

Questions on the Posterior Analytics

by John of Cornwall = Henry Bate, but
reputed to be by Duns Scotus

Henry Bate was MA at Paris before 1274. Student of Thomas Aquinas. At Liege before 1289. This would probably be at Paris. He wrote on astronomy at Liege. Became Tutor to Guy of Hainaut, for whom he wrote a *Speculum divinatorum et quorundam naturalium*, between 1285 and 1295.

John of Cornwall, possibly called in Latin Johannes Cornubiensis or Johannes de Sancto Germano was a 14th century scholar and teacher, author of the English grammar *Speculum Grammaticale*

He is not to be confused with the twelfth-century theologian John of Cornwall who authored the *Eulogium ad Alexandrum Papam III*. There was also a Benedictine monk John of St. Germans who wrote a *Commentarius in Aristotelis libros duo analyticorum posteriorum* (now at the Magdalen College, Oxford); it is not clear whether these were the same person

translated by John Longeway

Book I

Proemium

<Arguments against the possibility of demonstration> [342a] "Now we all consider ourselves to know something scientifically when we cognize the cause of a reality, and that it is the cause of the reality, and that it is impossible that it should be otherwise." Aristotle wrote down this proposition in the first book of this work, Chapter 2, Text 5.¹

Now there were some, namely the Platonists, who said all things were known scientifically, and they were moved by this argument: If something is unknown, then even if it occurred to one who did not know it, it would not be grasped; so, clearly, a fugitive slave who is unknown will not be apprehended by those who search for him, even if they should happen upon him. If it is required for something to be grasped that it be known somehow beforehand, and it cannot be grasped in any other way, then, by the *locus* from the similar, all things are known.

There were certain others who said nothing is known scientifically, for nothing can be learned, and they provide this argument for their position: everything cognized through teaching is cognized beforehand by someone more excellent than another as regards the reasoning soul. But the soul, since it is a substantial form, is not susceptible of more or less. Therefore nothing can be known, nor can anything be learned, so that all things are unknown. And this was the opinion of the Academics.

<Resolution of arguments against the possibility of demonstration> But the argument of the Platonists is answered through an argument that Aristotle places in the first book of this work: If something is to become known it may be unknown in a particular case, but it is necessary that it be known universally, for otherwise it can in no way be grasped, as the argument of Plato concluded. It is not necessary, then, that

¹P.A. I 2, 71b10 ff.

everything be known from the beginning under a form proper to a particular, but some things come to be known through discovery and teaching, as Plato posits.

The argument of the Academics is answered through this, that although the intellectual soul does not admit of more or less in accord with itself, still, it can admit of more or less as regards the disposition of the body of which it is the form or perfection, and in this way one man can be more excellent than another, and more ingenious.

In a similar way a proposition prevails which Grosseteste sets forth, for he says that he teaches neither by written letters, nor by that which sounds outside us, but these two only arouse and move the student. Rather, there is one teacher within, who illuminates the mind, and shows us the truth. It is clear then, that we do not learn through the excellence of the teacher, but rather because the soul understands through an interior light, which is caused from the beginning.

<Definition of scientific knowledge> According to Grosseteste, Aristotle introduces his definition of scientific knowing after he resolves the error [342b] of the Platonists, declaring that "we all consider ourselves to know scientifically etc."² In this proposition two things are recognized. The first is the act of scientific knowing, the second, the act of coming to know; in the passage the first is "to know scientifically," the second, "when we judge the cause to be known" etc.

Concerning the first, it must first be known that "knowing" is said in four ways according to Grosseteste. In one way, it is said most generally, and it is in this way that contingent matters, which may be the case or fail to be the case, are known—for instance, I know that you are sitting. In the second way, "knowing" is said strictly, and contingent matters due to nature are known in this way. In the third way "knowing" is said more strictly, and both principles and conclusions are known in this way, as well as every necessary truth. In the fourth way, "knowing" is said most strictly, and necessary truths that depend on other truths are known in this way, and conclusions are known in this way in demonstrations. This is the way "knowing" is defined here, and therefore Aristotle says in *Posterior Analytics* I 2, Text 5, "to know without qualification, that is, not incidentally, nor in any sophistical way."³

Concerning the second point, namely, coming to know the act of scientific knowing, three things are noted as regards scientific knowledge, and three are necessary as regards the scientifically knowable. As regards scientific knowledge, it is required that it be perfect, that it be actual, and that it be certain.

The first of these is noted when it is said "since we judge cognizing the cause of the reality . . .," for the perfection of scientific knowledge is its being through the cause.⁴

The actuality of scientific knowledge is noted when it is said, "and that it is the cause of this," for the application of cause to effect produces actual knowing. This is obvious from *Prior Analytics* II 26, which says that "knowing is two-fold, knowing universally, and in particular."⁵ We know something universally when we know the major premise, without knowing either the minor or the conclusion under their own forms, but only in the universal form. Knowing in particular is twofold, namely knowing in actuality and dispositionally. We know in particular and dispositionally, for instance, when we know the major and the minor premisses, but

²*P.A.* I 2, 71b 10 ff.

³*P.A.* I 2, 71b10-11.

⁴The perfection, or completion of knowledge is its actual existence, which is the sort of being it has as a result of being caused. This would be opposed, for instance, to the sort of being it has in virtue simply of being the sort of thing it is.

⁵*Pr. A.* II 26, 69b1 ff. seems intended, though it refers to two-fold *objections* not two-fold knowledge

without actually applying them to the conclusion. Then the conclusion is not known in particular, and in actuality, but only dispositionally. But knowing in particular and in actuality occurs when someone cognizes the major and minor premisses, and at the same time applies the premisses to the conclusion. Thus it is clear that the actuality of knowledge arises from the application of the cause to the effect.

In the third place, it is required that knowledge be certain, and this is noted when it is said, "since it is impossible that it should be otherwise."⁶ In this way, then, the three things are noted as regards scientific knowledge.

Three things are also noted concerning what is necessary in the knowable, for it is required that what is known should have a cause, [343a] it is required that there be an application of cause to effect, and, in the third place, it is required that it be necessary in respect of its cause. The first is noted when it is said, "we judge the cause of the reality to be cognized," for that which has no cause is not known by knowledge so-called in the fourth way, and neither are principles known in this way. The second point is noted when it is said, "since that is its cause." The third point is noted when it is said, "since it is impossible that it should be otherwise," for that is necessary which it is impossible should be otherwise. It is obvious that the conclusion known is necessary, since it follows from necessary premisses. And this is also clear through the first conclusion in this work, for in the same way, in its first conclusion, Aristotle says "demonstration is necessary and perpetual."

But "necessary" is said in two ways. In one way what does not depend on any prior cause is called necessary, and in this way the conclusion of a demonstration is not necessary, since its necessity depends on principles. And from this the preeminence and distinction of this book compared to the other books of logic is clear incidentally. For demonstrative syllogism produces scientific knowing, but dialectical syllogism produces only belief or opinion. Sophistical syllogism produces only appearance. Therefore, as scientific knowledge is more precious than opinion and bare appearance, so the demonstrative science, which is about demonstration as its subject, is more precious than the *Topics*, or, in the same way, the *Sophistical Refutations*. And so the distinction of this book from the other books of logic, and its preeminence, is clear.

But it must be known that demonstrative science can be considered in two ways. In one way, in as much as it uses demonstration, for through demonstration, namely demonstrating the effect in other sciences, and in this way every science is said to be demonstrative. In another way, that science is said to be demonstrative that teaches from what and what sort demonstration must needs arise, and this is how the *Posterior Analytics*, which we have at hand, uses "demonstrative science."

Question 1: Whether all teaching and all learning
is from preexisting cognition.

Aristotle, *Posterior Analytics* I 3; *Ethics* VI 3; *Metaphysics* I 2; Alfarabi, in Averroës, *On the Posterior Analytics* comm. 1; Themistius, *Paraphrase of the Posterior Analytics* in this place, and *Concerning Memory* II; Thomas, *Summa Theologiae* I q. 84, art. 3; I² II^{ae} q. 51, art. 5, *On the Posterior Analytics* I, lectio 1; John Major, *On the Posterior Analytics* I, doubt 1; Peter Tartaretus, *On the Posterior Analytics* I q. 1; Ruuius, *On the Posterior Analytics* I q. 1; Conimb. q. 3, art. 1; Sanchez, Book VII q. 1; Masius, *On the Posterior Analytics* I q. 1; Aversa, q. 76, *Logic* section 2; Complut., *Disputation* 17, q. 1.

⁶P.A. I 2, 71b10

That it is not:

<**First Argument**> Since it would either be from preexisting sensory cognition, or intellectual cognition. If in the second way, the process would be infinite, since this intellectual cognition would then be from another preexisting intellectual cognition, and this from another, and so on indefinitely. But if it is from sensory cognition, it is objected that teaching and learning of a conclusion is from the cognition of principles, which is not sensory cognition. Therefore not all teaching etc. is from preexisting cognition.

<**Second Argument**> It must be held that all teaching and learning is from preexisting sensory cognition either *per se* or incidentally. Now cognition of a conclusion is from the cognition of principles, which is sensory incidentally, because the principles' terms fall under the senses. Against this it is maintained that a principle's term is an object of the (343b) intellect, and since it is for that reason universal, it does not fall under the senses. Therefore principles are not cognized though the senses incidentally because they are cognized through their terms. Again, in a term there are two things, the utterance and what is signified, and the utterance is represented in the senses, and what is signified in the intellect. Now the utterance is a sign, and the sign offers itself to the senses, leaving the other to the intellect. But the utterance contributes nothing to the intelligibility of the principle. The principle is in the soul, but the utterance outside it, and therefore the utterance is accidental to the principle, and to its term, which is an integral part of the principle. So although the utterance is heard as a sensible, it does not follow that the terms of principles are cognizable by the senses, or are sensibles.

In another way, it is maintained against this that every teaching and every intellectual learning arises from preexisting intellectual cognition, and so from a cognition of principles which is intellectual, but it does not follow from this that there it proceeds thus indefinitely, since intellectual cognition comes to a stand in principles. And if it is argued against this, that since there is teaching and learning concerning principles, therefore this will be to that extent from preexisting intellectual knowledge—in response to this Grosseteste answers by demolishing the argument, for there is no teaching of principles, for teaching is of that which is doubted or regarded as false, and after discourse or opinion, appears to be true, and principles are not such, but conclusions are, for principles are known in themselves.

And against this, I also prove that there is no coming to a stand in the intellectual cognition of principles, for we cognize principles from this, that we cognize their terms, according to Aristotle. Therefore the cognition of terms precedes the cognition of principles. But the cognition of terms is intellectual, since it arises from an object of the intellect, therefore a different intellectual cognition precedes the cognition of principles, and therefore there is no coming to a stand in the cognition of principles.

