

CHAPTER 8

PRINCIPLES OF KNOWLEDGE AND TRUTH, THEIR DEFENSE, THE ORDERING OF SCIENCES

BOOK IV

Lesson 5 *This science considers the first principles of demonstration.*

588. Here he answers another question raised in Book III (387): whether it belongs to this science to consider the first principles of demonstration...

590. ... The argument is as follows: **whatever principles pertain to all beings**, and not just to one class of beings distinct from the others, belong to the consideration of the philosopher. But the above-mentioned principles are of this kind. Therefore they belong to the consideration of the philosopher. He proves the minor premise as follows. Those principles which all sciences use pertain to being as being. But first principles are principles of this kind. Therefore they pertain to being as being.

591. The reason which he gives for saying that all sciences use these principles is that the subject genus of each science has being predicated of it. Now the particular sciences do not use the foregoing principles insofar as they are common principles, i.e., as extending to all beings, but insofar as they have need of them; that is, insofar as they extend to the things contained in the class of beings which constitutes the subject of a particular science about which it makes demonstrations. For example, the philosophy of nature uses them insofar as they extend to changeable beings and no further.

592. Then he proves what he had said by using an example. First, he introduces the proof; and second (593), he rejects a false notion held by some men ("However, some").

He accordingly says, first, that no one whose chief intention is to hand down scientific knowledge of some particular being has attempted to say anything about the truth or falsity of first principles. Neither the geometer nor the arithmetician does this even though they make the greatest use of these principles, as was said above (588). Hence it is evident that the investigation of these principles belongs to this science.

593. Here he rejects the false notion held by some men, and in regard to this he does two things. First, he rejects the false notion of those who occupied themselves with these principles even though they did not concern them. Second, (594), he rejects the false notion of those who wanted to deal with these principles in a different way than they should be dealt with.

He accordingly says, first, that even though none of the particular sciences ought to deal with the above-mentioned principles, nevertheless some of the natural philosophers have dealt with them; and they did so not without reason. For the ancients did not think that there was any substance besides the changeable corporeal substance with which the philosophy of nature is concerned. Hence they believed that they alone established the truth about the whole of nature and

therefore about being, and thus about first principles, which must be considered along with being. But this is false, because there is still a science which is superior to the science of nature. For nature itself, i.e., natural being, which has its own principle of motion, constitutes in itself one class of universal being.

But not every being is of this kind, because it has been proved in the *Physics*, Book VIII, that an unchangeable being exists. Now this unchangeable being is superior to and nobler than changeable being, with which the philosophy of nature is concerned. And since the consideration of common being belongs to that science which studies the primary kind of being, then the consideration of common being belongs to a different science than the philosophy of nature. And the consideration of common principles of this kind will also belong to this science. For the philosophy of nature is a part of philosophy but not the first part, which considers common being and those attributes which belong to being as being.

594. Then he rejects the other false notion, which concerns the way in which such principles should be treated. For some men investigated these principles with the aim of demonstrating them. And whatever they said about the truth of these principles, i.e., how they must be accepted as true by force of demonstration, or how the truth found in all these principles must be reached, they did through ignorance of, or lack of skill in, "analytics," which is that part of logic in which the art of demonstration is treated. For "they must know these principles in order to attain scientific knowledge"; i.e., every science acquired by demonstration depends on these principles.

But "those who are learning," i.e., the pupils who are being instructed in some science, must not seek these principles as something to be demonstrated. Or, according to another text, "those who have scientific knowledge must attain science from these principles"; i.e., those who attain knowledge by demonstration must come to know common principles of this kind and not ask that they be demonstrated to them.

595. He draws the conclusion primarily intended, namely, that it will be the function of the philosopher to consider every substance as such and also the first syllogistic principles. In order to make this clear it must be noted that self-evident propositions are those which are known as soon as their terms are known, as is stated in Book I of the *Posterior Analytics*. This occurs in the case of those propositions in which the predicate is given in the definition of the subject, or is the same as the subject. But it happens that one kind of proposition, even though it is self-evident in itself, is still not self-evident to all, i.e., to those who are ignorant of the definition of both the subject and the predicate. Hence Boethius says in *De Hebdomadibus* that there are some propositions which are self-evident to the

learned but not to all. Now those are self-evident to all whose terms are comprehended by all. And common principles are of this kind, because our knowledge proceeds from common principles to proper ones, as is said in Book I of the *Physics*. Hence those propositions which are composed of such common terms as whole and part (for example, every whole is greater than one of its parts) and of such terms as equal and unequal (for example, things equal to one and the same thing are equal to each other), constitute the first principles of demonstration. And the same is true of similar terms. Now since common terms of this kind belong to the consideration of the philosopher, then it follows that these principles also fall within his scope. But the philosopher does not establish the truth of these principles (~) by way of demonstration, but (+) by considering the meaning of their terms. For example, he considers what a whole is and what a part is; and the same applies to the rest. And when the meaning of these terms becomes known, it follows that the truth of the above-mentioned principles becomes evident.

Lesson 6 *This science considers particularly the very first principle, that of contradiction.*

596. He shows here that it is the first philosopher who is chiefly concerned with the first principle of demonstration; and in regard to this he does two things. First, he shows that it is the business of the first philosopher to consider this principle; and second (611), he begins to examine this principle.

In regard to the first he does three things.. First, he shows that it is the office of this science to consider the first principle of demonstration. Second (597), he indicates what this principle is. Third (606), he rejects certain errors regarding this same principle.

In regard to the first point he uses the following argument. In every class of things that man is best informed who knows the most certain principles, because the certitude of knowing depends on the certitude of principles. But the first philosopher is best informed and most certain in his knowledge; for this was one of the conditions of wisdom, as was made clear in the prologue of this work (35), namely, that he who knows the causes of things has the most certain knowledge. Hence the philosopher ought to consider **the most certain and firmest principles of beings**, which he considers as the subject-genus proper to himself.

597. Then he shows what the firmest or most certain principle is; and in regard to this he does two things. First, he states the conditions for the most certain principle; and then (600) he shows how they fit a single principle (“And let us”).

He accordingly gives, first, the three conditions for the firmest principle. (1) The first is that **no one can make a mistake** or be in error regarding it. And this is evident because, since men make mistakes only about those things which they do not know, then that principle about which no one can be mistaken must be the one which is best known.

