
SAINT THOMAS AQUINAS

COMMENTARY ON PHYSICS

Books I–II translated by Richard J. Blackwell, Richard J. Sparth, W. Edmund Thirlkel.

Books III–VIII translated by Pierre H. Conway, OP.

ARISTOTLE COMMENTARIES

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NOTES ON THE TEXT

Latin Text of Aristotle and St. Thomas

Thomas's commentaries on Aristotle were written around 1266–1272, and his commentary on the *Physics* was likely written towards the beginning of his second period of teaching in Paris (1268–1269). The *Physics* is the first book of Aristotle's science of nature: beginning with the principles of coming to be, Thomas masterfully builds on Aristotle's treatment of matter and form, place and void, motion and time, before finally concluding with the demonstration of the existence of the First Unmoved Mover. The Latin text used in this volume is based on the Leonine Edition (1884); it has been edited and revised by The Aquinas Institute.

Greek Text of Aristotle

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English Translation of Aristotle and St. Thomas

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DEDICATED WITH LOVE TO
OUR LADY OF MT. CARMEL

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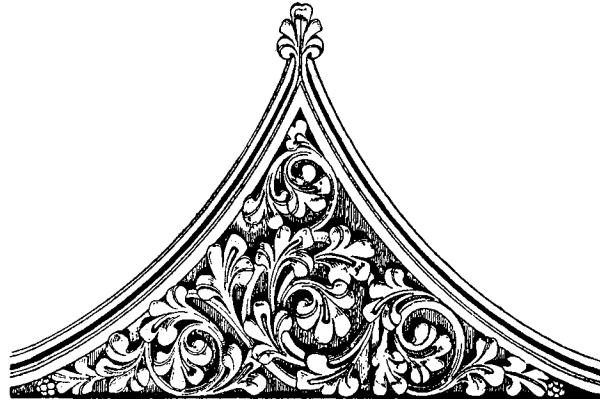
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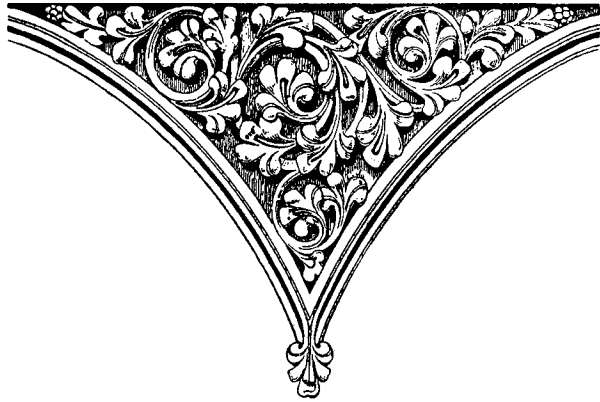
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COMMENTARY ON PHYSICS