<**Third Argument**> Again, “each holds more of that because of which it holds,” according to Aristotle in the first book, Text 5.⁷ But conclusions are known because of principles, therefore principles are better known than conclusions. But there can be teaching of all that can be known, and everything of which there is teaching is cognized through preexisting intellectual cognition; therefore before this intellectual cognition another preceded, and therefore it did not come to a stand earlier.

<**Fourth Argument**> Again, as sense is to the sensible, so the intellect to the intelligible. But the senses can sense something from scratch (*de novo*) without preexisting cognition, therefore the intellect can understand something from scratch, and cognize without preceding cognition.

<**Fifth Argument**> Again, according to Aristotle, *De Anima* III, Text 14, “intellect is at first like a blank tablet, knowing nothing.” Since, then, the intellect knows something through discovery, or teaching, and does not understand several things at once, it is necessary that the intellect first cognize something even though

⁷P.A. I 2, 72a29-30.

it knows nothing, and even though it is not cognized from something else cognized beforehand.

<Sixth Argument> Again, if intellectual cognition of a conclusion arises from intellectual cognition of principles, this has no other cause than this, that the principles are the cause of the knowledge of the conclusion. But the consequent is false, and therefore so is the antecedent. I prove the falsehood of the consequent: A principle is not cause of the conclusion otherwise than as it includes the conclusion in itself; but it only includes the conclusion in itself virtually. But knowledge of the conclusion strictly speaking is not cognition of the conclusion virtually, but under its own form. Therefore principles are not causes of knowledge in the conclusion.

<Seventh Argument> Again, a child in the beginning learns that this utterance [344] signifies this reality, and yet this is not from any other cognition, since the soul of the child in respect of this learning is like a blank tablet; therefore there is some intellectual cognition without preexisting cognition.

It is replied to this that the child cognizes that this utterance signifies this reality from some preexisting cognition, since he cognized the thing signified beforehand by a certain confused cognition, and also through the teaching of the teacher.

But if a child be taken who neither knows any reality nor cognizes any utterance, such a child will cognize something for the first time, and not from anything cognized beforehand, since he will cognize nothing beforehand at that time. Therefore there is an intellectual cognition from scratch without any preexisting cognition.

On the other hand, there is Aristotle in Book I, Text 10.

I respond to the question that every teaching and every learning arises from preexisting etc., since an intellectual cognition proceeds from capacity to actuality, and from the imperfect to the perfect. Therefore that which is known in respect of the particular, was known earlier in respect of the universal, which is not to say that it was known at the same time under its own form, for then one could not learn anything, for “to learn is to acquire cognition of something from scratch, and under its own form.” Nor is it necessary to say that what is known in respect of the particular must first be completely unknown, so that it cannot be grasped by the intellect, like a fugitive slave completely unknown to the head of the family, who does not lay hold of him even if he happens upon him, as Plato argues. Therefore what is known in respect of a particular is knowledge concluded using demonstration as an instrument. Knowledge of the conclusion in respect of the universal lies in the cognition of principles. For every intellectual cognition of a knowable arises from the intellectual cognition of principles, and this arises ultimately from the intellectual cognition of the terms, for we know principles from this, that we cognize their terms. And this cognition is ultimately from the cognition of signs, since Themistius posits this order, and Aristotle agrees with it. But Aristotle does not say that every cognition arises etc., but that every teaching and every learning etc., and the reason is this, that there is teaching and learning of some things of which there is no knowledge, as is clear in rhetoric, in which one acquires from example teaching and learning of a conclusion, but not knowledge of it, and similarly with induction. Hence, through this statement that “Every teaching and every learning etc.,” Aristotle excludes the opinion of the Academics, who assumed that they were ignorant of everything, and that there was no teaching. In the same way through this word, “arises,” he excludes the opinion of the Platonists, for that arises which is acquired from scratch. If the teaching arises in us, then it is acquired from scratch in us, and so not all things are known, as Plato assumes.

Next it must be understood, because of these arguments, that every intellectual cognition arises from preexisting cognition, but not always from the same kind of cognition. Some arise from preexisting sensory cognition, as is clear in induction, and some from preexisting intellectual cognition, as is clear in syllogism, so that syllogism concludes the less universal from the more universal, or at least it always concludes from the

universal, which is known by the intellect. But induction presupposes sensory cognition of singulars, since⁸ in induction intellectual cognition of a universal conclusion arises from sensory cognition of singulars.

<Reply to the First Argument> To the first it is replied that intellectual cognition sometimes arises from sensory cognition and sometimes from intellectual cognition, which are preexisting, but it does not always arise either from the one, nor always from the other.

<Reply to the Second Argument> As for the arguments that the terms of principles are not sensible, and therefore are not cognized by sensory cognition, let them be granted. For they are universal, and consequently an object of the intellect.

The second opinion is to be upheld, that intellectual cognition of the conclusion in a demonstration arises from intellectual cognition of principles, and that it comes to a stand there. It must be replied to the first argument against this that intellectual cognition is twofold, complex, and incomplex. Complex intellectual cognition comes to a stand at incomplex intellectual cognition, indeed, it is necessary that intellectual cognition of incomplex things precede this cognition.

<Reply to the Third Argument> To the other argument against this it is replied that principles are not strictly speaking known, but understood. For the understanding is of principles, and knowledge of the conclusion. Through this, to the form of the argument: since this proposition, “everything because of which etc.,” is to be understood when the effect and cause are denominated by the same name, and this univocally, as the hot in fire and everything hot through fire causally, are named by the same name univocally. But the conclusion is known through the principles, and the principles are not known at all. And therefore they are not named by the same name, and so it does not follow that principles are better known.

<Reply to the Fourth Argument> To the other I reply that is it not the same, because of this, that the object of the senses is of itself proportional to the senses, and so another preexisting cognition is not required. But the object of the intellect is not of itself proportional to the intellect, since it exists under individual conditions. And it is dissimilar in another way. The intellect is a discursive power from principles to conclusions, and therefore a preexisting cognition of principles is required by it, before the cognition of the conclusion arises.

<Reply to the Fifth Argument> To the other it is replied that if it is assumed that the intellect does not know any knowable in respect of the particular, to this extent there exists some intellectual cognition in respect of the universal. The boy, then, since he can know something immediately, has some cognition in respect of the universal, and there Aristotle says in *Physics* I, Text 4, that “children at first call all men fathers, and all women mothers, and afterwards they distinguish more.”

<Reply to the Sixth Argument> To the other I reply that principles are not causes of the conclusion, except virtually, as long as they are considered in themselves alone. Now principles can be considered in two ways—in one way in themselves, and in another way as they are applied to a conclusion, as in the cognition that this minor premise falls under this major premise. In the first way principles are not causes of conclusions except virtually and potentially, and only this is concluded in the argument. But in the second way principles are causes of actual knowledge of the conclusion actually under its own form.

<Reply to the Seventh Argument> The reply to the other is similar. It is replied to the argument against this that if someone demonstrates some reality to a boy of which he at first has no knowledge at all, he often uses this utterance for that reality, and from that use and exercise, and similarly by the light of the agent intellect, the boy learns that this utterance signifies this reality. Hence from such use he has for the first time a certain universal and confused cognition, and afterwards he has a determinate cognition, and one in respect

⁸The edition has “or since,” *vel quia*, which seems to make no sense.

of a particular. But first he seeks out cognition from sensory cognition, and so [345] it is clear how, and in what way every teaching and learning arises from preexisting cognition.

Question 2: Whether scientific knowledge is acquired by us through teaching.

Aristotle, *Posterior Analytics* I 1; Plato, *Meno*. Augustine, *On the Teacher*; Aquinas, *S.T.* pars 1, q. 42 and q. 117, art. 11; *Libri de cognitione verae vitae*, tract. 3, cap. 36; Henry of Ghent, *Summa* art. 196; Conimb. *On the Posterior Analytics* I, q. 1, art. 3.

It seems that it is not.

<**First Argument**> For if it is, then a teacher causes knowledge to flow into a student in the same way that what is actually hot makes the cold actually hot, and consequently knowledge would be an active quality, which is contrary to Aristotle, who says in the *On Coming-to-be and Passing-away* Text 8 that only two qualities are active, namely heat and cold.

<**Second Argument**> Again, if a teacher causes knowledge in a student through teaching, then it is either the same in number as that of the teacher or different. It is not the same in number, since numerically the same accident is not found in different subjects. It is not different in number from the teacher's knowledge, for two reasons: first, because no one gives what he does not have, but the teacher did not have beforehand numerically the same knowledge as is in the student, therefore he does not give it; second, because he would cause numerically the same knowledge in the student using his own knowledge, and thus the knowledge of the teacher would be an active quality.

<**Principal Argument**> Again, as to the principal argument, I ask whether a teacher proposes to a student something known to be learned, or something unknown. If it is known, then the student does not learn it, for learning is the acquisition of knowledge of something unknown. If it is unknown, then he cannot learn it, because it cannot be grasped by the intellect, as is clear concerning the fugitive slave, who is unknown to the head of the family, and so cannot be seized by him even if he should happen upon him.

It will be replied here that what is learned, or what is proposed to the learner, is in one way known, and in another unknown, for it is known universally, and unknown in particular and under its own form, and that, since it is known universally, it can be grasped well enough in particular. This is according to Grosseteste and Aristotle. Now how they are known can be explained—first the teacher advances propositions under an appropriate form, and applies them to the conclusion, and thus from these principles, known at the same time as their application, he arrives at the cognition of the unknown conclusion.

<**First Defense of the Principal Argument**> Now against this, if the learner arrives at cognition of the conclusion from the power of the premisses, not by themselves alone, but only with their application, then the conclusion in a demonstration is not known because these things are so, since an application is also required. But the consequent is false, therefore the antecedent is too.

<**Second Defense of the Principal Argument**> Again, we ask about that application, whether it is known to the learner, or unknown. If it is known to the learner before the conclusion, and the premisses are known by themselves before the conclusion is drawn, then the conclusion becomes known to the learner before the demonstration, and consequently the learner does not learn the conclusion again through the demonstration. If the application is unknown, then it cannot be a principle in the cognition of the unknown conclusion, therefore the application contributes nothing to teaching.

<**Third Defense of the Principal Argument**> Again, if you were to say, that the application is

not [345b] always known, but sometimes is unknown beforehand and known afterwards, and so the conclusion is not always known—against this, if the application comes to be known, this will be through known premisses and another application. I ask then about this application, whether it is known of itself, or not. If it is, by the same argument it should have come to a stop with the first application. If not, it will be through another, and so we will proceed indefinitely.

<Fourth Defense of the Principal Argument> Again, this application of the premisses is not required, except as it denotes the premisses to be the actual causes of the conclusion. But this is false, since if it were so, then in no way could it happen from the two first principles, but always three would be required, namely the two principles and the application, which signifies the principles to be actually cause of the conclusion, but this seems absurd; therefore etc.

On the other hand there is Aristotle, who says that “every teaching” etc., and to explain this, by “teaching” he understands the acquisition of knowledge from a teacher.

