

# Scriptum super libros Posteriorum

by Walter Burleigh

translated by John Longeway, from  
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## BOOK I

### Chapter 1

[I.1 71a1-10] (40va) "All teaching and all intellectual learning arises from preexisting cognition etc." (*Omnis doctrina et omnis disciplina intellectiva fit ex praeexistenti cognitione etc.*) Every cognition of ours is either sensitive or intellectual. A sensitive cognition is a cognition, and it does not arise from cognition existing beforehand. But every intellectual cognition of ours does arise from cognition existing beforehand. But even though our every intellectual cognition arises from cognition existing beforehand, nonetheless the Philosopher speaks here only of the intellectual cognition of conclusions. ☒

Hence, he understands by "teaching" and "learning" only the intellectual cognition of conclusions. Teaching and learning are the same in reality, and differ only in the respect in which the reality is considered, for teaching is knowledge of the conclusion as it comes from the teacher, and learning is the same knowledge as it is received by the student. Or it could be said that teaching and learning differ in reality since teaching is the knowledge of the conclusion acquired from another, and learning is knowledge of the conclusion acquired through discovery.

[I.1 71a11-16] There are two cognitions beforehand, namely that it is (or is so) (*quia est*) and what the name signifies. There are three things that are cognized beforehand, namely the subject, the passion, and the axiom (*dignitas*). Concerning the subject it must be cognized what is signified through the name, and that it is (*quia est*). Concerning the axiom, it must be cognized beforehand that it is so (*quia est*). ☒ Concerning the passion, it must be cognized beforehand what it is (*quid est*). ☒

It is to be understood that in every demonstration it must be cognized beforehand of the subject both that it is and what is signified by the name. But it need not in every

demonstration be cognized beforehand of the subject what it is really (*quid rei*). For it is not so in some demonstrations, for instance in a demonstration in which the real essence is concluded of the subject in a certain respect, and what is concluded ought not to be cognized beforehand. ☒ And so the Philosopher assumes that the nominal essence (*quid nominis*) is cognized beforehand, and not the real essence, for he is speaking of cognitions beforehand that are common to all demonstrations. ☒

But in some demonstrations what is to be cognized beforehand is the real essence. There is a difference between real essence and nominal essence. ☒ Nominal essence is when the name is referred to what it signifies. ☒ The real essence is the concept through which the reality is resolved into its essential principles. Hence someone can have a cognition of a nominal essence and not of the real essence. For example, if a boy is told that he is to look for a horse, and it is supposed that he does find a horse, and then leads out a horse, and not a lion, this would not have happened unless he knew what is signified by the name "horse," so that the boy has this cognition beforehand of the nominal essence, and not of the real essence, for he does not know what the genus or the difference of horse is.

But it must be understood that the being that is cognized of the subject beforehand is not the existence of something, but <being in the sense of existing> is prevented <from being the correct reading of the text>. For being acceptable is cognized beforehand concerning the axiom <i.e. that> it is true. ☒ For one must cognize beforehand concerning the axiom considered as it is an axiom.

Hence also concerning the passion it must be cognized beforehand what it is. ☒ A passion is an accident, and, for accidents, to be is to be in a subject. Now if we cognize beforehand the being of the passion, then the passion is cognized beforehand to be in the subject. And it will be concluded that the passion is in it, so that the same thing is both concluded and cognized beforehand, which is absurd. And therefore that it is must not be cognized beforehand of the passion.

[I.1. 71a17-b8] The premisses of a demonstration are cognized prior to the conclusion. The major premise is cognized prior to the conclusion in time, and the minor premise is cognized at the same ☒ time as the conclusion, but it is still cognized prior to the conclusion. It must be understood that the conclusion is cognized at the same time as the minor by the simultaneity of immediation, not by the simultaneity of adequation. For the conclusion is cognized immediately [Cf. 71a21-23] ☒ through the cognition of the minor. But the minor premise and the conclusion are not cognized at the same time in such a way that <they are cognized> in the same adequated time. Before the conclusion is arrived at through demonstration it is known in a way, and in a way unknown, for before the scientific knowledge is acquired through demonstration, the conclusion is cognized in the universal case, and potentially. It is unknown in the particular case and in actuality.

Thus, from the first chapter of this book it is clear how scientific knowledge is acquired by us through demonstration, which is in turn acquired through cognition existing beforehand. It is clear that there are things cognized before scientific knowledge

is acquired through demonstration, for the subject, passion and axiom are cognized beforehand. The major and minor premisses used in demonstration precede the demonstration and are cognized beforehand. The conclusion is cognized <beforehand, in a way, too>.