BOOK 1

THE PRINCIPLES OF NATURAL THINGS

LECTURE 1

The matter and subject of physics

- 184a10** Quoniam quidem intelligere et scire contingit circa omnes scientias, quarum sunt principia aut causae aut elementa, ex horum cognitione (tunc enim cognoscere arbitramur unumquodque, cum causas primas et prima principia cognoscimus, et usque ad elementa), manifestum quidem quod quae sunt circa principia scientiae quae de natura est, prius determinare tentandum. [5]
- {A.1} Ἐπειδὴ τὸ εἰδέναι καὶ τὸ ἐπίστασθαι συμβαίνει περὶ πάσας τὰς μεθόδους, ὧν εἶσιν ἀρχαὶ ἢ αἷτια ἢ στοιχεῖα, ἐκ τοῦ ταῦτα γνωρίζειν (τότε γὰρ οἰόμεθα γινώσκειν ἕκαστον, ὅταν τὰ αἷτια γνωρίσωμεν τὰ πρῶτα καὶ τὰς ἀρχὰς τὰς πρῶτας καὶ μέχρι τῶν στοιχείων), δῆλον ὅτι καὶ τῆς περὶ {15} φύσεως ἐπιστήμης πειρατέον διορίσασθαι πρῶτον τὰ περὶ τὰς ἀρχὰς.
- Since, indeed, to understand and to know happen in all sciences of which there are principles, causes, or elements, it is through acquaintance with these that knowledge is attained. For we do not think that we know a thing until we know its first causes and first principles and have carried our analysis as far as its elements. Plainly, therefore, in the science of nature, as in other branches of study, our first task will be to try to determine what relates to its principles.
- 184a16** Innata autem est ex notioribus nobis via et certioribus, in certiora naturae et notiora. Non enim eadem nobis nota et simpliciter. [6]
- πέφυκε δὲ ἐκ τῶν γνωριμωτέρων ἡμῖν ἡ ὁδὸς καὶ σαφεστέρων ἐπὶ τὰ σαφέστερα τῇ φύσει καὶ γνωριμώτερα· οὐ γὰρ ταῦτά ἡμῖν τε γνώριμα καὶ ἀπλῶς.
- The natural way of doing this is to start from the things that are more knowable and certain to us and proceed toward those that are clearer and more knowable by nature; for the same things are not “knowable relatively to us” and “knowable” without qualification.
- Unde quidem necesse secundum modum hunc procedere ex incertioribus naturae, nobis autem certioribus, in certiora naturae et notiora.
- διόπερ ἀνάγκη τὸν τρόπον τοῦτον προάγειν ἐκ τῶν ἀσαφεστέρων μὲν {20} τῇ φύσει ἡμῖν δὲ σαφεστέρων ἐπὶ τὰ σαφέστερα τῇ φύσει καὶ γνωριμώτερα.
- So, in the present inquiry, we must follow this method and advance from what is more obscure by nature but clearer to us toward what is more clear and more knowable by nature.
- 184a21** Sunt autem primum nobis manifesta et certa confusa magis: posterius autem ex his fiunt nota elementa et principia dividitibus haec. Unde ex universalibus ad singularia oportet procedere.
- ἔστι δ' ἡμῖν τὸ πρῶτον δῆλα καὶ σαφῆ τὰ συγκεχυμένα μᾶλλον· ὕστερον δ' ἐκ τούτων γίνεταὶ γνώριμα τὰ στοιχεῖα καὶ αἱ ἀρχαὶ διαιροῦσι ταῦτα. διὸ ἐκ τῶν καθόλου ἐπὶ τὰ καθ' ἕκαστα δεῖ προϊέναι.
- Now, what is plain and obvious to us at first is confused masses, the elements and principles of which become known to us later by analysis. Thus we must advance from universals to singulars.
- 184a23** Totum enim secundum sensum notius est: universale autem totum quoddam est. Multa enim comprehendit ut partes universale. [9]
- τὸ γὰρ ὅλον κατὰ {25} τὴν αἴσθησιν γνωριμώτερον, τὸ δὲ καθόλου ὅλον τί ἐστὶ· πολλὰ γὰρ περιλαμβάνει ὡς μέρη τὸ καθόλου.
- For it is a whole that is best known to sense perception, and a universal is a kind of whole, comprehending many things within it, like parts.
- 184a26** Sustinent autem idem hoc quodammodo et nomina ad rationem. Totum enim quoddam et indistincte significant, ut puta circulus. Definitio autem ipsius dividit in singularia. [10]
- ἐπέπονθε δὲ {184b10} ταῦτὸ τοῦτο τρόπον τινὰ καὶ τὰ ὀνόματα πρὸς τὸν λόγον· ὅλον γάρ τι καὶ ἀδιορίστως σημαίνει, οἷον ὁ κύκλος, ὃ δὲ ὀρισμὸς αὐτοῦ διαιρεῖ εἰς τὰ καθ' ἕκαστα.
- Much the same thing happens in the relation of the name to the formula. A name, such as “round,” means vaguely a sort of whole: its definition divides into particular elements.

184b12 Et pueri primum appellant omnes viros patres et feminas matres: posterius autem determinant horum unumquodque. [11] καὶ τὰ παῖδια τὸ μὲν πρῶτον προσαγορεύει πάντας τοὺς ἄνδρας πατέρας καὶ μητέρας τὰς γυναῖκας, ὕστερον δὲ διορίζει τούτων ἑκάτερον. Similarly, children begin by calling all men “father” and all women “mother,” but later on distinguish each of them.

1. Quia liber *Physicorum*, cuius expositioni intendimus, est primus liber scientiae naturalis, in eius principio oportet assignare quid sit materia et subiectum scientiae naturalis.

Sciendum est igitur quod, cum omnis scientia sit in intellectu, per hoc autem aliquid fit intelligibile in actu, quod aliquo modo abstrahitur a materia; secundum quod aliqua diversimode se habent ad materiam, ad diversas scientias pertinent.

