

## Questions on the Posterior Analytics

By Walter Burleigh

Translated by John Longeway

From the edition of Mary C. Sommers

"Every teaching and every learning etc."<sup>1</sup> Concerning this book, let us ask first whether a logician, acting as a logician alone, can make a demonstration from first principles proper to a subject. Then, whether there are any demonstrative syllogisms. And in the third place, it being supposed that a demonstration can be produced from first principles proper to a subject, and that there are demonstrative syllogisms, let it be asked whether there can be scientific knowledge about them.

### **[Question 1: Whether a logician, acting as a logician alone, can make a demonstration from proper first principles.]<sup>2</sup>**

1.1. **[First Principal Argument]** Concerning the first question, it seems that a mere logician cannot produce a demonstration from first principles proper to a subject, since a definition is the middle term in demonstration. A mere logician does not define since, if he were to, a mere logician would consider a reality in respect of what-it-is. The consequent is false, since this is a consideration appropriate to the metaphysician. The inference is clear, since a definition indicates the quiddity of a reality. Therefore, if the logician does define, he considers a reality in respect of what-it-is. The consequent is false, therefore a mere logician does

---

<sup>1</sup>*Posterior Analytics* I 1, 71a.

<sup>2</sup>For this question, Cf. Scotus, *Super universalia Porphyrii*, Q. 1 and 2; Albertus Magnus, *De praedicabilibus* I, 1, tr. 1. In the manuscripts Questions 1 and 2 are weaved together, so that the text of Question 2 follows 1.27 and 1.41 here. I give the paragraph numbers in the edition in diamond brackets, but I have put all the material in each question together, since this makes it considerably easier to follow. The question is whether a logician, acting purely within his competence as a logician (so a "mere logician"), has it as part of his work to produce demonstrations, and whether he is provided with all the tools he needs to produce them from logic alone. A demonstration must arise from "proper principles," that is, principles proper to the subject of the conclusion, which means that the principles in question must have that subject as their subject. In the ideal type of demonstration as Burleigh conceives it, that means that one principle must predicate its definition of the subject, and the other must predicate the attribute (*passio*), or predicate of the conclusion, of what falls under the definition. From this requirement that a demonstration have proper principles, difficulties will arise for the affirmative reply to the question that Burleigh thinks is the correct one.

not define. If this is so, then he does not produce demonstration from first principles proper to a subject.<sup>3</sup>

1.2. Moreover, if a mere logician defined something, since it is appropriate for the metaphysician to define the same thing, I ask then, whether the same definition is given by the metaphysician and the logician. If the same, I argue against this: They show different attributes of the reality defined by them, therefore they use different middle terms, and the definition is the middle term, therefore they use different definitions. The inference is clear, since different effects have different immediate causes. Therefore there is not the same definition.<sup>4</sup>

1.3. If one is different from the other, I ask then about that in which one definition differs from another. Either it is something made by the intellect, or is placed in the intellect beforehand. Certainly the first is not to be doubted, nor the second, since <if it is false> then those two definitions differ in something that does not depend on the soul, and since the definition is primarily (*primo*) of the same definitum, it follows that the definitum differs from itself in something that does not depend on the soul, since whatever is in the

---

<sup>3</sup>The point of the argument is that a logician does not consider the real essences of things, and one must consider the real essence of a thing to give its definition. Several objections come to mind concerning the discussion to this point. One is that it may indeed be the job of a logician to consider the essence of things such as demonstrations and syllogisms. This proposal gives rise to problems, though, since it may be questioned if these things have real essences, since they are not natural objects. So Ockham argues that the science of demonstration proceeds from nominal, and not real, definitions. We shall see that Burleigh handles this in a different way. Another problem is with the notion that it is the job of the metaphysician to deal with real essences. Surely the metaphysician deals with real essences considered as such, that is, with the notions of reality and substance, but it would not be the job of the metaphysician to give a definition of, say, wood. Perhaps the thought here is that a science does not provide its own principles, so the science of botany will not provide its own real definitions, and as a result some other science must provide the definitions used in all the special sciences, and this science can only be metaphysics. Ockham's response to this is to insist that the principles of a special natural science come from experience, not metaphysics. Burleigh's response to the first principal argument begins in 1.29. There he insists that a logician does have a real subject matter which he defines, and raises no objection to the notion that the metaphysician is in general the man to provide definitions of realities. A third problem: it looks as if the objection raised to the possibility of a logician providing demonstrations would also apply to practitioners of every other special science. But, of course, it is no objection to botany's producing its own demonstrations that it must make use of principles provided from elsewhere to do so. It remains the botanist who puts the demonstration together, whether the principles come from metaphysics, or from experience. One does not need to make one's own bricks to make a house, after all. So why would the logician need to produce his own definitions for terms such as 'syllogism' to produce demonstrations?

