

already seriously imperiled by the imperial cult, suffered further from the emperor's neglect and abuses. If we take these to be the primary concerns of Tacitus in the Sabinus incident, concerns evident throughout the fourth book of the *Annals*, there is little need either to speculate on imaginative reconstructions or to be unduly dissatisfied over the factual record. Thus without attempting either to vindicate Tacitus or denounce him for whitewashing certain important historical facts, we find the most productive means for understanding the Sabinus episode to come from looking within the broader contexts of the Tacitean narrative and of Roman religion.

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THE MIDDLE PLATONIC RECEPTION OF ARISTOTELIAN SCIENCE*)

The history of Platonism exhibits a continuous tension in its relationship with Aristotelianism. Plotinus' rejection of Aristotle's categories, for instance, is followed by Porphyry's 'rehabilitation'. Perhaps the 'middle-Platonic' tradition best exemplifies this tendency, for it is the first clear attempt to provide a synthesis of Plato and Aristotle – a theme which will continue to evolve long beyond the Greek era in Islamic, Byzantine and medieval philosophy. While middle-Platonic philosophers, such as Apuleius reject the influence of Aristotle, Albinus in his *Didaskalikos* finds a central

*) I wish to thank A.P.D. Mourelatos for his extensive help with an early version of this study and the American Council of Learned Societies for a Fellowship for Recent Recipients of the Ph.D. for a study of the post-Aristotelian analysis of induction. My work is continually indebted to John Dillon, *The Middle Platonists: 80 B.C. to A.D. 220*, Ithaca (NY) 1977. For the text of the *Didaskalikos* I use P. Louis, ed., *Epitomé*, Budé, Paris 1945, and all references are to the chapter, section and line division in that edition.

role for a great variety of Aristotelian doctrines¹). In this study we shall explore the incorporation of Aristotelian scientific methodology into this Platonic tradition.

The *Didaskalikos* contains a philosophy of science in the sense in which that phrase is applied to Aristotle's *Posterior Analytics*. Although Albinus never explicitly describes his philosophy of science, his presentation of the content of individual sciences permits one to see the general structure of his approach. Fundamental to individual sciences are the 'principles' (ἀρχαί) belonging to each. These principles are the basic tenets or entities of each branch of knowledge, and the individual sciences involve the deductions which follow from these principles in accordance with specific patterns of argumentation. Before considering the details of Albinus' treatment of the individual sciences, let us establish the relationship of his scientific methodology to that of Aristotle.

The Influence of Aristotle

In many ways the system of principles in the *Didaskalikos* is that which Aristotle presents in the *Posterior Analytics*. What Albinus adds is the practical application of the principles to the various individual branches of science whose theoretical foundation is developed by Aristotle. There can be little doubt that the system is derived from the writings of Aristotle, and Albinus' familiarity with the *Posterior Analytics* suggests that he even possessed the treatise itself.

Albinus' exposition of scientific demonstration does not contain the detail of the *Posterior Analytics*. For instance, the strict and explicit distinctions between a thesis (θέσις), and axiom (ἀξιωμα), and an hypothesis (ὑπόθεσις) made by Aristotle²) are not observed in the *Didaskalikos*, nor does that work discuss either the philosophical basis of the theory or the overall structure of deductive knowledge. Rather, the discussion of dialectic is restricted to the individual dialectical techniques and, in the 'scientific' sections of the treatise, the application of the theory to the investigation of physics and ethics. But this application certainly presumes a knowledge of the theoretical underpinnings presented in the *Pos-*

1) I am concerned with analyzing the doctrines of the *Didaskalikos*, not with the question of its authorship. I use the name 'Albinus' for the sake of convenience.

2) An. post. 72a15–25.

terior Analytics. The position of the principles as the fundamental tenets of a science is central to both philosophies; both systems present a deductive science based on these principles. Perhaps the clearest indications of this correspondence are the parallels in characterization of the principles³):

	<i>Didaskalikos</i>	<i>Posterior Analytics</i>
ἀναπόδεικτος	5.4.3	71b27, 72b22
ἄμεσος πρότασις	5.4.4	71b23, 72a8
ἀνυπόθετος	5.4.5, 5.6.6, 7.5.3	76b23
πρῶτος	7.5.3	71b23, b28
τὰ πρῶτα αἷτια	7.1.4–5	71b30–32
ἄνωτάτω	7.1.5	cf. 74a8, 76a19
ἄπλοῦς	10.1.5	cf. 72a3, b14

This similarity in characterization not only shows a knowledge of and dependence on Aristotle's theory, but it also implies a similar function for these principles within each system. A principle is a logical type that is simple and indemonstrable. The importance of this logical type is that those entities which fit its parameters are able to support demonstrative science. In the *Didaskalikos* the plane, for instance, like Aristotle's line, is a principle of mathematics⁴), matter is a principle of natural science⁵), and pain and pleasure are principles of ethics⁶).