Rursus, cum omnis scientia per demonstrationem habeatur, demonstrationis autem medium sit definitio; necesse est secundum diversum definitionis modum scientias diversificari.

2. Sciendum est igitur quod quaedam sunt quorum esse dependet a materia, nec sine materia definiri possunt: quaedam vero sunt quae licet esse non possint nisi in materia sensibili, in eorum tamen definitione materia sensibilis non cadit. Et haec differunt ad invicem sicut curvum et simum. Nam simum est in materia sensibili, et necesse est quod in eius definitione cadat materia sensibilis, est enim simum nasus curvus; et talia sunt omnia naturalia, ut homo, lapis: curvum vero, licet esse non possit nisi in materia sensibili, tamen in eius definitione materia sensibilis non cadit; et talia sunt omnia mathematica, ut numeri, magnitudines et figurae.

Quaedam vero sunt quae non dependent a materia nec secundum esse nec secundum rationem; vel quia nunquam sunt in materia, ut Deus et aliae substantiae separatae; vel quia non universaliter sunt in materia, ut substantia, potentia et actus, et ipsum ens.

3. De huiusmodi igitur est metaphysica: de his vero quae dependent a materia sensibili secundum esse sed non secundum rationem, est mathematica: de his vero quae dependent a materia non solum secundum esse sed etiam secundum rationem, est naturalis, quae physica dicitur.

Et quia omne quod habet materiam mobile est, consequens est quod ens mobile sit subiectum naturalis philosophiae. Naturalis enim philosophia de naturalibus est; naturalia autem sunt quorum principium est natura; natura autem est principium motus et quietis in eo in quo est; de his igitur quae habent in se principium motus, est scientia naturalis.

4. Sed quia ea quae consequuntur aliquod commune, prius et seorsum determinanda sunt, ne oporteat ea

1. Because this book upon which we intend to comment here, the *Physics*, is the first book of natural science, it is necessary in the beginning to decide what is the matter and the subject of natural science.

Since every science is in the intellect, it should be understood that something is rendered intelligible in act insofar as it is in some way abstracted from matter. And, inasmuch as things are differently related to matter, they pertain to different sciences.

Furthermore, since every science is established through demonstration, and since the definition is the middle term in a demonstration, it is necessary that sciences be distinguished according to the diverse modes of definition.

2. It must be understood, therefore, that there are some things whose existence depends upon matter and that cannot be defined without matter. Further, there are other things that, even though they cannot exist except in sensible matter, have no sensible matter in their definitions. And these differ from each other as the curved differs from the snub. For the snub exists in sensible matter and sensible matter must fall in its definition, for the snub is a curved nose. And the same is true of all natural things, such as man and stone. But sensible matter does not fall in the definition of the curved, even though the curved cannot exist except in sensible matter. And this is true of all the mathematical objects, such as numbers, magnitudes, and figures.

There are still other things that do not depend upon matter, either according to their existence or according to their definitions. And this is either because they never exist in matter, such as God and the other separated substances, or because they do not universally exist in matter, such as substance, potency and act, and being itself.

3. Now metaphysics deals with things of this latter sort, while mathematics deals with those things that depend upon sensible matter for their existence but not for their definition. And natural science, which is called “physics,” deals with those things that depend upon matter not only for their existence but also for their definition.

And because everything that has matter is mobile, it follows that mobile being is the subject of natural philosophy. For natural philosophy is about natural things, and natural things are those whose principle is nature. But nature is a principle of motion and rest in that in which it is. Therefore, natural science deals with those things that have in them a principle of motion.

4. Furthermore, those things that follow from something common must be treated first and by themselves.

multoties pertractando omnes partes illius communis repetere;

necessarium fuit quod praemitteretur in scientia naturali unus liber, in quo tractaretur de iis quae consequuntur ens mobile in communi; sicut omnibus scientiis praemittitur philosophia prima, in qua determinatur de iis quae sunt communia enti in quantum est ens.

Hic autem est liber *Physicorum*, qui etiam dicitur *De physico sive naturali auditu*, quia per modum doctrinae ad audientes traditus fuit: cuius subiectum est ens mobile simpliciter.

Non dico autem corpus mobile, quia omne mobile esse corpus probatur in isto libro; nulla autem scientia probat suum subiectum: et ideo statim in principio libri *De caelo*, qui sequitur ad istum, incipitur a notificatione corporis.