598. (2) The second condition is that it must “not be hypothetical,” i.e., it must not be held as a supposition, as

those things which are maintained through some kind of common agreement. Hence another translation reads “And they should not hold a subordinate place,” i.e., those principles which are most certain should not be made dependent on anything else. And this is true, because whatever is necessary for understanding anything at all about being “is not hypothetical,” i.e., it is not a supposition but must be **self-evident**. And this is true because whatever is necessary for understanding anything at all must be known by anyone who knows other things.

599. (3) The third condition is that it is not acquired (~) by demonstration or by any similar method, but (+) it comes in a sense by nature to the one having it inasmuch as it is **naturally known** and not acquired. For first principles become known through the natural light of the agent intellect, and they are not acquired by any process of reasoning but by having their terms become known. This comes about by reason of the fact that memory is derived from sensible things, experience from memory, and knowledge of those terms from experience. And when they are known, common propositions of this kind, which are the principles of the arts and sciences, become known.

Hence it is evident that the most certain or firmest principle should be such that there can be no error regarding it; that it is not hypothetical; and that it comes naturally to the one having it.

600. Then he indicates the principle to which the above definition applies. He says that it applies to this principle, as the one which is firmest: it is impossible for the same attribute both to belong and not belong to the same subject at the same time. And it is necessary to add “in the same respect”; and any other qualifications that have to be given regarding this principle “to meet dialectical difficulties” must be laid down, since without these qualifications there would seem to be a contradiction when there is none.

601. That this principle must meet the conditions given above he shows as follows: (1) It is impossible for anyone to think, or hold as an opinion, that the same thing both is and is not at the same time, although some believe that Heraclitus was of this opinion. But while it is true that Heraclitus spoke in this way, he could not think that this is true; for it is not necessary that everything that a person says he should mentally an opinion.

602. But if one were to say that it is possible for someone to think that the same thing both is and is not at the same time, this absurd consequence follows: contraries could belong to the same subject at the same time. And “let us suppose that the same things are established,” or shown, here as in the usual proposition established in our logical treatises. For it was shown at the end of the *Peri hermeneias* I that contrary opinions are not those which have to do with contraries but those which have to do with contradictories, properly speaking. For when one person thinks that Socrates is white and another thinks that he is black, these are not contrary opinions in the primary and proper sense; but contrary opinions are had when one person thinks that Socrates is white and another thinks that he is not white.

603. Therefore, if someone were to think that two contradictories are true at the same time by thinking that the same thing both is and is not at the same time, he will have contrary opinions at the same time; and thus contraries will belong to the same thing at the same time. But this is impossible. It is impossible, then, for anyone to be mistaken in his own mind about these things and to think that the same thing both is and is not at the same time. And it is for this reason that all demonstrations reduce their propositions to this proposition as the ultimate opinion common to all; for this proposition is by nature the starting point and axiom of all axioms.

604. (2 & 3) The other two conditions are therefore evident, because, insofar as those making demonstrations reduce all their arguments to this principle as the ultimate one by referring them to it, evidently this principle is not based on an assumption. Indeed, insofar as it is by nature a starting point, it clearly comes unsought to the one having it and is not acquired by his own efforts.

605. Now for the purpose of making this evident it must be noted that, since the intellect has two operations, one by which it knows quiddities, which is called the understanding of indivisibles, and another by which it combines and separates, there is something first in both operations. In the first operation the first thing that the intellect conceives is being, and in this operation nothing else can be conceived unless being is understood.

And because this principle—it is impossible for a thing both to be and not be at the same time—depends on the understanding of being (just as the principle, every whole is greater than one of its parts, depends on the understanding of whole and part), then this principle is by nature also the first in the second operation of the intellect, i.e., in the act of combining and separating. And no one can understand anything by this intellectual operation unless this principle is understood. For just as a whole and its parts are understood only by understanding being, in a similar way the principle that every whole is greater than one of its parts is understood only if the firmest principle is understood.

606. Then he shows how **some men erred** regarding this principle; and in regard to this he does two things. First, he touches on the error of **those who rejected** the foregoing principle; and second (607) he deals with those who wished to demonstrate it (“But some”).

He accordingly says that some men as was stated above about Heraclitus (601), said that the same thing can both be and not be at the same time, and that it is possible to hold this opinion; and many of the philosophers of nature adopt this position, as will be made clear below (665). For our part, however, we now take as evident that the principle in

question is true, i.e., the principle that the same thing cannot both be and not be; but from its truth we show that it is most certain. For from the fact that a thing cannot both be and not be it follows that contraries cannot belong to the same subject, as will be said below (663). And from the fact that contraries cannot belong to a subject at the same time it follows that a man cannot have contrary opinions and, consequently, that he cannot think that contradictories are true, as has been shown (603).

607. Then he mentions the error of certain men **who wished to demonstrate** the above-mentioned principle; and in regard to this he does two things. First, he shows that it cannot be demonstrated in the strict sense; and second (608), that it can be demonstrated in a way (“But even”).

Thus he says, first, that certain men deem it fitting, i.e., they wish, to demonstrate this principle; and they do this “through want of education,” i.e., through lack of learning or instruction. For there is want of education when a man does not know what to seek demonstration for and what not to; for not all things can be demonstrated. For if all things were demonstrable, then, since a thing is not demonstrated through itself but through something else, demonstrations would either be circular (although this cannot be true, because then the same thing would be both better known and less well known, as is clear in Book I of the *Posterior Analytics*, or they would have to proceed to infinity. But if there were an infinite regress in demonstrations, demonstration would be impossible, because the conclusion of any demonstration is made certain by reducing it to the first principle of demonstration. But this would not be the case if demonstration proceeded to infinity in an upward direction. It is clear, then, that not all things are demonstrable. And if some things are not demonstrable, these men cannot say that any principle is more indemonstrable than the above-mentioned one.

608. Here he shows that the above-mentioned principle can be demonstrated in a certain respect. He says that it may be demonstrated by **disproof**. In Greek the word is ἐλεγκτικῶς, which is better translated as by refutation, for an ἔλεγκτος is a syllogism that establishes the contradictory of a proposition, and so is introduced to refute some false position. And on these grounds it can be shown that it is impossible for the same thing both to be and not be.

But this kind of argument can be employed only if the one who denies that principle because of difficulties “says something,” i.e., if he signifies something by a word. But if he says nothing, it is ridiculous to look for a reason against one who does not make use of reason in speaking; for in this dispute anyone who signifies nothing will be like a plant, for even brute animals signify something by such signs.

