something, one is not moved. Instead, one acts in accord with concupiscence, as an incontinent person does. And we see that in general someone who has medical [knowledge] is not restored to health°—as acting in accordance with knowledge is a property of something else, not of the knowledge [itself].

433a6–8. But neither is appetite in charge of this movement. For those who practice abstinence do not do the things they have an appetite to do, [even] while having the appetite and concupiscence. Instead, they follow intellect.

1–4. *Analysis.* /795/ Now that the Philosopher has presented his account of the nutritional, sensory, and intellective parts of soul, he here, in the fourth place, presents his account of the part of soul that produces movement.

4–6. And this account is divided into two parts. In the first he says what his plan is; in the second he pursues it (beginning at **A puzzle arises** {432a22}).

{432a15–22} HIS PLAN

7–25. Aristotle says, then, that **the soul of animals has been defined,** even by the ancient philosophers, **in terms of two powers**—i.e., insofar as it has power for two things, one of which is **discrimination,** which is carried out by means of cognition (which discrimination, of course, **is the function** of both the intellective and the sensory part), the other of which is to move **locally. Accounts regarding sense and intellect have been presented to such an extent** as earlier discussions have allowed. But now **we should inquire, regarding** the source *(principio)*[1] of **moving, about what in the soul it** is—**whether it is a part** of soul **that is separable** from the others **either in extension,** i.e., in subject, in such a way that it has a place in the body distinct from other powers, as the Platonists supposed,[2] or whether it is separable from the other parts only **conceptually** *(ratione),* or whether it is not a part of soul but the whole **soul.** Given that **it is some part** of soul, it remains to be considered **whether it is** some other part of soul **beyond those** that have been **regularly discussed** by others and beyond those that have been **discussed** by us, **or** whether it is in fact **one** of those.

26–29. *Analysis.* /796/ Next, when Aristotle says **A puzzle arises,** etc. {432a22 ff.}, he pursues his plan: first by conducting a disputation and second by giving his own determination[3] (beginning at **Now these two things seem,** etc. {III.15.433a9}).

30–33. In connection with the first of these he does two things. First, he disputes against a distinction among soul's powers; second, he disputes specifically in regard to the source of movement that is part of soul (beginning at **As for local movement** {432b13}).

33–37. In connection with the first of these he does two things. First, he goes

1. The Latin *principium* has a range of meanings. In Book I it was often translated as "basic principle," to capture the point that the ancients were searching for the fundamental principles underlying all of nature. Quite often, too, *principium* has been translated simply as "principle," to capture the Aristotelian idea that the parts of soul are the internal principles responsible for the various operations of living beings.

But now that the discussion has turned to the principle of animal *movement* (in this and the following two chapters), *principium* is best translated as "source." In these chapters, *principium* strongly suggests that what is being sought is the starting point of animal movement—i.e., the place where movement begins, or its source.

2. See below, 269–73.

3. Here Aquinas invokes the image of Aristotle's working in the style of a scholastic disputation. First a series of tentative arguments are raised on both sides of a question, and then the master steps forward to present his own determination of the question and, in so doing, to reply to the initial arguments.

over a division of the powers of soul that some people have put forward; second, he disputes against [the account of] those powers (beginning at **For in accordance with** {432a26}).

{432a22–26} HOW SOME HAVE DIVIDED SOUL'S POWERS

38–50. So he says, first, that **right away,** at the beginning of this inquiry, **a puzzle arises: how must we** distinguish between **parts of soul, and how many are there?** For in one way **there seem to be infinitely many**—i.e., they seem to be incapable of being summed up under any definite number. And that would be true if, for soul's individual operations and the movements that stem from soul, it were necessary to attribute distinct parts to soul. And so it seems that there are **not only** the parts **that some people** present in their accounts—viz., the rational, **the irascible, and the appetitive** (i.e., the concupiscible). This division plainly does not include all the parts of soul, but only the powers productive of movement in a human being.

50–58. /797/ Other people, however, distinguish soul's powers as **the part that has reason and the irrational part.** But this division, although it includes all parts of soul after a fashion, is not a proper division of the parts of soul considered as parts of soul but, perhaps, only insofar as they occur in a soul that has reason. And Aristotle uses it in that way in *Ethics* I [1102a26–1103a3].

OBJECTIONS TO THIS DIVISION

59–60. /798/ Next, when he says **For in accordance with,** etc., Aristotle objects several times over to the divisions just mentioned.

61–74. *{432a26–31}* The first objection is that if **the distinguishing characteristics** *(differentiae)* **in accordance with which** some draw distinctions among parts of soul are enough to establish diversity among soul's parts, then **other parts** are going to be found, **having broader distinguishing characteristics** (relative to one another) than those that have been mentioned—**[other parts] which we have** also **discussed** in this work. For **the nutritional part is in plants and in all animals** (or in all living things); **and the sensory,** too, is in all animals. And the nutritional and the sensory obviously differ from each other and from the rational, the irascible, and the concupiscible more than the irascible differs from the concupiscible, and yet these two powers are not included under those divisions.

74–81. /799/ It is obvious that they are not included under the first division. For it is clear that neither the nutritional nor the sensory can be said to

be rational, irascible, or concupiscible. Thus, having ruled that out, he proves that they are not included under the second division, remarking that one cannot **easily classify** either the nutritional or the sensory **either as irrational or as having reason.**

82–90. /800/ That neither of them has reason is obvious indeed; but that neither of them is irrational can be made obvious in the following way. The irrational is either what is contrary to reason or what is naturally suited to have reason and does not have it, and neither of those applies to the parts we are discussing. For if we were speaking only of the negation of reason, it could not be introduced as a genus of the soul's powers.[4]

90–91. So it seems that the aforesaid divisions of soul's powers are unacceptable.

92–98. *{432a31–b3}* /801/ Aristotle provides a second argument to the same purpose beginning at **Moreover, there is the part,** etc., saying that the part of soul **concerned with phantasia, which** differs conceptually **from all the others, involves a great puzzle:** which of the powers under discussion must it be **the same** as **or different** from? This is especially puzzling **if one postulates parts of soul** that are **separated** in subject, as some have done.[5]

99–118. *{432b3–7}* /802/ Aristotle provides a third argument beginning at **Moreover, there is the appetitive part,** saying that the appetitive power also **seems to be different from all** soul's parts **conceptually and in potentiality. And** if, in keeping with the division mentioned earlier, the parts of soul are distinguished into the rational and the irrational, it will seem **awkward to parcel out,** i.e., divide, the appetitive into two parts differing in subject. All the same, that will have to be done if anyone says that the rational and the irrational are parts of the soul distinct in subject; for one appetitive power, the will, is in the rational part, and the others, the concupiscible and irascible, are in the irrational part. And if anyone distinguishes **three** parts of soul, distinct in subject—viz., the rational, the irascible, and the concupiscible—then it will follow that **in each** of them **there will be appetite: for in the reasoning part** there will be **will,** as was said, whereas the irascible is appetite and so is the concupiscible. Therefore, according to the division just mentioned, there will be three appetites in soul, differing in subject.

4. Aquinas's point can be made more clearly in English by contrasting *irrational* with *nonrational.* The nutritional and sensory powers are not irrational, only nonrational: they simply lack reason. But *nonrational* cannot serve as a genus of soul's powers, because many things are nonrational that are not powers of soul. Indeed, all material things other than human beings are nonrational.

5. That is, the Platonists; see below, 269–73.

A Question Regarding Appetite

120–123. /803/ A question arises, however. Why are there two appetitive powers in sensory appetite—the irascible and the concupiscible—whereas in rational appetite there is only one appetite, the will?

124–133. And it must be said that powers are distinguished in accordance with the natures *(rationes)* of their objects, and the object of an appetitive power is what is apprehended as good. /804/ But intellect and sense apprehend the good in different ways; for intellect apprehends the good in accordance with the *universal* nature of the good, whereas sense apprehends the good under a *determinate* nature of the good. And so there is only one appetite that follows intellectual apprehension, and it is distinguished from the appetite that follows sensory apprehension.

133–153. There are, however, two appetites following sensory apprehension, and they are distinguished in accordance with the different nature of what is apprehended as good. For one thing apprehended through sense has the nature of a good worthy of appetite *(appetibilis)* insofar as it pleases the senses, and the concupiscible power is directed toward this good. On the other hand, another has the nature of what is good and worthy of appetite insofar as it is set over pleasant things as if having the capability of freely enjoying them. This is what the irascible power—which is what fights for the concupiscible, so to speak—is directed toward. And for that reason animals get angry and fight only for things that are pleasant—i.e., for food and sex, as is said in *Historia animalium* IX [608b19–610a35]. /805/ For this same reason all the passions of the irascible power get their start from passions of the concupiscible power and have their terminus in them. (For anger is stirred by unhappiness and has pleasure as its end, since "angry people take pleasure in punishing.")[6] This is the reason why some people say that what is hard to attain is the object of the irascible power.

154–162. /806/ But it is altogether unreasonable to say, as some people do, that the irascible power is directed to the avoidance of what is bad. For it is one and the same power that deals with contraries, e.g., sight with white and black; and so good and bad cannot be used to draw distinctions in the appetitive power. And, for that reason, just as love of the good pertains to the concupiscible power, so does hatred of the bad (as the Philosopher says in *Topics* II [113a33–b3]); and hope for something good and fear of something bad pertain to the irascible power.