Sequuntur autem ad hunc librum alii libri scientiae naturalis, in quibus tractatur de speciebus mobilium: puta in libro *De caelo* de mobili secundum motum localem, qui est prima species motus; in libro autem de generatione, de motu ad formam et primis mobilibus, scilicet elementis, quantum ad transmutationes eorum in communi; quantum vero ad speciales eorum transmutationes, in libro *Meteororum*; *De mobilibus* vero mixtis inanimatis, in libro de mineralibus; de animatis vero, in libro *De anima* et consequentibus ad ipsum.

5. Huic autem libro praemittit Philosophus prooemium, in quo ostendit ordinem procedendi in scientia naturali. Unde duo facit:

primo ostendit quod oportet incipere a consideratione principiorum;

secundo quod inter principia oportet incipere a principis universalioribus, ibi: *innata autem* etc.

Primo ergo ponit talem rationem. *In omnibus scientiis quarum sunt principia aut causae aut elementa*, intellectus et scientia procedit ex cognitione principiorum, causarum et elementorum; sed scientia quae est de natura, habet principia, elementa et causas; ergo in ea oportet incipere a determinatione principiorum.

Quod autem dicit *intelligere*, refertur ad definitiones; quod vero dicit *scire*, ad demonstrationes. Nam sicut demonstrationes sunt ex causis, ita et definitiones; cum completa definitio sit demonstratio sola positione differens, ut dicitur in *I Poster*.

Per hoc autem quod dicit *principia* aut *causas* aut *elementa*, non intendit idem significare. Nam causa est in plus quam elementum; elementum enim est ex quo

Otherwise, it becomes necessary to repeat such things many times while discussing each instance of that which is common.

Therefore, it was necessary that one book in natural science be set forth in which those things that are consequent upon mobile being in common are treated, just as first philosophy, in which those things that are common to being insofar as it is being are determined, is set forth for all the sciences.

This, then, is the book, the *Physics*, or *On Physics or of the Natural to be Heard*, because it was handed down to hearers by way of instruction. And its subject is mobile being simply.

I do not, however, say “mobile body,” because the fact that every mobile being is a body is proven in this book, and no science proves its own subject. Thus, in the very beginning of the *De caelo*, which follows this book, we begin with the notion of body.

Moreover, after the *Physics*, there are other books of natural science in which the species of motion are treated: in *De caelo*, we treat the mobile according to local motion, which is the first species of motion; in *De generatione*, we treat of motion’s relation to form and of the first mobile things, the elements, with respect to their changes in general; but we consider their particular changes in *Meteororum*, and in *De mineralibus*, we consider the mobile mixed bodies that are non-living. Living bodies are considered in *De anima* and the books that follow it.

5. To this book, then, the Philosopher writes a preface in which he shows the order in which natural science must proceed. In this preface, he does two things.

First, he shows that it is necessary to begin with a consideration of principles.

Second, at *the natural way of doing this* (184a16; [6]), he shows that, among principles, it is necessary to begin with the more universal principles.

Therefore, he first gives the following argument. *In all sciences of which there are principles, causes, or elements* (184a10), understanding and science proceed from a knowledge of the principles, causes, and elements. Now, the science that is about nature has principles, elements, and causes. Therefore, in that science it is necessary to begin with a determination of principles.

When he says, *to understand*, he refers to definitions, and when he says, *to know*, he refers to demonstrations. For as demonstrations are from causes, so also are definitions, since a complete definition is a demonstration differing only by position, as is said in *Posterior Analytics* 1.8.¹

When he speaks of *principles* or *causes* or *elements*, however, he does not intend to signify the same thing by each. For “cause” is wider in meaning than “element.”

1. Cf. St. Thomas, *Commentary on Posterior Analytics*, bk. 1, lect. 16.

componitur res primo et est in eo, ut dicitur in *V Metaphys.*, sicut litterae sunt elementa locutionis, non autem syllabae: causae autem dicuntur ex quibus aliqua dependent secundum suum esse vel fieri;

unde etiam quae sunt extra rem, vel quae sunt in re ex quibus non componitur res primo, possunt dici causae, non tamen elementa. Principium vero importat quendam ordinem alicuius processus; unde aliquid potest esse principium, quod non est causa: sicut id unde incipit motus est principium motus, non tamen causa; et punctum est principium lineae, non tamen causa.

Sic igitur per *principia* videtur intelligere causas moventes et agentes, in quibus maxime attenditur ordo processus cuiusdam; per *causas* autem videtur intelligere causas formales et finales, a quibus maxime dependent res secundum suum esse et fieri; per *elementa* vero proprie primas causas materiales.