The division of the sciences

Commentary on the Nicomachean Ethics, Book 1, lect. 1

As the Philosopher says in the beginning of the *Metaphysics*, it belongs to the wise man to put things in order, this is because wisdom is the highest perfection of reason, whose business it is to know order. For, although the sense powers know some things

absolutely, it belongs to the intellect or reason alone to know to order of one thing to another.

Now there is a twofold order in things. One is the order of the parts of some whole or some multitude to each other, for example, the arrangement of the parts of a house among themselves. The other is the order of things to an end. And this order is more primary than the former one; for, as the Philosopher says in the *Metaphysics*, the order of the parts of an army among themselves depends on the order of the whole army to its leader.

Now order is related to reason in four different ways. (1) There is an order that reason does not make but simply examines, For example, the order or natural things. (2) There is another order that reason by thinking produces in its own activity; for example, when it establishes order among its concepts and the signs of its concepts, for they are meaningful sounds. (3) The third order is that which reason by its thinking produces in the acts of the will. And (4) the fourth order is that which reason by its thinking maker in the exterior things that it produces, as in the case of a box or a house.

Now, because rational thinking is perfected through a scientific habit, there are different sciences corresponding to the different orders that it is the office of reason to consider. (1) The *philosophy of nature* is concerned with the order of things that human reason examines but does not make, so that we also include both *mathematics* and *metaphysics* under the philosophy of nature. (2) The order that reason by its act of thinking produces in its own act pertains to *rational philosophy*; which is concerned with the order of the parts of discourse to each other and the order of principles to conclusions. (3) The order of voluntary actions belongs to the consideration of *moral philosophy*. (4) And the order that reason by its thinking produces in external things, made through human reason, pertains to the *mechanical arts*.

COMMENTARY ON THE *DE TRINITATE* OF BOETHIUS

QUESTION FIVE

The Division of Speculative Science

There are two questions here. The first concerns the division of speculative science which the text proposes, the second concerns the methods it attributes to the parts of speculative science. With regard to the first question there are four points of inquiry:

1. Is speculative science appropriately divided into these three parts: natural, mathematical, and divine?
2. Does natural philosophy treat of what exists in motion and matter?
3. Does mathematics treat, without motion and matter, of what exists in matter?
4. Does divine science treat of what exists without matter and motion?

ARTICLE ONE

Is Speculative Science Appropriately Divided into these Three Parts: Natural, Mathematical, and Divine?

We proceed as follows to the first article:

It seems that speculative science is not appropriately divided into these three parts, for:

1. The parts of speculative science are the habits that perfect the contemplative part of the soul. But the Philosopher says in the *Ethics* that the scientific part of the soul, which is its contemplative part, is perfected by three habits, namely, wisdom, science, and understanding. Therefore these are the three divisions of speculative science, not those proposed in the text.
2. Again, Augustine says that rational philosophy, or logic, is included under contemplative or speculative philosophy. Consequently, since no mention is made of it, it seems the division is inadequate.
3. Again, philosophy is commonly divided into seven liberal arts, which include neither natural nor divine science, but only rational and mathematical science. Hence natural and divine should not be called parts of speculative science.
4. Again, medicine seems to be the most practical science, and yet it is said to contain a speculative part and a practical part. By the same token, therefore, all the other practical sciences have a speculative part. Consequently, even though it is a practical science, ethics or moral science should be mentioned in this division because of its speculative part.
5. Again, the science of medicine is a branch of physics, and similarly certain other arts called “mechanical,” like the science of agriculture, alchemy, and others of the same sort. Therefore, since these sciences are practical, it seems that natural science should not be included without qualification under speculative science.
6. Again, a whole should not be contra-distinguished from its part. But divine science seems to be a whole in relation to physics

mathematics, since their subjects are parts of its subject of divine science or first philosophy is being; and changeable substance, which the natural scientist considers, and also quantity, which the mathematician considers, are parts of being. This is clear in the *Metaphysics*. Therefore, divine science should not be contra-distinguished from natural science and mathematics.

7. Again, as it is said in the *De Anima*, sciences are divided in the same manner as things. But philosophy concerns being, for it is knowledge of being, as Dionysius says. Now being is primarily divided into potency and act, one and many, substance and accident. So it seems that the parts of philosophy ought to be distinguished by such divisions of being.

8. Again, there are many other divisions of beings studied by sciences more essential than the divisions into mobile and immobile and into abstract and non-abstract; for example, the divisions into corporeal and incorporeal and into living and non-living, and the like. Therefore differences of this sort should be the basis for the division of the parts of philosophy rather than those mentioned here.

9. Again, that science on which others depend must be prior to them. Now all the other sciences depend on divine science because it is its business to prove their principles. Therefore Boethius should have placed divine science before the others.

10. Again, mathematics should be studied before natural science, for the young can easily learn mathematics, but only the more advanced natural science, as is said in the *Ethics*. This is why the ancients are said to have observed the following order in learning the sciences: first logic, then mathematics, then natural science, after that moral science, and finally men studied divine science. Therefore, Boethius should have placed mathematics before natural science. And so it seems that this division is unsuitable.

On the contrary, the Philosopher proves the appropriateness of this division in the *Metaphysics*, where he says, “There will be three philosophical and theoretical sciences, mathematics, physics, and theology. Moreover, in the *Physics* three methods of the sciences are proposed which indeed seem to belong to these three. Moreover, Ptolemy also uses this division in the beginning of his *Almagest*.”

Reply: The theoretical or speculative intellect is properly distinguished from the operative or practical intellect by the fact that the **speculative** intellect has for its end the truth that it contemplates, while the **practical** intellect directs the truth under consideration to activity as to an end. So the Philosopher says in the *De Anima* that they differ from each other by their ends; and in the *Metaphysics* he states that “the end of speculative knowledge is truth, but the end of practical knowledge is action.” Now, since matter must be proportionate to the end, the subject-matter of the practical sciences must be things that can be made or done by us, so that we can direct the knowledge of them to activity as to an end.

On the other hand, the subject-matter of the **speculative** sciences must be things that cannot be made or done by us, so that our knowledge of them cannot be directed to activity as to an end. And the speculative sciences must differ according to the distinctions among these things. Now we must realize that when habits or powers are differentiated by their objects they do not differ according to just any distinction among these objects, but according to the distinctions that are essential to the objects as objects. For example, it is incidental to a sense object as such whether it be an animal or a plant. Accordingly, the distinction between the senses is not based upon this difference but rather upon the difference between color and sound. So the speculative sciences must be divided according to differences between objects of speculation, considered precisely as such. Now an object of this kind – namely, an object of a speculative power – derives one characteristic from the side of the power of intellect and another from the side of the habit of science that perfects the intellect. From the side of the **intellect** it has the fact that it is immaterial, because the intellect itself is immaterial. From the side of habit of **science** it has the fact that it is necessary, for science treats of necessary matters, as is shown in the *Posterior Analytics*. Now everything that is necessary is, as such, immobile, because everything changeable is, as such, able to be or not to be, either absolutely or in a certain respect, as is said in the *Metaphysics*. Consequently, separation from matter and motion, or connection with them, essentially belongs to an object of speculation, which is the object of speculative science. As a result, the speculative sciences are differentiated according to their degree of separation from matter and motion.