<The Opinion of the Academics> It is replied to the question that the acquisition of scientific knowledge through teaching is not possible, as the Academics say, since in order for one man to teach another it is necessary that he have some preeminence over the other in intellect; but no one has such a preeminence, since the intellectual soul, or substantial form, is not susceptible of greater and less, therefore no human being can teach another; therefore etc.

And it might be replied to their argument that even though the intellectual soul is not susceptible of more and less in itself, still, according to the disposition of the body of which it is the perfection, it can become more or less, though accidentally, since the body perfected by one intellectual soul takes on a better structure than a body perfected by another intellectual soul. Therefore one human being is preeminent in his degree of understanding, and cleverer than another.

Against this: the intellect is not a material power, therefore it cannot take on more or less according to the disposition of matter. The consequence is clear from Aristotle, *On the Soul* III, Text 4 and 6, since the immaterial does not depend on the material, and consequently it receives no variation from the material.

<Refutation of the Opinion of the Academics> Against their opinion, one must argue from experience. For those who experience in themselves that they can learn from another, take the foundation of their proposition to be false when it is said that no human being has preeminence over another. One can be persuaded that this is false through two arguments. In the first place, one knows in actuality, and the other potentially, but one who knows in actuality has a preeminence over another who only knows potentially; therefore etc.

And again, this is clear because even if the intellectual soul has in itself no preeminence over another soul, still, when it is the perfection of a body with a better structure than another, it is preeminent over the other as regards understanding. Hence such people are mentally apt, according to Aristotle in *On the Soul* II. It is clear, then, that one human being is preeminent over another in understanding, and consequently can teach the other. From this it is clear how to respond to their argument, for although the intellectual soul is not in itself preeminent over another, it can still be preeminent over another as it is the disposition of a body that is better structured. [346]

And we reply to the argument against this that material form can be understood in two ways. In one way that is called a material form which is led forth from the capacity of matter, or because it is used by some corporeal organ in its functioning, and in this way an intellectual form is not a material form. In another way that is called material form which is the perfection of matter, and in this way the intellectual soul is a material form, and therefore can receive variation from the matter it perfects, since there arises a true unity from matter and form.

In response to the question, we reply differently from the Academics, namely, we hold that

scientific knowledge is possible for us through teaching, as we experience in ourselves. It should also be understood that knowledge is sometimes acquired entirely from within and sometimes partly from within and partly from without. This is just like health, which is sometimes acquired wholly from within, as when the healthy part alters the sick part near it, bringing it back to its original due proportion. And sometimes health is acquired partly from within and partly from without, for instance, when the healthy part cannot alter the sick part completely by itself and from its own power, and cannot bring it back to a due proportion, and then a person is not cured from within, but needs help from without, for instance, the assistance of a physician. And then through medications, the healthy part is helped to alter the sick part, and in this action the healthy part is the principal agent and the external agent, for instance, the medicine, is the assisting agent. This is how it is with knowledge, for sometimes knowledge is acquired wholly from within, as occurs in discovery, and this happens when the intellect is well disposed, can arrive through the power of the agent intellect from premisses to the cognition of an unknown conclusion, without the help of an external teacher.

But sometimes knowledge is acquired partly from without, for instance, when the intellect is not well disposed. This is clear in those who have a blunted intelligence, for then it is required that an external teacher put the principals for learning in order, and apply them to the conclusion, and hence the learner comes to cognition of the conclusion through the teacher, but principally through the light of his own intellect, and secondarily through the assistance of the teacher. And there Grosseteste says that not only the teacher teaches, but the written letter, and these do not teach by themselves, but rather they arouse and move the intellect of the learner. But within the true teacher, that is, God, illuminates the mind and shows the truth.

Last, it must be understood that the knowledge in the teacher is not an active quality, even though it is through this that knowledge is acquired in the student, and it is not the principal agent, but the assisting agent. This is because the principal agent is the intellect within, using its light in the acquisition of knowledge. Therefore the knowledge in the teacher is not an active quality.

In response to the arguments:

<Reply to the First Argument> It must be replied to the first argument that teaching does not cause knowledge to flow into the student, but rather arouses the intellect of the student through known principles, and the determinate application of those principles to the conclusion, so that the student, through the light of active intellect (as the principle, interior agent), might get a cognition of the same sensible which the teacher first cognized. Therefore it does not follow that the knowledge of the teacher is an active quality, for when an active quality acts upon another, this quality, in virtue of the body to which it belongs, produces something in the other by introducing its form, and it does not require in the other upon which it acts any active principle moving itself from potentiality to actuality. But in the acquisition of knowing the quality in the teacher is sufficient for introducing knowledge into the student neither in itself nor according to the power of the teacher—rather the principle agent is intrinsic to the student, namely the agent intellect using its own light. Therefore knowledge is not an active quality.

<Reply to the Second Argument> To the other it is replied that numerically the same knowledge is in the teacher and acquired by the student. Since knowledge is relative, for it is referred to the knowable, its numeration is received from its correlative. Since, then, the same knowable is known by the teacher and the one taught, namely the student, there is numerically the same knowledge in the teacher and the student.

On the other hand, every accident is numbered by the numeration of its subject, for it is not possible to understand truly, that numerically the same accident is in different subjects, but the teacher and student are different subjects, therefore numerically the same knowledge cannot be in them, since it is an accident.

In another way it is replied to this that numerically distinct knowledge is acquired in the student and the teacher, whether knowledge is taken for a quality that informs a subject, or for a relation. To the first proof it is replied as before, that it does not follow that the knowledge in the teacher is an active quality. And the

reason for this has been stated.

To the other proof it is replied that it proceeds from a false imagination. It supposes that a teacher gives knowledge to a student, which is false, for the teacher only arouses the intellect of the student to grasp [the conclusion], by proposing vocal propositions that are cognized of themselves through their terms, and applying them correctly to the conclusion, and then the student learns the conclusion by using the light of his agent intellect. And in this Plato was deceived, according to Aristotle in Text 3. Because the boy uneducated in geometry answered correctly and so got to the conclusion, Plato believed the boy had known the conclusion already, but this is false. The boy answering thus did not answer unlearned, but as one who had learned, for he learned from his questioner when known propositions were set before him, and applied to the conclusion. And therefore he did not respond correctly as unlearned, but as learned.

<Reply to the Principal Argument> To the principal argument it is replied that a conclusion proposed to a learner is not unknown universally, but only in particular, and that such a cognition universally suffices for the learner to grasp the conclusion through the light of the agent intellect, but for this the exercise of the external teacher, through known principles, and their due application, is also required.

<Reply to the Second Defense of the Principal Argument> As to the arguments against this, it is replied to the first that before the conclusion is known the learner does not cognize this application, but he does cognize it at the same time as he cognizes the conclusion. Still, the cognition of the application is prior to the conclusion in nature, and therefore it does not follow that this application is not made to the cognition of the conclusion.

<Reply to the First Defense of the Principal Argument> As to the other, when it is concluded that the conclusion in a demonstration will not be known because these things are so if such an application is required, one replies by destroying the consequence, since [347] it follows because these things are so, not through premisses considered by themselves, but through the premisses as they are applied. Therefore an application is required for the conclusion to follow because these things are, therefore the opposite of what is proposed follows from the argument.

<Reply to the Third Defense of the Principal Argument> As to the other, when it is claimed that application is always known, or unknown beforehand, and known afterwards, it is replied that this application was unknown to the learner beforehand; and after this, it does not follow that it became known to the learner through another application, but it suffices that the one applying it apply it to this in such a way that it becomes known.

<Reply to the Fourth Defense of the Principal Argument> One replies to the other by granting that it is required that an application be insinuated to the learner, because the premisses are the actual causes of the conclusion. Still, it does not follow from this that more than two premisses have to be produced for the knowledge of this conclusion. This is because it is not necessary to signify this application through a third proposition, but rather, from the teacher's due ordering of the premisses the application will be rendered sufficiently actual through these two premisses by themselves, etc.

Question 3: Whether we understand through acquired species,
or through separated species?

Aristotle, *De Anima* III 5, text 18, 1 and 5, the chapter against Plato above;
Avicenna, *Naturalia* VI part 5, chs. 6 and 7; Augustine, *On the Trinity* XI 3,
X 10, IX 12; Aquinas, *S.T.* Part I, q. 84, art. 4, and *On Truth* q. 10 art. 4;
Albert the Great, *Treatise Concerning the Agent Intellect*; Durand., I, dist. 3, q.
5; Conimb. *On De Anima* III 5, q. 5 and 6; in more recent works in this place

on the *Posterior Analytics*, and on *De Anima* III 5.

It seems that it is through species that flow into the intellect:

<**First argument**> For according to Aristotle, *Physics* VII, comm. 10, “No alteration occurs in the intellectual soul.” But if we were to understand through species acquired through the intellect, then there would be an alteration from an absence of species to the presence of species, and from ignorance to knowledge. Therefore it is necessary to assume that we understand through species that flow into the intellect, and not through acquired species.

<**Second Argument**> Again, whatever is brought from capacity to actuality, is brought to actuality by something actual (for if what is hot potentially were brought to being actually hot, it would be brought to actuality through some other actually hot thing.) But our intellect comes to be actually knowing from potential knowing. Therefore this occurs through some being that actually knows, and not from itself, since of itself it is only potentially knowing, and therefore through some outside being, which is the separate substance introducing the species into the intellect, which is nothing other than an Idea.

<**Third Argument**> It is replied that the intellect becomes something that understands or actually knows, but this is not through an external agent, namely the separate substance introducing the species into the intellect, but through the agent intellect, which is intrinsic to the intellect, and makes an actual intelligible from what is potentially intelligible, through an acquired species, by illuminating its images.

Against this, the object of sense multiplies its species in the exterior sense, and afterwards in the interior senses more and more immaterially, and a sense acting immaterially is not required for this. Therefore, similarly, [347b] an agent intellect somehow illuminating the images is not required for the object of the intellect, that is, what it is, to multiply its species through the intermediate senses up to the intellect more and more immaterially.

Again, what-it-is is of itself proportionable to the intellect, therefore an agent is not required for it to become an actual object of the intellect. Proof of the antecedent: just as the intellect does not include matter in its essence, but is nonetheless in matter because it is a perfection of matter, so what it is does not include material conditions within it, but is conjoined with them. Therefore it seems that there is a proportion between what it is on the one hand and the intellect on the other.

To return to the principle argument, everything that understands through participation must lead back to some other which understands in itself and primarily, just as everything hot through participation leads back to something that is hot primarily. But every human being understands through participation, therefore they understand through something that understands primarily; but such is the Idea of Human Being. Therefore etc.

<**Fourth Argument**> Again, we are rational and divine, but divine beings understand through an innate species, and not through an acquired species; etc.

<**Fifth Argument**> Again, a boy questioned in the right way will respond correctly, arriving at conclusions that he has not learned in some science. But he could not respond correctly unless he knew the conclusions already, and not through acquired species, since he never acquired any such species of this conclusion, or of its terms; therefore through species introduced etc.