Utitur autem istis nominibus disiunctim et non copulatim ad designandum quod non omnis scientia per omnes causas demonstrat. Nam mathematica non demonstrat nisi per causam formalem; metaphysica demonstrat per causam formalem et finalem praecipue, et etiam agentem; naturalis autem per omnes causas.

Primam autem propositionem rationis inductae probat ex communi opinione, sicut et in libro *Poster.*: quia tunc quilibet opinatur se cognoscere aliquid, cum scit omnes causas eius a primis usque ad ultimas. Nec oportet ut aliter accipiamus hic *causas* et *elementa* et *principia* quam supra, ut Commentator vult, sed eodem modo.

Dicit autem *usque ad elementa*, quia id quod est ultimum in cognitione est materia. Nam materia est propter formam; forma autem est ab agente propter finem, nisi ipsa sit finis: ut puta dicimus quod propter se serrae habet dentes, et ferreos oportet eos esse ut sint apti ad secundum.

6. Deinde cum dicit: *innata autem* etc., ostendit quod inter principia oportet praedeterminare de universalioribus:

et primo ostendit hoc per rationem;
secundo per quaedam signa, ibi: *totum enim* etc.

Circa primum ponit talem rationem. Innatum est nobis ut procedamus cognoscendo ab iis quae sunt nobis magis nota, in ea quae sunt magis nota naturae; sed ea quae sunt nobis magis nota, sunt confusa, qualia sunt universalia; ergo oportet nos ab universalibus ad singularia procedere.

An element is a first component of a thing and is in the composed thing, as is said in *Metaphysics* 5.² Thus, letters are elements of speech, but syllables are not. But those things are called “causes” upon which things depend for their existence or their coming to be.

Thus, even that which is outside the thing or that which is in it—though the thing is not first composed of it—can be called a “cause,” though it cannot be called an “element.” But “principle” implies a certain order in any progression. Thus, something can be a principle that is not a cause, as that from which motion begins is a principle of motion but is not a cause, and a point is a principle of a line but not a cause.

Therefore, by *principle* he seems to mean moving causes and agents in which—more than in others—there is found an order of some progression. By *causes* he seems to mean formal and final causes upon which things most of all depend for their existence and their coming to be. By *elements* he means properly the first material causes.

Moreover, he uses these terms disjunctively and not conjunctively in order to point out that not every science demonstrates through all the causes. For mathematics demonstrates only through the formal cause. Metaphysics demonstrates principally through the formal and final causes, but also through the agent. Natural science, however, demonstrates through all the causes.

He then proves the first proposition of his argument from common opinion. This is also proven in *Posterior Analytics* 1.2.³ For a man thinks that he knows something when he knows all its causes from the first to the last. The meanings here of *causes*, *principles*, and *elements* is exactly the same as we have explained above, even though the Commentator disagrees.

Furthermore, Aristotle says, *as far as its elements*, because matter is the last to be known. For matter is for the sake of form, and form is from the agent for the sake of the end, unless it itself is the end. For example, we say that a saw has teeth in order to cut, and these teeth ought to be made of iron so they will be apt for cutting.

6. Next, at *the natural way of doing this* (184a16), he shows that, among principles, it is necessary to treat the more universal ones first.

And first, he shows this by means of an argument; second, by an example, at *for it is a whole* (184a23; [9]).

Therefore, he first gives the following argument. It is natural for us to proceed in knowing from those things that are better known to us to those that are better known by nature. But the things that are better known to us are confused, and such are the universals. Therefore, it is necessary for us to proceed from universals to singulars.

2. Aristotle, *Metaphysics* Δ.3; cf. St. Thomas, *Commentary on Metaphysics*, bk. 5, lect. 4.

3. Cf. St. Thomas, *Commentary on Posterior Analytics*, bk. 1, lect. 4.

7. Ad manifestationem autem primae propositionis, inducit quod non sunt eadem magis nota nobis et secundum naturam; sed illa quae sunt magis nota secundum naturam, sunt minus nota secundum nos. Et quia iste est naturalis modus sive ordo addiscendi, ut veniatur a nobis notis ad ignota nobis; inde est quod oportet nos devenire ex notioribus nobis ad notiora naturae.