6. Aristotle, *Nicomachean Ethics* III.1117a6–7.

163–176. *{432b7–13}* /807/ Aristotle provides a fourth argument beginning at **And, again, regarding the subject,** etc., saying that **the subject of our present** inquiry—**what it is that moves an animal locally**—also raises a puzzle that challenges the divisions we have been discussing, because [that power] seems not to be contained under them. As regards the **movement of growth and deterioration,** however, **which is** common to **all** lower [forms of life], obviously it has a principle common to all living things—viz., **the generative and nutritional.** But there are certain other changes in animals, such as **breathing in and out, sleeping and waking,** regarding which an account will **later** have to be given of what causes them; **for they involve a great puzzle** and for that reason require a special treatise.[7]

WHAT IS THE SOURCE OF LOCAL MOVEMENT IN ANIMALS?

177–184. *Analysis* /808/ Next, when Aristotle says **As for local movement,** etc. {432b13 ff.}, he carries the disputation forward, asking what the source of local movement is in animals. And he shows, first, that it is not the nutritional power; second, that it is not the sensory (beginning at **But, likewise, it is not,** etc. {432b19}); third, that it is not the intellective (beginning at **But neither is it,** etc. {432b26}); fourth, that it is not the appetitive (beginning at **But neither is appetite,** etc. {433a6}).

{432b13–17} NOT THE NUTRITIONAL POWER: A FIRST ARGUMENT

185–188. So he says, first, that now **we have to look into what** it is that **moves an animal** locally by **a progressive movement.** And by means of two arguments he shows that **it is not the nutritional power.**

189–195. The first of these arguments runs as follows: local progressive **movement is always for the sake of something** imagined and desired;[8] for an animal is not **moved** unless it has **an appetite** for **or is avoiding** something—unless, perhaps, **by force.** But phantasia and appetite are not characteristics of the nutritional part. Therefore, the nutritional part is not the source of progressive local movement.

7. See Aristotle's *De respiratione* (470b6–480b3) and *De somno* (453b11–464b18).

8. Here it is particularly important to keep in mind that imagination is a general sensory power for forming images and ideas; to imagine, then, is simply to *envisage* something.

{432B17–19} A SECOND ARGUMENT

196–204. /809/ Aristotle provides a second argument for the same point beginning at **Besides, plants would surely,** etc. It runs as follows: the nutritional part is in plants as well. So if the nutritional part were the source of progressive local movement, then it would follow that **plants would be capable of movement** of their own as regards this sort of movement **and would have** parts that served as organs fit for this sort of movement—which is clearly false. Therefore, it is not the nutritional part that is the source of progressive local movement in animals.

{432B19–26} NOT THE SENSORY POWER

205–213. /810/ Next, when Aristotle says **But, likewise, it is not,** etc., he shows that neither is sense the source of the movement we are discussing, by an argument of the following sort. Sense occurs in all animals. Therefore, if sense were the source of this movement, it would follow that every animal would be moved by this movement—which is clearly false. For **there are many animals that have sense** and nevertheless always remain in the same place, **immobile to the end**—i.e., for as long as they live.

213–232. /811/ Now someone could say that that is not because they lack the source that produces movement but because they lack instruments suited to movement. So to remove this, Aristotle adds that **nature does nothing in vain and is not deficient in necessities, except where deformed and incomplete** animals **are concerned.** Monstrous animals are of this sort, and these monstrosities occur outside nature's plan as a result of the corruption of some principle in the seed. But immobile animals are **complete** in their species and **are not deformed** as if they were monstrosities, **an indication of which is that** they generate their like **and have** the appropriate **growth and deterioration,** which does not occur in deformed animals. So in connection with animals of this sort, nature does nothing in vain and is not deficient in necessities. From this it follows that if they have the source of movement, **they would have parts that served as organs** arranged for progressive movement; otherwise the source of movement would be superfluous in them, and they would lack things necessary for carrying out their capacity for movement.

232–236. From this we can gather that, in anything in which there is a source of life, there are organs in it suited to that source and that the body's parts exist for the sake of soul's parts.

{432B26–433A1} NOT THE INTELLECTIVE POWER

237–244. /812/ Next, when Aristotle says **But neither,** he shows that the source productive of movement is not intellect either. And he says that **neither** does **the reasoning** part, which is **called intellect,** seem to be what **does the moving.** (From this we can gather that reason and intellect are not distinct parts of soul. Instead, our intellect itself is called reason insofar as it arrives at the cognition of an intelligible truth by way of some kind of inquiry.)

244–255. /813/ And he proves that intellect is not the source that does the moving—first, as far as theoretical intellect is concerned. For since theoretical intellect considers in a theoretical way things that are available only for theoretical consideration and that can in no way be done—as when it considers that a triangle has three angles equal to two right angles, and other things of that sort—it is obvious that **theoretical** intellect **does not consider theoretically anything that has to do with action, nor does it have anything to say about what is to be avoided and what is to be sought.** And so it cannot move anything, since **movement always belongs to one that is avoiding or seeking something** in accordance with its appetite.

255–273. /814/ But sometimes intellect does consider something that can be done—and yet not practically, but theoretically. For it considers it universally, and not in such a way as to be the source of a particular deed. And regarding this he says, next, that intellect insofar as **it does consider theoretically something of this sort**—i.e., consider in a theoretical way something that can be done—**does not** yet **command either** pursuing* **or avoiding,** as when, often enough, we have intellective cognition of some **frightening or pleasant** thing but intellect **does not enjoin fear** or desire. **Instead,** sometimes, **the heart is moved** to fear without any command from intellect. And **if,** on the other hand, **something pleasant** moves appetite, it will be **some part other** than the heart that is moved. /815/ (He says this because of Plato's view. Plato supposed there were parts of soul distinct in subject, so that the irascible power, which has to do with fear, is in the heart, and the concupiscible is in some other part of the body—the liver, for instance.)[9]

273–276. In this way, then, it is obvious that intellect does not move anything when it considers something in a theoretical way. And on that basis it is clear that theoretical intellect does not move anything in any way.

9. Compare I.10.52–56, I.14.58–75.

{433A1–6} NOT EVEN PRACTICAL INTELLECT

277–285. /816/ Next, when Aristotle says **Furthermore, even when,** he proves that not even practical intellect moves anything. He says that **even when** practical **intellect is commanding** (which happens when **intelligence** says that something is to be avoided or sought), a person **is not** on that account **moved,** but, **instead, acts in accord with concupiscence.** This is clear in the case of incontinent people, who have right reason but do not rightly remain within reason. From this it seems that intellect does not move anything.

285–290. He also proves the same thing with an example involving physicians who, although they have **medical** knowledge, are **not restored to health** because they do not do for themselves what their art commands. From this it seems that **acting in accordance with knowledge** does not belong to practical **knowledge,** but to **something else.**

{433A6–8} NOT THE APPETITIVE POWER

291–298. /817/ Next, when Aristotle says **But neither is appetite,** he shows that the appetitive part is not in control of this movement, because we observe that continent people have an appetite for something and want *(concupiscunt)* it, although they **do not do the things they have an appetite to do.** It is the other way around in the case of incontinent people, as appears more clearly in *Ethics* VII [1145a15–1152a36]. It seems, therefore, that neither does appetite produce movement.

Chapter 15

The Correct Account of Local Movement in Animals

DE ANIMA III.10.433A9–433B27

433a9–13. Now these two things seem to produce movement: either appetite or intellect (if someone would have claimed that phantasia is like a kind of intelligence). For many follow phantasia, against knowledge, and in other animals there is neither intelligence nor reason, but rather phantasia. So both of these, intellect and appetite, are productive of local movement.

433a14–26. But [what produces movement is] the intellect that reasons for the sake of something, practical [intellect]; it differs in its end from theoretical [intellect]. Every appetite is also for the sake of something, since that for which there is an appetite is the source of practical intellect, whereas that which comes last is the source of action. So these two reasonably seem to produce movement: appetite and practical intelligence. For the object of appetite produces movement, and for the sake of this, intelligence produces movement, since the object of appetite is its source. Moreover, although phantasia also produces movement, it does not do so without appetite. So there is one thing that produces movement: the object of appetite.° For if there were two things that produce movement, intellect and appetite, then they would do so in respect of some common species. As things stand, however, intellect does not seem to produce movement without appetite. For the will is an appetite, and when [one] is moved in accord with reason, one is also moved in accord with will. Appetite, however, produces movement outside of reason. For concupiscence is a kind of appetite.

433a26–31. Therefore every intellection is right. Appetite and phantasia, however, are both right and not right. Thus the object of appetite always produces movement, and this is a good or an apparent good. Yet not every [good produces movement], but [only] the good pertaining to action *(actuale bonum).* **What pertains to action, however, is also capable of being otherwise. Therefore it is clear that this sort of power of soul, referred to as appetite, produces movement.**

433b1–4. Yet for those who divide the parts of soul, if they would divide and separate [these parts] in accordance with [soul's] powers, then many more emerge: the nutritive, the sensitive, the intellective, the deliberative, and also the appetitive. For these differ from one another more than do the concupiscible and the irascible.

433b5–10. But appetites arise that are contrary to one another. This hap-

pens when reason and concupiscence are made contraries, and it is brought about in beings that have a sense of time. For intellect enjoins giving up [some object] on account of the future, whereas concupiscence [urges acceptance] on account of the now. For that which is now enjoyable seems both unconditionally enjoyable and unconditionally good, since what is future is not seen.