Thus far, Albinus would seem to offer no more than a simplified version of Aristotle's theory. His innovation, however, is found in his use of recollection in justifying the certainty of principles so that they can be used in demonstration⁷). Both philosophers agree that the apprehension of the principles is through the faculty of νοῦς. But their respective explanations of this type of apprehension are quite different. Aristotle's νοῦς recognizes principles which are abstracted from perceptions through induc-

3) The actual phrasings of the qualities given in the table are taken from Albinus.

4) Did. 13.2.1. The substitution of the plane for the line as the fundamental geometrical figure would seem to be motivated by Plato's use of triangles, i.e. planes, in his reduction in the *Timaieus*.

5) Did. 9.1.1–2.

6) Did. 32.2.1–3.

7) Elsewhere I plan to present a fuller discussion of the role of recollection in the *Didaskalikos* and its precise relationship to induction.

tion⁸). Induction is at the center of the Aristotelian procedure and no clear justification of these principles is given. Albinus is critical of this solution and offers recollection as the justification for simple and indemonstrable principles. He attempts to construct an intelligible mental process that will make the apprehension of the principles understandable and that will show why the principles have certainty.

Albinus, furthermore, presents this theory in clear opposition to that of Aristotle. In the former's discussion of the inadequacies of induction, an example is given which highlights the defects of Aristotle's analysis. When Aristotle discusses the production of principles *via* intuition, he uses the example 'living' (οἶον τοιονδὶ ζῶον⁹). This very same example is found in the *Didaskalikos*, but there it exemplifies a fallacious conclusion, for by using induction Albinus claims, one could arrive at the definition of animals as only those beings which breathe¹⁰). But this is not the case for there are some animals which do not breathe. Aristotle provides no mechanism for distinguishing such a false definition from a true one. The force and irony of Albinus' criticism come from his choice of a definition for he selects as this example a definition of an animal which Aristotle himself criticizes¹¹).

The implicit criticism is that the philosophy of science expounded in the *Posterior Analytics* cannot meet the standards of Aristotle's own scientific endeavors. The theory has no way to eliminate those false propositions which result from induction; Aristotle does not provide his faculty of intuition with a *mechanism* for certifying principles. Recollection, however, is such a mechanism, and induction is demoted (and I believe the other

8) An. post. 99b15f. The interpretation of Aristotle is quite controversial. This is the traditional view (which comes in many flavors). For a recent critique of this approach, see V. Kal, *On Intuition and Discursive Reasoning in Aristotle*, Leiden 1988.

9) An. post. 100b2–3.

10) Did. 25.3.6–7.

11) At Did. 25.3.7 Albinus notes τὸ ἀναπνοῇ χρῶμενον μόνον ζῶον εἶναι. The error is that some animals are living organisms which do not breathe. This definition appears to have been quite common among the early natural scientists. Aristotle attributes it to the Atomists and (tenuously) the Pythagoreans at *De an.* 404a10f. and to Democritus, Anaxagoras and Diogenes at *Resp.* 470b f. In the latter passage Aristotle discusses the position at some length and refutes it by showing that there are some animals which do not breathe. Albinus must have this argument if not this passage in mind.

parts of dialectic as well) to a means of 'awakening' (ἀνακινεῖν)¹²⁾ our natural conceptions¹³⁾.

The Role of Dialectic

In investigating the use of principles, we must begin with dialectic for this is the second-order science of the principles. The division of science into the three branches, dialectic, physics and ethics, obscures their true relationship. The science of dialectic is both a science in its own right and a meta-science for physics and ethics. The knowledge obtained in dialectic, or perhaps it is better to call it a methodology, is applied to the content of physics and ethics. As a meta-science dialectic is pre-eminently concerned with the principles *qua* principles, and within it methods are developed for discovering and analyzing principles.

