

### 3

## *History and Dialectic*

*Metaphysics A 3, 983<sup>a</sup>24–4<sup>b</sup>8*

RACHEL BARNEY

In *Metaphysics A 3*, Aristotle undertakes to confirm his system of the four causes as a framework for inquiry into first principles, the knowledge of which will constitute wisdom. His strategy will be to survey his philosophical predecessors, in order to establish that none has supplied a cause which cannot be subsumed under his own canonical four. Thus *A 3* inaugurates a project not completed until the end of *A 6*—or, taken more inclusively, *A 10*, since *A 7* summarizes its results, chapters 8 and 9 develop criticisms of some of the views discussed, and chapter 10 reads as a summation of the whole.<sup>1</sup> (Much of *Metaphysics α* also reads, appropriately enough, like a series of reflections on this project: I will note its relevance on occasion below.)

Our concern here is with the opening phase of this project. Here Aristotle discusses the steps taken by the earliest philosophers and their successors towards determining the material cause, which led in turn to recognizing its inadequacy as sole first principle [*archê*]. I divide the text of *A 3, 983<sup>a</sup>24–4<sup>b</sup>8* into five moves: (1) the introduction of the project (983<sup>a</sup>24–3<sup>b</sup>6); (2) the account of the reasoning of the first philosophers (983<sup>b</sup>6–20); (3) a discussion of Thales, with an excursus on his putative predecessors among the poets (983<sup>b</sup>20–4<sup>a</sup>5); (4)

\* I would like to thank all the participants in the Symposium Aristotelicum meeting for discussion of this paper, as well as Victor Caston, Nathan Gilbert, Phillip Horky, Brad Inwood, Stephen Menn, and Robin Smith for their comments. My thanks also to Matthew Siebert for bibliographic assistance, and to Nathan Gilbert for some extremely helpful editorial interventions.

<sup>1</sup> I shall be agnostic as to how strongly we should distinguish *A 8–9* or *A 8–10* as a distinct project from *A 3–6* or *A 3–7*, and will often refer with deliberate ambiguity to ‘*A 3ff*’. See John Cooper’s paper in this volume for a full analysis of these structural relations, and Frede 2004 for a very helpful account of the underlying agenda and assumptions of *Metaph. A*.

a survey of candidate material causes up to and including those of Anaxagoras (984<sup>a</sup>5-16); and (5) an account of early steps towards discovery of the moving cause (984<sup>a</sup>16-4<sup>b</sup>8). I will work through this programme in order, but will not attempt to engage with every question it raises, especially ones more fully dealt with elsewhere. For instance, I will not be discussing the implications of Aristotle's brief references here to Parmenides, Empedocles and Anaxagoras, in light of his more extended discussions later on.<sup>2</sup> My primary concern throughout will be with the general strategies and methods Aristotle here adopts, and in relation to each section of text, I will be arguing for a particular claim: (1) that the argument of A 3ff. is a complex and perhaps unique exercise in 'negative corroborative dialectic'; (2) that Aristotle may attribute to the earliest philosophers a weaker and more plausible version of material monism than is usually thought; (3) that much of Aristotle's account of Thales is drawn from Hippo, via the doxography of the sophist Hippias; (4) that Aristotle's recounting of the various candidate material causes is shaped by Plato's proto-doxographic discussions in the *Sophist*; and (5) that his turn to the moving cause is marked by an unusual and important progressivist thesis, the 'internal logic' claim.

In a concluding section (VI), I try to put together the methodological pieces, and in particular consider whether *Metaph. A* 3 should count as a kind of 'history of philosophy'. This is a controversial question, and accounts of *Metaph. A* often include a disclaimer of the phrase.<sup>3</sup> (My concern here is with the term 'history' rather than 'philosophy': how far Aristotle's predecessors were engaged in a project rightly called 'philosophy' is another question altogether.)<sup>4</sup> This is sometimes meant to either excuse or dismiss Aristotle for failing to meet the

<sup>2</sup> Cf. especially Gabor Betegh's discussion of Anaxagoras and Empedocles in A 3-4.

<sup>3</sup> The *locus classicus* is the highly influential Cherniss 1935: "Aristotle is not, in any of the works we have, attempting to give a historical account of earlier philosophy. He is using these theories as interlocutors in the artificial debates which he sets up to lead 'inevitably' to his own solutions" (Cherniss 1935, xii cf. 349-50, 356-7; cf. Cherniss 1951; Ross 1958, vol. 1, 128; Mansion 1961, 75; McDiarmid 1970, 180; Stevenson 1974; Reale 1968 vol. 1, 151; Mansfeld 1986). Cherniss also holds that *Metaph. A* in particular is 'dialectical' in a way which excludes its being 'historical'. But Cherniss is not always consistent about precisely what he means to deny, or explicit about what he takes the word 'historical' to imply. Guthrie 1953 plausibly defends Aristotle as a historian of philosophy; but this is not the same as defending the claim that he *is* a historian of philosophy. Indeed, in adjudicating the Cherniss-Guthrie dispute, Stevenson 1974 takes it as common ground that "Nowhere was Aristotle trying to write a history of philosophy" (139). In general, the methodological question of what Aristotle is trying to do in *Metaphysics A* 3ff. has been badly muddled by value-laden debates as to how far he is fair and reliable as a source: I will be concerned here with the former question only. For a recent and fair-minded discussion, see Collobert 2002.

