

dealing with a topic that Aristotle would recognise as part of metaphysics' is confirmed by the persistent appeal to themes familiar from the *Metaphysics* and the *Categories*, including the multivocity of the terms 'being' and 'one', the idea that any candidate for being must fall into one of the categories of being, and that only substance can stand on its own without another substantial being to belong to.

Chapters 1 to 3: embarking on the study of nature

Aristotle's attack on Parmenides and Melissus, which is the subject of Chapters 2 and 3 of *Physics* 1, is preceded in the first chapter by some more general considerations about the methodology of enquiry in subjects such as physics. Philoponus' interest is engaged partly by the implicit argument in Aristotle's opening claim to the effect that one should start an enquiry by discovering the subject's principles and causes and elements. Establishing how Aristotle's incomplete argument for this claim could be rendered as a valid syllogism, by identifying its unstated premisses in such a way as to render it conclusive, was evidently a task already prominent in the tradition. Philoponus is responding to an analysis of the reasoning that was to be found in Theophrastus.⁸ Here we get a sense that Philoponus, with his somewhat long-winded explorations of how exactly one might construct a syllogistic argument from Aristotle's opening sentence, is part of a tradition of exegesis that goes right back to the generation after Aristotle.

The second problem that engages Philoponus' extended attention in relation to Chapter 1 is a puzzle that still worries scholars today. This is the contradiction, or apparent contradiction, between what Aristotle says here in the *Physics* and what he says in other works (including the *Nicomachean Ethics*, *Posterior Analytics*, and *Topics*) as to whether the universal is the first thing we grasp or comes later in the process of acquiring understanding. The problem is embedded in a relatively familiar thought, namely that we have to start our enquiries—in physics as in other areas — from what is more familiar to us, even though in the true order of things it may not be more 'knowable' or prior. So the order of investigation does not reflect the logical priority or epistemological value of the knowledge. We start from what is relatively inferior knowledge, but easier to get hold of, and we proceed to a better grade of knowledge, knowledge of things that are genuinely prior and more knowable. This point, made at *Physics* 184a16, is classic Aristotelian methodological dogma.

The problem in this case arises over the status of knowledge of universals. Philoponus explains the issue clearly at 10,23. Normally we should expect Aristotle to say that we start from encounter with the particular, and derive knowledge of the universal at a later stage in the enquiry, while emphasising that the knowledge of the universal is prior and superior in nature. Relative to us the universal is more obscure and

comes later in the process of discovery, but in reality the universal is what science is about. Here in the opening chapter of the *Physics*, by contrast, Aristotle surprises us, and Philoponus, with the claim that what is universal is prior and more clear to us, but less clear and posterior in nature. How can we resolve this apparent conflict, so as to show that Aristotle is not contradicting himself but saying something intelligent about the procedure for investigating the principles of nature? That is Philoponus' problem. The answer to it occupies nearly ten pages of the CAG edition, followed by a further two pages of close exegesis of the relevant sentences in Aristotle's work.⁹

Philoponus canvasses two possible solutions to rescue Aristotle's consistency, one of which is his own, and his preferred resolution.¹⁰ The alternative, attributed to 'some people' at 11,24, he rejects on the grounds that it fails to fit with Aristotelian theory or the real nature of things. In fact what he shows is that it turns out to amount to something very close to his own preferred solution, though the authors of the supposedly alternative theory do not see it that way since they have missed the point that is crucial to Philoponus' own theory. This crucial point is the distinction between the individual and the indeterminate particular. The individual, Philoponus maintains, is one definite item, such as Socrates; the indeterminate particular is something like 'a human being' or 'an animal', where a number of different individuals can be so described. It is indeterminate and indiscriminate in that it can pick out any one of a great many things, indiscriminately identified under the same description. Philoponus suggests that it is this universality of the indeterminate particular that meets the requisite criteria for being what we encounter first, but being less clear and less knowable in nature. He also makes a convincing case for the idea that when one perceives something as an indeterminate particular in this way, one need not yet have a clear grasp of the genuine universal, clearly articulated as such. That may be something still to be achieved. 'Universal' (*katholou*) in this text has therefore to be understood in a rather specialised way, as referring to the indiscriminate particular, by contrast with the individual.