Albinus openly acknowledges the position of dialectic as the ultimate source of knowledge and does so by contrasting it with mathematics¹⁴⁾. As for Plato, the purpose of mathematics is pedagogical. It is a tool for sharpening the mind (πρὸς ὀξύτητα διανοίας)¹⁵⁾ and preparing it for the observation of reality (πρὸς ἐπίσκειψιν τῶν ὄντων)¹⁶⁾. Arithmetic, for example, is the beginning of the ascent to reality (πρὸς τὴν τοῦ ὄντος ἐπάνοδον)¹⁷⁾ which finds its continuation in dialectic. But, in spite of the benefits of mathematics, Albinus is quite emphatic about its inherent limitations. Arithmetic releases us, as it were, from error and ignorance in *perceptual* matters (σχεδόν τι τῆς περὶ τὰ αἰσθητὰ πλάνης καὶ ἀγνοίας ἀπαλλάττει ἡμᾶς)¹⁸⁾, and it is (only) an ally in the pursuit of knowledge of essence (συνεργοῦν πρὸς τὴν τῆς οὐσίας γνῶσιν)¹⁹⁾. Mathematics and its branches, arithmetic, geometry, astronomy

12) Did. 5.7.3.

13) For Albinus 'natural conceptions' are the 'residue' of our pre-incarnate intellection of the Ideas. As such they function as standards against which we judge immanent forms in matter, cf. Did. 4.6. At the end of this study we shall return to the relationship of recollection and science.

14) While our more narrow concern here is the influence of Aristotle, one must also recognize the seminal importance of Plato, e. g. the divided line from the *Republic*.

15) Did. 7.2.2.

16) Did. 7.2.3–4.

17) Did. 7.2.5–6.

18) Did. 7.2.6–7.

19) Did. 7.2.7–8.

and music, are useful but limited in the pursuit of knowledge. They are a sort of prelude (προοίμιόν τι)²⁰⁾ to the contemplation of reality.

The theoretical justification of the inherent limit to mathematics is that it does not concern the principles: “In striving to grasp reality (τοῦ ὄντος), geometry, arithmetic and the divisions of mathematics derived from them dream about reality (περὶ τὸ ὄν); it is impossible for them to see the real thing (ὑπαρ) since they are ignorant of principles (τάς . . . ἀρχάς) and things constituted from principles (τὰ ἐκ τῶν ἀρχῶν συγκείμενα)”²¹⁾. Albinus contrasts this with dialectic: “But, since dialectic is much stronger than mathematics, in that it concerns things both divine and certain (βέβαια), it is, for this reason, ranked higher than the mathematical sciences, as if it were some sort of cornice or guardian of the others”²²⁾.

Mathematics has the deductive structure of dialectic and can lead one up from perceptions to mental apprehensions²³⁾; it is a process of abstraction. As such it can prepare the mind for the principles and the deductive structure of dialectic, but mathematics has no capacity for either justifying or analyzing the principles themselves.

The Branches of Dialectic

Dialectic, the science of demonstration, is the second-order science which concerns the principles of the other sciences. It is first presented as having five parts or methods: division, definition, analysis, induction and syllogistic²⁴⁾. But this is immediately revised so that definition is included as a sub-branch of division; it is division as applied to a genus²⁵⁾.

When dialectic is introduced, the purpose is declared to be: “... first, the examination of the essence (τὴν οὐσίαν) of each thing, and then [an examination] concerning their properties (περὶ τῶν συμβεβηκότων)”²⁶⁾. I shall argue that the concern of dialectic with

20) Did. 7.4.12.

21) Did. 7.4.13–16.

22) Did. 7.5.10–13.

23) Did. 7.4.9.11.

24) Did. 5.1.

25) Did. 5.2.

26) Did. 5.1.1–3.

the essence (οὐσία) of an object is its concern with a principle. Principles are the fundamental entities of any science, and the purpose of dialectic is analysis of these principles.

The four methods of dialectic are further grouped into two pairs – division and analysis, which concern essences, and induction and syllogistic, which concern the properties belonging to the essences. Division and analysis are distinguished by the direction of their movement. Division is ‘downward’ in that it begins with a definition of a genus and refines it into the definition of a species through differentiae. Analysis is, by contrast, ‘upward’, for it moves from lower entities, e.g. perceptual data or posterior propositions, to an essence.

Induction and syllogistic concern themselves with, or to be specific, ‘examine’ (ἐπιβλέπειν)²⁷/(ἐπισκοπεῖ)²⁸, properties. But we must not assume that either of these methods concentrates solely on properties. Induction only begins with them in order to discover universals. It proceeds “from the things contained” (ἐκ τῶν περιεχομένων)²⁹ by universals and from particulars (ἀπὸ τῶν καθέκαστα)³⁰ to the universals themselves (ἐπὶ τὰ καθόλου)³¹. Thus induction is associated with definitions³² and natural conceptions³³ both of which are universals and essences³⁴.