Notandum autem est quod idem dicit nota esse naturae et nota simpliciter. Simpliciter autem notiora sunt, quae secundum se sunt notiora. Sunt autem secundum se notiora, quae plus habent de entitate: quia unumquodque cognoscibile est in quantum est ens. Magis autem entia sunt, quae sunt magis in actu: unde ista maxime sunt cognoscibilia naturae.

Nobis autem e converso accidit, eo quod nos procedimus intelligendo de potentia in actum; et principium cognitionis nostrae est a sensibilibus, quae sunt materialia, et intelligibilia in potentia: unde illa sunt prius nobis nota quam substantiae separatae, quae sunt magis notae secundum naturam, ut patet in II *Metaphys.*

Non ergo dicit *notiora naturae*, quasi natura cognoscat ea; sed quia sunt notiora secundum se et secundum propriam naturam. Dicit autem *notiora et certiora*, quia in scientiis non quaeritur qualiscumque cognitio, sed cognitionis certitudo.

Ad intellectum autem secundae propositionis, sciendum est quod *confusa* hic dicuntur quae continent in se aliqua in potentia et indistincte. Et quia cognoscere aliquid indistincte, medium est inter puram potentiam et actum perfectum, ideo, dum intellectus noster procedit de potentia in actum, primo occurrit sibi confusum quam distinctum; sed tunc est scientia completa in actu, quando pervenitur per resolutionem ad distinctam cognitionem principiorum et elementorum. Et haec est ratio quare confusa sunt primo nobis nota quam distincta.

Quod autem universalis sint confusa manifestum est, quia universalis continent in se suas species in potentia, et qui scit aliquid in universalis scit illud indistincte; tunc autem distinguitur eius cognitio, quando unumquodque eorum quae continentur potentia in universalis, actu cognoscitur: qui enim scit animal, non scit rationale nisi in potentia. Prius autem est scire aliquid in potentia quam in actu: secundum igitur hunc ordinem addiscendi quo procedimus de potentia in actum, prius quoad nos est scire animal quam hominem.

7. To clarify the first proposition, he makes the point that things that are better known to us and things that are better known according to nature are not the same. Rather, those things better known according to nature are less known to us. And, because the natural way or order of learning is that we should come to what is unknown to us from what is known to us, it is necessary for us to arrive at the better known by nature from the better known to us.

It must be noted, however, that “what is known by nature” and “what is known simply” are the same. Those things are better known simply that are in themselves better known. But those things are better known in themselves that have more being, because each thing is knowable insofar as it is a being. However, those beings are greater that are greater in act. Thus, these are the most knowable by nature.

For us, however, the converse is true, because we proceed in understanding from potency to act. Our knowledge begins from sensible things, which are material and intelligible in potency. Thus, these things are known by us before the separated substances, which are better known according to nature, as is clear in *Metaphysics* 2.⁴

Therefore, he does not say *knowable by nature* as if nature knew these things, but because they are known better in themselves and according to their proper natures. And he says *better known and more certain* because, in the sciences, not just any kind of knowledge is sought, but certain knowledge.

Next, in order to understand the second proposition, it must be known that those things are here called *confused* that contain in themselves something potential and indistinct. And because knowing something indistinctly is a mean between pure potency and perfect act, therefore, while our intellect proceeds from potency to act, it knows the confused before it knows the distinct. But it has complete science in act when it arrives, through resolution, at a distinct knowledge of the principles and elements. And this is the reason why the confused is known by us before the distinct.

That universals are confused is clear. For universals contain in themselves their species in potency, and whoever knows something in the universal knows it indistinctly. The knowledge, however, becomes distinct when each of the things contained in potency in the universal is known in act. For he who knows “animal” does not know “rational” except in potency. But knowing something in potency is prior to knowing it in act. Therefore, according to this order of learning, in which we proceed from potency to act, we know “animal” before we know “man.”

4. Aristotle, *Metaphysics* α.1; cf. St. Thomas, *Commentary on Metaphysics*, bk. 2, lect. 1.

8. Contrarium autem huic videtur esse quod dicit Philosophus in *I Poster.*, quod singularia sunt magis nota quoad nos, universalia vero naturae sive simpliciter.

Sed intelligendum est quod ibi accipit singularia ipsa individua sensibilia: quae sunt magis nota quoad nos, quia sensus cognitio, quae est singularium, praecedit cognitionem intellectus in nobis, quae est universalium. Sed quia cognitio intellectualis est perfectior, universalia autem sunt intelligibilia in actu, non autem singularia (cum sint materialia); simpliciter et secundum naturam universalia sunt notiora.