<sup>4</sup> See Mansfeld 1985b and Lloyd 1997 and 2002 for different kinds of doubts, with the comments of Laks 2005. It seems clear that *Aristotle* sees his story as one of a coherent enterprise, to which his own project of 'first philosophy' is heir (cf. Frede 2004).

norms we now apply to the history of philosophy, sometimes merely to warn that his motives are ‘philosophical’ rather properly ‘historical’: but obviously such contrasts beg some important questions. For instance, when Ross says that “Aristotle’s object is not to write a history of philosophy but to confirm by reference to earlier philosophers his own account of the primary causes” (1958, 128), he is no doubt right, in way – but aren’t there also some questions being begged here about how many ‘objects’ a philosophical text can have, or perhaps about which ones are compatible? A more constructive starting-point is provided by Jaap Mansfeld’s observation that A 3ff. belongs to a distinctive Aristotelian genre: it is a dialectical survey of the *endoxa*, the reputable views which Aristotle likes to adopt as a starting-point for his own theorizing.<sup>5</sup> As such, it belongs to the early history of doxography, which (in its dominant Peripatetic tradition) began as the assembling of competing philosophical doctrines for use in dialectic. But this cannot be the whole story about our text, for there are ways in which it is quite unlike Aristotle’s other dialectical surveys. For one thing, A 3ff. does much more than set out *endoxa* from which to begin: it is presented as an *argument*, supporting a distinctive and already posited Aristotelian position. Second, it in large part takes the form of a chronological narrative – a mode of presentation neither required nor typically exhibited by dialectic or doxography.

This layering of genres – dialectical survey, corroborative argument, and historical narrative – makes A 3ff. a very complex text. Much of my concern here will be to trace and disentangle these methodological strands. In doing so I will also be concerned to bring out the relation of A 3 to certain predecessor texts, including Plato’s *Sophist* and a doxographic work of the sophist Hippias. Early and foundational though it is, Aristotle’s text does not give us an unmediated response to the Presocratics. And some of its complexities can be traced back to its use of still earlier works, each with its own methods and agenda.

## I. The Introduction of the Project

“Since it is clear that we must obtain knowledge of the original causes (for we say we know each thing when we think we grasp its first cause), and the causes are said in four ways, of which we say one is the substance and the essence (for the primary ‘why’ is referred ultimately to the account, and the primary ‘why’ is a cause and first principle),<sup>6</sup> while one is matter and the underlying substrate, and a third is that from

<sup>5</sup> Cf. Mansfeld 1986

<sup>6</sup> I here follow Primavesi in, with mss family  $\alpha$ , reading *prōton* in 983<sup>a</sup>28 (omitted by  $\beta$  and Ross) as well as in 983<sup>a</sup>29.

which there is a beginning of motion, and a fourth is the cause opposite to this, i.e., that-for-the-sake-of-which and the good<sup>7</sup> (for this is the end of becoming and all motion) – well then, these having been studied sufficiently in our work on nature, nonetheless, let us take up also those who before us went to the study of being and philosophized about the truth. For it is clear that they too speak of certain first principles and causes. So this will be of some help to those who take up the present subject. For either we will discover some other kind of cause, or we will trust all the more in those mentioned here.”<sup>8</sup> (983<sup>a</sup>24–3<sup>b</sup>6)

The chapter opens with a brief and dogmatic reminder that we are seeking knowledge of ‘the original causes’ [*tôn ex archês aitiôn*]. The use of *archê*, his standard term for ‘first principle’, seems almost punning here; Aristotle will collocate causes and principles repeatedly in what follows (3<sup>a</sup>29, b<sup>3</sup>–4), and already in A 1–2 he has discussed wisdom as knowledge of ‘the first causes and first principles of all things’ (981<sup>b</sup>28–9, cf. 2<sup>a</sup>2, 2<sup>a</sup>5, 2<sup>b</sup>9).<sup>9</sup> But the two categories are far from interchangeable. In fact, we need to distinguish them in order to properly articulate what Aristotle is arguing. His general project will be to examine the first causes proposed by various philosophers *as claimants* to the honorific status of *archai* – that is, as candidates for being the ultimately explanatory ‘first principles’ of reality, knowledge of which constitutes wisdom. In order to examine them, he will classify these causes in terms of his own schema: his claim about the very first philosophers, for instance, will be that each recognised a material cause (that is to say, a persisting substrate underlying the cosmic order, which they identified with various natural bodies) and claimed it to be the sole *archê*. At the same time Aristotle’s phrasing here delicately avoids asserting that his predecessors were engaged in exactly the same inquiry as himself. Instead he introduces two further terms for the objects of their inquiry, ‘truth’ [*alêtheia*] and ‘being’ (more precisely the plural, ‘beings’ or ‘things that are’ [*ta ontá*]). These indicate, I take it, the subject matter of what Aristotle elsewhere terms ‘first philosophy’. (‘Truth’, as Ross notes here, clearly means not just any old truth but “the ultimate nature of things”.<sup>10</sup>) It was in the course of thinking about truth

<sup>7</sup> I here follow Primavesi in reading a *kai* which  $\alpha$  includes and  $\beta$  omits at 983<sup>a</sup>31, and adopt a suggestion of Carlos Steel in taking it as epexegetical (‘i.e.’).

<sup>8</sup> Translations follow Primavesi’s text except where noted. Translations are my own, though heavily indebted to Ross; my aim is to be a bit more literal than Ross, reproducing some of the spontaneous-looking convolutions of Aristotle’s prose. Translations from elsewhere in the *Metaphysics* are from Ross, sometimes with revisions, and from other works of Aristotle in the ROT translations except as noted.

<sup>9</sup> On the concept of an *archê*, see Stephen Menn’s contribution to this volume, and Schofield 1997.