<sup>4</sup>The line of argument begun here is continued through 1.5. The idea is to show that the metaphysician and the logician both define the subject matter of logic, the one because it is his subject matter, the other because it is his job to provide definitions to the special sciences. These definitions must differ, it is argued, because the logician and the metaphysician arrive at very different conclusions using them. The conclusions of demonstrations, however, are primary truths, predicating a predicate of its primary subject (the subject to which it belongs in virtue of no other subject), and the middle term must provide the reason for this inherence in its subject. But that means different predicates will demand different middle terms, since just one aspect of a reality causes immediately only one predicate in it. (I've never penetrated why this last must be so, but it is standard doctrine.)

definition is in the definitum.<sup>5</sup>

1.4. Moreover, if the definitions differ in something that does not depend on the soul, since the definitions are primarily of the same definitum, it follows that one and the same thing differs quidditatively from itself.

1.5. Moreover, if these definitions differ in some reality outside the soul, let A be that reality in which one definition differs from the other. But whatever is in the definition is in the definitum, therefore A is in the definitum. And in the same way, whatever is in the definitum is in the definition, therefore A is in both definitions. If this is so, then one definition does not differ from the other in A.

1.6. It is replied to this that the mere logician cannot make a demonstration from first principles proper to a subject, since he does not have a definition proper to the subject. For a mere logician can define nothing, indeed, he takes his definition from the metaphysician.<sup>6</sup>

1.7. Against this: Metaphysics presupposes logic. Hence the logician does not take his middle term from the metaphysician, since logic is a prior science that is in the logician. Therefore he has his own first principles, and so he does not take the definition from the metaphysician. In the same way, since it is presupposed by the metaphysician, logic does not depend on metaphysics, for a prior science does not depend on one that is posterior. If this is so, then neither do the principles of logic depend on metaphysics.

1.8. Moreover, it seems that the mere logician does not take the definition from the metaphysician, since metaphysics does not define the reality that the logician considers, since the metaphysician does not define any reality except what falls under his own consideration. But a reality that the logician considers does not fall under the consideration of the metaphysician, since the logician considers a being that is true (*ente vero*). But

---

<sup>5</sup>Cf. Aristotle, Posterior Analytics II 13 (97a23-26). The two definitions are "primarily of the same definitum" inasmuch as they are definitions of the same fundamental reality. Since a definition must express the whole essence of a reality, and, it seems to be assumed, cannot refer to any reality outside the one defined, two definitions of precisely the same reality cannot differ. That is, they can differ only in the manner in which exactly the same reality is regarded by the intellect. This is argued in the next two paragraphs as well. It follows, then, that the definitions of the metaphysician and logician of the logician's subject matter must differ in the manner in which exactly the same reality is regarded, and not in anything real. Burleigh will respond that the logician defines a reality as it falls under a second intention, and a metaphysician defines it in its quiddity (1.29). Moreover, these two definitions are not distinct only in the manner in which the reality is regarded by the intellect, but really distinct, through a formal distinction (something Ockham would never admit) (1.33 ff.).

<sup>6</sup>Here the first round of objections is finished off. The logician, it is argued, does not produce his own definition, but takes it from the metaphysician, and this is the only way to avoid the absurdity of supposing there are two definitions in no way really distinct of one thing.

the Philosopher in *Metaphysics* VI<sup>7</sup> excludes a being that is true from his consideration. Therefore metaphysics does not consider a being that is true. If this is so, then it does not define the reality that the logician considers, therefore the logician does not take his middle term from the metaphysician.