On the other hand, there is Aristotle in Text 1 of the *Posterior Analytics*, who says that “every teaching” etc.

Again, the first of this, “every cognition of ours takes its rise from the senses”; therefore we do not understand through innate species, but through acquired species.

<**The Opinion of the Platonists**> According to the Platonists it is replied to the question that we understand through species introduced from the ideas. For Plato posits in the *Meno*, and elsewhere, the Idea, in which the species of human being, cow and so on... And he said that this idea of human being is the cause

and exemplar of these singulars, and that it is necessary for cognition and generation. For he assumes that the sensible agent does not introduce a form into matter, but prepares the matter, and disposes it to the reception of the form from without, that is, from the Idea. And he assumes that the teacher in no way is the cause of the knowledge in the student, but only removes impediments, which prevent the student's knowing. But knowledge is always introduced from the Form of Human Being, through species introduced by this idea in our intellect.

Aristotle postulates the opposite on both counts. He has it that forms are brought from potentiality to actuality through a natural agent, and that teaching is caused in us from cognition existing beforehand, and thus through acquired species, which are multiplied through the exterior senses, up to the intellect.

Again, one may advance against these that if they are right the blind would have scientific knowledge of colors from birth just as much as the sighted, and the opposite of this is obvious from experience, and Aristotle said the opposite, similarly he says at the end of *Posterior Analytics* II, "One who lacks a sense also lacks that cognition which is in accord with the sense."

Avicenna posits otherwise in *Natural Things* VI, Part 5, Chapters 6 and 7, that we understand through species that flow into us, but they do not flow into us from ideas, as Plato assumed, but from a separate substance. For he posits that superior separate substances introduce species into inferior separate substances, and at last [348a] a separate substance <the lowest one> introduces into our intellect intelligible species through which we understand. And he assumes that we understand when this substance introduces species into us, and that we do not understand when this substance ceases to introduce species.

Against this is the intention of Aristotle. And in the same way it can be advanced against this that the blind would then have knowledge of colors, just like the sighted.

Therefore let it be replied otherwise to the question, that we understand through species acquired from the exterior senses. And the reason for this has already been touched upon, since otherwise the blind would have as complete a knowledge of colors as the sighted. But concerning the manner in which they are acquired there is some doubt. This manner is set out thus: The soul is in potentiality to all things, according to Aristotle, *De Anima* I text 37. It is in potentiality to all intelligible things through the intellect, and is in capacity to all sensible things through the senses. Therefore the object of the intellect, although it is potentially intelligible, cannot become actually understood through its species by itself. For since it exists under individuating conditions, there is a lack of proportion. Therefore, before the possible intellect understands in actuality, some agent is required, like the agent intellect which makes the possible intellect, which understands potentially, actually to understand. In the same way, it makes what it is, which is intelligible potentially, actually intelligible through its species. And so our intellect understands through acquired species.

But it must be understood that a reality multiplies its species through exterior senses to the internal senses, and to the imagination, and this species exists in a material way, and is conceived under individuating conditions. But the intellect cannot perfect this species as such. Therefore the agent intellect, from the species found in the imagination, originates another species in the possible intellect. Therefore the Commentator says, commenting on *On the Soul*, text 8, that the agent intellect produces universality in realities. And it is not to be understood that the same species in number which is in the imaginative power arises in the possible intellect, since then an accident would migrate from one subject to another, or at least from an organic capacity to one that is not organic, which seems to be absurd. Nor is it to be understood that the species in the imaginative power gives rise to another outside itself in the possible intellect, for the species in the imagination is material, and something material cannot give rise to something immaterial. Nor can it be said that a species in the imagination is illuminated through the agent intellect and so in a certain way is made immaterial, and as it is made immaterial and illuminated it gives rise to another in the possible intellect, for this seems false, since it is contradictory to a species in an organic power, since a species in an organic power always exists materially.

Therefore it is necessary to say that the agent intellect gives rise in the possible intellect to a species from that which is in the imagination.

In response to the arguments. To the first, it is replied that our soul can be altered by ignorance to scientific knowledge, but nonetheless it cannot be altered from one quality to another quality, and Aristotle understands this in *Physics* VII Text and Comment 20.

<Reply to the Second Argument> To the next, it is replied that our intellect comes to understand, from the capacity for understanding in actuality, through another being in actuality, which is not an idea, nor anything separated from our intellect. Rather it is a certain power conjoined to our intellect, and the agent intellect is of this sort.

<Reply to the Third Argument> In response to the arguments against this: It is replied to the first, that an agent sense is not required for the object of the senses to become more spiritual in the intermediate senses than in the object, and more spiritual in the external senses than in the internal senses, for the materiality of the species is consistent with this spirituality without qualification, since the sensitive power is material, for it is the perfection of a corporeal organ. In the same way the species in sensitive powers is a similitude of the reality, and exists individually and materially, therefore an agent sense is not required. But the possible intellect is an immaterial power, since it is not tied to an organ. In the same way the species in that power is immaterial at the same time, since it is a similitude of a reality not as it exists materially, and the possible intellect cannot make this immateriality of the species, since it is a passive power, nor can the image make this species here, since the material remains material and in no way becomes immaterial, therefore an agent intellect is required making this species in the possible intellect from the species which is in the imaginative power.

To the next I reply that what-it-is is not of itself proportional to the intellect, since what-it-is cannot actually change unless it be under some being; but it does not have any except a twofold being, namely being outside the soul and being in the soul. What-it-is under being outside the soul cannot be unchanged as such, since there it exists materially, and also under individuating conditions. But what-it-is is not unchanged as it exists materially, therefore it is necessary that this what-it-is be unchanged according to the being it has in the intellect. But it does not have being in the intellect of itself, but through the agent intellect. Therefore an agent intellect is required. Through this we address the form of the argument: I deny the consequence, for even if what-it-is does not include material conditions in itself, nor depend on them, it is still under them. In the same way, the intellect does not include matter in its essence, nor does its essence depend on it, but it is still in matter. ‘Therefore it is in a sufficient proportion to both’—this does not hold, for although there is a proportion as concerns these conditions, yet it is not sufficient, for more is required, namely that just as the species in the intellect is a similitude of the reality, but not as it exists materially, in the same way it is necessary for what-it-is to have an immaterial manner [of being] for it to be unchanged. Now under being outside the soul it does not have an immaterial manner [of being], but only as it is in the soul. Therefore it cannot of itself take on a proportion, but this occurs through the agent intellect.

To the other it is replied that everything that understands through participation leads back to something that understands through its essence. But that understanding is not an Idea, but a first cause, in which understanding and being are the same.

<Reply to the Fourth Argument> To the next it is replied that “we and divine beings are both rational only equivocally,” because divine beings do not reason, strictly speaking, nor do they move from premisses to a conclusion, but by a simple perception of the principles they also grasp the conclusion, but we reason, moving from principles to the conclusion. Therefore divine beings are not rational, strictly speaking. And if they are rational, it is equivocally, and more perfectly than we are, and therefore even though separated substances understand through innate species that have flowed in, still it is not necessary that the intellect understand thus, and this is due to the imperfection of our intellect.

<Reply to the Fifth Argument> To the next it is replied that the boy questioned in an ordered way by Plato about the principles of Geometry, which he had never learned, and afterwards about the conclusion, learns the conclusion from scratch through such application and questioning, therefore it does not follow that this boy knows the conclusion before he learned the conclusion under its proper form, and Plato believes this to be correct because it is hidden from him that the boy can learn the conclusion from scratch through application of the premisses to the conclusion.

Question 4: Whether there are only two cognitions beforehand?

Averroës, Comment 2; Thomas Aquinas, Lectio 2; John Major, *On the Posterior Analytics* I, Question 2; Paul of Venice, this text; Conimb., on this place, Question 4, Article 3 and following; Complut. *Disputatio* 17, *Logical Questions* 2; Hurtado, *Disputation* 11, *Log. Sect.* 1; Aversa, Question 18, Sect. 5.

It seems that there are not.

<First argument> There are four questions according to Aristotle in Text 1 of *Posterior Analytics* II, but questions presuppose assumptions, or cognitions beforehand, since every question asks something, and assumes something; therefore there are four cognitions beforehand.

<Second argument> Again, there are three things cognized beforehand, namely axiom, subject and passion. Therefore there are three cognitions beforehand. I prove the consequence, since cognition beforehand is number in accord with the numeration of things cognized beforehand.

It is claimed by way of refutation, that cognition beforehand is not numbered in accord with the numeration of things cognized beforehand. Against this, accident is numbered in accord with the numeration of that which it denominates, and of which it is the passion, but this accident, namely cognition beforehand, denominates things cognized beforehand, therefore etc.

<Third argument> Again, as to the principal argument, as a reality has what it is, so a reality has quality, and quantity, but it is not necessary to cognize beforehand of what sort the subject is, or how much, and in the same way, neither is it necessary to cognize this of the passion beforehand. Therefore, by the same argument, neither is it necessary to cognize beforehand what it is of a reality, and therefore there are not even two cognitions beforehand.

<Fourth argument> Again, it seems there are three, from the intention of Aristotle, for he says in *Posterior Analytics* I that it is presupposed concerning the subject what it is without qualification, and of the axiom that it is, but concerning the passion it is not presupposed what it is without qualification, but what it is that is signified by the name. Since then, what it is that is signified by the name and what it is without qualification are different cognitions beforehand, there will be three cognitions beforehand.

It is replied here that what it is that is signified by the name and what it is without qualification are not different “what’s,” and therefore they do not make different cognitions beforehand. It is argued against this from Aristotle, *Posterior Analytics* II, Text 39: what it is without qualification presupposes if it is, for to seek what it is in ignorance if it is to seek nothing. But what it is that is signified by the name does not presuppose being, since we know concerning non-beings what is signified by the name, and still non-beings are not known

to be, since they are not. And Aristotle says that we know concerning a wild goat⁹ what it is that is signified by the name, and still we are ignorant if it is. Therefore what it is without qualification and what it is that is signified by the name are different things.

On the other hand, there is Aristotle, Text 1 of *Posterior Analytics* I, who says “but cognition beforehand is twofold, etc.”

It is replied to the question that there are only two cognitions beforehand, namely what it is and that it is. But it must be understood for the conclusion to be cognized that it is necessary to cognize principles beforehand. There are three principles for a conclusion, one complex, which is the axiom, and two incomplex, that is, the subject and the passion, because it is from these two that the conclusion is constituted. In the conclusion the passion is predicated of the subject, therefore, to understand the conclusion it is necessary to cognize beforehand the axiom, the passion and the subject, and so there are three things cognized beforehand, but there are only two manners in which they are cognized beforehand. Concerning the subject it is cognized beforehand what it is, and that it is, concerning the passion what it is, and concerning the axiom, that it is, and there are two sorts of cognition beforehand, namely what it is and that it is.