So too syllogistic is said to be concerned with properties. It proceeds “from that which contains” (ἐκ τῶν περιεχόντων)³⁵. But it is difficult to see why Albinus associates it with induction in a concern with properties. All of the examples of syllogistic suggest that its goal, like that of the other methods, is a correct definition of essences, e.g. the definition of man³⁶, things which are just³⁷, and the nature of the One³⁸.

With this overview in mind, let us individually consider the parts of dialectic beginning with analysis. Albinus distinguished

27) Did. 5.1.2.

28) Did. 5.1.3.

29) Did. 5.1.6. The term ‘contains’ is applied to syllogistic in that some predicates contain another.

30) Did. 5.7.2.

31) Did. 5.7.2–3.

32) Did. 25.3.

33) Did. 5.7.3–4.

34) I below argue that natural conceptions are principles and, in the conclusion of this section, that principles are essences.

35) Did. 5.1.6–7.

36) Did. 6.5.5–6.

37) Did. 6.5.9–10.

38) Did. 6.5.11 f.

three types, which we shall refer to as the perceptual, the demonstrative and the hypothetical analysis:

“There are three types of analysis”, 1 – that which is an upward journey to the first intelligibles (ἐπὶ τὰ πρῶτα νοητά) from perceptibles (τῶν αἰσθητῶν), 2 – that which is an upward journey through proofs and demonstrations to those premises which are indemonstrable and immediate (ἐπὶ τὰς ἀναποδείκτους καὶ ἀμέσους προτάσεις), and 3 – that which is an upward journey proceeding from hypothesis (ἐξ ὑποθέσεως) to unhypothetical principles (ἐπὶ τὰς ἀνυποθέτους ἀρχάς)³⁹.

In spite of the differentiation of analysis into three methods, its common character is visible. It is described as an ascent⁴⁰. Further, the application of each method of analysis results in a proposition which is not within the scope of that method itself. Perceptual analysis yields a non-perceptual result; demonstrative analysis a non-demonstrable result; hypothetical analysis a non-hypothetical result⁴¹). In the case of hypothetical analysis Albinus explicitly states that the result is a principle, and I shall argue that principles also result from the other two types of analysis.

Perceptual analysis is the repeated application of abstraction to our perceptions: “... from the beauty of bodies we could proceed to the beauty in souls, and from this to that in ways of living, then from this to that in laws, then to the great sea of beauty, so that proceeding in this way we might find in the end Beauty itself”⁴²).

In this method we begin with the beauty which is in bodies and, after several steps, approach beauty itself, i. e. the Idea of Beauty⁴³). The ultimate object of perceptual analysis is a ‘first intelligible’, i. e. an Idea⁴⁴). In attaining a first intelligible, perceptual analysis has yielded a non-perceptual result. But analysis is a process of discovery, not of proof; recollection is the certification of truth.

The second type of analysis, the demonstrative, ascends to indemonstrable and immediate premises. These too are principles for we have seen that Albinus follows Aristotle’s system of the

39) Did. 5.4.

40) Cf. also Did. 5.1.4.

41) The adjective ‘non-hypothetical’ must here be understood to mean ‘not subject to hypothetical analysis’ not as ‘real’.

42) Did. 5.5.1–5.

43) Did. 5.5.1–5.

44) Did. 5.4.1–2.

Posterior Analytics, and this is exactly how Aristotle identifies the primary principles of demonstration: ἀρχὴ δ' ἐστὶν ἀποδείξεως πρότασις ἀμεσος...⁴⁵). [It is necessary that demonstration be] ἐκ πρώτων ... ἀναποδείκτων, ὅτι οὐκ ἐπιστήσεται μὴ ἔχων ἀπόδειξιν αὐτῶν⁴⁶). Thus demonstrative analysis leads to principles which are beyond its scope, i.e. beyond demonstration itself.

Finally, hypothetical analysis also leads to principles, for Albinus explicitly states that they lead to unhypothetical principles⁴⁷) (though it is difficult to distinguish this type of analysis from the previous type). Again, the result of analysis is to arrive at a premise which is outside its own scope. In each case it is clear that principles are the common goal of each method of analysis.