1.9. Moreover, logic is one science and distinct from the other sciences, therefore it has distinct principles proper to its subject matter. If this is so, then the mere logician can make a demonstration from first principles proper to his subject.

1.10. Further, if the mere logician does not define, then demonstrative science does not belong to the mere logician. The consequent is false. The inference is obvious, for if demonstrative science can belong to him, he can make a demonstration; but if he makes a demonstration, it is necessary for him to define, since a definition would be the middle term; therefore he will be a metaphysician, and consequently, will not be a mere logician.

1.11. Therefore a different view is maintained, that the mere logician can make a demonstration from first principles proper to his subject, and it is held that the mere logician can define a reality that he considers, and the metaphysician cannot define that reality, for he excludes a being that is true from his consideration.<sup>8</sup>

1.12. Against this view: If a mere logician defines, then he considers the reality in respect of what-it-is. The consequent is false. The inference is clear, since definition indicates what a reality is.<sup>9</sup>

1.13. Moreover, according to the Philosopher,<sup>10</sup> the metaphysician and the logician labor over the same thing; therefore the metaphysician does not exclude those things from his consideration which are settled by the logician. If this is so, then there will be several definitions of the same reality, and so the principle difficulty still remains.

1.14. Moreover, it seems that the Philosopher does not exclude a being that is true from his

---

<sup>7</sup>Aristotle, *Metaphysics* VI 4. Aristotle speaks here of things that are in the sense that they are true, and in Greek one can say that "a man running is," meaning that it is true that a man is running. He also remarks in this chapter that the combination and separation of the parts of the complex that is true occur in thought, and that falsity and truth are not in things, but in thoughts. All of this is consistent, then, with an Ockhamist line that would make logic's subject matter reside entirely in thought and the artifacts of thought (that is, syllogisms, demonstrations and the like). Burleigh, however, tries to make out a real subject for logic while accepting these notions, as we shall see.

<sup>8</sup>Paragraphs 1.7-11 form a unit in which the position that Burleigh would like to defend is laid out in response to the first round of objections. A second round of objections to this position is now raised in what follows.

<sup>9</sup>Ockham would argue here that logic does not consider real, but only nominal, definitions.

<sup>10</sup>Aristotle, *Metaphysics* IV 2 (1004b18-25). He remarks here that dialectic (commonly taken to mean all of logic) embraces all things, and so seems to deal with being, as metaphysics does.

consideration, for in *Metaphysics IV*<sup>11</sup> he considers a being that is true, for he considers there the first principle, “of every affirmation or negation etc.,” and investigates the conditions under which it is so. Consequently, he decides about a being that is true there, and so he does not exclude a being that is true from his consideration.

1.15. And therefore, a different view is maintained, that the mere logician can define the reality he considers. The metaphysician considers the same reality the logician does, since according to the Philosopher they labor over the same, but the metaphysician does not define that reality, for it does not pertain to metaphysics to consider the individual quiddities of individual beings, but this rather belongs to the special sciences. Hence the metaphysician does not define that reality, but considers that reality insofar as it is. And this is the consideration of the metaphysician, for the metaphysician does not define these special beings, but considers these beings insofar as they are beings.

1.16. Against this view: This absurdity follows from this answer, that the consideration of the metaphysician is the most imperfect consideration, even though it is the most perfect of all the ways of considering.<sup>12</sup> The assumption is clear, for the most imperfect consideration of something is of it insofar as it is a being, since the most imperfect cognition of something is cognizing it insofar as it is, for unless one cognizes about the thing that it is a being, he would have no cognition of it at all.<sup>13</sup> Therefore the most imperfect cognition of something is cognizing that it is a being. If this is so, then the most imperfect consideration is of something insofar as it is a being.

1.17. Therefore, another position is held, that a mere logician can make a demonstration from principles proper to the subject, and that a mere logician defines the reality he considers, and similarly, the metaphysician can define that same reality, but different definitions will be given by the metaphysician and the logician, for the metaphysician defines the reality in its essence, and the logician defines the reality he considers under some second intention, and so the definitions of the two are different.