<sup>10</sup> (1958) 128, with supporting references to *Metaph.* A, 988<sup>a</sup>20 and  $\alpha$  993<sup>a</sup>30, b<sup>17</sup>, b<sup>20</sup>. On *alêtheia* in these contexts cf. also Stephen Menn’s contribution to this volume.

and being that earlier philosophers spoke of causes and first principles, which is what makes them relevant to the inquiry here.

Aristotle's very brief resume here of the four causes – formal, material, moving, and final – assumes that they are familiar to his audience from his 'writings on nature'. This is plausibly our *Physics*, where the four causes are expounded in Book II, or some subset or predecessor text. There too the system of the causes is more explained than argued for, albeit at greater length, and so his use here of the term 'studied' [*tetheôrêmenôn*] is perhaps carefully chosen – with it, Aristotle avoids any claim to have *proved* the system of causes.<sup>11</sup> True first principles can in any case be provided only with dialectical support, not demonstration. And though *Physics* I can be read as an exercise in the dialectical establishment of first principles, these are the triad of form, privation and underlying subject – not the four causes of Book II. So, as Mansion notes, the survey of *Metaph.* A 3–10 can be read as somewhat in lieu of the argument we might have expected for the four-cause system in the *Physics* itself (1961, 40) – with the important change, of course, that the causes are here considered not as all-purpose modes of explanation, but as *first* causes – i.e., explanatorily fundamental causes of being as a whole, and putative first principles.

In the course of A 3–10, Aristotle will periodically remind us of the work in hand in terms consistent with this introduction.<sup>12</sup> At the start of A 7 he announces the completion of his survey and its result: none of his predecessors has mentioned any principle except those he himself has identified – but all evidently have some vague grasp of at least some of *them* (988<sup>a</sup>18–23). At the end of that chapter, as Aristotle segues to critical discussion, that result is restated; the earlier philosophers are now cited as witnesses – reluctant ones, presumably – testifying through their lack of any alternative to the correctness of Aristotle's own system (988<sup>b</sup>16–18). After two chapters of critique, this result is reaffirmed once more, with the diagnosis of his predecessors as philosophically immature (993<sup>a</sup>11–17). So A 3–10 are occupied with a coherent and successfully completed project, yielding a clear result – or so, at any rate, Aristotle is determined to claim.<sup>13</sup>

As already noted, that project bears a family resemblance to the surveys of Aristotle's predecessors with which several other works begin, including *De*

<sup>11</sup> The term is most often used by Aristotle for observations of animals (e.g. *GA* 721<sup>a</sup>15, *HA* 501<sup>b</sup>21); at *A2*, 983<sup>a</sup>17, we might translate it as 'discern'. Cf. Nightingale 2004 on the connotations of *theôria*.

<sup>12</sup> Cf. John Cooper's contribution to this volume for an account of the trajectory of this argument, and that of *A* 1–10 as a whole.

<sup>13</sup> Cf. 986<sup>a</sup>13–15, <sup>b</sup>2–12, 987<sup>a</sup>27–8, and the striking image at 987<sup>a</sup>2–3 of his predecessors as wise men summoned to a council (as at the opening of *De Anima* I.2).

*Anima* I.2–5, *Physics* I and *On Generation and Corruption* I.1 (and in some ways *Pol.* II). But these predecessor-reviews are a very heterogeneous group, each of which presents its own interpretive puzzles. Moreover, there are at least two respects in which *A* 3ff. is something of an outlier. First, the others are overtly and consistently *diairetic*, proceeding by a more or less systematic division [*diairesis*] and classification of positions by content, in the manner which later becomes standard in the doxographic tradition.<sup>14</sup> A crucial text here is *Physics* I.2, which divides thinkers according to whether they propounded one principle or more than one; if one, whether motionless or moving; if more than one, whether finite or infinitely many, and so on. *On Generation and Corruption* I.1 classes philosophers as to whether they identified generation with alteration or distinguished the two. In *De Anima* I.2, Aristotle classifies views according to the ‘mark’ taken as characteristic of soul: movement, thought, or both. Since accounts of soul often derive from views on first principles, *De Anima* also sketches an alternative *diairesis* in terms of the *archai*, dividing them into corporeal, incorporeal, or both, and again by whether they are one or many (404<sup>b</sup>30–5<sup>a</sup>4). But *Metaph.* *A* 3ff. will follow a diairetic structure only intermittently, interwoven with *chronological* order. (The contrast with *De Anima* I.2 is particularly striking: there the atomists, Pythagoreans, Anaxagoras, Empedocles and Plato are all discussed before Thales.) Moreover, these other discussions are all explicitly concerned to establish a novel starting-point for theorizing. Only in *A* 3 do we begin with the initial positing of a previously articulated theory, which the survey is intended to corroborate.<sup>15</sup>

So the official form of the present survey is a distinctive one. It is roughly as follows, with *P* standing for the Aristotelian schema of causes: ‘*P*. One might propose instead *Q*, *R*, *S*, or *T*; but *Q*, *R*, *S*, and *T* can all be subsumed under *P*. Therefore *P* (and *P* alone).’<sup>16</sup> Formally speaking, this is not any familiar mode

<sup>14</sup> See e.g., Theophrastus *Phus. Dox.* fr. 1–5 Diels, extracted from the exposition of Simplicius *In Ph.* IX.20.27ff. CAG. Simplicius is here of course following Aristotle’s own division in *Physics* I (presumably along with other intervening texts, including his Theophrastan source). Cf. also the division of positions in Theophrastus *De Sensibus* and the *Menôneia* portion of the *Anon. Lond.*

<sup>15</sup> This is not to deny that the other predecessor-reviews are intended to eventually persuade us of a view which, however gradually it may be disclosed, represents an antecedent Aristotelian commitment. What is unique to *Metaph.* *A* is its explicitly and formally corroborative aim.