In contrast to the upward movement of analysis, Albinus depicts division and its sub-class definition as 'downward' in movement⁴⁸). This procedure involves the separation of a whole into parts or a genus into species – the latter application yielding definitions. If the preceding interpretation of analysis is accepted, it is then reasonable to speculate that division and definition are concerned with the 'division' and specification of principles. Division need not always be applied to principles just as syllogistic need not always be demonstrative. There can, for instance, be a division of accidents according to substrates⁴⁹). But the primary application of this method is certainly to principles, for we have seen that Albinus himself regards essences as the fundamental object of division, and definition is that part of division which concerns essences⁵⁰) (e.g. the standard example which is the definition of man)⁵¹).

The third method, induction, is the least developed part of dialectic. "Dialectic examines what which each thing is ... through induction, from those [properties] which are included (ἐκ τῶν περιεχομένων) [within essences] ...⁵²) Induction is every method using arguments (διὰ λόγων) which proceeds from like

45) An. post. 72a8–9.

46) An. post. 71b26–28.

47) Did. 5.6.5–6.

48) Did. 5.1.4.

49) Did. 5.2.6–7.

50) Did. 5.3.1–2.

51) Did. 5.3.5–8.

52) Did. 5.1.3–6.

to like or from particulars (ἀπὸ τῶν καθέκαστα) to universals (ἐπὶ τὰ καθόλου). Induction is most useful for awakening (τὸ ἀνακινεῖν) natural conceptions⁵³).

In addition to these two descriptions, one example of induction is found where it is (falsely) inferred that the definition of an animal is that which breathes⁵⁴).

The first description defines induction as that which makes inferences from particulars to universals, or literally from those particulars which are included (ἐκ τῶν περιεχομένων) in a universal to the universal itself⁵⁵). The second passage confirms this interpretation⁵⁶). The example, although it is in fact false, can also aid us, for there is no reason to suspect that the method of induction presented is not indicative of its typical form, i.e. that the product of induction is a definition.

But what status do these inductive universals have? I suggest that they too are principles. The most useful application of induction is in the 'awakening' of our natural conceptions⁵⁷). I argue below that there Albinus identifies natural conceptions and principles, or at least includes natural conceptions within principles. Our only example of a product of induction is a definition of a natural kind, and this is an obvious candidate for a principle, for we shall see that many principles are the fundamental objects of a science. But it is also important that Albinus severely limits the process of induction when he denies that it is an independent path to truth⁵⁸). The significance of the example is that induction may well lead to various false conclusions, and so induction like analysis is not able to justify its own conclusions.

Finally, we must consider the fourth dialectical method – syllogistic. In spite of the relatively elaborate explanation of this method, very little is said about its position within dialectic or its philosophical purpose. Its object is the same as the other parts of dialectic, that is the essence of objects and their accidents⁵⁹). These, as argued above, include the principles. We would further expect

53) Did. 5.7.

54) Did. 25.3.6–7.

55) This use of περιέχω is Aristotelian; it is found at An. pr. 43b23 f.

56) As noted by R. E. Witt (Albinus and the History of Middle Platonism, Cambridge University Press, Cambridge 1937, 64) the phrase "from like to like" in this passage refers to analogical reasoning, which is included within induction.

57) Did. 5.7. The use of ἀνακινεῖν connects induction with recollection, for the word points to Plato's description of recollection at Meno 85a.

58) Did. 25.3.

59) Did. 5.1.1–3.

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58) Did. 25.3.

59) Did. 5.1.1–3.

manipulates the principles of the specific sciences and thus produces the facts and relationships within those sciences. But dialectic transcends not only the opinion of our senses but also scientific knowledge. For it is ultimately based upon principles and recollection.

The Application of Dialectic to Physics and Ethics

Albinus' scientific systematization goes far beyond the bounds of what we normally designate as science, for he extends this analysis to cover ethics as well as physics. 'Science' includes everything which is produced by dialectic from principles. Though demonstrative science does not include contingent matters which are within the scope of traditional science, it does cover ethics, or at least those elements of ethics which are derived from the application of dialectic to principles.

Although we find no complete list of those principles available to the intellect, those Albinus does give allow a reconstruction of his application of the Aristotelian theory to the practical needs of science. A starting point will be a list of those entities within each branch of knowledge which are described as principles:

<i>Dialectic</i>		Unhypothesized Premises (5.4.5, 5.6.6)
<i>Physics</i>	Mathematics	The Figure of a Plane (13.2.1)
	Natural Science	Soul (5.4.5, 5.5.15, 25.4.5–6) Matter (9.1.1) Ideas (9.1.1–4) God (9.1.1–4, 10.1.1–2)
	Theology	God (10.7.13–14)
<i>Ethics</i>		Pleasure and Pain (32.2.1–4) The Good (28.3.5–6)

The fundamental entities of each branch of science are the principles with which dialectic works.

