

Scriptum super libros Posteriorum

by Walter Burleigh

translated by John Longeway, from

the edition of Pamphilius de Montebononiensis, Venice 1514

Chapter 2

[II.11 94a20-b27] “Now since we think etc.” (*Quoniam autem scire opinamur etc.*)

In this chapter the sixteenth conclusion is proved first, which is that there are four causes and each of these is a middle of demonstration. This conclusion is proved thus: From the definition of knowing, as is clear from the previous book, knowing is cognizing the cause of the reality, from which it is argued thus: Since, then, we know when we cognize the cause, and we do not know unless we cognize the demonstrative middle, therefore every cause is a demonstrative middle. Afterwards the Philosopher explains this proof by induction on every genus of cause. So he says first that from every cause demonstration occurs if two propositions are accepted, for from every cause the effect follows of necessity, but this would not be if one proposition is accepted, for from one [proposition] nothing follows, as the Philosopher says in the *Prior Analytics*. ☒

[94b28-95a9] The seventeenth conclusion is that one can demonstrate the same thing through a middle that is the final cause, and through the material cause, which is said to be necessity. For instance, this conclusion, that light is diffused through the parchment covering of a lamp, is demonstrated through both of the aforesaid causes, since the necessity of the diffusion of the light through the covering is from the material cause, therefore the porosity of the skin, and not every porosity, is the material necessity of the diffusion of the light. So it can truly be called a lamp, but this is since the pores through which the light is diffused are greater than are the solid spaces between the pores, for when there are such pores the light is drawn to the outside. So a demonstration can be produced through a material cause in this way: Everything that is diffused through something greater than the pores of a lamp cover, passes through a lamp cover. It must be understood that skins are not in reality wholly continuous, for when the hairs are extracted, there are pores left that were at the roots of the hairs. The final cause of the diffusion through the lamp cover is that we not stumble in the dark. An argument can be formed thus: Everyone making something to save us from stumbling in the dark prepares something to transmit light, a lamp cover is like this, therefore etc.

[II.12 94b10-95b12] The eighteenth conclusion is this, that the cause of being, and

of having been, and of being about to be, is the same. This is proven thus, a true cause that is not partial only occurs at the same time as what is caused, as is clear in the cause of a lunar eclipse, which is the position of the earth on a right line between the sun and the moon. When there is such an interposition there is an eclipse, and when the interposition arises an eclipse occurs, and when the interposition has occurred an eclipse has occurred.

[95b13-37] The nineteenth conclusion is that in the cause and the caused that are not at the same time, the posterior is not demonstrated through the prior, but vice versa.

This conclusion is proved thus: When an intervening period of time falls between a cause and the caused, then the caused is not demonstrated (44va) from the cause, but when cause and caused are not at the same time, some intervening time falls between them; therefore with these the caused is not demonstrated from the cause. Hence in such cases it is not suitable to syllogize the posterior from the prior, since when the prior is posited, it is not necessary that the posterior follow. For this is not necessary, that he drinks the potion, therefore he is healthy, for in the intervening time between the taking of the potion and the attainment of health, there is a true antecedent and a false consequent. Still, it follows well enough that he is healthy, therefore he has taken the potion, it being assumed that he could not otherwise be healthy than by the taking of the potion. It follows from this that if the house was made it is necessary that the foundation had first been laid. But from this, that the foundation is, it does not follow that the house is, nor that the house is in the past.

[95b38-96a8] The twentieth conclusion is that in those realities in which there is circular generation there is <circular> demonstration. Each generator in such a case can be the cause of the other generated thing, so that they are circular causes of one another. Since, then, demonstration is from the cause, where there are circular causes there can be circular demonstration. An example is in the operations of nature, for the rain-soaked earth is the material cause of vapor, and vapor of clouds, and clouds of the earth's being rain-soaked. But it must be known that it does not follow from this that the same being is the cause of itself, for there is no return to the same, or at least to the same in number, but only to the same in species. Hence the rain is the cause of this singular vapor, and this singular vapor causes the cloud, and the cloud causes another rain, not the same in number with what was in the beginning, but the same in species, etc.

[96a9-19] The twenty-first conclusion is that the principles of what is not always, but only for the most part, are not always, but only for the most part. This conclusion is proved thus: From premisses that are necessary and always true nothing follows except what is necessary, and <always> true. Necessary truths, therefore, are not principles, but the principles are for the most part true, so that both <contradictories> are possible.

But principles of what is for the most part true are not necessary, for there are no contingent principles of what is necessary, therefore of what is true for the most part the principles are true for the most part.

Chapter 3

[II.13 96a20-b25] “Now how one should hunt etc.” (*Quomodo autem oportet venari etc.*) The twenty-second conclusion is that for the investigation of a definition one must take the genus of the reality to be defined with its differences ordered suitably to the reality to be defined, so that all of them are received and each is in something wider <than the species defined>, and all of them taken together are not in a wider but are convertible <with the species defined>. This conclusion is proved thus: That aggregate that is predicated essentially of what is defined is its genus or definition. But it is not the genus, for if it were it would not be convertible, therefore it is the definition. Therefore the aggregate of the genus and the differences, of which every one is in something wider than the defined and the whole is convertible <with the defined>, is the true definition of the reality.