<sup>16</sup> ‘Subsume’ does not correspond to any Aristotelian term, but seems right as a description of his overall strategy. What it means for one position to subsume another is a delicate question, but I take it that theory *y* subsumes a rival *x* by showing the following: (a) everything *x* gets right, *y* also gets right; (b) *y* puts these shared correct views more clearly and perspicuously than *x*; (c) there are some things *x* gets wrong, and *y* can explain why they are wrong (and not vice versa); and (d) there are some further things which *y* gets right and *x* does not (and not vice versa). This is, it seems to me, very much how we intuitively judge the superiority of one explanatory scheme over another. And it goes naturally with

of Aristotelian dialectical argument – and it is certainly not demonstrative either. The closest analogue in the corpus is perhaps the argument of *Metaphysics* Γ. Here Aristotle explores the various avenues by which some thinkers have purported to deny the principle of non-contradiction (or have been alleged to do so), to show that none is genuinely viable. The upshot is that the principle (more precisely, the *indisputability* of the principle) is confirmed. The project embarked on in A 3 differs in that the operation here is presented as one of analysis and positive subsumption rather than refutation: still, it too seeks to dialectically confirm a claim about first principles by exploring the putative alternatives and showing that none really *is* an alternative. Thus both texts are exercises in what we might call the negative-corroborative use of dialectic.

Criticisms of A 3ff. for the anachronistic application of Aristotle's own conceptual scheme are thus somewhat obtuse: the whole *point* of the exercise, about which Aristotle is perfectly explicit, is to see how far this can be made to work. At the same time, the exercise will only be of value insofar as the anachronism is combined with a certain historical scrupulosity. That is, it can only really show what Aristotle wants it to insofar as the predecessor theories considered (his chosen *Q*, *R*, *S*, and *T*) really do represent the most promising theoretical alternatives; and they must be presented in sufficiently accurate and transparent terms that anything valuable which could *not* be subsumed by his own system would remain visible as such. Given the terms of his own project, then, Aristotle *should* be scrupulous in presenting the views he discusses with sufficient clarity, accuracy and detail to convince an informed reader that his interpretive subsumptions are valid. Hence too his occasional presentation of his undertaking as a more sympathetic attempt to learn what can be learned from his predecessors, as wise men called to council (987<sup>a</sup>2–3, cf. 987<sup>a</sup>28).

Two difficulties face us in trying to judge how far Aristotle's subsumptions succeed. First, Aristotle's translations of earlier theories into his own terminology inevitably distort – and the more remote the theory from Aristotle's own, conceptually and in time, the greater the distortion. For concepts such as 'substance' and 'matter' get their precise meaning from their roles in the Aristotelian system as a whole. To grasp the material cause just *is* to grasp how it relates to and differs from the other causes, and how exactly it contributes to substance and substantial change – and part of his point in A 3 will be that the earliest philosophers got all that wrong. So none of the terms here applied to their views can quite be meant *sensu stricto*. To grasp exactly what Aristotle

a progressivist conception of philosophy (cf. (VI) below), on which it is the *task* of each new candidate theory both to capture what was valuable in its predecessors and to make progress beyond them. Cf. MacIntyre 1988 and 1990.

means to attribute to his predecessors, we will need to disentangle the respects in which his terminology captures their insights from those in which it misrepresents, or even implicitly criticises.

Second, we are unfortunately no longer in a position to be ‘informed readers’. In a few cases, most obviously Thales, Aristotle’s *own* evidence was clearly too scanty to make a really confident historical judgement possible, so that his expositions can only be intended as charitable rational reconstructions. Our own evidentiary position is of course dramatically worse: for most of the figures he discusses, we simply do not have enough independent and reliable information to judge Aristotle’s terminological translations and interpretive subsumptions against their originals. (It is of course tempting to try, however, and I will sometimes make a speculative attempt in what follows.) It is for this reason, I think, that A 3–10 sometimes strikes contemporary readers as inherently self-serving or circular in its argument. On the analysis I have given of Aristotle’s procedure, there is nothing wrong with the form of argument here; the problem is rather an artifact of our circumstances. We need to imagine reading *Metaphysics* A at a time when Empedocles’ own text was easily available, and when any misrepresentations of Plato’s teaching might be contested by his successors. In that context Aristotle’s presentation must have read as *parti pris* and deliberately controversial, but without any clear sleight of hand or methodological illegitimacy. And viewed at a somewhat higher level of generality, Aristotle’s method here rightly remains a standard one in historically informed philosophizing. How else *could* a philosophical stance dialectically corroborate its position, if not by showing that it can capture its predecessors’ insights, explain their limitations and correct their mistakes?<sup>17</sup>

## 2. The Reasoning of the First Philosophers<sup>18</sup>

“Of those who first [*prōton*] philosophized, then, most thought that [a] the first principles of all things were solely of the material type [*en hulês eidei*]. For [b] that from which all beings are and from which as a first thing they come to be, and into which they are in the end destroyed, remaining as an underlying substance but changing

<sup>17</sup> Cf. e.g., the works of Alasdair MacIntyre, including his 1984, 1988, and 1990, as well as Korsgaard 1996 and Brandom 2002.