Philoponus' solution to the apparent contradiction has some merits, although the delivery of it is marred by occasional inconsistency in the use of its own technical terminology. Philoponus himself seems to lose track of which is which between the individual and the particular on page 14, or at least he appears to become careless in his choice of terms, in a section where consistency was crucial. But still, overlooking that brief lapse in his otherwise painstaking treatment of the problem, we may see that his introduction of the notion of an indefinite particular is helpful in capturing what Aristotle ought to be saying, if he is to be saying something both plausibly true and consistent with his claims elsewhere. It is a fine example of the principle of charity applied by a commentator in discussing a difficult text, and bearing fruit for our

understanding both of Aristotle's meaning, and of the subject under discussion, which Aristotle had tried to explain in a less than transparent manner.

In Chapter 2 Aristotle turned to a review of his predecessors in the field of natural philosophy. Following his opening remarks about the importance of discovering the principles of the science, he attempted to set out the types of theory found among earlier thinkers as a formal classification according to the number of first principles that a thinker posited to explain the world. If you are doing natural philosophy, Aristotle tells us, you must have either one principle or several, and they must be either motionless or subject to change, and if there is more than one, the number must be finite or infinite. This approach to thinkers of the past is synoptic rather than chronological, and it generates the classic division into monists and pluralists that has stayed with the history of philosophy ever since. It is still the conventional way to classify the Presocratic philosophers, even though the predominant mode of studying these thinkers is now historical and chronological, rather than attempting, as Aristotle was, to chart the range of possible positions that one might hold on a subject.

Philoponus does not question the usefulness of this kind of classificatory review, but rather tries to show that the classification is indeed thorough: that it is 'scientific'¹¹ and that it is 'lucid' or obvious.¹² That is, Philoponus wants to show that the division is systematic and exhaustive, so that all the options are effectively covered. The alternatives that it canvasses are exhaustive, because they are derived by positing one term and then the negation of that term. Philoponus refers to this kind of exhaustive division as a classification based on contradiction (*diaeresis hat' antiphasin*). The lucidity is a result of the familiarity of the concepts, such as 'one' and 'several', in terms of which the classification is constructed.

In the course of explaining Aristotle's summary, at *Physics* 184b15-25, of the possible positions on how many principles there might be, and of what kind, Philoponus fleshes it out with some names and details. Aristotle does not name the individual philosophers for every arm of the classification because he is going to deal with them in more detail later in the book, from Chapter 4 onwards. Philoponus takes it upon himself to identify one or more thinkers for each of the possible combinations that are realistic, and to give a brief outline of how they are to be understood as falling into that section of the division. In some cases Philoponus passes judgement on the quality of the suggestions that the Presocratic philosopher had offered. In the case of Empedocles, who is both a monist and a pluralist depending which regime is governing the components of the world, he presents a nicely nuanced account which interprets the two worlds, the one and the many, under love and strife, as the intelligible world and the sensible world respectively.¹³ He argues that what Empedocles describes as a change of worlds is a description

of the soul's move from one world to the other. This brief discussion of Empedocles is a good example of a Neoplatonic interpretation of Empedocles, and is of a piece with Philoponus' Neoplatonic interpretation of the two parts of Parmenides' poem on the same lines, which is offered at 22,4-9 and again at 55,27-57,12 and 65,3-15.

Aristotle is immediately distracted from his task of discussing earlier natural philosophy by a digression to deal with Parmenides and Melissus, who are not to count as *physikoi* due to the fact that they deny the first principles of physics. The remainder of Chapters 2 and 3 of Aristotle's first book are devoted to the refutation of Eleatic monism. Philoponus pauses briefly to explain Aristotle's claim that the dispute with Parmenides and Melissus is not a proper task for physics, and to elucidate the examples of the quadrature of the circle by Hippiasus and Antiphon that occur in Aristotle's text,¹⁴ before proceeding to the details of Aristotle's altercation with the monists.