When in the *Didaskalikos* Albinus has finished his exposition

of dialectic, he moves on to the sciences themselves – physics and ethics – and to how the techniques of dialectic are applied to the principles of these individual sciences. He begins with physics and gives a summary of the branches of physics and the goals of those branches:

“... let us in turn speak of theoretical philosophy. Thus we say that its parts are theology, physics and mathematics. The goal (τέλος) of theology is knowledge concerning first causes and the highest and principal things (περὶ τὰ πρῶτα αἰτία καὶ ἀνωτάτω τε καὶ ἀρχικὰ γνῶσις); that of physics is knowing the nature of the universe, what sort of animal is man, what place he holds in the cosmos, if God has foreknowledge of all things, if there are other gods subordinate to him, and what the relationship of men is toward the gods. And [the goal] of mathematics is investigating the plane and three-dimensional nature, and how change and motion work”⁶⁷).

Although, as far as its content and scope are concerned, this scientific program is a development of that proposed in the *Republic*, within each sub-division of science, Albinus attempts to follow the deductive method developed by Aristotle in the *Posterior Analytics*, in which each individual science is founded upon certain fundamental principles.

The survey begins with mathematics. This science is constituted by geometry, arithmetic, astronomy and music. The latter two are derived from the first two⁶⁸), so we should not expect to find principles within them. In spite of the pedagogical importance of arithmetic, geometry is given the pre-eminent role in mathematics. It is the most useful (χρησιμωτάτη) branch of mathematics⁶⁹), and it is the highest of the branches, for dialectical ascent takes its start from it⁷⁰), and when Albinus describes the goal of mathematics, we find that he specifically associates it with geometrical concerns – the investigation of the plane and three-dimensionality.

If Albinus thoroughly applies the Aristotelian program of science, we should expect to find such a deductive structure above all in geometry, and Albinus does not disappoint us⁷¹). The expos-

67) Did. 7.1.

68) Did. 7.4.14.

69) Did. 7.3.1.

70) Did. 7.5.1–2.

71) Neither the exposition of geometry nor that of any of the other individual sciences presents the detail of how the specific tenets of that science are reducible to its principles. But the *Didaskalikos* is an introductory work, and its goal is to

ition of geometry is peculiar in its emphasis on stereometry. This is due, no doubt, to the influence of Platonic construction of the world in the *Timaeus*. Albinus follows Plato in reducing the world to a variety of three-dimensional figures⁷²), but he adds, “the nature of the plane is more of a principle (ἀρχικωτέρα)” than any of these other figures⁷³). The plane is not further reduced to either lines or points. It remains the fundamental geometrical entity, and it is thus the principle upon which geometry is based.

From mathematics Albinus moves to natural science and the constitution of the world. In the beginning of this section he announces that the task of natural science concerns principles⁷⁴). As one might expect, the cosmogony is that of the *Timaeus*, and its principles are matter, form and God: “While matter holds the character of a principle (᾿Αρχικὸν . . . λόγον), [Plato] further admits other principles: the paradigm, that is the paradigm of the Ideas, and the paradigm of God, the father and cause of all”⁷⁵).

Albinus then goes on to explain how the Ideas and matter function in the creation of the world, that is to say how these principles intermix in ontology⁷⁶). Matter as a principle can be contrasted with the four elements which do not have this status⁷⁷). The implication is that elements are not principles, and this is because they are posterior to matter. This analysis is expected given the Aristotelian background, which, I have argued, lies behind this account of science. In this Platonic cosmology we need only establish matter, the Ideas and God as the primary explanatory principles. From them we should, at least in theory, be able to determine the remainder of the deductive science. We need not give this status to derivative entities such as the elements. The second concern within physics is anthropology, and we again find a science centered on a principle. The soul is a principle⁷⁸), and in this one instance we see in some detail how dialectic is able to furnish us with deductive knowledge. The proof of the immortality of the soul is used as an example of demonstrative analysis, and the arguments of the *Phaedo* are organized into demonstrative-

establish the deductive nature of the sciences not to carry out this program with great precision.

72) Did. 13.1.

73) Did. 13.2.1–2.

74) Did. 8.1.