<sup>18</sup> If with Primavesi we follow  $\alpha$  in reading an adverbial *prōton* at 983<sup>b</sup>6 (rather than a genitive *prōtōn* with  $\beta$ ), as I do in the translation given here, there is no point in A 3 at which Aristotle actually labels any group ‘the first philosophers’ (or more literally, ‘the first who have philosophized’). I will refer to the early materialists spoken of here using the phrase ‘first philosophers’ or ‘early/earliest philosophers’ for convenience; but it is worth remembering that Aristotle’s phrasing is less suggestive of a discrete group, and the scope of his allusion is vague.

in its affections, this they say is an element and first principle of all beings. And because of this they think that [c] nothing comes to be or is destroyed, as such a nature is always preserved, just as we say that [d] Socrates neither comes to be (without qualification) when he becomes beautiful or musical nor is destroyed when he loses these dispositions, because an underlying substrate remains, Socrates himself, and so too neither does any of the other things <come to be or be destroyed>. [e] For it is necessary that there be some nature, either one or more than one, from which the other things arise while it is preserved.”<sup>19</sup> (983<sup>b</sup>6–20)

Aristotle’s introduction leaves open the membership of the group vaguely identified as ‘most of those who first philosophized’. Presumably the group strictly speaking includes only the pre-Parmenidean philosophers Aristotle will list at 984<sup>a</sup>2–8 prior to Empedocles and Anaxagoras, since the latter two, like Parmenides, do to some extent recognise another cause.<sup>20</sup> At the same time, these two are evidently close enough to their monistic predecessors in their conception and use of the material cause to be reasonably grouped with them – this is particularly clear in the case of Empedocles, whose four ‘elements’ repeat three of the *archai* already proffered.

Aristotle here credits these earliest philosophers with [a] a kind of material cause as *archê*; glosses this in terms of [b] a persistent underlying substrate; [c] attributes to them a denial of generation and destruction; [d] explains this denial by analogizing the *archê* to a primary substance undergoing qualitative change, such as Socrates (already adumbrated by the reference to the substrate as *ousia* at 983<sup>b</sup>9–10); and [e] suggests a motivation for all these positions in the idea that there must be a persisting ‘nature’ from which other things arise. As I noted earlier, and Aristotle himself is well aware, concepts like ‘material cause’ only find their proper sense as part of his own system as a whole: so a certain amount of distortion is necessarily built in to the present account, and even a certain incoherence – for instance, the relation of material substrate to substance [b] is not really the same as that of a substance to its changing attributes [d]. Thus even without allowing for outright misreadings or failures of understanding on Aristotle’s part, we may arrive at very different readings of the early materialists depending on what we think needs to be subtracted or rephrased.

With that caveat, the focal claim here is stated clearly in [a]: the earliest philosophers recognized a material cause. Ross qualifies even this, saying “Aristotle does not say that the earlier thinkers recognized the material cause” (1958, 128);

<sup>19</sup> Letters in translated passages are of course mine for ease of reference.

<sup>20</sup> A complication is that in that case all the true materialists (and hence all the members of the ‘first’ group) are monists. But later, at 987<sup>a</sup>3–9, Aristotle seems to say that this group includes never-named pluralists (or dualists) as well.

for *the* ultimate material cause is prime matter, and their analysis went only as far as the four elements. This seems somewhat beside the point, however. Even assuming that Aristotle believes in ‘prime matter’, what fixes the *meaning* of the term *hylê* is the functional role of matter as the substrate of substances. And this role is just what Aristotle emphasises here by using the phrase, ‘of the material type’, or more literally ‘in the role of <or of the kind or type of> matter [*en hylês eidei*, 983<sup>b</sup>7]’. This means something like ‘properly classed as material’; and a cause is properly classed as material if it persists as a substrate through substantial change.<sup>21</sup> For Aristotle, a cause which does the work of the material cause is a material cause, however poorly identified or incompletely understood.

If this is right, then what warrants classifying an earlier thinker’s choice of cause as material has nothing to do with whether it resembles the material ingredients of Aristotle’s own cosmos.<sup>22</sup> One might object that in that case Anaximander’s *apeiron* should be just as much a material cause as water; and yet Anaximander will be mysteriously absent from Aristotle’s account here. This is only a small corner of the large interpretive puzzle raised by Aristotle’s treatment of Anaximander. Aristotle’s explicit references to Anaximander are too few and sketchy to provide a clear sense of how he understands the *apeiron* (cf. *Physics* 187<sup>a</sup>21, 203<sup>b</sup>14; *GC.* 332<sup>a</sup>19–25),<sup>23</sup> and it is controversial whether we should see Anaximander in Aristotle’s otherwise mysterious references to those who postulated an ‘intermediate’ substrate.<sup>24</sup> I cannot address these larger problems here: the issue is worth raising just in order to note that it can explain Aristotle’s otherwise puzzling ‘most’ in 983<sup>b</sup>7, rather than ‘all’. Aristotle may be quietly allowing that one major figure does not fit into his story here and will be elided. If this is right, it implies that Aristotle takes Anaximander’s *apeiron* not to persist as substrate; presumably the opposites, once ‘separated off’, are precisely not indeterminate or indefinite [*apeira*] any more.<sup>25</sup>

What the philosophers to be discussed have in common, then, is their commitment to a single persisting material substrate (whatever its nature), from

<sup>21</sup> That this is what Aristotle means by the phrase is clear from *Metaph.* A 5, 986<sup>b</sup>4–7.

<sup>22</sup> Thus at A 5, 987<sup>a</sup>7, the fact that the first philosophers regarded the *archê* as bodily [*somatikê*] is presented as a distinct point from their having set down those *archai* as material.