1.18. Against this position: If each one is a true definition of the reality, then through each definition it can be suitably responded to a question made using “*quid*” <i.e., a question why it is so (*propter quid est*) or what it is (*quid est*)>.<sup>14</sup> The consequent is false, for each question has but one way of being settled.

---

<sup>11</sup>Aristotle, *Metaphysics IV* 2 (1004b3-8).

<sup>12</sup>Aristotle, *Metaphysics I* 2 (983a10-11).

<sup>13</sup>Aristotle, *Posterior Analytics II* 1 (89b31-35).

<sup>14</sup>Aristotle, *Posterior Analytics II* 2 (89b36 ff.).

1.19. Moreover, if one reality has several definitions, then if one man should answer through one definition to a question made using “*quid*,” and another through another definition to the same question made using “*quid*,” then each would answer well. And consequently, one could answer one question made using “*quid*,” well with several different answers, which is absurd, since one certain definite question<sup>15</sup> seeks one certain definite answer. And consequently one cannot respond to one question using different answers at one and the same time without absurdity.

1.20. Moreover, if one reality had two different definitions, then one definition would differ from the other. Take that in which one differs from the other, and let it be A. A is not caused by the intellect, that is certain, but is rather presupposed in the intellect. Therefore A is something belonging to the reality itself signified by the definition. But the same reality is signified by the definition and the defined. If, then, one reality had two definitions, since one reality is signified through the definition and the defined, and vice versa <that is, through the defined and the other definition>, therefore the same reality will be signified through one definition and the other definition. But A is something belonging to the reality itself signified through one definition; therefore it will be something belonging to the reality itself signified by the other definition, for the reality signified by the one definition and the other is the same. If this is so, then one definition does not differ from the other in A.

1.21. Again, let B be the defined, and let C be one definition and D the other definition. Let A be that through which C differs from D. Then, since A is something belonging to the reality signified by C, I argue thus: Whatever is in C is in B, since whatever is in the definition is in the defined, for the reality signified by the one and the other is the same. But if whatever is in C is in B, and A is in C, then A is in B. And what is more, whatever is in B is in D, since whatever is in the defined is in the definition; and more, therefore A is in D. But if A is in D and A is in C, then C does not differ from D through A.

1.22. Moreover, if there are several definitions, there will be several things defined, since a definition is the same as its primary definitum.

1.23. Moreover, it seems that the metaphysician would not define a reality that the logician considers, according to the argument previously made, since the metaphysician does not define a reality that falls under his consideration. But a reality that the logician considers does not fall under his consideration, since the

---

<sup>15</sup>Here and elsewhere discussing this issue, the phrase “*certa et determinate*” occurs. I take it that this emphasizes that a definite question or answer is wanted, rather than specifying that it is both certain (certainly true) and definite, for the question is characterized in this way as well as the answer.

logician considers a being that is true, and the Philosopher excludes a being that is true from his consideration;<sup>16</sup> therefore the metaphysician does not define the reality the logician considers.

1.24. **Another <the second> principal argument:** A logician is a common artificer, therefore he must use common terms, and consequently, he cannot make a demonstration from first principles proper to a subject, since every demonstration made from first principles proper to a subject is a demonstration restricted to a single thing, and is a demonstration made in terms related to a species (*specialis*); and such a demonstration does not belong to the logician, since he is a common artificer, and consequently, the logician cannot make a demonstration from first principles proper to a subject.

1.25. **Moreover, another <the third> principal argument:** If a mere logician could make a demonstration from principles proper to a subject, then a mere logician could have demonstrative science. The consequent is false, for a mere logician considers the way of coming to know scientifically (*de modo sciendi*) and the way to scientific knowledge (*via ad scientiam*); but a way of coming to know scientifically differs from scientific knowledge.<sup>17</sup>

1.26. **On the other hand,** logic is a science distinct from other sciences, therefore it has distinct first principles proper to its subject. Consequently, a mere logician can make a demonstration from first principles.

1.27. Moreover, a mere logician has an attribute, subject and definition proper to his art, and these principles suffice for demonstration. Therefore a mere logician can make a demonstration from first principles proper to an art. That the logician has a proper definition is clear, since otherwise one must grant that the logician takes the definition from the metaphysician. The consequent is false, since the metaphysician presupposes logic, and since the metaphysician does not define that which the logician considers, since he excludes that from his consideration, for the metaphysician excludes a being that is true from his consideration.