## Chapter 2

[II.2 71b9-19] "Now we consider ourselves to know etc." (Scire autem opinamur etc.) Since knowing is the end of demonstration, it is necessary to cognize this end beforehand in order that we might order those things correctly that concern demonstration. (40vb) So the Philosopher in this chapter first defines knowing, saying that we judge ourselves to know without qualification, and not in the sophistical way that is the subject of the preceding <book, the *Topics*>, when we cognize the cause of the reality because of which the reality is, and <cognize> that it is the cause of that reality, and that it cannot be otherwise. ☒

It must be understood, according to Grosseteste, that "to know" is said in four ways, namely, in the widest sense, strictly, more strictly, and most strictly. Knowledge said in the widest sense is a grasp of the truth of anything, no matter whether it be necessary or contingent, and in this way of knowing we know contingent things that could either be or not be. Knowledge in the strict sense is the grasp of truth which obtains always or in the usual case, and in this way of knowing we know contingent things suited to each subject matter. Knowledge said more strictly is a grasp of every necessary thing, it being indifferent whether it is a principle or a conclusion. Knowledge said most strictly is a grasp of necessary things the truth of which is gotten through causes. And it is in this last way that we know the conclusions of demonstration. ☒ And Aristotle calls the other <non-demonstrative> ways of knowing logical (*logicos*).

[I.2 71b19-24] Assuming the definition of scientific knowing, the Philosopher defines demonstration in two ways. First, thus: A demonstration is syllogism that produces knowing. And this definition of demonstration is formal or final, for it is taken from the end of demonstration, which is knowing. The second definition is material, ☒ and it is this: Demonstration is from what is true, first, immediate, better known than, prior to, and the cause of the conclusion. This is the first conclusion of the science of this book. ☒ The conclusion is proven thus: Every syllogism that produces scientific knowledge is from what is first, true, etc., and demonstration is syllogism that produces scientific knowledge; therefore etc.

[I.2 72a5-13] And since it was said that demonstration is from what is immediate, the Philosopher defines immediate propositions, saying that an immediate proposition is one to which no other is prior. And since he placed proposition in the definition of immediate, the Philosopher defines propositions, saying that a proposition is one or another part of a statement ☒ signifying one thing of another. And since propositions are divided into dialectical and demonstrative, he says what a dialectical and a demonstrative proposition are. A dialectical proposition is one taking whichever part of a

contradiction <indifferently>, even if it is false, as long as it is probable. A demonstrative proposition is one taking one part alone of a proposition, namely that one which is true.

And since he places statement in the definition of proposition he defines statement, saying that a statement takes up one or the other part of a contradiction. And since he places contradiction in the definition of statement he defines contradiction, saying a contradiction is an opposition in which, *per se*, there is no middle <ground>.

It must be noted that contradictions are said to be immediate, and also contraries are said to be immediate, but this occurs in different ways. ☒ For contraries are said to be immediate from the immediacy of form alone on this account, namely that between immediate contraries there is no form sharing the nature of both extremes. For example, between health and sickness there is no middle form which is composed of health and sickness. But no contraries are immediate <in this way> from the immediacy of the subject, for there are no contraries that are so immediate that there is not a subject between them through denial. ☒ Hence the contrariety between sickness and health is not a mediating form even though there is a mediating subject between sickness and health, for the subject is called mediating <only> because both are removed from it, as from a stone which is neither sick nor healthy. But contradictories are said to be immediate just as much from the immediacy of the subject as from the immediacy of form. For between contradictories there is not any form participating in the nature of both extremes, nor is there between them any mediating subject from which both contradictories are removed. For there is no subject which is neither white nor not white. So I hold that they are said to be immediate in two ways, one by the immediacy of form alone, the other by the immediacy of subject and form. Contraries are immediate by the immediacy of form alone. But contradictories are immediate by the immediacy of form and subject, and so a contradiction is an opposition for which there is no middle.

[I.2 72a14-19] In another way, immediate principle is divided into posit (*positio*) and axiom (*dignitas*). A posit is an immediate principle that it is not necessary for everyone to have learned, and such are immediate principles in geometry and other special sciences. An axiom is an immediate principle that it is necessary for everyone to have learned, thus, this principle: It is not possible for the same to be in something and not to be in the same at the same time and in the same respect. ☒

[I.2 27a19-24] Next, posit is divided into supposition (*suppositio*) and definition. A supposition is a principle receiving being <or> non-being. Hence supposition, being thus, is a complex principle, as for instance this principle: If from equals equals are subtracted, the remainders are equals. Definition is a posit receiving neither being nor non-being. Hence definition is a posit, but it (41ra) must not receive being or non-being.

The second conclusion of this book is this, that principles are better known than conclusions. This conclusion is proved thus: Because whatever things are such that when it is known we know conclusions, these are better known than conclusions. But because of principles, when they are known, we know conclusions. Therefore principles are better known than conclusions.