In the second place, it must be understood that what it is without qualification of a reality, and what it is that is signified by the name are not the same. And this is so for two reasons. One is that to cognize beforehand what it is of a reality without qualification it is necessary to cognize beforehand if it is, since a non-being does not have a true what it is, but in cognizing beforehand what it is that is signified by the name alone, it is not necessary to cognize beforehand if it is, for a non-being can have such being.

Again, another reason is this: in cognizing what is signified by the name we only cognize in an indistinct way, and confusedly, and in cognizing what it is without qualification of a reality, we cognize the reality determinately and distinctly. And Themistius shows this through an example. If a boy is told to lead out a horse, then he leads out a horse, and not a cow, and this does not happen unless it is because he cognizes what is signified by the name horse. But the boy does not cognize the true quiddity of the horse, since then he would cognize the intrinsic principle of the horse, which is false. Therefore it is clear that what it is of a reality, taken absolutely, and what is signified by the name, are not the same at all. But it must be understood that Aristotle includes both in a certain generality under one cognition beforehand, therefore he assumes only two cognitions beforehand.

<Reply to the first argument> It is replied to the first objection that the consequence is not valid, since the question what it is and why it is lead back to the cognition what it is, and that it is and if it is lead back to the cognition if it is.

<Reply to the second argument> It is replied to the other in the same way. As for the arguments against this reply, it is replied to the first that cognition is not in what is cognized beforehand as in a subject, but in the one cognizing beforehand. Therefore it is not necessary that cognition beforehand be numbered in accord with the numeration of what is cognized beforehand.

Because of this it must be understood that function is twofold. One sort of operation is immanent in the agent, for instance, understanding in respect of the intellect, or sensing in respect of the senses. The other is an operation crossing over into an extrinsic matter, and of this sort is the combustion of fire, for combustion is in that which is burned, but the function is in the agent primarily, and secondarily in what suffers its action. Through this we have a solution, because the function crossing over into intrinsic matter is in that upon which it functions, but the first sort of function is not.

As for the second argument against this, I hold that if it is supposed that the cognition beforehand is

⁹Surely the non-existent goat-stag is intended, though the word is Latin for a wild goat.

referred to what is cognized beforehand, it is not necessary that it be numbered in accord with the numeration of what is cognized beforehand. This is a counterexample, that the father is referred to the son, and yet it is not necessary that if there are several sons of the same father, that because of this this one is many fathers, or that several fatherhoods are within him.

As for the third, it is replied that this premise is not universally true, namely, “an accident is in that as a subject which it denominates.” For it denominates sometimes the term from which, for instance, Socrates is destroyed; and sometimes the term to which, for instance, Socrates is generated; sometimes the efficient cause, for instance, the agent acts; and sometimes the subject in which it is, as white man. Therefore it is not necessary that an accident always be in it as in subject which it denominates.

<Reply to the third argument> To the other it is replied that it is not cognized beforehand of the subject what quality it has or what quantity, nor is it necessary for this, that the passion be known of the subject, for to the end that the passion be known quality and quantity and every common accident is extraneous. But what it is is necessarily cognized beforehand of the subject, since the definition of the subject is the middle term for concluding the passion of the subject in the highest sort of demonstration, and before the conclusion is cognized it is necessary to cognize beforehand the middle term through which it is cognized. Therefore it is cognized beforehand what it is, but not what quality it has, or what quantity.

<Reply to the fourth argument> As for the other, I grant that what it is, which is signified by the name, and what it is of the reality without qualification, are not wholly the same, but Aristotle includes both what’s under one general sort of cognition beforehand, even though these are different cognitions beforehand in species. And the same <phrase> is understood of one what¹⁰ and of the other.

As to the arguments that they give, that a true what it is and what it is that is signified by the name are different, is to be granted, since they conclude something true, but they can fall under one general sort of cognition beforehand.

Question 5: Whether what-it-is can be cognized
beforehand of an axiom?

Aristotle, this chapter and chapter 8; Averroës, this text, Comments 1 and 2; *Metaphysics* ch. 1; Themistius, Philoponus and Thomas Aquinas on this place; Fonseca *Metaphysics* I ch. 2, question 2, section 8; Conimb. *On Posterior Analytics* I, question 3, article 4; Complut. *Disp.* 17, question 2; Aversa Question 28, *Logic*, section 5.

It seems that it can.

<First Argument> There is as much complexity and unity in a syllogism as in an axiom, but it can be cognized of a syllogism what-it-is, despite its complexity, otherwise there could not be knowledge about syllogism. Therefore it can be cognized beforehand of an axiom what-it-is, despite its complexity.

<Second Argument> Again, immediate proposition is defined in this first book, despite its complexity. Therefore, by the same reasoning, axiom can be defined, and have a what<-it-is>.

¹⁰The edition has “quod” here, and “quid” seems to be demanded by the context.

<**Third Argument**> Again, being is not nothing, this sort of axiom is being, for it is cognized before that-it-is, therefore an axiom has being. But everything that has being is something [*quid*], therefore being-something [*quid*] is cognized beforehand of an axiom. It follows, then, that it is cognized beforehand of an axiom what-it-is [*quid est*].

<**Reply to the Third Argument**> One replies here by denying the consequence, and to the proof of the consequence it is replied that even though the axiom is being, still it does not have a what-it-is, because it is a complex, and a complex does not have a what-it-is. Hence it does not follow, “it has being, therefore it is something, or has a what-it-is,” unless it is presupposed that it is simple, and not composite.

On the other hand, that complexity does not stand in the way is argued, as before.¹¹

<**Fourth Argument**> Again, being is either being-true, or what accompanies essence inseparably. If the first, it is necessarily cognized beforehand of an axiom that-it-is, therefore what-it-is, because this is its being. If in the second way, it follows in addition that being presupposes essence, and whatever is presupposed, it follows that it is, therefore one arrives at what-it-is.

<**Fifth Argument**> Again, proposition is defined thus, “a proposition is an expression (*oratio*) signifying something true or false.” Therefore proposition has a what-it-is, because it has a definition, since definition and what-it-is are the same, and yet a proposition is something complex. Therefore axiom can have a what-it-is, despite the argument about the complex.

<**Reply to the Fifth argument**> Here it is replied that proposition is not defined inasmuch as it is something complex received under the formula of the complex, but under the formula of the non-complex.

<**Sixth Argument**> On the other hand, this clause is placed in the definition, “signifying what is true or false,” but nothing signifies something true or false unless it is a complex considered under the formula of something complex. Therefore proposition as here defined signifies something complex considered under the formula of something complex.

<**Seventh Argument**> Axiom is signified according to that which it is, therefore it can be cognized beforehand about axiom what is signified by the name.

For the opposed view, there is Aristotle in Book I of the *Posterior Analytics*, who say that it is cognized beforehand of an axiom only that-it-is.

Again, if it cognized beforehand of an axiom what-it-is, then from the axiom and that what-it-is, together, an immediate proposition, or axiom, can arise. And by the same argument, this axiom would have a what-it-is, and another axiom would arise from this what-it-is and this axiom, and so on to infinity, which is absurd. Therefore it is absurd to say that an axiom has a what-it-is.

I reply to the question that it is only cognized beforehand concerning an axiom that-it-is. Proof: because an axiom produces cognition of the conclusion, but a non-being produces nothing relating to the conclusion, therefore it is necessary that it be cognized of an axiom beforehand that-it-is.

Again, I show that it is not cognized beforehand concerning an axiom what-it-is without qualification, because what-it-is without qualification is only of the non-complex, and an axiom is a certain complex, therefore etc. Now that it does not have a what-it-is is clear from the intention of Aristotle in Book 7 of the *Metaphysics*, Text 10. He says there that a white man does not have a what-it-is, because it is an accidental being, or an aggregate. But an axiom is more an aggregate than a white man is, therefore an axiom does not have a what-it-is. In the same way it is not cognized beforehand of it what-it-is, namely what is signified by the name, because it does not have a what-it-is, but several what-it-is’s brought together. Therefore it is only cognized beforehand of an axiom that it is.

¹¹In the first and second arguments.

<Reply to the First Argument> To the first argument it is replied that syllogism can be considered as it is complex, taken under the formula of a complex, and in this way it does not have a what-it-is. In another way it is considered as it a certain complex, and taken under the formula of a non-complex, and in this way it has a what-it-is and a definition.¹² As such, it is signified through an incomplex utterance, as through this, “syllogism,” and it is conceived by our understanding, and in this way it is cognized beforehand of syllogism what-it-is, but not of axiom, according to what Aristotle understands, because Aristotle understands about an axiom as it is a complex taken under the formula of something incomplex.

<Reply to the Second Argument> As for the other, immediate proposition is not defined as it is a complex taken under the formula of something complex.¹³

<Reply to the Third Argument> As for the other, it is replied in the same way, by denying the consequence, namely that since it is cognized beforehand that-it-is of the axiom therefore it is also cognized beforehand what-it-is. And as for the proof, it is answered in the same way as before, that an axiom does not have a what-it-is, even though it does have being. For what-it-is is only of the incomplex, which is an object of the understanding without qualification.¹⁴

<Reply to the Fourth Argument> As to the argument against this, it is replied that being accompanies the essence of an axiom, therefore it follows that the essence of an axiom is cognized beforehand, but it does not follow from this that it is cognized concerning an axiom what-it-is, because what-it-is belongs only to that which is an object of the understanding without qualification.¹⁵ Now essence can be of the complex and the incomplex, and of every other sort of being.¹⁶

<Reply to the Fifth and Sixth Argument> As for the other concerning the proposition, as before. And as to the argument against it, it is replied that this clause, “signifying what is true or false,” can be related to the proposition under the formula of the non-complex, and under the formula of the complex. For instance, relate it to this whole, “A human being is an animal considered under its oneness” (*integritas*). In the

¹²A syllogism is composed of parts, but if we consider it as a mere composition of parts, even if we note the relations of the parts that make it a syllogism, we do not consider its essence, what-it-is. What-it-is is a unitary thing, and to consider what it is we need to consider what brings the parts together into a unity, and, since we are dealing here with an artifact, that would be a purpose the producer of the syllogism has in mind in producing it.

¹³That is, immediate proposition is defined as it is a simple unity, with an eye to its function in a demonstrative syllogism, not with an eye to the way its parts are put together (unless one looks at that to see how they are put together in such a way as to fulfill that function).

¹⁴Considered as something incomplex, an axiom has a what-it-is, though, since it is an artificial and not a natural thing, this is a “what-it-is that is signified through the name.” But this what-it-is is the same for every axiom, and in no way enters into a demonstration, nor does it have to be known to understand a demonstration. So it is not cognized beforehand, that is, before a demonstration can be brought off (unless, perhaps, one is demonstrating something of axioms). If we look at the what-it-is that a particular axiom talks about, instead of the essence of axiom, there is a different, but equally decisive difficulty. An axiom may mention several things with different whats, or it may concern qualities alone, and mention no what’s at all. There is no guarantee that only one what-it-is is involved in any particular axiom. The axiom is being treated as a collection of parts, and some of the parts may have a what-it-is or signify something that does. None of these what’s, of course, are the what of the axiom, considered as a unity.