75) Did. 9.1.1–4. This triple structure is also found at Did. 10.1.1–2.

76) Did. ch. 9.

77) Did. 10.8.1–4.

78) Did. 5.5.13–17 and 25.4.3–6.

analytic form⁷⁹). Our knowledge of the immortality of the soul is a product of the application of dialectic to anthropology. Finally, God is a principle not only in physics but also in theology⁸⁰). Thus at the head of each division of the physical sciences one finds that the fundamental entities are all reckoned to be principles. In a good Aristotelian fashion, each science must assume its principles and can only investigate from them; it cannot question their very existence⁸¹).

Albinus, however, extends his application of Aristotle's theory beyond the traditional range of science and includes within it ethics. In this area of knowledge we find two different classes of principles: feelings and moral concepts. Pleasure and pain are the principles which lie behind all of our other feelings, e.g. fear. A feeling (πάθος) is an irrational movement of the soul⁸²), and all other feelings are derived from the two fundamental ones, pleasure and pain; each is a mixture of these two 'elements'⁸³). Moral concepts include the Good as well as other virtues, and each of these stands at the top of a hierarchy which unfolds from it. The Good is, for instance, the principle from which benefit (τῆς ὀφελείας) is derived⁸⁴). It is also quite likely that other moral concepts are likewise principles, e.g. φρόνησις⁸⁵), σωφροσύνη⁸⁶), and ἀνδρεία⁸⁷). I shall argue below that all of our natural conceptions can function as principles in demonstration. And if this is true, we can be certain that at least one other moral concept is a principle for beauty, like the Good, is a natural conception⁸⁸).

Natural Conceptions and Principles

Having considered Albinus' philosophy of science, especially his development of the Aristotelian theory of principles, we shall

79) Did. 5.5.11–19.

80) Did. 10.7.13–14.

81) Phys. 184a10–16 and 184b26–185a4.

82) Did. 32.1.2–5.

83) Did. 32.2.1–2 and 32.3.

84) Did. 28.3.5–6.

85) Did. 29.2.1–2.

86) Did. 29.2.1–2.

87) Did. 29.3.1–3.

88) Did. 4.8.7–8.

now ask how it is related to his epistemology⁸⁹). Recollection and dialectic are two parts of the same process, but they are logically distinct, because science is the aspect of discovery and recollection the aspect of proof or confirmation. But there is an additional connection between epistemology and philosophy of science: the natural conceptions, which are at the center of epistemology, are among the principles of scientific demonstration. Epistemology contains certain privileged items, i. e. natural conceptions, whose certainty is guaranteed by recollection. It is this class of privileged times *qua* principles which form the basis of the specific sciences.

When recollection is used to show the immortality of the soul, Albinus asks rhetorically: ἢ πῶς ἂν τὸ ἀρχικὸν εἶεν αἱ ἐννοιαὶ⁹⁰). I translate this, "Or how could conceptions be [i. e. function] as a principle?"⁹¹) A principle is a logical category and designates a class of entities (or propositions) which are primary, simple and beyond demonstration; they are the foundation of dialectical demonstration. The point of the rhetorical question is to assert that any explanation of natural conceptions must account for the fact that they can have this logical function. The characterization of natural conceptions shows that they fit the requirements of principles. They are certain for their veracity is guaranteed by recollection; they are also described as simple or elemental pieces of knowledge⁹²). Thus they fit the logical criteria required for them to function in dialectic as primary premises or principles.

Further, the class of natural conceptions seems to be co-extensive with that of principles. Natural conceptions, at least

89) Elsewhere I plan to present a fuller discussion of the epistemology of the *Didaskalikos*.

90) Did. 25.3.7–8.

91) Louis calls τὸ ἀρχικὸν an adverbial accusative (*Épitomé* 120, n. 366) and translates: "Enfin, que seraient, au début, nos pensées?" (120). G. Invernizzi translates: "E como potrebbero essere all'origine i concetti?" (*Il Didaskalikos di Albinos e il medioplatonismo*, Rome 1976, vol. 2, 50) in agreement with Louis, but also suggests the possibility, "come potrebbero essere i concetti qualcosa di originario?" (vol. 2, 173, n. 25). G. Burges gives the translation, "Or how would thoughts have the property of a principle?" (*The Works of Plato*, London 1854, vol. 6, 289). Although the exact wording is not as important as our understanding the theory behind the statement, I would suggest, "Or how could conceptions be [i. e. function as] a principle". The phrase τὸ ἀρχικὸν qualifies the verb and designates how concepts epistemologically 'exist'. These conceptions, which are derived from recollection, function as the highest principles (ἀρχαί) within Albinus' deductive philosophy of science. These are what ultimately give certainty to scientific deductions, so Albinus' claim is that for thoughts to be principles, i. e. of science, there must be recollection.