[I.2 72a25-31] Or <it is shown> thus: Everything because of which is also more.

But conclusions are known because of principles, therefore principles are better known than conclusions. Note that this rule must be understood in respect of efficient causes ordered *per se*. And I call a cause efficient and ordered *per se* without which the thing caused cannot act. In such causes if the first does not act then nothing posterior to it acts, and such a first cause is equivocal in respect of the effect. In this way the sun is your efficient *per se* cause, but your father is your accidental cause insofar as he is an agent. I hold, therefore, that in causes ordered essentially it is necessary that the definition which is in the effect from a universal cause reside more perfectly in the cause than in the effect, as long as the definition is common to the cause and the effect. ☒ For if the definition is not in the cause, it is necessary that something having the definition, and more worthy than what is caused, be in <it>. Therefore it is clear from this that the sun is the cause of heat in these lower things, and similarly <it is clear that this is> because the sun is hotter, or because the sun has some other disposition or perfection <and> insofar as heat is in this intermediate, thus far the sun contains this heat virtually.

That this is the intention of Aristotle is clear, for a cause is not always denominated from the disposition from which the effect is denominated, but <sometimes> from a more universal and nobler cause. The Philosopher intends that the conclusion is known by knowledge most strictly so called. And so he intends that principles and conclusions are not known in the same way. But from this, that conclusions are known because of principles, he intends to conclude that the *habitus* <i.e., knowledge> ☒ of the principles is in a way called that <i.e., called a *habitus*> from the name of knowledge most strictly so called. Therefore it has a more perfect habit than the conclusion. So in causes essentially ordered the disposition common to the cause and the reality which is in the effect through the cause is more truly in the cause than in the effect. But even if there is no disposition common to both, even then you may still conclude something more perfect than this disposition to be the definition of the power and the cause.

[I.2 72a32-37] The third conclusion of this book is that one cannot know conclusions better than principles. This conclusion is proved from the preceding conclusion. For if it is necessary that principles be better known than conclusions, then one cannot know conclusions better than principles.

[I.2 72a37-72b4] The fourth conclusion of this book is that nothing is better known than these first principles. The conclusion is proved thus: Principles are better known than conclusions, and what is better known is prior and more a principle; therefore if something were better known than first principles it would follow that something is prior to first principles. But this is impossible. Therefore etc.

### Chapter 3

[I.3 72b5-7] "Now some etc." (*Quibusdam igitur etc.*) It was said above that principles are better known than conclusions. It was also said that everything that is known is known through demonstration. Because of these two <propositions> some fall

into error. Therefore the Philosopher sets aside two errors in this chapter which arise because of these two <propositions>. For some say that one can know nothing through demonstration, and others say that one can know everything known through demonstration, by demonstrating every conclusion in a circle.

[I.3 72b7-15] The reason for the first error was this: If someone is to come to know through demonstration it is necessary that the principles of the demonstration be known, for as it was said, principles are better known than conclusion. Therefore it is necessary to know the principles of this demonstration through demonstration, for everything that is known is known through demonstration. And the principles of this demonstration must be known through demonstration, and so it will recede into infinity. But one cannot proceed thus in principles or in demonstrations, therefore one cannot know anything through demonstration.

[I.3 72b15-18] Others said that one can demonstrate everything in a circle, for these hold that one can know all things through demonstration. And on this view it is necessary that principles be known through demonstrations, and in the same way the principles of these demonstrations, and so on infinitely in a circle. But that is impossible. And on this view everything that is in the supposed circle ☒ is known in this way through another. And so they hold that everything that is known can be demonstrated in a circle.

[I.3 72b18-24] The first error is removed by the Philosopher when he says that principles are known, but not through (41rb) demonstration. Rather they are cognized from this, that the terms are cognized. ☒ Hence not everything that is known is known through demonstration, but everything that is known in the strictest sense of knowledge is known through demonstration, and we do not know principles in this way. Rather they are the causes of such knowledge, that is, of knowledge most strictly so called, and we cognize principles inasmuch as we cognize terms.

[I.3 72b25-73a20] The Philosopher excludes the other error and proves that there is not a circular demonstration of everything that is known, and he proves this through three ☒ arguments. [72b25-31] The first is this: A principle is better known than the conclusion, and so the same would be better known than itself. [72b32-73a5] The second argument is this: If it were thus, nothing would be demonstrated except by saying this is this, and so everything would easily be demonstrated. [72a6-20] The third argument is this: A <valid> circular syllogism only arises in convertible terms, but it can be demonstrated that an isosceles <triangle> has three angles, and yet isosceles and having three angles are not convertible. ☒