¹⁵The axiom is cognized to be, it is cognized that it is. Therefore its essence is cognized, since it must have an essence to be (it must somehow be a unity). But its essence is not cognized here without qualification. One need not cognize what its essence is to cognize that something is. Its essence is only cognized as a concomitant of being.

¹⁶That is, essence does not only belong to beings that are objects of the understanding without qualification, i.e. incomplex beings. Complex beings are objects of the understanding only in a qualified way, i.e., insofar as they are unified under some form.

first way it is related to the proposition as what-it-is. In the second way it is related to a proposition as a quality or something that qualifies.¹⁷

As to the first, when it is said that nothing signifies what is true or false except a complex under the formula of the complex, it is replied that this is true qualitatively.¹⁸ But taking “true or false” quidditatively, the proposition assumed is false, because only a proposition taken under the formula of the non-complex has this.

<Reply to the Seventh Argument> As for the other, it is replied that it is not cognized beforehand concerning an axiom what-it-is, because it is signified through the name, for an axiom does not have one what, but several together, and therefore it is not cognized beforehand of an axiom what-it-is that is signified by the name. For there is a cognition beforehand of the same what-it-is that is signified by the name, or has one what, etc.

Question 6: Whether it is cognized beforehand of
an attribute that-it-is?

Aristotle, *Posterior Analytics* I 1 and II 1; Thomas Aquinas on this place; John Major, *On Posterior Analytics* I, Question 2; Conimb. *On Posterior Analytics* I, question 3, article 4; Complut. *Disp.* 17, question 2.

It seems that it is, because it is cognized beforehand of the attribute what it is, therefore it can be cognized beforehand that it is. The antecedent is obvious from Aristotle, *Posterior Analytics* I, text 1. I prove the consequence: What it is presupposes if it is, because those seeking what it is while ignorant if it is seek nothing. Here it is said that it is cognized beforehand of the attribute what-it-is that is signified through the name, and such a what-it-is does not presuppose if-it-is. Therefore this consequence is denied, “it is cognized beforehand concerning the attribute what-it-is, therefore that-it-is.” Although what it is without qualification presupposes if-it-is, it is not cognized beforehand of the attribute what-it-is in this way.

On the other hand, this is argued through Aristotle, who says in *Metaphysics* 4, text 28, and 5 that the what it is that is signified through the name is a true definition. If, therefore, it is cognized beforehand of the passion what-it-is that is signified by the name, then it is cognized beforehand of it what-it-is without qualification, and that is the true definition, and so the first argument is restored.

Again, Aristotle in *Posterior Analytics* II distinguishes sorts of definition: one is a definition without qualification and what the reality is, the other is definition what the name is, and this he attributes to non-beings. Since, then, an attribute is a being, it does not have such a definition expressing what-it-is of the name, but definition without qualification, which consequently expresses what-it-is without qualification.

¹⁷The point seems to be that the proposition, considered as a proposition, in terms of what-it-is, is what signifies something true or false. The proposition considered not as a unity, but as a mere collection of things brought together, a collection of words, say, is true or false, but this is a mere accident or quality of this collection of words, an accident that not every collection of words will have.

¹⁸That is, if we consider a proposition to have the quality of truth or falsity, a quality it might lose if the world were to change, then it is the proposition considered as a complex that happens to be a proposition that we have in view. If we consider a proposition to have the quality of being either true or false, taking this as an essential property, then we are considering the proposition as a unity, not a mere collection, in terms of its form, not of the multifarious matter that is informed by it.

Again, to the principal, an attribute is known of the subject, but non-being cannot be known; therefore it is necessary that it be cognized beforehand of the passion that-it-is.

To the contrary, there is Aristotle in *Posterior Analytics* I.

To the question it is replied concerning the attribute alone it is cognized beforehand what-it-is that is signified by the name, and the reason for this is that in an attribute being and being in the subject are the same, because the being of an accident is being-in. But the being-in of the attribute in the subject is concluded in the demonstration, and this is its being. Therefore the being of an attribute is concluded, and so it must be that it is not cognized before the conclusion.

Again, concerning the attribute it cannot be cognized beforehand without qualification what it is, although what it is without qualification is possessed indirectly. The reason for this is that what it is presupposes without qualification if it is, but it is not cognized of the attribute beforehand if it is, or that it is, before the conclusion. But it is necessary to cognize beforehand of the attribute what is signified by the name. The reason for this is that it is necessary to have some cognition of the attribute before the conclusion, since it is a principle making the conclusion whole, because from the attribute and the subject the conclusion arises in demonstration, so that it was possessed before, but it was not cognized beforehand concerning it that it is, nor what it is without qualification, therefore it is necessarily cognized beforehand of it what it is that is signified by the name. And this cognition is indistinct, and so can be had before its cognition what it is without qualification, and thus the cognition what it is can be had without cognition that it is. For a boy cognizes what is signified by "horse," and still he does not cognize the quiddity of a horse without qualification. In the same way, we cognize concerning non-being what is signified by the name, and yet we do not cognize what it is without qualification, nor that it is. [215]

It can be argued against this position. It can be cognized beforehand concerning the attribute that it is in the subject, because even though it is concluded in the conclusion that the attribute is in some determinate proper subject, it is in a subject before it is in this subject, and the first can be cognized beforehand without cognizing the second beforehand; therefore it can be cognized that it is concerning the attribute in general, even though it is concluded that it is in this special subject in the conclusion.

Here it is claimed that an accident is not a being unless it is of a being, that is, a proper accident is not a being unless it belongs to its proper subject. Therefore it is impossible to understand a proper or real accident if the subject of which it is an attribute is not understood. Therefore the being of a passion is not cognized beforehand unless its being in its proper subject is cognized beforehand. Each thing is understood in the way it is a being. Now an attribute is a being in some determinate subject, and it is not a being unless it is of such a being. Therefore it cannot be understood except under its relationship to such a being. And from this we speak to the form, that the being of the proper attribute in general cannot be cognized beforehand, unless its being in its proper subject is cognized beforehand.

One replies in response to the first in the same way. It is replied to the first against this that sometimes the formula that signifies the name is the true definition, and Aristotle understands this, but it is not always so, for sometimes the formula can be a description of the being, and this is not a true definition of the reality, even though it will be signified through the name.

To the second it is replied that the formula expressing what it is of the name is not always attributed to beings, but sometimes to a being. But sometimes to another formula, which is the true definition, can be in a being. Hence Aristotle does not understand that the formula expressing what the name is in non-being alone. Rather, he understands that the formula expressing what the name is in non-being in such a way that no true formula is in it, but a true formula is in the attribute along with the formula expressing what the name is. But the true formula is not cognized concerning the attribute before the conclusion, but it is only cognized beforehand what it is that is signified by the name.

To the other it is replied that a non-being cannot be known, and therefore it follows that an attribute must be, but still it does not follow further that its being is cognized before the conclusion, because its being is concluded in the conclusion, because its being is being in its subject.

Question 7: Whether it can be cognized of the subject <beforehand> that-it-is <in demonstration>?

Commentator, *Physics* I, last chapter and Book II; com. 26D; Thomas Aquinas opusc. 48; Doctor 1, *Metaph.* Q. 1; Ant. Andr. *Ibid.*; Cajetan, here and cap. 1, seq. lib. and 1. p. q. 2, art. 3; Ferrar. 1. *Contra Gentes* cap. 66; Conimb. *Hic*, q. 3 sect. Art. 3; Ruvius, above, *De altera praedognitione subjecti*, de qua D in this same question. Vide Arist. *Metaph.* VI 1, *De anima* I 1 text. 11; Thomas, *hic* 1, p. q.1 art. 7. Albertus Magnus, Tract 2. Conimb., *hich q. Et art. Cit et c. q. praeced, cit.*

It seems not. The conclusion of a demonstration depends on the predicate, just as much as it does on the subject; for the predicate in the conclusion is the attribute, and the attribute is concluded of the subject; but it is not cognized beforehand of the attribute that it is, therefore not of the subject either.

Again, an attribute can be demonstrated of a rose, and yet it is not always supposed that a rose is, for sometimes there are none, therefore etc.

Again, this is true, "A human being is able to laugh," whether there is a human being or not, for able-to-laugh can be demonstrated of human being through the definition of human being, whether there is a human being or not. For this is true, "A human being is a rational animal," whether it is actual or not. Therefore for the attribute to be demonstrated of the subject, it is not necessary to cognize beforehand of the subject that it is.

Again, being is said of the subject, and the questions are equal in number etc., therefore being can be known of the subject through demonstration. If therefore being can be demonstrated of the subject, it is not necessary to cognize beforehand of the subject that it is, because that is demonstrated, so it is not necessary to cognize it beforehand of the conclusion.

Here it is said that being is sought concerning the subject, not that being is demonstrated of the subject, but that being is cognized of the subject in another way. On the other hand, being in the essence of the subject having a cause, it is also posterior to the essence of the subject, therefore it can through that cause be demonstrated of the essence of the subject.

Here it is said that being is not posterior to essence as an attribute, and therefore it cannot be demonstrated of the essence of the subject. On the other hand, knowing is through cognizing the cause, etc., therefore these three conditions suffice for something to be known demonstratively, since therefore these three conditions are found in essence, in respect of being, therefore being can be demonstrated of essence. Again, demonstration is from primary truths, etc., but these particulars are not placed in the definition of demonstration, because that about which it is demonstrated is the attribute, therefore it is not required for this that anything be demonstrated of that, because it is its attribute.

Again, essence produces cognition of being, therefore it produces cognition of being without qualification, or of being in relation to us. Not in relation to us, because thus it is better known than essence, as is obvious. We cognize separated substances to be, but not there essence, therefore the essence produces cognition of being without qualification, and such cognition is through demonstration without qualification,

therefore being can be demonstrated without qualification of essence.

On the contrary, there is Aristotle, the first book of this work, text. 2, who say that “concerning the subject it is cognized before what it is and that it is.”

It is replied to the question that it is cognized concerning the subject both ways before the conclusion, for it is cognized beforehand of the subject what, because the what of the subject is the principal middle term in demonstration. For the middle term in demonstration is the cause of the conclusion, and the cause is cognized before the effect, therefore concerning the subject it is cognized beforehand what it is. In the same way it is cognized beforehand of the subject that it is, because what it is presupposed that it is, because a non being does not have a what.

But it must be understood that what it is does not presuppose the being of existence, nor it is necessary to cognize such being beforehand of the subject, as being of existence is distinguished from past or future being. But the being that is presupposed of the subject is being something (*esse secundum quid*), for there are degrees of being under which one being differs from another. For a different degree of being corresponds to human being, and donkey, even if neither actually exists. Or it can be said that being which is presupposed is not being prohibited in the natural order. For that of which knowledge is obtained, must be something that had being in the past, or can have it in the future, or has being now.