1.28 <2.22>. **In response to the first question** it must be held that a mere logician can make a demonstration from proper principles, since logic is a distinct science from other sciences, therefore it has principles distinct from other principles. If so, then a mere logician has proper principles that suffice for demonstration. So, then, a mere logician can make a demonstration from proper principles.

---

<sup>16</sup>See Note 2. The reference is to *Metaphysics* VI 4, 1027b29-34.

<sup>17</sup>Cf. Averroës, *In lib. Met.* II 3, t.c. 15, f. 35v G; Scotus, *Super universalia Porphyrii* Q.1 (pp. 51-52); Albertus Magnus, *De praedicabilibus* I 2, tr. 1 (pp. 2-5); Thomas Aquinas, *In libros Metaphysicorum* IV, lect. 4 (nn. 576-577). Note that this approach to the question is adopted by Giles of Rome in the beginning of his commentary on the *Posterior Analytics*, and is discussed in Simon of Faversham.

1.29 <2.23>. **Through this, in response to the arguments:**

**In response to the first <principal> argument,** [1.1] when it is argued that “if a logician can make a demonstration from proper principles, then a logician’s job is to define,” one must reply by granting the conclusion, that a logician can define that reality which he considers. And it is replied that if a metaphysician’s job is to define that reality, then there will be definition given by the metaphysician other than that given by the logician, and what is defined will be other; [1.2-3] for the metaphysician defines that reality in respect of what-it-is, but the logician defines it under some second intention. Through this point it is replied to the arguments to the contrary.

1.30 <2.24>. When it is argued, “If it is the job of a mere logician to define a reality, then it is his job to consider the reality in respect of what-it-is,” [1.1] it is replied denying this inference. For consideration in respect of what-it-is is more general than defining. Therefore this consequence is not valid, “It is the job of a mere logician to define, therefore it is his job to consider a reality in respect of what-it-is.”

1.31 <2.25>. In response to the other argument, when it is argued, “if one reality has two definitions, if they are both true definitions, then one can answer well using either one to a question made using “*quid*”<sup>18</sup> [1.18]; one replies to this by granting the conclusion. And then, when it is argued that “a single question seeks a single answer,” this is granted, though this still stands, that it is the logician’s job to answer it using one definition and one answer, while the metaphysician’s job is to answer it using another definition and another answer. Hence it is not the job of the mere logician to answer that question except through one definite answer, and the metaphysician using another definite answer. Hence the same question must be settled by the one in one way, but it might very well be settled in different ways by different people. Nor is it absurd that one definite question should be settled by several answers. For instance, if it were asked, “Who is running?,” one might do well to answer, “Socrates runs.” In the same way, if someone else said “the philosopher runs,” he would have answered well to this. Hence it is not absurd that one question seeking a certain answer should be settled by several answers from different people, as long as each gives a certain definite answer.

1.32 <2.26>. In response to the other argument to the contrary, when it is argued, “If there are several definitions of any reality, there will be several things defined,” [1.19] it is granted, for as there are several definitions, so there are several things defined, since just as the definition given by the metaphysician is other than that given by the logician, so is the defined another, since the reality under the form under which

---

<sup>18</sup>I.e. a question why it is so (*propter quid est*), or what it is (*quid est*).

it is considered by the metaphysician is other than the reality taken under the form under which it is considered by the logician. Hence the metaphysician defines and considers the reality in connection with what it is, and the logician considered and defines the reality under some second intention.<sup>19</sup> And so just as the definitions are different, so the things defined are different.

1.33 <2.27>. In response to the other argument to the contrary, when it is argued, “either one definition is wholly the same as the other, or it is other,” [1.20] it is to be replied that the one definition is other than the other. And when it is asked through what one differs from the other, it should be replied that they differ through forms and real considerations that do not depend on the soul, hence the reality under the formal form <that is, form belonging to a thing formally, not concomitantly> under which the definition is given by the metaphysician, differs from this same reality taken under the formal form under which falls the definition given by the logician.