Hic autem *singularia* dicit non ipsa individua, sed species; quae sunt notiores secundum naturam, utpote perfectiores existentes et distinctam cognitionem habentes: genera vero sunt prius nota quoad nos, utpote habentia cognitionem in potentia et confusam.

Sciendum autem quod Commentator aliter exponit. Dicit enim quod ibi, *innata autem est* etc., vult ostendere Philosophus modum demonstrationis huius scientiae,

quia scilicet demonstrat per effectus et posteriora secundum naturam: ut sic quod ibi dicitur, intelligatur de processu in demonstrando, et non in determinando.

Cum autem dicit, *sunt autem nobis* etc., intendit manifestare, secundum eum, quae sunt magis nota quoad nos et minus nota secundum naturam, scilicet composita simplicibus, intelligens *composita* per *confusa*.

Ultimo autem concludit quod procedendum est ab universalioribus ad minus universalia, quasi quoddam corollarium.

Unde patet quod eius expositio non est conveniens, quia non coniungit totum ad unam intentionem; et quia hic non intendit philosophus ostendere modum demonstrationis huius scientiae, hoc enim faciet in secundo libro secundum ordinem determinandi; iterum quia confusa non debent exponi composita, sed indistincta; non enim posset concludi aliquid ex universalibus, cum genera non componantur ex speciebus.

9. Deinde cum dicit: *totum enim* etc., manifestat propositum per tria signa.

Quorum primum sumitur a toto integrali sensibili: et dicit quod totum sensibile est notius secundum sensum; ergo et totum intelligibile est notius secundum intellectum. Universale autem est quoddam totum intelligibile, quia comprehendit multa ut partes, scilicet sua inferiora;

8. It would seem, however, that this is contrary to what the Philosopher says in *Posterior Analytics* 1.2,⁵ that singulars are better known to us, whereas universals are better known by nature or simply.

But it must be understood that, there, he takes as singulars the individual sensible things themselves, which are better known to us because the knowledge of sense, which is of singulars, does precede in us the knowledge of the intellect, which is of universals. But because intellectual knowledge is more perfect, and because universals are intelligible in act—whereas singulars are not (since they are material)—universals are better known simply and according to nature.

Here, however, by *singulars*, he means not the individuals themselves, but the species. And these are better known by nature, existing more perfectly, as it were, and being known with a distinct knowledge. But the genera are known by us first, being known, as it were, confusedly and in potency.

It should be known, however, that the Commentator explains this passage in another way. At *the natural way of doing this* (184a16), he says that the Philosopher wishes to explain the method of demonstration of this science:

this science demonstrates through the effect and what is posterior according to nature. Hence, what is said here is to be understood of the progression in demonstration, and not of the progression in determination.

Then, at *now, what is plain and obvious* (184a21), according to the Commentator, Aristotle intends to make clear what things are better known to us and what is better known by nature, namely, what is composed of simple things—understanding *confused* to mean *composed*.

Finally, then, he concludes, as if to a corollary, that we must proceed from the more universal to the less universal.

It is clear that the Commentator's explanation is not suitable, because he does not join the whole passage to one intention. Moreover, the Philosopher does not intend to set forth the mode of demonstration of this science here, because he will do this in book 2, according to his order of treatment. Furthermore, the "confused" should not be taken to mean "composed," but rather to mean "indistinct." For nothing could be concluded from such universals, because genera are not composed of species.

9. Next, at *for it is a whole* (184a23), he clarifies his position with three examples.

The first of these is taken from the integral sensible whole. He says that, since the sensible whole is better known to the sense, the intelligible whole is also better known to the intellect. But the universal is a sort of intelligible whole, because it comprehends many as parts—

5. Cf. St. Thomas, *Commentary on Posterior Analytics*, bk. 1, lect. 4, n. 42.

ergo universale est notius secundum intellectum quoad nos.

Videtur autem haec probatio inefficax, quia utitur *toto* et *parte* et *comprehensione* aequivoce.

Dicendum est autem quod totum integrale et universale conveniunt in hoc, quod utrumque est confusum et indistinctum. Sicuti enim qui apprehendit genus, non apprehendit species distincte sed in potentia tantum, ita qui apprehendit domum, nondum distinguit partes: unde cum ratione confusionis totum sit prius cognitum quoad nos, eadem ratio est de utroque toto. Esse autem compositum non est commune utrique toti: unde manifestum est quod signanter dixit supra *confusa*, et non *composita*.