433b10–13. Hence that which produces movement, the object of appetite or the appetitive power,° will be one in species, whereas the object of appetite comes first of all. For this produces movement while not being moved, as a result of being intellectively cognized or imagined. Numerically, however, there is more than one thing producing movement.

433b13–21. Now because there are three [elements in movement]—one being the mover, second that by means of which it produces movement, and third that which is moved—while the mover is of two kinds, one immobile, the other moved, [for that reason] the immobile one is the good pertaining to action, whereas the mover that is moved is the appetitive power. For that which has appetites° is moved inasmuch as it has appetites, and appetite is a kind of actuality or movement.° That which is moved, however, is the animal, whereas appetite produces movement by means of this organ, which is then corporeal. Hence these [sorts of organs] should be considered along with the functions that are common to body and soul.

433b21–27. But now, so as to speak in summary, that which produces movement through an organ [is that] where source and end are the same—for instance, a hinge joint. For here [there is both] convex and concave: the latter° is the end and the former° is the source. Hence the one is at rest, whereas the other is moved, being different conceptually but inseparable in extension. For all things are moved by pushing and pulling; for this reason (as in the case of a circle) something must stay still and the movement must begin from there.

1–7. *Analysis.* /818/ Now that the Philosopher has proceeded by way of disputation to investigate what the source *(principium)* of local movement in animals is, he here establishes the correct account. And first he shows what in general the source of movement is; second, he shows how this source is found differently in different things (beginning at **In general, therefore,** etc. {III.16.433b27}).

7–11. In connection with the first he does two things. First, he shows what the source of movement is in animals. Second, he teaches the order in which that movement is achieved, as regards things producing movement and things that are movable (beginning at **Hence that which produces movement** {433b10}).

11–15. In connection with the first he does three things. First, he posits two things as the sources for movement. Second, he reduces these to one (beginning at **But [what produces movement is],** etc. {433a14}). Third, he resolves an objection introduced earlier (beginning at **But appetites arise** {433b5}).

{433A9–13} TWO SOURCES FOR MOVEMENT

16–34. So Aristotle says first that, given the considerations stated earlier [III.14], since it is clear that the nutritional part does not produce movement, nor likewise do the senses (since we find that not all things that contain these are moved, as is plain from what has been said [III.14.432b14–26]), **these two things seem to produce movement**—namely, **appetite** and **intellect.** [We have to understand this] in such a way, however, that **phantasia** is also encompassed by 'intellect,' since it contains something like intellect, inasmuch as it produces movement when sense objects are absent, as does intellect; for this [phantasia] is also a source of movement. /819/ **For many** human beings push intellect's **knowledge** to one side and **follow phantasia** in its movements. This includes those people, for instance, that do not act in keeping with reason, but are moved on impulse to do something. **And in other animals** it is clear that **there is neither** intellect **nor reason** that can move them, **but** only **phantasia. So** in this way it is clear that **both of these** produce movement: **intellect** (including under it phantasia) **and appetite.**

THESE TWO SOURCES OF MOVEMENT REDUCED TO ONE

35–42. *Analysis.* /820/ Next, when Aristotle says **But [what produces movement is],** etc. {433a14 ff.}, he reduces the sources of movement just mentioned to one. And in this connection he does three things. First, he states his thesis. Second, on the basis of what he has stated, he gives a reason for a particular accidental feature of animal movement (beginning at **Therefore every intellection,** etc. {433a26}). Third, he disproves a division of powers that the ancients introduced (beginning at **Yet for those who divide** {433b1}).

{433A14–26} HIS THESIS

43–49. So Aristotle says first that the intellect that produces movement is **the intellect that reasons for the sake of something,** not for the sake of reasoning alone. And this is **practical** intellect, which **differs from theoretical [intellect]**

as regards **its end.** For theoretical intellect inquires into the truth not for the sake of something else, but for the sake of truth alone, whereas practical intellect's inquiry into truth is for action's sake.

50–65. /821/ And it is clear as well that **every appetite is for the sake of something.** For it would be foolish to say that someone has an appetite just for the sake of having one: for having an appetite is a certain movement tending toward something else. Yet that **for which** there is **an appetite,** the object of appetite *(appetibile),* is **the source of practical intellect.** For that which is first the object of appetite is the end from which practical intellect's consideration gets its start. This is because when we wish to deliberate in some way about what is to be done, we first settle on the end and next proceed in sequence to investigate the things that are to be done for the sake of that end—in this way always proceeding from posterior to prior, all the way to that which first confronts us as needing to be done.[1] This is why he adds that **that which comes last** in practical intellect's consideration **is the source of action**—i.e., that from where we should begin the action.

65–78. Hence it was **reasonably** stated that **these two produce movement: appetite and practical** intellect. **For** since **the object of appetite** itself, which is the first thing considered by practical intellect, **produces movement,** it is **for the sake of this** that practical intellect is said to **produce movement—since,** that is, what produces movement is its **source, the object of appetite.** /822/ What is said of intellect should also be understood of phantasia. For **although phantasia produces movement, it does not do so without appetite.** For it produces movement only insofar as it represents the object of appetite, as is true for intellect. /823/ **So** in this way it is apparent that **there is one thing that produces movement: the object of appetite.** For this both moves our appetite and is the source of intellect—the two things that are claimed to produce movement.

78–100. /824/ And it is reasonable that these two things that produce movement are reduced to one thing: the object of appetite. For **if** these **two, intellect and appetite,** were supposed to **produce movement** with respect to the *same* movement, then it is necessary, since for one effect there is one proper cause, that these two should produce movement **in respect of some common species.** Yet it should not be said that appetite produces movement under the aspect *(sub specie)* of intellect, but instead, conversely, that intellect or an intelligible object does so under the aspect of appetite. For we do **not** find that **intellect produces movement without appetite,** since **the will,** in virtue of which intellect produces movement, **is** a kind of **appetite.** /825/ (Aristotle

1. Compare Aristotle, *Nicomachean Ethics* III.1112b15–19.

gives the reason for this in *Metaphysics* IX [1048a8–16]: for since the reasoning *[ratio]* involved in practical knowledge is open to opposites, it produces movement only when determined to one of them through appetite.) But **appetite produces movement** without **reason,** as is clear in the case of those that are moved by concupiscence. **For concupiscence is a kind of appetite.** (Aristotle gives concupiscence as an example rather than anger,[2] because anger possesses some degree of reason, whereas concupiscence does not, as the Philosopher proves in *Ethics* VII [1149a25–b2].) And in this way it is plain that the two things that produce movement are reduced to one thing: the object of appetite.

{433a26–31} WHY WE MAKE MISTAKES IN OUR ACTIONS

101–119. /826/ Next, when Aristotle says **Therefore every intellection,** etc., he gives the reason, based on the above discussion, for a particular accidental feature of movement or action; he shows, that is, why we make mistakes in our actions and movements. And he says that **every intellection is right.** This should be understood as concerning the intellection of principles. For we do not make mistakes as regards first principles that involve possible actions, such as *Harm should be done to no one; Nothing should be done unjustly;* and the like. In the same way we do not make mistakes as regards first principles that are involved in theoretical matters. But in the case of [judgments] that come after these principles, if we consider rightly, then we advance on the basis of the rightness that is associated with first principles. If, however, we stray from this rightness, then we advance on the basis of a mistake that occurred in reasoning. **Appetite and phantasia,** however, which also produce movement, occur both with and without rightness. Thus it happens that our actions fall short of this rightness inasmuch as we fall short as regards intellect and reason.

119–131. Thus it is plain from what has been asserted that **the object of appetite always produces movement.** /827/ **This** object of appetite **is** either **the** truly **good,** when [one] is made to abide in the judgment of right intellect, **or the apparent good,** when [one] is made to stray from the judgment of right intellect because of appetite or phantasia. **Yet not every** good is an object of appetite and productive of movement, **but [only] the good** that can be done, which is a good pertaining to **action.** This good **is capable of being otherwise,** as is the case for all things that are subject to our action. Thus [even] a

2. Here Aquinas is thinking of anger *(ira)* as the dominant passion of the irascible power. For the difference between the irascible and concupiscible appetites, see III.14.99–162.

universal and necessary good, when considered in its universality, does not produce movement. **Therefore it is clear that** the **power of soul** called **appetite** is what **produces movement.**

{433B1–4} THE ANCIENT DIVISION OF POWERS DISPROVED

132–147. /828/ Next, when Aristotle says **Yet for those who divide,** etc., he rules out something the ancients had said about the distinction between the parts of soul that produce movement. He says that **for those who divide the parts of soul** into the rational, irascible, and concupiscible, **if they** are intending to distinguish soul's separate **powers** from one another, many more will **result** than they claimed: viz., **the nutritive, the sensitive, the intellective,** and both **the deliberative** and **the appetitive.** (Aristotle distinguishes the deliberative from the intellective in the same way that in *Ethics* VI [1139a11–15] he distinguishes the calculative, which concerns things that are contingent, from the scientific, which concerns things that are necessary—and for the same reason touched on there.) But **these** parts of soul **differ from one another more than do the concupiscible and the irascible,** which are included under sensory appetite. Thus there are more parts than they would claim.