This topic, Aristotle's altercation with the monists, occupies the remainder of the present volume. Philoponus divides it into two main parts: first a section in which Aristotle is considering the question what it would mean to say that being is one, taking the question in its own right and not as a question of exegesis of the ancients' texts; and secondly a section in which Aristotle examines the actual theories or arguments put forward by Parmenides and Melissus. The first of these treats the second half of Chapter 2 (185a20-186a3) and the second covers the whole of Chapter 3, which Philoponus divides into four chunks covering first the discussion of Melissus (186a4-22), second, the discussion of Parmenides (two chunks, 186a22-186b14, 186b14-35), and finally the last part of the chapter, which Philoponus identifies as referring to both Parmenides and Zeno (187a1-10). Much of the discussion of the passage relating to Melissus is an examination of the diagnosis of fallacy in Melissus' argument, which Aristotle claims is eristic. This involves reformulating Melissus' argument into syllogistic form and then showing how it depends upon conversion from the antecedent in a case where the terms are not coextensive, or on equivocation on the term *arfe/ie*.¹⁵

The main themes running through Aristotle's attack on the Eleatics are those of the different ways in which one might call something 'one' and the different categories or senses of 'being', according to the classic Aristotelian distinction between substance (*ousia*) and attribute (*sumbebekos*), and between quantity, quality, etc. within the class of attributes. Philoponus had provided a systematic analysis of the ways in which something might be 'one' in his discussion of *Physics* 185a20. This is put repeatedly to use in explaining the complex explorations of what would happen if one were to suppose that the Eleatics meant that their 'being' was one (really one, or nominally one? generically one or as one individual? and so on), and if one were to suppose that they meant it was one substance or one quality or one quantity and so on.

Philoponus' chief task here is to unpack what is a very compressed and allusive discussion in Aristotle. It is clear at a number of points that even the text is in some dispute, and Philoponus discusses more than one alternative way of construing or punctuating the lemma, seeking the one that makes best sense of the argument.¹⁶

Philoponus as exegete

As we have noticed, Philoponus operates something recognisable as the principle of charity. He seeks to make good sense of Aristotle's text. He tries to show that Aristotle fulfils his promises and that his project is systematic and appropriate. He explains how the apparent difficulties with reconciling this text with others, or with plausibly true Aristotelian positions, can be eliminated once one adopts a more refined understanding of what is going on in the texts under discussion. He looks for the reading that brings order and intelligibility to Aristotle's text.

Philoponus' own method of procedure is also a model of systematic organisation. He divides the text he is discussing into substantial sections at the points at which Aristotle changes topic. In many cases these major divisions correspond with the chapter divisions or paragraph divisions that are inserted into modern texts, although there is no reason to suppose that Philoponus was reading from a text in which these divisions were already marked out. For each of these major sections he begins with a long expository discussion, explaining what has gone before and why Aristotle is moving in the direction he is now going. This expository discussion, or *protheoria*,¹⁷ is headed by a partial lemma which gives the opening words of the new section - but the discussion which follows is not designed to be exegesis of those words but of the section which those words introduce. At these points I have inserted a heading with the words 'Exposition and Discussion' to show that we are embarking upon one of these introductory discursive passages.

After completing the expository discussion of the whole passage, Philoponus changes gear. He now provides a detailed commentary on issues that arise in the interpretation of particular sentences or phrases in the text of the passage just discussed. This involves going back to the beginning, and heading each new, often very brief, textual comment with the relevant lemma from Aristotle. Usually the first of these mini-lemmata repeats the words that were cited as the main lemma at the start of the expository discussion: the same words are cited as a new lemma, on which to hang detailed treatment of difficulties with its sense or exploration of the implications.¹⁸

This move from expository discussion of a whole section to detailed exegesis of small lemmata is often not adequately marked in Vitelli's edition in the *CAG*. Because it cites again a lemma from Aristotle that had already headed the *long protheoria* passage immediately preceding