(1) Now there are some objects of speculation that **depend on matter for their being**, for they can exist only in matter. And these are subdivided. (a) Some depend on matter both for their being (+) **and for their being understood**, as do those things whose definition contains sensible matter and which, as a consequence, cannot be understood without sensible matter. For example, it is necessary to include flesh and bones in the definition of man. It is things of this sort that physics or *natural science* studies. (b) On the other hand, there are some things that, although dependent upon matter for their being, do not depend upon it (~) **for their being understood**, because sensible matter is not included in their definitions. This is the case with lines and numbers – the kind of objects with which *mathematics* deals. (2) There are still other objects of speculative knowledge that do not depend upon matter (~) for their being, because they can exist without matter; (a) either they never exist in matter, as in the case of God and the angels, or (b) they exist in matter in some instances and not in others, as in the case of substance, quality, being, potency, act, one and many, and the like. The science that treats of all these is *theology or divine science*, which is so called because its principal object is God. By another name it is called *metaphysics*; that is to say, “beyond physics”, because it ought to be learned by us after physics; for we have to proceed from sensible things to those that are non-sensible. It is also called *first philosophy*, inasmuch as all the other sciences, receiving their principles from it, come after it. Now there can be nothing that depends upon matter for its being understood but not for its being, because by it; very nature the intellect is immaterial. So there is no fourth kind of philosophy besides the ones mentioned.

Reply to the Opposing Arguments:

Reply to 1. In the *Ethics* the Philosopher considers the intellectual habits insofar as they are intellectual virtues. Now they are called virtues because they perfect the intellect in its operation; for “virtue makes its possessor good and renders his work good.” So he distinguishes between virtues of this sort in as much as speculative habits perfect the intellect in different ways. In one way the speculative part of the soul is perfected by understanding, which is the habit of principles, through which some things become known of themselves. In another way it is perfected by a habit through which conclusions demonstrated from these principles are known, whether the demonstration proceeds from inferior causes, as in science, or from the highest causes, as in wisdom. But when sciences are differentiated insofar as they are habits, they must be distinguished according to their objects, that is, according to the things of which the sciences treat. And it is in this way that both here and in the *Metaphysics* speculative philosophy is distinguished into three parts.

Reply to 2. As is evident in the beginning of the *Metaphysics*, the speculative sciences concern things the knowledge of which is sought for their own sake. However, we do not seek to know the things studied by logic for themselves, but as a help to the other sciences. So logic is not included under speculative philosophy as a principal part but as something brought under speculative philosophy as furnishing speculative thought with its instruments, namely, syllogisms, definitions, and the like, which we need in the speculative sciences. Thus, according to Boethius, logic is not so much a science as the instrument of science.

Reply to 3. The seven liberal arts do not adequately divide theoretical philosophy; but, as Hugh of St. Victor says, seven arts are grouped together (leaving out certain other ones), because those who wanted to learn philosophy were first instructed in them. And the reason why they are divided into the trivium and quadrivium is that “they are as it were paths (*viae*) introducing the quick mind to the secrets of philosophy.” This is also in harmony with the Philosopher’s statement in the *Metaphysics* that we must investigate the method of scientific thinking before the sciences themselves. And the Commentator says in the same place that before all the other sciences a person should learn logic, which teaches the method of all the sciences; and the trivium concerns logic. The Philosopher also says in the *Ethics* that the young can know mathematics but not physics, because it requires experience. So we are given to understand that after logic we should learn mathematics, which the quadrivium concerns. These, then, are like paths leading the mind to the other philosophical disciplines. We may add that among the other sciences these are called arts because they involve not only knowledge but also a work that is directly a product of reason itself; for example, producing a composition, syllogism or discourse, numbering, measuring, composing melodies, and reckoning the course of the stars. Other sciences (such as divine and natural science) either do not involve a work produced but only knowledge, and so we cannot call them arts, because, as the *Metaphysics* says, art is “productive reason”; or they involve some bodily activity, as in the case of medicine, alchemy, and other sciences of this kind. These latter, then, cannot be called liberal arts because such activity belongs to man on the side of his nature in which he is not free, namely, on the side of his body. And although moral science is directed to action, still that action is not the act of the science but rather of virtue, as is clear in the *Ethics*. So we cannot call moral science an art; but rather in these actions virtue takes the place of art. Thus, as Augustine says, the ancients defined virtue as the art of noble and well-ordered living.

Reply to 4. As Avicenna says, the distinction between theoretical and practical is not the same when philosophy is divided into theoretical and practical, when the arts are divided into theoretical and practical, and when medicine is so divided. For when we distinguish philosophy or the arts into theoretical and practical we must do so on the basis of their end, calling that theoretical which is directed solely to knowledge of the truth, and that practical which is directed to operation. However, there is this difference when we distinguish the whole of philosophy and the arts on this basis. We divide philosophy with respect to the final end or happiness, to which the whole of human life is directed. For, as Augustine says, following Varro, “There is no other reason for a man philosophizing except to be happy.” And since the philosophers teach that there is a twofold happiness, one contemplative and the other active, as is clear in the *Ethics*, they have accordingly also distinguished between two parts of philosophy, calling moral philosophy practical and natural and rational philosophy theoretical. But when they call some arts speculative and some practical, this is on the basis of some *special* ends of those arts; as when we say that agriculture is a practical art but dialectic is theoretical. However, when we divide medicine into theoretical and practical, the division is not on the basis of the end. For on that basis the whole of medicine is practical, since it is directed to practice. But the above division is made on the basis of whether what is studied in medicine is proximate to, or remote from practice. Thus we call that part of medicine practical which teaches the method of healing; for instance, that these particular medicines should be given for these abscesses. On the other hand, we call that part theoretical which teaches the principles directing a man in his practice, although not immediately; for instance, that there are three virtues, and that there are so many kinds of fever. Consequently, if we call some part of a practical science theoretical, we should not on that account place that part under speculative philosophy.