{433B5–10} AN EARLIER OBJECTION RESOLVED

148–167. /829/ Next, when Aristotle says **But appetites arise,** etc., he rules out an objection introduced earlier [III.14.433a6–8] that was designed to show that appetite does not produce movement. This objection is based on the claim that continent people do not follow their appetites. But that argument can be resolved. For there are **contrary appetites** in a human being, one of which continent people follow while they resist the other. So Aristotle says that, since **appetites** can **arise that are contrary to one another, this** happens **when reason** runs **contrary** to **concupiscence.** And this **is brought about,** i.e., this occurs, **in beings that have a sense of time,** i.e., that have cognition not only of what is in the present but also consider the past and future. For **intellect** sometimes **enjoins giving up** some object of concupiscence **on account of** a consideration for **the future.** An example would be when it seems to someone with a fever, on the basis of intellect's judgment, that he should abstain from wine so as not to make the fever worse, whereas **concupiscence** urges acceptance **on account of the now,** i.e., on account of what is in the present. **For that which is enjoyable** in the present **seems** to be **unconditionally enjoyable and good,** because the **future is not** being considered.

168–174. *Analysis.* /830/ Next, when Aristotle says **Hence that which produces,** etc. {433b10 ff.}, he demonstrates the order of movement. And in this connection he does three things. First, he shows the way in which these things that produce movement are one and the way in which they are more than one. Second, he shows how they are ordered relative to one another (beginning at **Now because there are three** {433b13}). Third, he presents a summary account of one of the things required for movement (beginning at **But now, so as to speak** {433b21}).

{433B10–13} HOW THESE MOVERS ARE ONE AND ALSO MORE THAN ONE

175–185. So Aristotle says first that if the things that produce movement are considered formally and in terms of **species,** then **that which produces movement will be one**—namely, **the object of appetite** or **the appetitive power.** For **the object of appetite** is the **first** mover among **all; for this** is the unmoved mover inasmuch as it is **imagined or intellectively cognized.** For it is clear that secondary movers produce movement only inasmuch as they participate in the first; hence they all share the species of the first mover. But although all things **producing movement** are one, in terms of the species of the first mover, nevertheless they are **more than one numerically.**

{433B13–21} HOW THESE MOVERS ARE ORDERED

186–206. /831/ Next, when Aristotle says **Now because there are three,** he assigns an order to this movement. And he says that **there are three** things found in movement: **one** is **the mover**; another is the organ **by means of which** the mover **produces movement; and** the **third** is **that which is moved. The mover,** however, **is of two kinds:** one **immobile** and **the other** a **moved** mover. So in the case of animal movement, the mover that is not moved is **the good pertaining to action** *(bonum actuale),* which moves appetite insofar as it is intellectively cognized or imagined. But **the moved mover is** the appetite itself, since everything **that has appetites is moved** to the extent that **it has appetites, and** this having appetites **is a kind of actuality** or **movement,** taking movement as the actuality of what is complete (as was said earlier about the operation of sense and intellect [III.12.431a4–7; II.10.416b32–417a2]). **That which is moved, however, is the animal,** whereas the **organ by means of which appetite produces movement is** something **corporeal**—namely, that which is the first **organ** of movement. And so these sorts of

organs **should be considered along with** the operations **that are common to soul and body.** Aristotle presents his account of this in his work on the cause of animal movement [*De motu animalium* 698a1–704b3]. For in this work his plan is to present an account of soul considered on its own.

{433b21–27} THE ORGAN OF LOCAL MOVEMENT

207–218. /832/ Next, when Aristotle says **But now, so as to speak,** etc., he presents a summary account of the organ of local movement. And he says **in summary** that the first thing that **produces movement through an organ** must be such that both the **source and** the **end** of the movement are [located] in **the same** thing—just like the case of a rotation in which there is both **convex and concave,** one of which serves as **the end** whereas the other serves as **the source.** The concave is like the end, whereas the convex seems to be like the source of the movement. For in virtue of being concave [a thing] is drawn back into itself, whereas in virtue of being convex its expansion is extended, inasmuch as the source of a pushing movement comes about through it.

218–230. /833/ Now both the source and the end of the movement are [located] in this thing. Further, in the case of any movement, the movement's source must be immobile. (When one's hand is moved, for instance, the arm is at rest; and when one's arm is moved, the shoulder is at rest.) Thus, since every movement comes out of something that is immobile, it must be that in the first organ of movement, the heart,[3] there is something **at rest** insofar as it is the source of movement and **something else** that **is moved** insofar as the movement is terminated at it. These two [aspects] of it, that which is at rest and that which is moved, are distinct **conceptually** *(ratione),* but in subject and **extension** they are **inseparable** from one another.

230–240. /834/ And that there must be both a source of movement and an end, and consequently both something at rest and something movable, is made clear by the fact that every movement of an animal is made up of **pushing and pulling.** In the case of pushing that which is moving is merely the source of the movement, since the thing pushing puts that which is pushed at a distance from itself. In the case of pulling, however, that which does the moving is the terminus of the movement, since the thing pulling moves toward itself the thing that is pulled. And **for this reason** the first organ of

3. In various works Aristotle identifies the region of the heart as the origin of movement, nutrition, and even sense perception. See, e.g., *De somno* 455b33–456a8, and *De partibus animalium* II.647a24–31, III.665a10–13, III.666b14–16.

local movement in an animal must serve both as the source of movement and as the terminus.

240–252. /835/ And thus there **must** be **something** staying still in it, **and** yet **the movement must begin from there, as** is apparent **in the case of** circular movement. For a body that is moved circularly as the result of having an immobile center and poles does not entirely change location, except perhaps in aspect *(ratione).* As a whole, however, it stays in the same location in terms of subject, although its parts vary their location—they vary in subject, not only in aspect. So, too, in the case of the heart's movement. For the heart stays fixed in the same part of the body, but it is moved through expansion and contraction so that it causes the movement of pushing and pulling. Thus in a certain way it is susceptible to movement, and in a certain way it is at rest.

Chapter 16

The Source of Movement in Different Kinds of Animals

DE ANIMA III.10.433B27–11.434A21

433b27–30. In general, therefore, as we have already said, insofar as an animal is appetitive, so is it capable of moving itself. The appetitive power, however, does not occur without phantasia, while every phantasia is either rational or sensory *(sensibilis).* **The latter, therefore, is something in which other animals also take part.**

433b31–434a5. Now we should also consider what it is that produces movement for incomplete animals, in which there is only the sense of touch—whether or not it is possible for phantasia and concupiscence to be in these animals. For joy and sadness seem to be in them, and if these are there, then concupiscence is necessarily there. But how will phantasia be in them? Or are these in them indeterminately, in just the way that they are moved indeterminately?

434a5–12. So sensory phantasia, as we have said, is also in other animals, whereas deliberative [phantasia] is in those capable of reason. For whether one should do this or that is the work of reason, and it is necessary to measure by means of one thing. For [a person] emulates what is greater; thus one can make one out of many phantasms. This is the reason why [these animals] are not thought to have opinion: for they do not have that [opinion] that is based on the syllogism, whereas this [has] that.° That is why appetite does not have the capacity for deliberation.

434a12–15. Now sometimes [appetite] overcomes and moves deliberation,° whereas sometimes it moves itself,° just as a sphere does, appetite [moving] appetite, when one is in [a state of] continence.° By nature, however, that which is above is always predominant and moves [that which is lower], so that it is now moved by three motions *(lationibus).*

434a16–21. The capacity for knowledge, however, does not produce movement,° but stays still. But because one [sort of] evaluation and reason is universal, whereas another is particular (for one says that such a person must do such a thing, whereas one [says] that this is such and I am such), the latter opinion produces movement at this time, not the one that is universal; or they both do, but one is more at rest, whereas the other is not.

1–5. *Analysis.* /836/ Now that the Philosopher has presented his account of the source of movement as regards local movement, presenting his account

generally and in its own right, he here presents his account of it in relation to different kinds of animals.

6–13. In this connection he does three things. First, he shows what is common to all animals that take part in movement. Second, he shows how a source of movement is found in incomplete animals (beginning at **Now we should also consider,** etc. {433b31}). Third, he shows how this source of movement occurs in the most complete animal, human beings, in a way that is different from how it occurs in other animals (beginning at **So sensory phantasia,** etc. {434a5}).

{433B27–30} WHAT IS COMMON TO ALL MOVING ANIMALS

14–19. So Aristotle says first that every **animal is capable of moving its** very **self insofar as** it **is appetitive.** (For appetite is the proper cause of movement.) But **the appetitive power does not occur without phantasia,** which **is** either **rational** or **sensory** *(sensibilis).* Now **other animals** besides humans **take part in** sensory phantasia, but not in rational phantasia.

Phantasia as Appearance

20–27. /837/ It is important to consider, however, that just as earlier Aristotle included phantasia under intelligence [III.15.433a9–10], so too now he extends phantasia up to intellect, in keeping with the name's defining character *(rationem).* For phantasia is a kind of appearance, and something appears both in virtue of sense and in virtue of reason. Phantasia also has its operation in the absence of sense objects, just as do reason and intellect.