1.34 <2.28>. And when it is argued: “that real thing through which one definition differs from another, let it be B. Since then whatever is in the definition is in the defined, and B is in the definition, therefore B is in the defined. And more, whatever is in the defined is in the definition, therefore B is in both definitions, therefore one definition does not differ from the other in B.” [1.21] It is replied to this that this proposition is false, “whatever real thing is in the definition is in the defined,” if a distinction is made through a real form (*pro ratione reali*), since there is some real form not depending on the soul in the definition, which is not also in the defined. Now if it is understood thus, that a distinction is made through a real being, as distinguished from a real form and a real consideration, under this concept it can be granted that this is true, “whatever real thing is in the definition is also in the defined.” But if it be taken under B, through which one definition differs from the other, then the minor will be false, since it was said that one definition differs from another only by a formal form.

1.35 <2.29>. In another way, it must be replied by granting this, “whatever real thing is in the definition is in the defined,” and then, when it is argued “B is in the definition, therefore it is in the defined,” the conclusion is granted. And then, when it is argued, “whatever is in the defined is in the definition, therefore B is in both definitions,” the conclusion is granted, that B is in both definitions, for B is in one definition as a formal form taking the reality signified through that definition, and it is in the other definition as a concomitant form. Hence it is not absurd that some two things should be distinguished through something that is in one

---

<sup>19</sup>Cf. Thomas Aquinas, *In libros Metaphysicorum* IV, lect. 4, n. 574.

formally and in the other concomitantly. Indeed, it is necessary, since otherwise a reality signified by a definition would in no way be other than the reality signified by the defined.

1.36 <2.30>. In response to the other argument to the contrary, [1.22] it is granted that the same reality is signified by one definition and by the other, taken under a different consideration and under a different real form not depending on the soul, and under another formal form, and this formal form suffices for this distinction.

1.37 <2.31>. In response to the other argument to the contrary, when it is argued, “The metaphysician excludes a being that is true from his consideration, concerning which the logician decides, therefore it is not the job of the metaphysician to define a being that is true,” [1.23] it must be replied that the metaphysician does not have the job of defining a being that is true under that form under which a being that is true is excluded from his consideration. Hence he does not exclude a being that is true under every form received under his consideration, since in the fourth book of the *Metaphysics* the Philosopher decides about the first principle, which is a being that is true. In the same way, according to the Philosopher the logician and metaphysician labor over the same thing, but the metaphysician excludes a being that is true from his consideration under that form under which the logician considers a being that is true, and under that form the metaphysician does not define a being that is true. For it was said earlier that even if the logician and metaphysician have the job of defining the same reality, this is still under different forms and under different formal considerations.

1.38 <2.32>. **It must be replied to the other <second> principal argument**, when it is argued “the mere logician is a common artificer, therefore it is his job to use common terms,” [1.24] it is replied by granting the conclusion. Hence the logician in this book uses a demonstrative syllogism, which is common and applicable to every demonstration and every demonstrative syllogism. And when it is argued further, “Every demonstration made from proper principles is a demonstration restricted to a single thing,” the conclusion is granted. And when it is argued further, “Every demonstration restricted to a single thing is in terms related to the species,” it must be held that these terms are related to the species, since they belong in species, and principally to logic, and in this way it is granted that the logician uses terms relating to a species.

1.39 <2.33>. Nor does this consequence hold, “the demonstration is restricted to a single thing, therefore the terms are singular,” for a syllogism so restricted can be in common terms, for instance, if it were argued thus: “Every being is a being or a non-being, some reality is a being, therefore some reality is a being or a non-being.” this syllogism is restricted to a single thing, and still it is in the most common terms.

1.40 <2.34>. **In response to the last <principal argument>**, when it is argued, “A mere logician can make a demonstration from proper principles, therefore a mere logician can have demonstrative science,” [1.25] this conclusion is granted.

1.41 <2.35>. In response to the proof, “A logician considers the way of coming to scientific knowing and the way to scientific knowledge, therefore he does not have scientific knowledge,” one replies by denying this consequence, since there is scientific knowledge of the way of coming to scientific knowing.