Reply to 5. One science is contained under another in two ways: in one way, as its part, because its subject is part of the subject of that other science, as plant is part of natural body. So the science of plants is also contained under natural science as one of its parts. In another way, one science is contained under another as subalternated to it. This occurs when in a higher science there is given the reason for what a lower science knows only as a fact. This is how music is contained under arithmetic. Medicine, therefore, is not contained under physics as a part, for the subject of medicine is not part of the subject of natural science from the point of view from which it is the subject of medicine. For although the curable body is a natural body, it is not the subject of medicine insofar as it is curable by nature, but insofar as it is curable by art. But because art is nature’s handmaid in healing (in which art too plays a part, for health is brought about through the power of nature with the assistance of art), it follows that the

reason for the practices used in the art must be based on the properties of natural things. So medicine is subalternated to physics, and for the same reason so too are alchemy, the science of agriculture, and all sciences of this sort. We conclude, then, that physics in itself and in all its parts is speculative, although some practical sciences are subalternated to it.

Reply to 6. Although the subjects of the other sciences are parts of being, which is the subject of metaphysics, the other sciences are not necessarily parts of metaphysics. For each science treats of one part of being in a special way distinct from that in which metaphysics treats of being. So its subject is not properly speaking a part of the subject of metaphysics, for it is not a part of being from the point of view from which being is the subject of metaphysics; from this viewpoint it is a special science distinct from the others. However, the science treating of potency, or that treating of act or unity or anything of this sort, could be called a part of metaphysics because these are considered in the same manner as being, which is the subject of metaphysics.

Reply to 7. These parts of being require the same manner of consideration as being-in-general (*ens commune*) because they too are independent of matter. For this reason the science dealing with them is not distinct from the science of being-in-general.

Reply to 8. The other diversities of things mentioned in the objection do not differentiate those things essentially as objects of knowledge. So the sciences are not distinguished according to them.

Reply to 9. Although divine science is by nature the first of all the sciences, with respect to us the other sciences come before it. For as Avicenna says, the position of this science is that it be learned after the natural sciences, which explain many things used by metaphysics, such as generation, corruption, motion, and the like. It should also be learned after mathematics, because to know the separate substances metaphysics has to know the number and disposition of the heavenly spheres, and this is impossible without astronomy, which presupposes the whole of mathematics. Other sciences, such as music, ethics, and the like, contribute to its fullness of perfection. Nor is there necessarily a vicious circle because metaphysics presupposes conclusions proved in the other sciences while it itself proves their principles. For the principles that another science (such as natural philosophy) takes from first philosophy do not prove the points which the first philosopher takes from the natural philosopher, but they are proved through other self-evident principles. Similarly the first philosopher does not prove the principles he gives the natural philosopher by principles he receives from him, but by other self-evident principles. So there is no vicious circle in their definitions. Moreover, the sensible effects on which the demonstrations of natural science are based are more evident to us in the beginning. But when we come to know the first causes through them, these causes will reveal to us the reason for the effects, from which they were proved by a demonstration *quia*. In this way natural science also contributes something to divine science, and nevertheless it is divine science that explains its principles. That is why Boethius places divine science last, because it is the last relative to us.

Reply to 10. Although we should learn natural science after mathematics because the general proofs of natural science require experience and time, still, since natural things fall under the senses, they are by nature better known than the mathematical entities abstracted from sensible matter.

ARTICLE TWO

Does Natural Philosophy Treat of What Exists in Motion and Matter?

Reply: It was the difficulty of this problem that drove Plato to posit Ideas. Believing that all sensible things were always in flux, as Cratylus and Heraclitus taught, he thought there can be no science concerning them, as the Philosopher says in the *Metaphysics*. So he claimed that there were substances separated from the sense world, which might serve as the objects of science and of definitions. He made this mistake because he failed to distinguish what is essential from what is accidental. For it happens that by accident even the wise often fall into error, as is said in the *Sophistic Refutations*. Now, as is shown in the *Metaphysics*, we find in a sensible substance both the whole or the composite itself, and also its nature (*ratio*) or form; and it is the composite that is essentially generated and corrupted and not the nature or form, except accidentally. As the *Metaphysics* says, "It is not house that is made, but *this house*."

Now anything can be thought of without all the items that are not essentially related to it. Consequently, forms and natures, though belonging to things existing in motion, are without motion when they are considered in themselves; and so they can be the objects of sciences and of definitions, as the Philosopher says. As he proves, the sciences of sensible reality are not based upon the knowledge of certain substances separated from the sense world.

Natures of this kind, which are the objects of the sciences of real beings, are thought of without motion; and so they must be thought of without those conditions by reason of which motion belongs to mobile things. Now, because every motion is measured by time, and the primary motion is local motion (for without it there is no other motion), a thing must be subject to motion inasmuch as it exists here and now; and it exists under these conditions insofar as it is individuated by matter having determinate dimensions. Consequently, natures of this kind, which make possible sciences of things subject to motion, must be thought of without determinate matter and everything following upon such matter; but not without indeterminate matter, because on its notion depends the notion of form that determines matter to itself. Thus the nature of man, which his definition signifies and which is the object of science, is considered without *this* flesh and *these* bones, but not absolutely without flesh and bones. And because individuals

include determinate matter in their nature, whereas universals include common matter, as is said in the *Metaphysics*, the above-mentioned abstraction is not said to be the abstraction of form from matter absolutely, but the abstraction of the universal from the particular.

Natures of this sort, thus abstracted, can be considered in two ways. First, in themselves; and then they are thought of without motion and determinate matter. This happens to them only by reason of the being they have in the intellect. Second, they can be viewed in relation to the things of which they are the natures; and these things exist with matter and motion. Thus they are principles by which we know these things, for everything is known through its form. Consequently, in natural science we know mutable and material things existing outside the soul through natures of this kind; that is to say, natures that are immobile and considered without particular matter.

ARTICLE THREE

Does Mathematics Treat, Without Motion and Matter, of What Exists in Matter?

Reply: In order to throw light on this question we must understand how the intellect in its operation is able to abstract.

We must realize that, as the Philosopher says, the intellect has two operations, one called the “understanding of indivisibles,” by which it knows *what* a thing is, and another by which it joins and divides, that is to say, by forming affirmative and negative statements. Now these two operations correspond to two principles in things, The first operation concerns the nature itself of a thing, in virtue of which the object known holds a certain rank among beings, whether it be a complete thing, like some whole, or an incomplete thing, like a part or an accident. The second operation has to do with a thing’s being (*esse*), which results from the union of the principles of a thing in composite substances, or, as in the case of simple substances, accompanies the thing’s simple nature.