{433B31–434A5} THE SOURCE OF MOVEMENT IN INCOMPLETE ANIMALS

28–60. /838/ Next, when Aristotle says **Now we should also consider,** etc., he shows **what** the source of **movement is** in **incomplete** animals. (Animals are called incomplete **in which there is only the sense of touch.**) And he says that **we should consider what** moves them, namely, **whether or not phantasia and concupiscence** are in them. Now it seems that concupiscence is in them, since **joy and sadness seem to be in** them. For these animals recoil when touched by something harmful, and open and extend themselves toward that which is agreeable to them, which would not happen if pain and pleasure were not in them. **And if these are** in them **then** it is necessary that **concupiscence is** also in them. For concupiscence follows from the sense of pleasure. But since

concupiscence does not occur without phantasia, /839/ it remains to be asked **how phantasia** is **in them.** Aristotle replies that **in just the way that they are moved,** so too both phantasia and concupiscence are in animals of this sort. However, they are not moved determinately, as if they were aiming in their movement at some determinate place. This is what happens in the case of animals moved by a progressive movement: they imagine something remote, want *(concupiscunt)* that thing, and are moved toward it. But incomplete animals of this sort do not imagine anything remote, because they imagine a thing only when the sense object is present. When they are hurt, however, they imagine that thing as harmful and recoil. And, when they take pleasure in a thing, they devote and attach themselves to it. Thus there is indeterminate phantasia and concupiscence in them, inasmuch as they imagine and want *(concupiscunt)* something as it is agreeable, but not as it is this or that, here or there. Instead they have indefinite imagination and concupiscence.

THE SOURCE OF MOVEMENT IN HUMAN BEINGS

61–68. *Analysis.* /840/ Next, when Aristotle says **So sensory phantasia,** etc. {434a5 ff.}, he shows how the source of movement occurs in human beings. And in this connection he does three things. First, he shows how the source of movement in human beings is deliberating reason. Second, he shows how reason's deliberation is sometimes overcome by appetite (beginning at **Now sometimes [appetite] overcomes,** etc. {434a12}). Third, he shows which reason is productive of movement (beginning at **The capacity for knowledge,** etc. {434a16}).

{434a5–12} DELIBERATING REASON

69–96. So Aristotle says first that **sensory phantasia,** as is evident from things said, **is** also **in other animals,** whereas that which comes through deliberation is only **in those capable of reason.** For to consider **whether this** is to be done **or else that** (which is to deliberate) **is the work of reason.** /841/ **And** while considering in this way **it is necessary** to draw on some **one** rule, or end, or something of this sort, against which one **measures** which is more to be done. **For** it is clear that a human being **emulates** (i.e., desires) that which is greater in goodness (i.e., that which is better). But we always judge the better on the basis of some measure, and so we must draw on some measure in deliberating about which is more to be done. This is the middle [term] on which basis practical reason forms a syllogism regarding what should be chosen.

Hence it is clear that deliberating reason **can out of many phantasms make one**—out of three, that is: one of which is chosen over another, whereas the third serves as the measure by which the one is chosen. /842/ **And this is the reason** why animals do **not have opinion** even though they have phantasia. For they cannot employ a **syllogism** through which one thing is chosen over another. But the deliberation of reason has **that** (viz., it has phantasia)—otherwise it would not make one out of many phantasms. And so it is that a lower **appetite,** which follows phantasia, **does not have deliberation** but is moved without deliberation to wanting or getting angry *(concupiscendum vel irascendum).* For it follows sensory phantasia.

{434a12–15} HOW DELIBERATION IS OVERCOME BY APPETITE

97–122. /843/ Next, when Aristotle says **Now sometimes,** etc., he shows how reason's deliberation may be overcome by a lower appetite. He says that **sometimes** a lower appetite, which occurs without deliberation, **overcomes deliberation** and distracts a person from what he has deliberated about. **Sometimes,** however, conversely, **appetite moves appetite**—that is, a higher appetite, belonging to deliberating reason, [moves] one that belongs to sensory phantasia (**just as** in the case of heavenly bodies a higher **sphere** moves a lower one). This occurs **when** someone **is** continent.[1] For it is characteristic of the continent person to overcome the impulse of passion through the deliberation of reason. /844/ And it is the natural order for a higher appetite to move a lower one. For in the case of heavenly bodies as well a higher sphere **is** naturally **predominant and moves** a lower one, in such a way that the lower one **is moved by three** local movements. In this way the sphere of Saturn is moved by a diurnal movement, over the earth's poles, and by an opposite movement, over the poles of the zodiac, and in addition by its own movement. Likewise a lower appetite, even if it retains something of its own movement, is still moved, as part of the natural order, by the movement of a higher appetite and by the movement of deliberating reason. But if, conversely, it should happen that the higher appetite is displaced by the lower,

1. Aristotle is here discussing the notion of weakness of will, or *akrasia,* a term that medieval Latin translations rendered as *incontinentia.* This word was sometimes mistaken for two words, *in continentia.* For that reason Aquinas here takes the text to be referring to the continent person rather than, as Aristotle intended, to the incontinent person. Correspondingly, Aquinas reads this whole passage quite differently than modern translations would have it, arriving at a sense that fits Aristotle's general position but not the letter of the Greek text.

then this goes against the natural order. Hence this leads to fault *(peccatum)* in morality, in just the way that monstrosities are faults in nature.

{434A16–21} WHICH REASON IS PRODUCTIVE OF MOVEMENT

123–145. /845/ Next, when Aristotle says **The capacity for knowledge,** etc., he shows which reason is productive of movement. And we should first know that theoretical reason, which he calls **the capacity for knowledge, does not produce movement, but** is at rest. For it says nothing of what is sought after or what should be fled (as was said earlier [III.14.432b27–28]). Some practical **reason,** however, is **universal,** and some is **particular.** The universal is like that which **says that such a person must do such a thing:** for instance, that a son must honor his parent. Particular reason, however, **[says] that this is such and I am such**—e.g., that I the son should now display this honor to my parent. /846/ **The latter opinion produces movement at this time,** and **not** the opinion that is **universal. Or,** if **both** produce movement, then that which is universal does so as the cause that is first and **at rest, whereas** the particular does so as the cause that is proximate and in a certain way attached to what is being moved. For operations and movements concern particulars. Hence for a movement to follow, a universal opinion must be applied to the particulars. And on this account, too, fault in actions occurs when an opinion about particular things to be done is corrupted on account of some pleasure or some other passion, although still that passion does not corrupt the universal opinion.

Chapter 17

The Order Among Soul's Parts

DE ANIMA III.12.434A22–435A10

434a22–26. So it is necessary for every single thing that lives and has soul to have the nutritive soul, all the way from its generation to its corruption. For it is necessary that what is generated have growth, maturity, and degeneration, and these are impossible without food. Therefore it is necessary for the nutritive power to be present in all things that are generated and can be corrupted.

434a27–30. It is not, however, necessary for sense to be in all living things. For, among such things, a simple body is not able to have touch (and without this it is not possible for any animal to exist), nor is anything that is not capable of taking on *species* without matter.

434a30–b2. It is necessary, however, for an animal to have sense, if nature does nothing in vain. For all things that occur by nature subsist for the sake of something, or occur together with things that are for the sake of something. Therefore every progressive body, if it did not have sense, would be harmed and will not arrive at its end, which is the task of nature. For how will it be fed? For stationary things have that by which they are naturally constituted.

434b3–8. A body cannot have soul and a discriminative intellect while not having sense, if it is not inert but generable—and also not ungenerable. For why will it not have [sense] *(Quare enim non habebit)*? For [that would have to be] better either for its soul or for its body, whereas in fact it is neither. For soul will intellectively cognize no more [than it would with sense], and body will be nothing more because of that. Therefore no nonstationary body has soul without sense.

434b8–11. But also, if it has sense, a body is necessarily either simple or mixed. Being simple, however, is impossible; for [then] it would not have touch. But it is necessary that it have this.

434b11–18. This is clear on the following basis. For since an animal is an ensouled body, while every body is tangible, and the tangible is that which is sensible by touch, it is necessary for an animal's body to be capable of touch, if the animal is to survive. For the other senses—smell, sight, and hearing—sense through different things. But unless [the animal] has the

sense [of] touch,° it could not flee some things or select others. But if this is the case, then it will be impossible for the animal to survive.

434b18–24. For this reason taste, too, is like a kind of touch. For it is concerned with food, while food is a body able to be touched. But sound, color, and smell do not nourish and contribute neither to growth nor to degeneration. Hence taste, too, is necessarily a kind of touch, because it is the sense concerned with what is tangible and nutritional. Therefore these [senses] are surely necessary for an animal, and from this it is also clear that it is not possible for an animal to exist without touch.

434b24–29. The other [senses], however, are for the sake of the good and are necessarily present, not in every single kind of animal, now, but in certain kinds, such as the progressive kind. For if [an animal] is to survive, it must sense not only when touched but also from far away. This will be the case, however, if [the animal] is capable of sensation through a medium, inasmuch as that [medium] is affected and moved by the sense object, and this [animal] by that [medium].

434b29–435a10. For just as what produces local movement brings about the change all the way to some point, and that which pushes another makes it push [a third], and the movement occurs through an intermediary—the first thing that produces movement pushes and is not pushed, and only the last one is pushed without pushing, whereas an intermediary is both, and there are many intermediaries—so too in the case of alteration, aside from the fact that one thing brings about the alteration° while staying in the same place. It is as if someone dipped [an object] in wax: [the wax] is moved up to the point where [the object] is dipped. A stone, however, is not at all [moved], whereas water is up to a further point. Air, however, is moved, acts, and is affected to the greatest extent, if it stays still and is one. So, regarding reflection as well, rather than [say] that the emerging sight is reflected, it is better [to say] that the air is affected by shape and color while it is one; and in a smooth [medium] it is one. For this reason the air will go on to move sight, just as if a seal had penetrated the wax all the way to the end.