In response to the first argument, it is replied that the conclusion depends more on the subject than on the predicate, for the subject is the cause of the predicate, which is its attribute.

To the other, it is replied that it proves a truth, for it proves that it is not necessary to cognize that it is actually existing of the subject beforehand, etc.

The same reply is made to the next.

To the last, as it was replied, and to the argument against this, it is replied that being, although it is posterior to essence, still cannot be demonstrated of essence, because what is demonstrated of something necessarily meets two conditions: for it is necessary that it be a being in some genus *per se*, and it is necessary that being be presupposed in the subject of which it is concluded. But being meets neither condition, for it is not being in a genus, but it is led back to the same genus in which the essence is. In the same way being in the subject does not presuppose being, because thus there is a process to infinity, because of which being (*esse*) cannot be demonstrated, because it is not a being (*ens*), since it is neither subject, nor accident, speaking *per se*.

To the first argument against this, it is replied that if it is supposed that that which is demonstrated in the subject presupposes being, then it can be demonstrated if it has a cause in the subject, as the argument concludes, but being in essence does not presuppose being by the essence.

To the other it is replied that it is required that that which must be demonstrated in the subject presuppose being, and then it is demonstrated consistently, if it is concluded from true principles, etc. In the same way, an argument proves that it is not necessary that what is demonstrated be an attribute, and this is to be granted, for sometimes a material definition is concluded for the subject through a formal definition, or a final definition.

It is replied to the last that essence does not produce cognition of being, because in being essence is not cognized beforehand in respect of being.

Question 8: Whether the conclusion is cognized at the same time as the premisses are cognized?

Doct. *Following question.* Gabriel. *Question 1, Prologui.* Tartaretus, *Post. 1*
Doubt 3. John a Magistri, *In Primum Posteriorum Q. 2, Dub. 3.* Conimbr., *in*

cap. De praecognit., q. 3, art. 2.

It appears it does not, for the premisses are related to the conclusion under the formula of efficient cause. But an efficient cause does not contain its effect, except virtually, and does nothing beyond its species, therefore the premisses do not produce cognition of the conclusion, except virtually; therefore when the premisses are known, the conclusion is not known at the same time strictly speaking, but only virtually, and potentially.

Again, premisses are related to the under the formula of material cause. But when the material cause produces cognition of an effect, the cause is known before the effect in time, as in the example of Aristotle in VII *Metaphysics*, text. com. 4. For substance precedes every accident, in cognition, definition and time, therefore the premisses are cognized earlier in time than the conclusion is.

Again, according to Aristotle, *Prior Analytics* II, it is possible to cognize that every mule is sterile, and that this is a mule, and yet to doubt whether it has anything in its belly, and consequently to be ignorant of the conclusion, therefore etc.

Again, several things cannot at the same time, by the formula by which they are several, be understood by the understanding, for the understanding does not understand more than one intelligible at a time. But the premisses and conclusion are several intelligibles, therefore they cannot be cognized at the same time by the understanding, etc.

Again, the understanding in syllogizing run successively from the premisses to the conclusion, therefore it understands the premisses successively, that is, first, and afterwards the conclusion, because it understands discursively, and does not cognize, therefore, premisses and conclusion at the same time.

Again, if it were thus, when we had the premisses in a fallacy of accident, we would immediately have the conclusion, and so we should not err.

On the other hand, there is Aristotle in the first book, text 2, who says that premisses are cognized at the same time as the conclusion, for at the same time as one concludes he cognizes (*simul enim inducens cognovit*).

It is replied to the question, that when the premisses are cognized, at the same the conclusion is cognized, if it is cognized under the formula of cause. But first principles being cognized in themselves, not as applied under the formula of cause, the cognition of the conclusion at the same time is not necessary. The first is obvious, because the cause and effect are simultaneous, and they are not. For the cause is the principle of being of the effect, but the same are the principles of being and of cognizing, according to Aristotle, *Metaphysics* II, therefore when the principles are cognized under the formula of cause, at the same time the conclusion is cognized. The second is clear from Aristotle, *Prior Analytics* II 26. He says that one can cognize every mule to be sterile, and be ignorant that this mule is sterile, by neither applying these to one another, nor comparing the minor to the major. Thus, therefore, it is clear, that the premisses can be cognized in themselves without cognizing the conclusion, and this is because the application [to the conclusion] is lacking.

Together with this it should be known, as is clear in *Prior Analytics* II 26, that “knowing is three-fold.” For there is knowing in the universal, and in the particular, and this latter in two ways, namely actual and habitual. The conclusion is known in the universal when the major is cognized without cognizing the minor, nor the conclusion in itself, because by cognizing this in itself, “Every mule is sterile,” it is cognized in the universal that this mule is sterile. In another way, the conclusion is cognized in the particular, and habitually, when the major and minor are cognized, but still the minor is not considered actually to fall under the major, and in these two ways by nature, and also in time, the premisses are cognized prior to the conclusion actually. In the third way, the conclusion is cognized actually, and in this way the major is cognized, and also the minor, and at the same time as the minor is cognized to be actually under the major. For thus arises the application

of the premisses under the formula of cause, and in this way it is impossible for the premisses to be cognized before the conclusion is at the same time.

As for the first objection, I hold that the premisses contain the conclusion virtually. Not virtually alone in this way, because some agent is required through which the premisses make knowledge of the conclusion actual. But the premisses thus applied contain the conclusion virtually, as the efficient cause disposed to actuality contains the effect. Now the efficient cause places the effect into actuality in every matter disposed to this, as the premisses, applied determinately in the third way, make the cognition of the conclusion actual.

It is replied to the second objection that the premisses have the formula of material cause in respect of the conclusion, and not only this, but they have the formula of efficient cause as well, so that they can sufficiently by themselves produce cognition of the conclusion under its proper formula, and therefore it is not necessary that they be cognized before the conclusion in time.

As for the other objection, that this argument proves that there is cognition of the premisses not applied to one another, by ignoring the conclusion, and Aristotle understands this. But if the premisses are applied to one another, and the minor is cognized to fall under the major, then you do not cognize the premisses while remaining ignorant of the conclusion.

To the other objection it is replied that many things can be understood, not under the species of many, but under the species of one. Hence premisses and conclusion are cognized in indivisible time, and under their proper species, but under a species of habitude. And if you then ask, where this species of habitude comes from, for this habitude never made a species in the senses, therefore neither did it make one in the understanding—one replies by denying the consequence, and it is held that someone can produce a species in the understanding, that does not produce a species in the senses. For substance (as is assumed by some) does not make a species in the senses, and yet it makes a species in the understanding. P. 220.

Book II

Question 9: Whether the middle term in demonstration is the definition of the subject or of the passion?

It seems it is of the passion:

<**First argument**> Aristotle says that “The definition of the first term is the middle term in demonstration”;¹⁹ the first term in demonstration is that which is predicated most widely, and this is the passion, therefore the definition of the passion is the middle in demonstration. This is clear in the same way through an example of Aristotle, for he says that leaves fall from the vine is demonstrated through this middle term, “The sap being condensed in drawing together of the leaves to the branches,”²⁰ but this definition is the definition of the passion, therefore the definition of the passion is the middle term.

<**Second Argument**> Again, Aristotle in the first book says that “the extreme and the middle terms must be of the same genus,”²¹ but if the definition of the subject were the middle term in demonstration, then the middle and the extreme terms would not be of the same genus, but the middle term would be of another genus than the passion.

<**Third Argument**> Again, demonstration must be from immediate propositions,²² but if the definition of the subject were the middle term, the demonstration would not be from immediate propositions, but always the minor premise would have a middle term from which it could be demonstrated; for the passion belonging to the definition of the subject inheres in that definition which is a middle term for properties.

<**Fourth Argument**> Again, if the definition of the subject were the middle term, then there would be a begging of the question in every demonstration—the consequent is false, and so the antecedent as well. The proof of the consequence: in the major premise of a demonstration the passion is predicated of the definition of the subject, if the definition of the subject is the middle term, and in the conclusion it is predicated of the subject. But the definition of the subject and the subject are one and the same reality. Therefore it is concluded that since the passion is verified of this reality, it will also be true of the same reality, and consequently there arises a begging of the question. Now it is replied that although the definition and the thing defined are the same, still the definition is better known than the thing defined, for the definition is the cause of becoming known given by Aristotle;²³ and therefore the passion is in a definition better known than the thing defined, and therefore the demonstration does not beg the question. But it is argued against this that the thing defined and the definition are one reality, as was granted, but the passion is demonstrated of the reality by reason of the reality, and not by reason of any intention; therefore the passion is demonstrated of what is defined because what is defined is in the definition, and therefore it is demonstrated through a begging of the question.

¹⁹*Posterior Analytics* II 17, 99a23.

²⁰*Posterior Analytics* II 17, 99a27–29.

²¹*Posterior Analytics* I 7, 75b10–12.

²²*Posterior Analytics* I 2, 71b20–23.

²³This argument and the reply to it seems to be adapted from one given in Albert the Great, Albert (1890) II Tract II 10 and 11. 141–142. The refutation of the reply is in effect a response to Albert.

<**Fifth Argument**> Again, *Topics* VIII:²⁴ one manner of begging the question occurs when the defined is proved through the definition, and conversely; therefore there will be a begging of the question.

<**Sixth Argument**> Again, demonstration is from primary propositions, but when the definition of the subject is received one does not argue from primary propositions, therefore the definition of the subject is not the middle term. The minor premise is obvious, since the subject is last in demonstration.

On the other hand, that is a principle in demonstration that is most the cause, the definition of the subject is the cause of the passion, and it is also the cause of the definition of the passion; therefore the definition of the subject is the middle in demonstration. The minor is obvious from Aristotle at the end of the second book, in the text “For the principle is what is nearest.”²⁵ He also says elsewhere that if any passion must be demonstrated of the subject, it must rather be demonstrated through C, which is the definition of the subject, than through B, which is the definition of the passion, and it indicates the cause, for C, which is the definition of the subject, is the cause of the passion A, and also of B, which is the definition of the passion.²⁶

Again, it is not the middle term in demonstration if when it is cognized one can ask why it is so. But when the passion is known of the subject through the definition of the passion, it can be asked why it is in the subject. Therefore the definition of the passion is not the middle in demonstration.

Again, the middle in demonstration is the definition of that from the principles of which it is cognized, and also caused, what the passion is, and whether it is in the subject. But what the passion is, and also that it is, is caused from the principles of the subject. Therefore what the passion is is not the middle in demonstration.

Again, demonstration is from necessary premisses, but a syllogism in which the passion is concluded of the subject, through the definition of the subject, is from necessary premisses, therefore such a syllogism is a demonstration.

Again, a syllogism in which the passion is concluded of the subject through definition is good, so it is either dialectical or demonstrative. Not dialectical, for dialectical syllogism is not from necessary premisses, but only from probable premisses. Therefore, then, the syllogism is demonstrative.