Now, since the truth of the intellect results from its conformity with reality, it is clear that in this second operation the intellect cannot truthfully abstract what is united in reality, because the abstraction would signify a separation with regard to the very being of the thing. For example, if I abstract man from whiteness by saying, “Man is not white,” I signify that there is a separation in reality. So if in reality man and whiteness are not separate, the intellect will be false. Through this operation, then, the intellect can truthfully abstract only those things that are separate in reality, as when we say, “Man is not an ass.”

Through the first operation, however, we can abstract things that are not separate in reality; not all, it is true, but some. For, since everything is intelligible insofar as it is in act, as the *Metaphysics* says, we must understand the nature itself or the quiddity of a thing either inasmuch as it is a certain act (as happens in the case of forms themselves and simple substances); or through that which is its act (as we know composite substances through their forms); or through that which takes the place of act in it (as we know prime matter through its relation to form, and a vacuum through the absence of a body in place). And it is from this that each nature is given its definition.

Therefore, when the nature itself is related to, and depends on something else, with regard to that which forms the definition (*ratio*) of the nature, and through which the nature itself is understood, clearly we cannot know the nature without that other thing. This is true whether they are connected as a part is united to a whole (as we cannot know *foot* without knowing *animal*, because that whereby *foot* has the nature of *foot* depends on that whereby *animal* is *animal*); or whether they are connected as form is united to matter, or as one part to another part, or as accident to subject (as we cannot know *snub* without *nose*); or even whether they are separated in reality (as we cannot know *father* without knowing *son*, although these relationships are found in different things). But if one thing does not depend on another with regard to that which forms the definition of the nature, then the intellect can abstract the one from the other so as to know it without the other. This is true not only if they are separated in reality, like *man* and *stone*, but also if they are united in reality, whether they are joined as part and whole (as *letter* can be understood without *syllable*, but not vice versa, and *animal* without *foot*, but not conversely); or even if they are joined as form is united to matter and accident to subject (as *whiteness* can be understood without *man* and vice versa).

Accordingly, through its various operations the intellect distinguishes one thing from another in different ways. Through the operation by which it composes and divides, it distinguishes one thing from another by understanding that the one does not exist in the other. Through the operation, however, by which it understands what a thing is, it distinguishes one thing from another by knowing what one is without knowing anything of the other, either that it is united to it or separated from it. So this distinction is not properly called separation, but only the first. It is correctly called abstraction, but only when the objects, one of which is known without the other, are one in reality. For if we consider animal without considering stone, we do not say that we abstract animal from stone.

It follows that since, properly speaking, we can only abstract objects united in existence, there are two sorts of abstraction corresponding to the two modes of union mentioned above, namely, the union of part and whole, and the union of form and matter. The first is that in which we abstract form from matter, and the second is that in which we abstract a whole from its parts.

Now a form can be abstracted from matter if the essential nature of the form does not depend on that particular kind of matter; but the intellect cannot abstract form from the kind of matter upon which the form depends according to its essential nature.

Consequently, because all accidents are related to the underlying substance as form to matter, and because it is the nature of every accident to depend upon substance, no form of this kind can be separated from substance. But accidents befall substance in a definite order. Quantity comes to it first, then quality, after that passivities (*passiones*) and actions. So quantity can be thought of in substance before the sensible qualities (because of which matter is called sensible) are considered in it. Quantity, then, according to its essential nature does not depend upon sensible matter but only upon intelligible matter. For, after accidents have been abstracted, substance is intelligible only to the intellect, because it is beyond the sense powers to comprehend substance. And abstract objects of this kind are the concern of mathematics; it treats of quantities and the properties of quantity, such as figures and the like.

Moreover, we cannot abstract a whole from just any parts. For there are some parts upon which the nature of the whole depends, namely, when the being of a particular whole consists in the composition of particular parts. It is in this way that a syllable is related to letters and a mixed body to the elements. Parts of this sort, which are necessary for understanding the whole because they enter into its definition, are called parts of the species and of the form. There are some parts, however, that are accidental to the whole as such. The semicircle, for instance, is related to the circle in this way, for it is accidental to a circle that it be divided into two or more equal or unequal parts. But it is not accidental to a triangle that three lines are designated in it, for because of this a triangle is a triangle. Similarly, it is an essential characteristic of man that there be found in him a rational soul and a body composed of the four elements. So man cannot be understood without these parts and they must be included in his definition; so they are parts of his species and form. But finger, foot, and hand, and other parts of this kind are outside the definition of man; and thus the essential nature of man does not depend on them and he can be understood without them. For whether or not he has feet, as long as he is constituted of a rational soul and a body composed of the elements in the proper mixture required by this sort of form, he will be a man. These parts are called parts of matter: they are not included in the definition of the whole, but rather the converse is true. This is how all determinate (*signatae*) parts are related to man; for instance, *this* soul, *this* body, *this* nail, *this* bone, etc. These indeed are parts of the essence of Socrates and Plato, but not of man precisely as man; and therefore the intellect can abstract man from these parts. And this is the abstraction of the universal from the particular.

So there are two abstractions of the intellect. One corresponds to the union of form and matter or accident and subject. This is the abstraction of form from sensible matter. The other corresponds to the union of whole and part; and to this corresponds the abstraction of the universal from the particular. This is the abstraction of a whole, in which we consider a nature absolutely, according to its essential character, in independence of all parts that do not belong to the species but are accidental parts. But we do not find abstractions opposed to these, by which a part is abstracted from a whole by the intellect if it is one of the parts of matter in whose definition the whole is included, or it can even exist without the whole if it is one of the parts of the species, for instance, a line without a triangle, a letter without a syllable, or an element without a mixed body. But in the case of things that can exist separately, separation rather than abstraction obtains. Similarly, when we say form is abstracted from matter, we do not mean substantial form, because substantial form and the matter correlative to it are interdependent, so that one is not intelligible without the other, because the appropriate act is in its appropriate matter. Rather, we mean the accidental forms of quantity and figure, from which indeed sensible matter cannot be abstracted by the intellect, because sensible qualities cannot be understood unless quantity is presupposed, as is clear in the case of surface and color. And neither can we understand something to be the subject of motion unless we understand it to possess quantity. Substance, however, which is the intelligible matter of quantity, can exist without quantity. Consequently, the consideration of substance without quantity belongs to the order of separation rather than to that of abstraction.