1–8. *Analysis.* /847/ Now that the Philosopher has presented his account of soul's individual parts, he here shows how they are ordered to one another. And first he shows that it is necessary for soul's nutritive part to be found in all living things. Second, he shows that the sensory part is not in all things, but [only] in animals (beginning at **It is not, however, necessary,** etc. {434a27}).

{434a22–26} SOUL'S NUTRITIVE PART IS IN ALL LIVING THINGS

9–28. So first, drawing on the conclusions reached earlier about soul's parts, Aristotle says that **everything** that **lives,** and that consequently **has** any one part of **soul,** necessarily has **the nutritive soul, from** the beginning of its **generation all the way to** its **corruption.** (By this remark he suggests that his claim should be understood for living things that are generated and corrupted.) /848/ Now he proves this as follows: **it is necessary that** every living thing that **is generated have growth, maturity, and degeneration.** But **these** cannot occur **without food,** since during times of growth more food must be converted than is needed to preserve the size that already exists, whereas during times of maturity an equal amount is needed, and during times of decline less is needed. **Therefore** since using food pertains to the **nutritive** part, **it is necessary** for this part of soul to be **in all** living **things that are generated and corrupted.** And thus the order of this part of soul to soul's other parts is clear: for all the others presuppose it.

29–33. *Analysis.* /849/ Next, when Aristotle says **It is not, however, necessary,** etc. {434a27 ff.}, he shows how the sensory part is correlated with living things. And first he shows that it is not in all living things. Second, he shows which living things it does occur in (beginning at **It is necessary, however,** etc. {434a30}).

{434a27–30} SENSE IS NOT IN ALL LIVING THINGS

34–53. So Aristotle says first that **it is not necessary** that **all living things** have **sense,** because the sense of **touch (without** which no other sense can exist, and consequently neither can any **animal,** the defining character *[ratio]* of which depends on having sense) cannot occur in any **simple body.** This is because the organ for the sense of touch must be in a kind of mean-state between contraries (as was shown earlier [II.23.423b26–424a10]), a state for which no simple body is fit. For the simple bodies—the elements, that is—contain a superabundance *(excellentiae)* of the tangible qualities: Fire, for instance, contains a superabundance of the hot, and Water of the cold. /850/ Likewise, too, **anything that is not capable of taking on** *species* without matter does not have sense. For, as was said earlier [II.24.424a18], "a sense is capable of taking on *species* without matter." But there are some living things, plants, that come close to simple bodies on account of their earthiness, and receive the *species* of

sensible things only through a material alteration *(immutationem)*. Therefore not all living things have sense.

54–58. *Analysis.* /851/ Next, when Aristotle says **It is necessary, however,** etc. {434a30 ff.}, he shows that all animals have sense. And in this connection he does two things. First, he shows this for animals that are moved with a progressive movement. Second, he shows it unconditionally, for all animals (beginning at **But also,** etc. {434b8}).

59–61. In connection with the first he does two things. First, he demonstrates his thesis; second, he rules something out through which someone could counter his argument (beginning at **A body cannot have soul,** etc. {434b3}).

{434A30–B2} ALL ANIMALS WITH PROGRESSIVE MOVEMENT HAVE SENSE

62–77. So Aristotle says first that it is **necessary** that **an animal** has **sense.** To prove this he first puts forward the claim that **nature does nothing in vain.** For **all things that occur** in **nature** occur **for the sake of something** (since nature acts for the sake of an end) or **occur together with things that are for the sake of something**—i.e., arise of necessity from things that are for the sake of something. In this way nature makes limbs for the sake of certain operations, while as a result of the limbs' being in such a state it follows that they have certain accidents—hairiness, for instance, or colors, or corruptions that do not occur for the sake of an end but rather arise out of some necessity belonging to the matter. In this way, therefore, since nature acts for the sake of something, if a natural thing could not reach the end that nature aimed at, it would exist in vain.

77–95. /852/ But nature made a **progressive body** (i.e., the body of an animal that can be moved with a progressive movement) be organized and arranged in a certain way for the sake of movement and also so that through movement it would further pursue the food through which it would be preserved in existence. This could not take place, however, **if it** did **not have sense,** because it would not discern the harmful forces *(corruptiva)* that could resist it. Thus it **would be harmed and** would not reach **the end** that **nature** aimed at—namely, that it would be preserved through the food that it acquires from movement. **For how** would **it be fed** if it did not seek food through movement? /853/ Neither is the case of immobile animals a counterexample. **For stationary** (immobile) animals **have** something attached [to them] **by which they are naturally constituted** to be nourished, which is why

they need not search at a distance. Therefore it is clear that if progressive bodies were not to have sense, they could not pursue the end to which nature has ordered them. And thus they would exist in vain, which is unacceptable.

{434B3–8} RULING OUT ONE WAY TO COUNTER THE ARGUMENT

96–106. /854/ Next, when Aristotle says **A body cannot have soul,** he rules out something through which one could seem to counter the argument just given. For someone could say that a progressive body can reach the end aimed at by nature by discerning harmful forces through intellect, even if that body did not have sense. But he rules this out, saying that **a body** that is **not inert,** but progressive, **cannot have soul and an intellect** discerning harmful things in such a way as not to have sense—regardless of whether it is **generable** or **ungenerable.**

107–117. This has been shown in the case of what is generable; for the only living generable things that have intellect are human beings, and the human intellect needs sense, as was shown earlier [III.12.431a14–17, 13.432a3–10]. /855/ But when he says that neither does that which is ungenerable have intellect without sense, this seems to be false—as far as Aristotle's view is concerned. For the heavenly bodies, which he supposes to be ensouled, have (among soul's parts) intellect, but not sense. For they are uniform bodies and do not have the distinctness in their organs that is required for sense.

118–142. Thus some explain the passage in such a way that the sentence ends where it says "but generable"[1]—so that the meaning is that no body that is not stationary can have intellect without sense, as long as it is generable. What he adds, "and also not ungenerable," is then the beginning of another sentence, as if he were to say that what he has said about generable bodies does *not* hold in this way for an ungenerable body (that it could not have intellect without sense). /856/ And what he then adds, *quare enim non habebit,* should be understood as a relative statement rather than as a question, so that the meaning is that the reason why an ungenerable body (viz., a heavenly body) does not have sense although it has intellect, is this: that if it were to have sense, this would be so that either something would follow that would be **better for** the **soul** of the heavenly body or else something would follow

1. The source for this reading seems to be an earlier commentary, from around 1246, by an arts master, probably at the University of Paris. This is one of the clearest indications that Aquinas was in fact influenced by work being done within the arts faculty there (see Introduction).

that would be **better for** the heavenly **body.** But **it is neither** of these, because the soul of a heavenly body would **intellectively cognize** on account of sense **no more** than without sense; for it intellectively cognizes, in the manner of separated substances, things that are intelligible in their own right. Neither, further, could a heavenly body be **more** preserved in existence through sense: for it cannot be harmed, and hence it does not need the senses to escape harmful forces.

143–148. But this meaning does not fit with the conclusion that follows, namely, that **no nonstationary** (nonimmobile) **body has soul without sense**—unless perhaps one were to say that this conclusion follows not from what has just been said, but from what was said at first [434b3–4].

149–172. /857/ Therefore, since this exposition seems strained, we should say that by an "ungenerable" body Aristotle means, not a heavenly body, but the bodies of certain airy animals that the Platonists postulated, giving them the name 'demons.' The Platonist Apuleius defined these demons in the following way: demons are animals that are airy in body, rational in mind, passive in spirit *(animo)*, and eternal in time.[2] It is with respect to the bodies of these sorts of animals, then, that the Philosopher wants to show that they cannot possibly have intellect without sense, as the Platonists supposed. As a result, the phrase *quare enim non habebit*, should be read as a question—viz., **why will** a body of this sort **not have** sense? That is as if to say, "There is no reason to be given for this." For if such a body does not have sense, this is either for the good of **its soul or** for the good of **its body.** But **it is neither** of these, since without sense neither **will** its soul **intellectively cognize** better nor will its body be preserved **more.** And from this the conclusion that he directly draws at once does follow: that **no** mobile **body** that **has soul** lacks **sense.** (This appears to be Aristotle's intention based also on what he immediately adds: that it is impossible for any simple body to be the body of an animal [434b8–11].)

ALL ANIMALS HAVE SENSE

173–178. *Analysis.* /858/ Next, when Aristotle says **But also, if it has,** etc. {434b8 ff.}, he shows that sense is absolutely necessary for every animal. And in this connection he does two things. First, he demonstrates his thesis. Second, he establishes one particular conclusion on the basis of what has been said (beginning at **It is clear, therefore,** etc. {III.18.435b4}).

178–180. In connection with the first he does two things. First, he introduces

2. Compare *De Deo Socratis* XIII. Apuleius was active in the second century C.E. The later Middle Ages knew his work through Augustine; see *The City of God*, bk. VIII, chap. 16.

his plan. Second, he proves his thesis (beginning at **This is clear,** etc. {434b11}).

181–188. *{434b8–11}* He first puts two things forward. First, that **if** some **body has sense,** then it **is necessarily** either **simple** or **mixed.** And it **is impossible** for it to be **simple,** because if it were a simple body, **it would not have touch.** [Second,] it **is** surely **necessary** for every animal to **have** this sense: not only progressive animals, but even immobile animals, as has been indicated [434a28–29].