<**First opinion with refutation of the same**>

It is replied to the question that the definition of the passion is the middle in the most powerful sort of demonstration. The reason is that demonstration must be from immediate premisses, but if the definition of the subject were the middle term in demonstration, the minor premise would not be immediate, but would have a middle term through which it can be demonstrated, for the passion is immediately in the definition of the property, and with that as middle term it is in the definition of the subject. Therefore the definition of the subject is not the middle term in a demonstration.

Against this, I can prove through that same argument that the definition of the passion is not the middle term in demonstration. For the minor premise would have a middle term through which it is demonstrated in a demonstration in which the definition of the passion is predicated of the subject, for the definition of the passion is more immediately in the definition of the subject than in the subject, just as the passion is *per se* more

²⁴*Topics* VIII 13, 162b34–37.

²⁵*Posterior Analytics* II 18, 99b11.

²⁶Apparently he has *Posterior Analytics* II 8, 93a28–b14 in mind. The passage seems to speak only of the definition of the passion, but at the end it remarks that if another middle term is needed it will be taken from the definitions of the remaining terms, and Aquinas (1970) II Lecture 7, 190–191, interprets this as a reference to the use of the definition of the subject in the most fundamental sort of demonstration.

immediately in the definition of the property than in the definition of the subject. By this argument, then, you suppose that the definition of the subject is not the middle term in demonstration, for then the minor premise would have a middle term by which it is demonstrated, but by the same argument I can argue for you that the definition of the passion is not the middle term in demonstration, for the minor premise would have a middle term by which it is demonstrated if it were.

Again, that the definition of the passion is not the middle term in the most powerful sort of demonstration is obvious from the two arguments given. Sometimes this is because one still asks why it is so when such a demonstration has been made, sometimes because the definition of the subject is as much the cause of the passion as it is of its definition, and even as much as it is of the whole that is in the definition.

Again, their argument is not cogent, since it does not follow that the minor premise has a middle term if the definition of the subject is the middle. And it must be replied to the proof of this that it is not cogent, since the passion is in the subject just as much as the definition of the passion is.

Again, passion and definition are in the subject immediately by the immediacy of a subject. In a similar way both are in the definition of the subject by the immediacy of cause. You say that the passion is immediately in the subject, and also in the definition of the subject. What, therefore, is the reason why the passion is more demonstrated of the subject through the definition of the subject, than the contrary? For there seems to be no reason.

Here it is replied that although the passion is immediately in the definition of the subject, and in the defined, still the biggest reason is because it is demonstrated of the subject through the definition of the subject, rather than the contrary. For the passion is in the definition of the subject by the immediacy of cause; but it is in the subject by the immediacy of the subject, not by the immediacy of cause, and therefore there is another cause, and there is a reason for the immediacy with which it is in the subject.

Against this, the definition and what is defined are the same in reality. Since, then, the passion is in the defined by the immediacy of the subject, the subject being considered as the proper susceptible of the passion, therefore it is in the definition as the proper susceptible.

Here it is replied that although the definition and the defined are the same in reality, still they are different according to reason, for the definition expresses explicitly the cause that is included in the defined implicitly. And therefore the definition is said to have the form of cause more than the subject is said to have the form of susceptible, and this cannot be prevented if that which is signified by the definition is not the subject of the passion. But more specifically, it is said to have the form of cause since the definition expresses the principles of the passion, which are the principles of the subject, for the passion is caused from the principles of the subject, and the definition expresses those principles.

<Opinion of the author>

Therefore it is replied to the question otherwise because of this. It is replied that the definition of the subject is the middle term in the most powerful sort of demonstration, and not the definition of the passion.

The first argument is that what is demonstrated is an accident, but not a common accident, for that sort of accident first follows on the singular, rather the accident that is demonstrated, which first follows the universal subject, since according to Aristotle "The principle of demonstration is said to be universal."²⁷ Therefore the subject will be universal, otherwise there would not be a demonstration from universals. Therefore the accident that is demonstrated, since it is not common, must be proper. But a proper accident is caused from the principles of the species. Knowledge of the accident, then, is caused by knowledge of the principles of the species. But the principles of the species are expressed through the definition of the species,

²⁷*Posterior Analytics* I 8, 75b21; 12, 77b36? These places assert the proposition, but not in those words, precisely.

or of the subject. Therefore knowledge of the passion is knowledge of the definition of the species that is its subject. The definition of the subject, then, is the middle term in the most powerful sort of demonstration.

In the second place, I show that whatever is the middle term in the most powerful sort of demonstration produces knowledge without qualification, so that it does not depend on another for its being or cognition. But the definition of the passion depends for its being and its cognition on the subject, and the definition of the passion is caused by the principles of the subject, therefore the definition of the passion cannot be the middle term in demonstration of the most powerful sort. And these are the arguments of the expositor Thomas.²⁸

But it must be understood that although the definition of the passion is not the middle term in the most powerful sort of demonstration, it is still the middle term in some demonstrations, as is clear from the reasoning of Aristotle, and for this reason Aristotle says “the formula of the first term is the middle term in demonstration,”²⁹ and both must be understood as the formula of the passion, as the expositor says. For the passion is in one way called the first term, in another way the last. Considering the order of the predicates according to which the passion is called first, that is more provable, in this way the passion is the first term since the passion is predicated in demonstration, and never made subject. But considering the order of nature, in that way the passion is the last term, since the passion is posterior to the subject according to nature, and also to the principles of the subject, since the passion follows the subject by reason of the principles of the subject.

<Reply to the First Argument> To the first of the arguments it is replied that it concludes that the definition of the passion is the middle term in demonstration, and this is granted, but it is not granted that it is the middle term in demonstration of the most powerful sort. The answer to the second authority is the same, because it has the same conclusion.

<Reply to the Second Argument> In reply to the next, that the middle and extreme terms are of the same genus, this is not in such a way that they are of the same logical genus, but the proposition is to be understood thus, that the middle and extreme terms are of the same principle of generation, since what causes the subject, inasmuch as it causes the subject, causes the principles of the subject in the same way, and it even causes the passion in consequence. For what causes man, in consequence causes the ability to laugh, and so they are from the same cause or generator.

<Reply to the Third Argument> In reply to the next, demonstration demonstrated from the definition of the subject is from immediate premisses. And in response to the proof that it is not, when it is said that the passion is in the subject through a middle term, since the definition of the passion is in the subject immediately and the passion is in the subject only through this definition, it is held that the passion is in the subject immediately just as much as the definition of the passion is, although the definition of the passion is still better known to be in it.

<Reply to the Fourth Argument> To the next, one replies in the same way. In reply to the argument against this, to the first it is replied that although demonstration does not arise through an intentional middle term, but a real one (and this is because of the intention of the cause, since the middle term has the formula of a cause),³⁰ still the definition of the subject can be the middle term in demonstration, by

²⁸Thomas Aquinas (190) II Lecture 1, 167–8.

²⁹*Posterior Analytics* II 17, 99a23–24.

³⁰The point is that since the middle term refers to the nature of the subject *as cause*, it refers to the reality of the subject (which has the causal powers in question), not to a mere intention referring to that nature.

demonstrating the passion of the subject because of some second intention added to it.³¹ Not, then, because of a reality absolutely, but because it expresses explicitly, and in a contracted manner,³² the reality of the subject, which is signified by the subject in a confused way, and therefore it is not begging the question, since it is argued through a distinct knowledge of the nature of something, which is in itself confused, and so is argued from the better known.

<Reply to the Fifth Argument> In reply to the next, that Aristotle in *Topics* VIII intends that one begs the question when one argues from a definition, if this is so, because the predicate is better known in the thing defined than in the definition, then one begs the question. But the proper passion, and similarly any essential predicate, is prior, and better known in the definition than in what is defined. And therefore there is no begging of the question in concluding the passion of the subject through the definition of the subject. Hence it must be understood that when a predicate that is better known to be in the defined is shown of the defined through a definition, then there is a sophistical locus. But if that predicate is better known to be in the definition, then there is a dialectical locus.

<Reply to the Sixth Argument> It is replied to the next principal argument, to the effect that demonstration is from what is primary, that when the definition of the subject is received, this is from premisses that are *per se* known, and it does not matter whether the subject is first or last in this respect.

Still, it can be argued further, that in demonstration the conclusion and the minor premise ought not to be *per se* in the same way, but if the passion is concluded of the subject *per se* through the definition of the subject, then the minor premise and the conclusion would be *per se* in the same way of saying something *per se*, namely, in the second way, for in whatever way the passion is in the subject *per se*, it seems that it is in the definition of the subject *per se* in the same way.

But this is replied, that even though the subject and the definition of the subject are the same in reality, still it is not necessary that the passion be in the definition of the subject and in the subject in the same way of saying something *per se*. For the definition expresses the cause, and therefore the minor premise, where the passion is predicated of the definition of the subject, is *per se* in the fourth way, for the definition of the subject is *per se* the efficient cause of the passion. But the conclusion, where the passion is predicated of the subject, is *per se* in the second way, and there the subject is received in the form of the material cause.

Against this, it might be rejoined that it is impossible that the same thing should be in reality the efficient and the material cause in respect of the same thing. For Aristotle says in *Physics* II that “Efficient and material do not coincide,”³³ but the definition of the subject and the subject are the same in reality, therefore it is impossible for the subject to have the form of material cause and the definition to have the form of the efficient cause.

Here it can be replied that the major premise only has truth in transmutable things, and this is Aristotle’s intention in *Physics* II. But the definition of the subject is not the efficient cause in respect of the passion through transmutation, but through a certain emanation. And in this way the same thing can be the

³¹That is, it demonstrates the passion of the subject only because of the second intention of causation joined to the definition of the subject in the major premise—only because the major premise is *per se* in the fourth way, expressing not mere inherence of the passion or its definition in the subject, but the causal activity of the subject in producing that inherence.

³²Contracted, that is, to a cause. It explicitly expresses the subject’s nature, but that is not what really makes the demonstration go. Rather, it is necessary to express that nature explicitly, and *then* to indicate that it causes the passion to inhere in the subject.

³³Aristotle, *Physics* II 7.

material and the efficient cause.

<Reply to the Seventh Argument> It is replied differently to the last argument, to the effect that the conclusion and the minor premise can be *per se* in the same way of saying something *per se*, just as this is *per se*, “Every triangle has three etc.,” and this in the same way, “An isosceles triangle has three etc.,” namely in the second way of saying something *per se*. Still, the first can demonstrate the second, and it is the same way in the matter at hand. The passion can be in the subject, and can be in the definition of the subject entirely in the second way of saying something *per se*, and still the passion can be demonstrated of the subject, because it is in the definition of the subject. For the subject is, just as much as the definition of the subject, the cause of the passion. Still, it is better known and simpler in the definition, and so in a different degree from the defined, for it is better known in the definition of the subject. Hence it is not absurd that in the same way of speaking *per se* there should be several degrees, of which some are better known, and some less known, etc.