92) Did. 4.6.7, cf. 4.7.1.

when recollected, take the form of definitions. The scope of the natural conceptions includes natural kinds and moral concepts, and these are the very things which are the fundamental entities of physics and ethics. It appears that these natural conceptions are recalled in propositional form, i. e. that form which is suited for dialectic. One example of a natural conception, the definition of animal⁹³), is also a frequent example of a principle in the discussion of dialectic⁹⁴). The Good, a moral concept, is a natural conception⁹⁵) and is also used as a principle in dialectic⁹⁶) and described as such⁹⁷). Lastly, the analysis of the attributes of Good confirms the use of natural conceptions as principles. When Albinus uses the *via negativa* to describe God, he attributes to him a lack of differentiation (ἀδιάφορον) because "this does not accord with [our] conception of him" (οὐδὲ γὰρ τοῦτο κατὰ τὴν ἐννοιαν αὐτοῦ)⁹⁸). A natural conception is explicitly used in a scientific deduction.

Finally, we must consider a passage from the discussion of the capacities of the soul: "For since we judge (κρίνομεν) each existent thing by the soul, [Plato], with reason, establishes (ἐγκατέταξεν) in the soul the principles of each thing, so that, whenever we contemplate any of the things that we come upon according to [their] affinity and proximity, we might conceive (ὑποστησώμεθα) the essence (τὴν οὐσίαν) of the [principle] also to be harmonious with its facts"⁹⁹).

Here the principles are described as possessing much the same function as natural conceptions. We judge "by the soul" just as we judge using reason (τῷ λόγῳ χρώμενοι . . . κρίνομεν)¹⁰⁰); the principles are present in the soul just as the natural conceptions are present in reasoning¹⁰¹). A congruence model of judgment is implied in the description of the principles, i. e. κατὰ τὸ συγγενὲς καὶ παραπλήσιον and σύμφωνον τοῖς ἔργοις. These phrase τῶν ὑποπιπτόντων ἕκαστον even recalls those instances by which recollection is triggered (ἀπό τινων κατὰ μέρος ὑποπεσόντων)¹⁰²). Even though Albinus never actually equates principles with natural concep-

93) Did. 25.3.

94) Did. 5.3 and 6.5.

95) Did. 4.8.

96) Did. 5.5, 6.2 and 6.5.

97) Did. 28.3.5–6.

98) Did. 10.4.5.

99) Did. 14.1.

100) Did. 4.8.9–10.

101) Did. 4.8.8–9.

102) Did. 25.3.9.

tions, it is now clear that each can function as does the other and that each refers to the same entity under different descriptions¹⁰³).

It is only when this final connection has been made that we can recognize the synthesis offered by the author of the *Didaskalikos*. Plato, worried about the possibility of true knowledge, devised the theory of recollection to ground our apprehension of the Ideas. But he provided no detailed systematization of how recollection was to operate. Only the example of Socrates and the slave boy in the *Meno* gave any hint of the workings of recollection. Aristotle devised a grand system, but one that was, in Albinus' view, inadequately grounded. The Platonic theory of recollection needed to be updated, not only to make use of the advances made by Aristotle, but also so that it could meet the Stoic challenge. By placing the theory of recollection at the beginning of an Aristotelian philosophy of science, Albinus provided the required foundation.

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103) The identification of natural conceptions and principles, for which I argue in this section, is explicitly made in the *Introduction to Plato's Dialogues* (*Eisagoge* 150.18–23 [Hermann]). Thus those who accept Albinus as the author of the *Didaskalikos*, as well as the *Introduction*, must accept this identification on the basis of this passage. Because of the dispute over the authorship of the *Didaskalikos*, however, I have presented arguments based solely on the text of this treatise. The *Anonymous Commentary of the Theaetetus* seems to hold a similar position. That work claims that we can only speak about objects by 'unfolding' (ἀναπτύσσων) natural conceptions (47.37–48 [Diels-Schubart]). Here the natural conceptions are some sort of latent conception, and the description of them in this work suggests that they are closer to those of Albinus than those of the Stoics. J. B. Skemp (*Plato's Statesman*, London 1952, p. 76) has even suggested that the connection between division and recollection goes back to Plato himself.