189–193. *Analysis.* /859/ Next, when Aristotle says **This is clear,** etc. {434b11 ff.}, he proves his thesis: first, that the sense of touch is in all animals; second, that an animal's body cannot be a simple body (beginning at **It is clear, however,** etc. {III.18.435a11}).

193–197. In connection with the first he does two things. He shows first that the senses of touch and taste are necessarily present in all animals; second, that the other senses are not present in all animals (beginning at **The other [senses],** etc. {434b24}).

198–201. In connection with the first he does two things. First, he shows that touch is necessarily present in all animals. Second, he shows the same for taste (beginning at **For this reason taste,** etc. {434b18}).

{434B11–18} TOUCH IS NECESSARILY PRESENT IN ALL ANIMALS

202–231. So Aristotle says first that **this,** that it is necessary for touch to be present in all animals, **is clear on the basis** of what will now be said. **For an animal is an ensouled body, while every body** (every generable and corruptible body) **is tangible.** Now I call **tangible that which is sensible by touch.** (The heavenly bodies, however, which are ungenerable and incorruptible, are not tangible. For they do not have the nature of elements, and so cannot have the elemental qualities that are the tangible qualities. But all corruptible bodies necessarily have tangible qualities, since they either are the simple elements or are composed of these elements.) /860/ From this Aristotle concludes that **it is necessary for an animal's body** to have the sense of **touch, if the animal is to survive** *(debeat salvari)*. For because the body of an animal is tangible—i.e., it has tangible qualities—and so likewise are the bodies that touch it, an animal's body can be altered *(immutari)* by the things that touch it, via a material alteration, even to the point of being harmed. It is different, however, for **the other senses—smell, sight, and hearing**—which **sense through** other intermediaries, and not by touching. Hence those sensible qualities, because they are distant and do not touch the animal's body, cannot alter it to the point of being harmed, as tangible things can. And so,

unless the animal were to have **the sense** of **touch** through which it distinguishes agreeable from harmful things, **it could not flee some things** and **select others,** and so **the animal** could not **survive.** Therefore it is necessary for the animal's survival that it have the sense of touch.

{434B18–24} TASTE IS NECESSARILY PRESENT IN ALL ANIMALS

232–247. /861/ Next, when Aristotle says **For this reason taste,** he shows the same for taste, namely, that **taste is like a kind of touch. For it is** by tasting **food** that one discerns whether or not food is agreeable, **while food** is a kind of tangible **body,** since it nourishes as the result of its being hot, cold, wet, and dry. For we are nourished by the same things by which we exist.[3] But **sound, color, and smell contribute** nothing to nourishment—**nor** to **growth** or to deterioration. Flavor, however, does contribute to nourishment inasmuch as it is a consequence of [the food's] condition.[4] In this way, then, it is evident that **taste is a kind of touch, because it is the sense concerned with** something **tangible and nutritional** (or nourishing)—namely, the sense concerned with food. And thus it is evident that **these** senses **are necessary for an animal,** on which basis it is also **clear that an animal** cannot **exist without touch.**

248–253. *Analysis.* /862/ Next, when Aristotle says **The other [senses],** etc. {434b24 ff.}, he shows that the other senses are present not in all animals but in some. And in this connection he does two things. First, he expounds his thesis; second, he makes clear something that he said (beginning at **For just as what produces,** etc. {434b29}).

{434B24–29} THE OTHER SENSES ARE NOT PRESENT IN ALL ANIMALS

254–265. So Aristotle says first that **the other** senses—sight, hearing, and smell—are suited to an animal, not of necessity, but **for the sake of** their well-being. **And** it is necessary for those to be **present, not in** each and every **kind of animal, but in certain kinds**—namely, those that are moved with a **progressive** movement. For **if** this sort of animal **is to survive,** it has to **sense not only** that which touches it **but** also that which is **far away,** because it is moved toward

3. Compare Aristotle, *De generatione et corruptione* II.335a10–11.

4. Compare II.21.52–59.

something distant. **This,** that it senses something far away, **will be the case, however, if** it possesses senses that sense **through a medium, inasmuch as** the medium **is affected and moved by the sense object, and** the sense, **by** the medium.

{434B29–435A10} A SIMILARITY WITH LOCAL MOVEMENT

266–282. /863/ Aristotle goes on to make this point clear through a similarity with local movement, when he says **For just as what produces,** etc. For we see that **what produces local movement brings about change all the way to** a determinate place, since **that which** first **pushes makes** the thing pushed go on to **push** something else, and thus the first thing that pushes moves a third **through an intermediary. The first thing that produces movement pushes** but **is not pushed, and the last one,** where the movement ends, **is pushed** but does not push, **whereas an intermediary** has **both**—namely, that it pushes and is pushed. There can be **many** such **intermediaries.** And **just as** this is so for local movement, so it can happen **in the case of alteration** *(alteratione)* that there is a first mover and a last thing moved and an intermediary that is moving and moved. /864/ It differs only in this respect, **that** what first alters remains **in place** while it **brings about the alteration,** which cannot occur with the thing that pushes.

282–292. And Aristotle provides an example. It is just **as if someone** were to dip [an object in] melted **wax.** The wax **is moved up to** that end point to where, due to the alteration of heat, the action of the dipping extends. But **a stone,** since it is hard, is not capable of taking on such an impression. In **water,** however, such an alteration reaches much **further** than in wax, and moreover **air,** which is more capable of being affected, **is moved, acts, and is affected** at the greatest distance, as a medium, for as long as **it stays still and is one,** in such a way that it is not broken up by any intervening obstacle.

292–303. And so as regards the **reflection** of sight **it is better** to say **that the air is affected by shape and color** for as long as it remains **one** and continuous, which can happen when it is **smooth** and not broken up, **rather than** [to say] that rays **emerging** from **sight** are **reflected** by the visible object, as the Platonists supposed.[5] And thus air moved in this way by shape and color **will move sight,** to the extent that the visible object alters *(immutat)* the whole of the air all the way to sight. And much the same would hold for **wax** and **a seal** if the seal's shape were impressed on the wax **all the way to** its final end point, just as the visible object impresses its *species* on the air all the way to sight.

5. Compare II.15.118–135.

Chapter 18

The Order Among Soul's Parts (Continued)

DE ANIMA III.13.435A11–B25

435a11–b4. It is clear, however, that it is impossible for the body of an animal to be simple—I mean, for instance, that it be made of Fire or Air. For, indeed, without touch it is not able to have any one other sense. For every ensouled body is capable of touch, as was said. The other [elements], however, except for Earth, may indeed be made capable of sensation, but they all bring about sensation *(sensum)* by sensing through another and through a medium. Touch, however, occurs by touching [the things] themselves, and for that reason it has this name. The other senses nevertheless sense by means of touch, but through other things; only this one, however, seems [to sense] through itself. For this reason the body of an animal will not be any [one] of these sorts of elements, and so not made of Earth. For touch is like a mean-state between all tangible qualities, and the sense is capable of taking on not only whatever different characteristics Earth has, but also hot, cold, and all the things that can possibly be touched. And for this reason we do not sense with our bones and hair and these sorts of parts, because they are composed of Earth. And plants too, on account of this, have no senses, because they are composed of Earth. But without touch it is not possible for there to be any other [sense], and this sense is not composed of Earth, nor of any other of the elements.

435b4–19. It is clear, therefore, that it is only when this sense is lost that animals necessarily die. For it is not possible for what is not an animal to have this, and nor when there is an animal does it necessarily have another in addition to this. And on this account the other sensible qualities, in their extreme instances (e.g., color, smell, and sound), harm not the animal but only the senses, unless accidentally—e.g., if a blow and impact comes at the same time as the sound. And by sights and smell other things are moved which do harm by means of touch. Moistness too does harm, to the extent that it happens to be capable of touch at the same time. But an extreme instance of tangible qualities (e.g., that of hot, cold, and hard things) harms the animal. For an excess of every sensible quality harms the sense, and for this reason what can be touched [is capable of harming the sense of] touch. But living° is limited by this; for it has been demonstrated that it is impossible for an animal to exist without touch. Hence an extreme tangible

quality harms not only the sense but also the animal, since it necessarily has this alone.

435b19–25. An animal has the other senses, however, as was said, not for the sake of existing, but for the sake of [doing so] *well*. As a result [it has] sight, since [it lives] in air and water, in order to see—and in general because [it lives] in a diaphanous medium. It has taste, however, on account of what is pleasant and harsh, in order to sense that in the food and to want *(concupiscat)* [it] and to be moved [toward it]. [It has] hearing, however, so that something is signified to it, and it has a tongue so that it signifies something to another.

{435A11–B4} THE BODY OF AN ANIMAL CANNOT BE SIMPLE

1–22. /865/ Now that the Philosopher has shown that touch is present of necessity in all animals, he here plans to show **that it is impossible for the body of an animal to be simple—for instance,** that it be **made of Fire or Air,** in the way that the Platonists supposed that some animals are made of Air.[1] Aristotle proves this in the following way: there can be no **other sense without touch.** For every animal must have touch, as has been shown [III.17.434b11–24], and consequently **every ensouled body**—every body with a sensory soul—must be such that the sensation *(sensus)* of touch can occur through it. Now **the other** elements, **except for Earth,** can be organs or media for the other senses—Air and Water can, that is, inasmuch as Air and Water **bring about sensing through another** (that is, **through a medium).** But **touch** is not brought about through a medium, but **in touching** the sensible things **themselves,** and that is why it is so named.[2] Although **the other senses** also **sense** in a certain way by touching, still this does not occur immediately, **but through** a medium. (For a sense object touches a sense through a medium in just the way that it alters it through a medium.) **Only** the sense of touch,

1. Compare III.17.149–156.

2. The point here comes across best in Greek, where the verb for touching has the primary meaning of *fastening upon.* Aristotle is saying, then, that Greek uses the word it does for touch because the sense of touch directly *fastens upon* its object.