[96b15-25] The twenty-third conclusion is that a definition is to be collected and investigated through the method ☒ of division. This conclusion is proved thus: Every logical operation is either syllogizing, dividing or defining. It is obvious that such an aggregation does not arise from definition or syllogism, therefore it is extracted through division. But although in a science such divisions through differences of division are not useful for investigating definitions, since such divisions demonstrate nothing, as was said before, still they are useful for collecting definitions in the aforesaid way, though it seems there is no utility in them. But the whole aggregate that is the definition can equally well be accepted right off and without division.

[96b26-97a23] The twenty-fourth conclusion is that division adds a two-fold utility in dividing. One is that it orders the parts of the definition correctly, and the other is that it separates one part of the definition from another. It is clear that the division ☒ has a two-fold utility, since division is useful for collecting what-it-is, for it indicates what is prior and what is posterior as they are ordered in the definition. For the parts of a definition are naturally ordered to one subject and one predicate, and the same parts ordered otherwise are not ordered to one, but to many. The division is also useful so that nothing is left outside of these that comes into the quiddity of the reality to be defined, and since the division is always through proximate differences, nothing is (44vb) left, therefore etc.

[97a24-b6] The twenty-fifth conclusion is that in order to investigate a definition by the way of division one must take the predicates that concern essentially the reality to be defined, and these are to be ordered in the natural order, that is, so that which is first in nature is first in the order of definition. In the second place everything must be received that pertains to the essence; nothing is to be left aside. Hence these three conditions are required in order for someone to infer a definition by the way of division. The proof of this: It is a division of what is in the reality, and it is conversely predicated of the reality in its what-it-is. And it is obvious that if a due order of definables does not arise it is not demonstrated what the thing is, for if it places what is posterior before, it is not a definition. So if the definition is demonstrated thus, “it is a social, bipedal animal,” the posterior is placed before here, for every biped is social, and not conversely. ☒ In the same way the third condition is also required, that everything pertaining to what it is be taken in, for otherwise the definition is missing something, and is not convertible with the

defined. ☒ And so it can be accepted through division of the genus into its primary differences, the difference of the genus to be added, and afterwards that difference of the whole to be divided, and so on step by step until the last difference is arrived at. And those that are in the reality to defined are received <first> through the method of accident, then through the method of definition <they are received as> belonging to whatever genus they are in essentially. ☒ And the parts must be ordered correctly, placing what is prior before and what is posterior after; therefore etc.

[97a36-b6] The twenty-sixth conclusion is that the aforesaid three are sufficient for properly defining, that is, division, gathering the parts of the definition, the method of accident and the method of genus. This conclusion is proved thus: For the division is assigned properly when it is not missing anything, nor does it contain anything superfluous, as is clear. Therefore etc.

[97b7-25] The twenty-seventh conclusion is that in order to investigate any definition through the way of resolution <or analysis>, that must first be received in which there agree according to the name to be defined those realities the most indifferent <that is, least different from one another> of which the name to be defined is predicated. Then that must be received in which there agree according to the name of the definable those realities indifferent to one another in the same way, but different from what was first received. And in the third place what agrees with what was received first and the second must be received, and so on if there are realities yet more different while agreeing in the name to be defined, therefore etc. ☒

[97b32-34] The twenty-eighth conclusion is that a definition generates a clear and well-defined (*certa*) cognition of a reality, ☒ and this is obvious through the definition of definition, which is that a definition is an expression indicating what it is to be. That which indicates what it is to be produces certain cognition in that matter. Therefore it indicates being etc.

[97b38-40] The twenty-ninth conclusion is that since a definition acquires a clear and well-defined cognition it follows that something is not to be defined that is said metaphorically, since metaphor is a cause of ambiguity. This is the thirtieth conclusion. Hence two conclusions follow from one conclusion.

[II.14-15] The thirty-first conclusion is that in order to obtain discovered and proposed definitions, divisions are to be chosen for universals, and resolutions for singulars. This conclusion is in part explained earlier, and the complete explanation of this conclusion can be seen in Grosseteste's opinions on this book. ☒

Chapter 4

[II.16-19 98a35-99b16] “But the cause for is is the cause etc.” (*Causa autem ad cuius est causa etc.*) The thirty-second conclusion is that what is demonstrated from one [thing] per se, and not accidentally, has one cause, and one demonstrative middle.

Hence the proof of this conclusion is clear from Grosseteste's opinions on this book.

Chapter 5

[II.19 99b17-100b17] "Now as for principles etc." (*De principiis etc.*) This is the last chapter of this book, in which Aristotle explains how there is a cognition of first principles for us, and he says that memory arises from sense multiplied, and experience from memory multiplied, and from experience multiplied arises the universal, which is the principle of art and science and from this experience multiplied there arises in us cognition of first principles. This is clear elsewhere in this chapter.