We conclude that there are three kinds of distinction in the operation of the intellect. There is one through the operation of the intellect joining and dividing which is properly called separation and this belongs to divine science or metaphysics. There is another through the operation by which the quiddities of things are conceived which is the abstraction of form from sensible matter, and this belongs to mathematics. And there is a third through the same operation which is the abstraction of a universal from a particular, and this belongs to physics and to all the sciences in general, because science disregards accidental features and treats of necessary matters. And because certain men (for example, the Pythagoreans and the Platonists) did not understand the difference between the last two kinds of distinction and the first, they fell into error, asserting that the objects of mathematics and universals exist separate from sensible things.

ARTICLE FOUR

Does Divine Science Treat of What Exists Without Matter and Motion?

We proceed as follows to the fourth article:

It seems that divine science does not treat of things separate from motion and matter, for:

1. Divine science seems to be especially concerned with God. Now we can come to know God only by way of his visible effects, which are created in matter and motion, as it is said in the Epistle to the Romans, "The invisible things of him, from the creation of the world, are clearly seen, being understood by the things that are made." Therefore, divine science does not abstract from matter and motion.

2. Again, that to which motion in some way belongs is not entirely separate from motion and matter. But motion in some way belongs to God. Thus it is said in *Wisdom* that the Spirit of Wisdom is “mobile” and “more mobile than all mobile things.” And Augustine says that God moves himself without time and place. Plato also asserted that the First Mover moves itself. Therefore divine science, which treats of God, is not entirely separate from motion.

3. Again, divine science must treat not only of God but also of angels. But angels change both with regard to choice, because they became bad after having been good, and also with regard to place, as is evident in the case of those who are sent as messengers. So the objects of divine science are not entirely separated from motion.

4. Again, as the Commentator seems to say in the beginning of the *Physics*, every being is either pure matter, or pure form, or a composite of matter and form. But an angel is not a pure form, because then he would be pure act, which is true of God alone. Neither is he pure matter. So he is a composite of matter and form. Therefore divine science does not abstract from matter.

5. Again, divine science, the third part of speculative philosophy, is the same as metaphysics, whose subject is being, and especially substantial being. This is clear in the *Metaphysics*. But being and substance do not abstract from matter; otherwise there would be no material being. So divine science does not abstract from matter.

6. Again, according to the Philosopher, it is the business of a science to consider not only a subject but also the divisions and attributes of that subject. Now, as we have said, being is the subject of divine science. Therefore it is the business of this science to treat of all beings. But matter and motion are beings. Therefore they come under the consideration of metaphysics, and so divine science does not abstract from them.

7. Again, divine science demonstrates by means of three causes: efficient, formal, and final, as the Commentator says, But we cannot consider an efficient cause without taking motion into account; and the same thing is true of a final cause, as the *Metaphysics* says. Thus, because the objects of mathematics are immobile, there are no demonstrations through these causes in that science. Consequently, divine science does not abstract from motion.

8. Again, in theology we treat of the creation of the heavens and the earth, of acts of men, and many similar things that involve matter and motion. So theology does not seem to abstract from matter and motion.

On the contrary, the Philosopher says in the *Metaphysics* that “first philosophy deals with things that can exist separately,” that is, from matter, “and with immobile things.” Now first philosophy is divine science, as he says in the same place. Therefore divine science abstracts from matter and motion.

Moreover, the most excellent science deals with the most excellent beings. But the most excellent science is divine science. Therefore, since immaterial and immobile beings are the most excellent, divine science will treat of them.

Moreover, the Philosopher says in the beginning of the *Metaphysics* that divine science concerns first principles and causes. Now these are immaterial and immobile. Therefore things of this sort are the objects of divine science.

Reply: In order to throw light on this question we must understand what science should be called divine science. We must realize indeed that if a science considers a subject-genus, it must investigate the principles of that genus, since science is perfected only through knowledge of principles, as the Philosopher explains in the beginning of the *Physics*. Now there are two kinds of **principles**. (1) Some are complete natures in themselves and nevertheless they are the principles of other things, as the heavenly bodies are principles of lower bodies and simple bodies are principles of mixed bodies. In the sciences, therefore, we study them not only insofar as they are principles, but also insofar as they are certain things in themselves. And for this reason they are considered not only in the science of the beings of which they are the principles, but also in a separate science. Thus there is a branch of natural science treating of heavenly bodies distinct from that treating of lower bodies, and there is one treating of the elements distinct from that treating of mixed bodies. (2) There are some principles, however, that are not complete natures in themselves, but only principles of natures, as unity is the principle of number, point the principle of line, and form and matter principles of natural bodies. Principles of this sort, then, are investigated only in the science dealing with the things of which they are principles.

Now just as there are certain common principles of any particular genus extending to all the principles of that genus, so too all beings, inasmuch as they share in being, have certain principles that are the principles of all beings. And as Avicenna says, “these principles can be called **common** in two ways, (1) first, by **predication**, as when I say that form is common to all forms because it is predicated of all; (2) second, by **causality**, as we say that the sun, which is numerically one, is the principle of all things subject to generation.

Now there are principles common to all beings not only in the first way (in this sense the Philosopher says that all beings have proportionately the same principles), but also in the second way, so that there are certain beings, each numerically one, which are the principles of all things. Thus the principles of accidents are reducible to the principles of substance, and the principles of perishable substances are reducible to imperishable ones, with the result that all beings are reducible to certain principles in a definite graded order.

And since the principle of the being of all things must be being in the highest degree as the *Metaphysics* says, these principles must be most perfect and therefore **supremely in act**, so that they have no potentiality whatsoever, or the least possible, because actuality is prior to, and more excellent than potentiality, as the *Metaphysics* says. For this reason they must be free from matter, which is in potency, and free from motion, which is actuality of that which exists in potency. Divine beings are of this sort, “because if the divine exists anywhere, it exists especially in such a nature” (that is to say, in a nature that is immaterial and immutable), as is said in the *Metaphysics*.

Accordingly, because these divine beings are the principles of all things and nevertheless they are complete natures in themselves, they can be studied in two ways: (1) first, insofar as they are the **common principles** of all things, and (2) second insofar as they are **beings in their own right**. But even though these first principles are most evident in themselves, our intellect regards them as the eye of an owl does the light of the sun, as the *Metaphysics* says. We can reach them by the light of natural reason only to the extent that their effects reveal them to us. It was in this way that the philosophers came to know them as is clear from the Epistle to the Romans: “The invisible things of God... are clearly seen, being understood by the things that are made.” Philosophers, then, study these divine beings only insofar as they are the principles of all things. Consequently, they are the objects of the science that investigates what is common to all beings, which has for its subject being as being. The philosophers call this divine science.