In Latin and English the point is less obvious but can still be made, because we do commonly speak of one object touching another in the sense of *being in contact.* (Indeed, it is helpful to keep in mind in this chapter that 'touching' is ambiguous between sensation and mere contact.) And so it is reasonable to suppose that we associate touch with tactile sensations because these are the sensations that are produced by the most direct kind of contact. Thus the sense of touch is so called because of the direct kind of touching that is involved.

however, senses by touching the sense object **through itself** and not through some medium.

22–52. /866/ It is clear on this basis that the body of an animal has to be such that touch can occur through it, but not such that sight and hearing can occur through it. For these latter senses occur through an outside medium. And because the body of an animal must be such that the sensation of touch occurs through it, it is impossible for **the body of an animal** to be **any [one] of these elements:** neither **Earth,** through which the other sensations do not occur, nor the other elements, through which the other sensations do occur. /867/ The reason for this is that that through which **touch** occurs must be intermediate relative to contrary **tangible** qualities, in order for it to be **capable of taking on** these qualities (inasmuch as it exists in potentiality relative to them), as was shown earlier [II.23.423b26–424a10]. And this is true not only with respect to the qualities of **Earth but also** with respect to **all** tangible qualities. But in the case of simple bodies we find no intermediary tangible qualities; instead, we find qualities lying at one or another extreme of a contrariety. From this it is clear that the sensation of touch cannot occur through any simple body nor through anything closely related *(vicinum)* to simple bodies. **And** so **we do not sense with our bones and hair and** other such **parts, because** there is too much **of Earth** in them, and they are not made intermediate, as touch requires. /868/ For this reason, **too, plants have no senses, because** they have so much of what is earthy, and **without touch it is not possible** for there to be any **other** sense; **nor** is it possible for touch to be brought about through any **other** element. So in this way it is clear that no simple body can be ensouled by having a sensory soul.

53–56. *Analysis.* /869/ Next, when Aristotle says **It is clear, therefore,** he draws a conclusion from the things just said about the relationship of the senses to animals: first as regards touch; second as regards the other senses (beginning at **An animal has the other senses** {435b19}).

{435b4–19} THE RELATIONSHIP OF TOUCH TO ANIMALS

57–96. So Aristotle says first that, since it is necessary for every animal to have touch, as was shown, **it is clear** that it is **only when** they lose **this sense,** touch, **that animals necessarily die.** For this sense and *animal* are logically interchangeable *(convertitur),* since nothing can **have** that sense unless it is **an animal, nor** can anything be **an animal** unless it has **this** sense. /870/ And from here Aristotle further concludes that the sensible qualities of the other

senses, if they are extreme instances *(excellentia),* harm the individual **senses**—e.g., too much brightness harms sight, and loud sounds harm hearing. Nevertheless, because an animal can continue to exist even after these senses have been harmed, **extreme instances** of these do **not harm the animal unless** *per accidens,* inasmuch as the animal happens to be affected at the same time by some tangible things that are harmful—**e.g., if a blow and impact comes at the same time** as **the sound,** as happens in the case of thunder, as a result of which animals occasionally die. Likewise too, some die from things that are seen—not inasmuch as they are seen, but inasmuch as they infect the air, as is said of some poisons. And the same should be understood for smells, to the extent that sometimes the air's being harmed is associated with these bad smells. And so it is the case for flavor, too, that an animal can be harmed: not inasmuch as [the object] is a flavor, but to the extent that some tangible quality is attached to the flavor—e.g., that such a flavor is the result of excessive heat or cold. /871/ But **extreme tangible** qualities **harm the animal** *per se* and not *per accidens,* because **every** extreme **sensible quality harms the sense.** And for that reason **what can be touched**—what is tangible—if it is extreme, harms **[the sense of] touch.** But the life of an animal is **limited** by **this** sense: for an animal's life lasts as long as the sense of touch lasts in it. **For** Aristotle has shown **that it is impossible for an animal to exist without touch. Hence** it is clear that **extreme tangible** qualities harm **not only the sense** of touch **but also the animal,** inasmuch as **this** sense **alone** is **necessarily** present in the animal.

{435b19–25} THE RELATIONSHIP OF THE OTHER SENSES TO ANIMALS

97–109. /872/ Next, when Aristotle says **An animal has,** he shows how the other senses are related to an animal. And he says that **an animal has the other senses not for the sake of** the necessity of its **existence,** because without them it *can* exist and live, **but for the sake of** its **well**-being. In this way it has **sight, since** it lives **in air and water, in order to see** through air and water things that are far away—and not only through air and water, but also through any **diaphanous medium,** since we also see through the heavenly bodies.[3] An

3. By 'heavenly bodies' Aquinas means not the planets or stars themselves, but the various regions of the heavens, such as that region in which the planets and stars are located (the sidereal heaven). This sidereal heaven must be transparent, Aquinas supposed, or we would be unable to see those planets and stars (cf. II.14.101–104).

animal **has taste, however, on account of** the pleasure and harshness that are contained in food—**in order,** namely, for the animal **to sense** pleasure **in the food and** in order **to want** *(concupiscat)* it **and to be moved** to seek it.

Are Taste and Smell Necessary for an Animal?

110–120. /873/ But it is important to notice that above Aristotle claimed that taste is necessary for an animal insofar as it is a kind of touch pertaining to food [III.17.434b18–24]. Here, on the other hand, he numbers it among the senses that are not necessary insofar as it discriminates between the flavors that make food pleasant or harsh—so that the food is more readily selected or spurned. And what is said about taste should be understood for the sense of smell, too, since through smell animals are drawn to food from far away, whereas in human beings there is also another kind of smell, with a different use, as Aristotle says in *De sensu et sensato* [443b17–444a19].[4]

121–129. *{435b19–25, Continued}* /874/ The reason, **however,** why **hearing** is in an animal is so that **something is signified** to it. For it is necessary, to the extent that one animal is helped by another, that the conceptions of the one animal be signified to the other. This is clear above all in animals that live in groups, and in all animals whose offspring are educated by their parents. And thus an animal must also have **a tongue** through which, by making sounds, **it signifies** its various states *(suas affectiones)* **to another.**

130. Let these remarks on soul be enough for now.

4. The reference is to Aristotle's claim that human beings perceive scents that have a purely aesthetic value, lacking any connection to nourishment (e.g., the smell of a flower). Like taste, then, smell has one function that is necessary and another that is merely pleasurable.

Textual Emendations

I have made the following alterations to René-Antoine Gauthier's Leonine edition. Changes were made for one of four reasons.

{Aq.} I have altered Aristotle's text on the basis of Aquinas's commentary.
{cor.} A correction of a misprint in the Leonine edition. (I am indebted to Father Gauthier for his confirmation of the items in this category.)
{mss.} I prefer the reading in the manuscripts to the alternative proposed by Gauthier.
{var.} I prefer a variant manuscript reading.

I.3.187–197: *cuius—vera* added {mss.}
I.4.135: *uno/uni* {var.}
I.5.405a23: *primum/principium* {mss.}
I.9.150: *anima/animal* {cor.}
I.9.408a17: *commixtis/commixta* {mss.}
I.10.408b11: *dicere* omitted {mss.}
II.2.413a3: *ita/ibi* {var.}
II.3.69: *latitudinem/longitudinem* {cor.}
II.3.179: *igitur* added {var.}
II.4.227: *in* added {mss.—cf. line 230}
II.4.256: *et* omitted {cor.}
II.15.94: *quod/quo* {cor.}
II.16.156: *aliquid/aliquis* {var.}.
II.19.44: *ineptitudine/ineptudine* {cor.}
II.19.421a12: *quo/quod* {var.}
II.20.421b24: *ab aspalto et* added {Aq.}
II.21.25: *quod/quia* {var.}
II.21.185: *qui* omitted {mss.}
II.21.186: *saporem et/saporem* {var.}
II.22.12: *determinat/determinet* {cor.}
II.22.98: *sunt/sont* {cor.}
II.22.187: *demonstrat/demonstrant* {cor.}
II.22.423a4: *et/set* {mss.}
II.23.424a12: *tactus/actus* {cor.}
II.24.4: *quid/quit* {cor.}
III.1.272: *inmùtatiuum/inmitatiuum* {cor.}

III.4.427b5: *sibi/simile* {Aq.}
III.8.156: *sensibilem/sensitiuam* {var.}
III.11.84: *unum* omitted {mss.}
III.11.430b14: *indiuisibile/indiuisible* {cor.}
III.12.311: *separatam/separatarum* {var.}
III.14.263: *prosequi/persequi* {mss.—cf. III.12.55, 111, 140}
III.14.432a30: *uel uiuentibus* omitted {mss.}

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Footnotes explaining key technical terms are listed in *italics*. Aristotle's text is not indexed.