<sup>23</sup> Admittedly Simplicius takes it for granted that the *apeiron* is a *stoicheion* in the manner of the other monistic *archai*, *In Ph.* IX.24.13. But Graham seems to me too quick to attribute this reading to Aristotle himself (2006, Ch. 2, 3.2, and 20 n. 55).

<sup>24</sup> *Physics* A 4, 187<sup>a</sup>12ff. seems to me to be decisive evidence against that identification.

<sup>25</sup> Granted, this suggestion is not only speculative but presupposes that Aristotle conceived of Anaximander’s *apeiron* as *essentially* indeterminate. And the original sense of *apeiron* in Anaximander is more likely to have been untraversable or boundless -- that is, spatially infinite rather than qualitatively indeterminate, though no doubt the *apeiron* was the latter as well. See Graham 2006, 29–31 and Kahn 1960, 231ff.

which particular entities arise and into which they are destroyed: I shall use the phrase *material monism*, standardly applied to these thinkers, for precisely this claim.<sup>26</sup> Now whether this is a reasonable reading of the philosophers Aristotle lists is a controversial question, and exactly what he means to attribute to them is not as obvious as is sometimes assumed. Aristotle is usually read as here holding that Thales' water, for instance, is the persisting substrate of *each individual object* or Aristotelian primary substance – and also that it is the *ousia*, the nature or essence, of each one, overlaid with merely superficial qualitative variations. This amounts to reading the earliest philosophers as working with the same basic ontological schema as post-Parmenideans like Empedocles and Anaxagoras. For Empedocles, trees and tables are really just compounds of the four elements, which do not change; what Aristotle sees as substantial generation is just rearrangement of these elements into different complexes.<sup>27</sup> It is the four elements which are 'substance', in the sense that they are what all things really are; and *they* are neither generated nor destroyed. Likewise, *mutatis mutandis*, for the basic entities affirmed by Anaxagoras and the atomists.<sup>28</sup> Aristotle in [c]–[d] seems to claim that this pattern – *material reductionism*, we might call it – is a constant from the days of the earliest philosophers. This view needs to be kept sharply distinct from the weaker thesis of material monism proper, which as articulated above and in [a] by no means entails a reductionist stance. Aristotle *seems* here to attribute both positions to the earliest philosophers: about each, we can ask both whether this is the right reading of Aristotle and whether it is the right reading of the thinkers in question.

One reason we might have doubts about reductionist monism is that in [e] Aristotle seems to gesture towards the motivation for the view he has been discussing (introduced with 'for' [*gar*] at 983<sup>b</sup>17): "For it is necessary [*dei*] that there be some nature, either one or more than one, from which the other things arise while it is preserved."<sup>29</sup> I take the emphasis here to be twofold, on the need for

<sup>26</sup> I cannot here enter into the long and complex history of scholarship on material monism: for a recent rethinking which includes a helpful history and recapitulation of the standard view, see Graham 2006. Graham argues that material monism as construed by the standard view was really the innovation of Diogenes of Apollonia, and offers a plausible alternative reading of the earlier theories as versions of a 'generating substance theory'. Considerations of space make it impossible for me to engage properly with his arguments here, but note that we differ importantly regarding the interpretive options for A 3: Graham's 'material monism' includes what I distinguish as material reductionism (2006, Ch. 3.2) and, unlike me, he takes A 3 to be unambiguous in attributing both to the early monists.

<sup>27</sup> DK31B8, B9, A28, etc.

<sup>28</sup> For Anaxagoras, DK59B10, A43; for the atomists, see DK68A37, B9.

<sup>29</sup> I here assume that we should take 983<sup>b</sup>17–18, quoted above, following Primavesi's text, with the *dei* found in all mss. This is controversial: Bywater and Ross here emend to *aei* (or, Ross suggests, Wirth's *dein*), "since the clause is still concerned with what the early philosophers thought" (1958, 129). But

a ‘from which’ and for it to be ‘preserved’. These are needed to avoid generation *ex nihilo*, the urgency of which is made clear by some strong wording in *On Generation and Corruption*: “that coming-to-be proceeds out of nothing pre-existing <is>... a thesis which, more than any other, preoccupied and alarmed the earliest philosophers” (I.3, 317<sup>b</sup>28–31, trans. Joachim). Now this desideratum in no way requires material reductionism: *any* pre-existing and persisting *arché* will do the trick.<sup>30</sup> Moreover, in contrasting the Eleatics with their predecessors a bit later on in A 3, Aristotle says: “the one and nature as a whole is unchangeable not only in respect of generation and destruction (for this is an ancient belief, and all agreed in it)...” (984<sup>a</sup> 32–3).<sup>31</sup> This is, I think, significant: what is important to the ancients is *not* that there be no generation and destruction of ordinary substances, but that there be none of *nature as a whole*, i.e. the cosmos itself. Thus [e] in our text stresses that there *must* be at least one eternally existing thing from which the cosmos has come to be.

Moreover, the reading of the earliest philosophers as material reductionists may reasonably inspire doubts on external grounds. Even allowing for the general paucity of our sources, there is remarkably little evidence to support it – even within the doxographic tradition which was so enormously influenced by Aristotle and *Metaphysics A* in particular.<sup>32</sup> And post-Parmenidean reductionism would clearly be a more difficult thesis for a monist to hold (or even make intelligible) than for a pluralist like Empedocles, since no rearrangement of diverse elements can be used to explain diversity and change. The very idea of an *arché* as ‘element’ [*stoicheion*], i.e. an inhering partial material constituent (like

it would hardly be extraordinary for Aristotle to drop into direct discourse (and thus, in a loose way, *propria persona*) to voice the reasoning of the early philosophers. Compare for instance 983<sup>b</sup>30–4, just a few lines later, where the whole reasoning of those who attribute *doxai* to the theologians is given in direct discourse.