There is, however, another way of knowing beings of this kind, (a) not as their effects reveal them, but (b) as they reveal themselves. The Apostle mentions this way in his First Epistle to the Corinthians: “So the things also that are of God no man knows, but the Spirit of God. Now we have received not the spirit of this world, but the Spirit that is of God, that we may understand.” And again, “But to us God has revealed them by his Spirit.” In this way we consider divine beings as they subsist in themselves and not only inasmuch as they are the principles of things.

Accordingly, there are two kinds of theology or divine science. (1) There is one that treats of divine things, not as the subject of the science but as the **principles** of the subject. This is the kind of theology pursued by the philosophers and that is also called *metaphysics*. (2) There is another theology, however, that investigates divine things **for their own sakes** as the subject of the science. This is the theology taught in *Sacred Scripture*.

Both treat of beings that exist separate from matter and motion, but with a difference, for something can exist separate from matter and motion in two distinct ways: (1) first, because by its nature the thing that is called separate in no way can exist in matter and motion, as God and the angels are said to be separate from matter and motion. (2) Second, because by its nature it does not exist in matter and motion; but it can exist without them, though we sometimes find it with them. In this way being, substance, potency, and act are separate from matter and motion, because they do not depend on them for their existence, unlike the objects of mathematics, which can only exist in matter, though they can be understood without sensible matter.

Thus philosophical theology investigates beings separate in the second sense as its subjects, and beings separate in the first sense as the principles of its subject. But the theology of Sacred Scripture treats of beings separate in the first sense as its subjects, though it concerns some items in matter and motion insofar as this is needed to throw light on divine things.

Replies to Opposing Arguments:

Reply to 1. When something is incorporated into a science only to throw light on something else, it does not belong to the science essentially, but, in a way, incidentally, as some mathematics are incorporated into the natural sciences. In this way nothing prevents some things in matter and motion being in divine science.

Reply to 2. We do not attribute motion to God properly, but by a kind of metaphor, and this in two ways, first, according as the operation of the intellect or will is improperly called motion; and in this way a person is said to move himself when he knows or loves himself. In this sense, as the Commentator says, the statement of Plato is true, that the First Mover moves himself because he knows and loves himself. Second, according as the flowing forth of effects from their causes can be called a procession or motion of cause to effect insofar as the likeness of the cause is left in the effect itself; and so the cause, which previously existed in itself, afterward comes to be in the effect through its likeness. And in this way God, who has communicated his likeness to all creatures, in a certain respect is said to be moved by all of them or to go forward to all things. Dionysius frequently uses this manner of speaking. This also seems to be the meaning of the statement in Wisdom, that “Wisdom is more mobile than all mobile things,” and that “She reaches from end to end mightily.” However, this is not motion in the proper sense the term, and so the argument does not follow.

Reply to 3. Divine science received through divine inspiration does not treat of the angels as its subject, but only as something incorporated into the science to throw light on its subject. For Sacred Scripture treats of the angels just as it does other creatures. In the divine science taught by the philosophers, however, the angels, which they call Intelligences, are considered from the same point of view as the First Cause or God, insofar as they are also secondary principles of things, at least through the movement of the spheres, though the angels themselves are subject to no physical motion. Moreover, motion with respect to choice is reducible to the sense in which the act of the intellect or will is called motion, which is an improper sense of the term, motion being understood as operation. Further, when angels are said to move in place, their motion is not with reference to enclosure in place but with reference to the activity they exercise in this or that place, or with reference to some other relation they have to place,

although that relation is absolutely equivocal to that which a localized body has to place. So it is clear that they do not move in the sense in which we say natural things move.

Reply to 4. Act and potency are more common than matter and form. Therefore, even though we do not find the composition of form and matter in the angels we can still find potency and act in them. For matter and form are parts of a thing composed of matter and form; and so we find the composition of matter and form only in things with parts, one of which is related to the other as potency to act. Now what can be, can also not be; and so one part can be found with or without the other; and therefore, as the Commentator says, we find the composition of matter and form only in those things that are by nature corruptible. Nor is the objection valid, that an accident may be eternally conserved in a subject, like shape in the heavens. For a heavenly body cannot exist without such a shape, since shape and all accidents in general follow upon substance as their cause. So a subject is related to its accidents not only as passive potency, but also in a way as an active power; and for this reason some accidents are naturally conserved forever in their subjects. But matter is not the cause of form in this way; and therefore all matter subject to form can cease to be subject to it, unless perhaps an extrinsic cause preserves it; thus we maintain that by the divine power even some bodies composed of contraries, like the bodies of those arisen from the dead, are incorruptible.

Now, since the essence of an angel is incorruptible by its nature, it is not composed of form and matter. But an angel does not exist of himself, and so he is potential to the being (*esse*) he receives from God. Consequently, the being (*esse*) received from God is related to his simple essence as act to potency. This is what is meant by saying that angels are composed of what they are (*quod est*) and that by which they are (*quo est*); being (*esse*) is understood as that by which they are and the angelic nature as what they are. However, even if angels were composed of matter and form, they would not be composed of sensible matter, from which both the objects of mathematics must be abstracted and those of metaphysics must be separated.

Reply to 5. We say that being and substance are separate from matter and motion not because it is of their nature to be without them, as it is of the nature of ass to be without reason, but because it is not of their nature to be in matter and motion, although sometimes they are in matter and motion, as animal abstracts from reason, although some animals are rational.

Reply to 6. The metaphysician deals with individual beings too, not with regard to their special natures, in virtue of which they are special kinds of being, but insofar as they share the common character of being. And in this way matter and motion also fall under his consideration.

Reply to 7. Action and passion do not belong to things as they exist in thought but as they exist in reality. Now since the mathematician deals with things that are abstract only in thought, insofar as they come under his consideration they cannot be the principle or the end of motion. So the mathematician does not demonstrate by means of efficient and final causes. But the things the metaphysician deals with are separate, existing in reality, and these can be the principle and end of motion. So nothing prevents his demonstrating by means of efficient and final causes.

Reply to 8. Just as faith, which is in a way the habit of the principles of theology, has for its object the First Truth itself, and yet the articles of faith contain certain other things relating to creatures insofar as they have some connection with the First Truth, in the same way theology is primarily concerned with God as its subject, but it includes many things about creatures as his effects, or as being in some way related to him.