10. Deinde cum dicit: *sustinent autem* etc., ponit aliud signum de toto integrali intelligibili. Definitum enim se habet ad definientia quodammodo ut totum integrale, in quantum actu sunt definientia in definito;

sed tamen qui apprehendit nomen, ut puta *hominem* aut *circulum*, non statim distinguit principia definientia; unde nomen est sicut quoddam totum et indistinctum, sed definitio *dividit in singularia*, id est distincte ponit principia definiti.

Videtur autem hoc esse contrarium ei quod supra dixit; nam definientia videntur esse universaliora, quae dixit prius esse nota nobis. Item si definitum esset notius nobis quam definientia, non notificaretur nobis definitum per definitionem: nihil enim notificatur nobis nisi ex magis notis nobis.

Sed dicendum quod definientia secundum se sunt prius nota nobis quam definitum; sed prius est notum nobis definitum, quam quod talia sint definientia ipsius: sicut prius sunt nota nobis animal et rationale quam homo; sed prius est nobis notus homo confuse, quam quod animal et rationale sint definientia ipsius.

11. Deinde cum dicit: *et pueri* etc., ponit tertium signum sumptum ex universaliori sensibili. Sicut enim universalius intelligibile est prius notum nobis secundum intellectum, ut puta animal homine, ita communius sensibile est prius notum nobis secundum sensum, ut puta hoc animal quam hic homo.

Et dico prius secundum sensum et secundum locum et secundum tempus. Secundum locum quidem, quia cum aliquis a remotis videtur, prius percipimus ipsum esse corpus quam esse animal, et hoc prius quam quod sit homo, et ultimo quod sit Socrates. Et similiter secundum tempus puer prius apprehendit hunc ut quendam hominem, quam ut hunc hominem qui est Plato, qui est

namely, its inferiors. Therefore, the universal is known better to us intellectually.

But it would seem that this proof is not effective, because he uses *whole*, *part*, and *comprehension* equivocally.

However, it must be said that the integral whole and the universal agree in that each is confused and indistinct. For just as he who apprehends a genus does not apprehend the species distinctly, but in potency only, so also he who apprehends a house does not yet distinguish its parts. Hence it is that a whole is first known to us as confused. This applies to both of these wholes. However, to be composed is not common to each whole. Thus, it is clear that Aristotle significantly said *confused* above, and not *composed*.

10. Next, at *much the same thing* (184a26), he gives another example taken from the integral intelligible whole. For that which is defined is related to the things defining it as a kind of integral whole, insofar as the things defining it are in act in that which is defined.

But he who apprehends a name—for example, *man* or *circle*—does not at once distinguish the defining principles. Thus it is that the name is, as it were, a sort of whole and is indistinct, while the definition *divides into particular elements*, that is, distinctly sets forth the principles of that which is defined.

This, however, seems to be contrary to what he said above. For the things that define would seem to be more universal, and these, he said, were first known by us. Furthermore, if that which is defined were better known to us than the things that define, we would not grasp that which is defined through the definition, for we grasp nothing except through that which is better known to us.

But it must be said that the things that define are in themselves known to us before that which is defined, but we know the thing that is defined before we know that these are the things that define it. Thus we know animal and rational before we know man. But man is known confusedly before we know that animal and rational are the things that define man.

11. Next, at *similarly, a child* (184b12), he gives the third example taken from the more universal sensible. For as the more universal intelligible is first known to us intellectually—for example, animal is known before man—so the more common sensible is first known to us according to sense—for example, we know this is an animal before we know this is a man.

And I say “first according to sense” both with reference to place and with reference to time. This is true according to place, for when someone is seen at a distance, we perceive him to be a body before we perceive that he is an animal, and an animal before we perceive him to be a man, and finally we perceive that he is Socrates. And in the same way, with reference to time, a boy apprehends

pater eius: et hoc est quod dicit, *pueri primum appellant omnes viros patres et feminas matres, sed posterius determinant*, idest determinate cognoscunt, *unumquodque*.

Ex quo manifeste ostenditur quod prius cognoscimus aliquid sub confusione quam distincte.

this individual as some man before he apprehends this man, Plato, who is his father. And this is what he says, *children begin by calling all men “father” and all women “mother;” but later on distinguish*; that is, they know *each* determinately.

From this, it is clearly shown that we know a thing confusedly before we know it distinctly.