<sup>30</sup> If this is the basic motivation for the *arché*, we might wonder why it must be supposed to persist eternally once the cosmos has been generated. Perhaps otherwise the ‘generation’ to which it gives rise might just be seen as an arbitrary Hesiod-style succession of new entities: if the pre-existent A is no part of any generated B, the generation of B is covertly *ex nihilo* after all. Or perhaps, on the ‘reservoir monism’ view, the persistence of the *arché* is necessary to guarantee an ongoing, recyclable supply of beings of all kinds.

<sup>31</sup> *Contra* Jaeger and Ross, Primavesi double-brackets this interjection on ‘the ancient view’ and the later comment, “And this is peculiar to them” (see section v for the full translation of the passage), both of which are omitted from the  $\beta$  tradition and Alexander’s paraphrase, as later supplements to the  $\alpha$ -tradition (see his discussion, as Text 13). But his reasons seem to me inconclusive, and there is nothing un-Aristotelian about the thought or language. As Jaeger notes *ad loc.*, the basic point is the same as that already made at 983<sup>b</sup>6–11. A very useful clarification is added *en passant*, however, namely that it is in relation to ‘the one and the whole nature’, i.e. *the cosmos as a whole*, that the ancients denied generation and destruction. So the passage is not entirely redundant.

<sup>32</sup> What evidence there is includes Anaximenes DK13A5, Xenophanes DK21B29 and B33 (but Xenophanes goes unmentioned in A 3), and Heraclitus, DK22B30.

a letter in a word), seems out of place in a monistic system, despite Aristotle's use of the term at 983<sup>b</sup>10–11.

So we have reason to be skeptical about material reductionism as a reading of the earliest monists. Moreover, neither here nor elsewhere does Aristotle attribute the crucial reductionist stance to them – that is, the view that all things are 'really only' water (for instance). To say that some *archê* is *ousia* is to grant it honorific ontological standing, but not necessarily to the point of reductionism about anything else, any more than Aristotle himself is a reductionist about non-substantial attributes.

Some scholars have gone to the other extreme in holding that the attribution of even material monism – that is, any sort of persistent *archê* – is an Aristotelian misrepresentation, particularly in the case of Thales. It has been suggested that his *archê* of water was simply a *first* thing -- a starting-point for cosmogony, with no role as enduring substrate.<sup>33</sup> This seems to me an overreaction, and there is certainly no strong evidence *against* the ascription of material monism to him.<sup>34</sup> So I would suggest that we should be skeptical of both interpretive extremes, material reductionism on the one hand and the denial of even material monism on the other. In between, there are two intermediate positions worth distinguishing. On one, water persists as part of each transient object: this tree and that chair each include it as an 'element' and persisting substrate (without however being reducible to it). This is how material monism has standardly been understood – call it *classic monism* -- and brings the monists closest to Aristotle's own conception of matter. But we might also distinguish a somewhat less Aristotelian- and less post-Parmenidean-sounding possibility. On this view, which we might call *reservoir monism*, water persists as a substrate not within each individual being but only in relation to the cosmos as a whole. It acts as a kind of reservoir of being from which generation takes place, and to which the matter of destroyed entities is returned for recycling. This view holds that all things are generated from and destroyed into water; and that water, which is

<sup>33</sup> E.g., Waterfield 2000, xiii.

<sup>34</sup> It is perhaps also worth noting that a reading of the earliest philosophers as material monists is not really optional for Aristotle. If their *archê* is not an enduring substrate, then it fails to be a material cause; and it is certainly not a cause of any other kind. Only by reading the first philosophers as material monists can Aristotle find a place for them among his ancestors. Moreover, as we shall see below, Aristotle *inherits* a Platonic reading on which the ancient cosmogonies are understood as analyses of 'being' and 'truth' – that is, of what there really is – as Aristotle acknowledges when he introduces them at 983<sup>b</sup>2–3. On that 'ontological' reading the persistence of the *archê* and its status as *ousia* is a given. So Aristotle's reading here can be seen as overdetermined by a number of different interpretive considerations.

alone eternal, is therefore the persisting *archê* and sole *ousia* of the cosmos; and yet allows that water is genuinely transformed into other bodies.<sup>35</sup>

We have two tiny hints that the earliest philosophers might indeed have seen their *archê* in these terms. As Heraclitus says: all things in exchange for fire, and fire in exchange for all things (DK22B90). This talk of exchange implies real distinctness, just as money is distinct from the goods we buy and sell with it; but also a special, foundational status for fire as the inexhaustible and universal medium of change, always available in sufficient stock to compensate for fluctuations in other commodities. Second, we are told that according to Thales the earth rests on water (DK 11 A14, A15; A 3 983<sup>b</sup>21–2). This claim has standardly been seen as a traditional piece of Near Eastern cosmology, and even, skeptically, as the seed from which a distorting depiction of Thales as material monist arose.<sup>36</sup> Again, I see no reason to go this far, but it is worth noting two things about this doctrine. First and most obviously, it seems to presuppose a real distinction between water and earth as cosmic bodies. And second, by depicting water as literally basic – as fundamental or ‘underlying’ in an ongoing way – it might reasonably suggest to Aristotle that water is ontologically basic to Thales’ cosmos as well. This doctrine does nothing to imply that water is a component as material substrate of each individual object: rather it is in a quite literal way the basis for our cosmos as a whole, the body from and on which other things grow.

Can we see any room left for reservoir monism in Aristotle’s own text? As I noted earlier, Aristotle does not go so far as to cast the motivations or conclusions of the first philosophers in reductionist terms. And if this leaves a space for a non-reductionist version of monism, then the choice between classic and reservoir monism seems to me an open question. For it turns on just how we should understand the role of *archê* as persisting substrate, whether in relation to each particular generated object or to the cosmos as a whole. And Aristotle’s very general references here to ‘(all) beings’ (983<sup>b</sup>8, <sup>b</sup>11, cf. *ta alla* <sup>b</sup>18) seem to leave this open.

So it seems to me that Aristotle’s presentation of the monists is in fact underdetermined: it is compatible with all of reservoir monism, classic monism,

<sup>35</sup> What I call reservoir monism has some affinities with Graham’s ‘generating substance theory’ (2006, Chapters 3–4), which he proposes as a *non*-monistic reading of the early Ionians. I intend reservoir monism as a kind of material monism, though, on the supposition that (a) it emphasises the eternal nature of the *archê*, understood as a persisting, ontologically prior component of the cosmos as a whole, and (b) that a view can legitimately count as monistic without insisting on the strict numerical identity of all beings, if it emphasises that a single (kind of) being has a fundamental, explanatory and honorific status.

<sup>36</sup> E.g., Waterfield 2000, xiii. See Algra 1999, 49–54 for a succinct statement of the reasons for doubt.

and material reductionism. We might view this as the effect of a half-hearted attempt at standardization on Aristotle's part, a retrojection of post-Parmenidean ideas on to the early monists. But in fact the sources of this underdetermination are, I think, much more complicated.

This can best be seen if we consider the alleged denial of 'generation and destruction' in [c] above. This is clearly not meant *au pied de la lettre*: Aristotle is happy, throughout A 3-10, to speak of generation and destruction in describing the views of the first philosophers; his criticisms in A8 even describe them as seeking to explain these phenomena (988<sup>b</sup>26-7). A complete denial of all becoming would annul the distinction between the monists and the Eleatics; and at 986<sup>b</sup>14-15 Aristotle presumably has the former in mind in contrasting the Eleatics with *phusiologoi* who set down being as one but nonetheless 'generate' from it as from matter. What Aristotle means to claim is rather that the monists deny *substantial* generation – and what he means by *that* is that their account does not hold it distinct from qualitative change. Taken together with their use of the *archê* in the role of substance, this amounts to the same charge Aristotle levels against them in *On Generation and Corruption* I.1: they reduce the generation and destruction of substances to qualitative change in the *archê* as substrate. But the evidence of *GC*. I.1 cuts both ways. For Aristotle there states initially that some earlier philosophers say that generation and alteration are the same (314<sup>a</sup>6-8); but when he actually turns to expound the views of the monists, the point is twice put in terms of what it is *necessary* [*anankê, anankaion*] for them to say (314<sup>a</sup>9-10, <sup>b</sup>1-5). That is, their conflation of generation and qualitative change is an inference on Aristotle's part, a position to which he takes them to be *committed* given their other views – not an explicit or intended *doxa*.<sup>37</sup>

So too in A 3 too, it seems to me that Aristotle's claim is not that the earliest philosophers shared the post-Parmenidean reductionist agenda, but rather that they lacked the conceptual resources that would be needed to clearly distinguish their views from reductionist ones. His presentation *presses* them, so to speak, in the direction of material reductionism; but this is as much a matter of critique as interpretation. They *intended* to deny generation and destruction only of the cosmos as a whole; but the mechanisms they used to do so leave them with no obvious way to resist an unfortunate assimilation of *all* generation to mere qualitative change.

This interpretive 'pressure' has, I think, a rather complicated origin. In *Metaphysics* Z, Aristotle presents what looks like the A 3 account of the *archai* once more, but here under the rubric of *to on*:

<sup>37</sup> Cf. Barnes 1982, 41.

“And indeed the question which was long ago and is now and always the object of inquiry, and is always puzzled over, viz. what is being, is just the question, what is substance? For it is this that some assert to be one, others more than one, and that some assert to be limited in number, others unlimited. And so we also must consider chiefly and primarily and almost exclusively what that is which *is* in *this* sense.” (Z1, 1028<sup>b</sup>2–7)

Aristotle here presents – as an ancient topic of discussion – a division [*diairesis*] of positions which corresponds reasonably well with the progression of *archai* given in *Metaph. A* 3, from ‘one’ (monists such as Thales) to ‘many’ (the pluralists), some of whom opt for ‘limited’ (Empedocles) and others for ‘unlimited’ (Anaxagoras). But here these are presented as accounts of *what being [to on] is*, used in turn as a proxy for substance [*ousia*]. (‘Being’ is here again to be understood in a strong sense, as at *A* 3, 983<sup>b</sup>2: the question is what there *really* is, in a fundamental, explanatory and honorific sense.) And, crucially, this reading is taken by Aristotle as *closer* to what the early thinkers themselves had in mind; for at the outset of *A* 3, as we noted, he says that he will be mining the ‘investigation of beings’ which his predecessors carried out, for their views about causes and first principles (983<sup>b</sup>1–3).

In other words Aristotle casts his project in *A* 3 as involving a *re-interpretation* of earlier theories of *being*, by which the honorific *onta* of each thinker will be recast as their *archai* – as an interpretive innovation, that is, over the reading sketched in *Z* 1. Now if we ask where that prior reading itself came from, the answer is not far to seek. For the *Z* 1 account is clearly shaped by Plato’s proto-doxography of accounts of being in the *Sophist*. Here the Eleatic Visitor squarely presents the early philosophical debate as one about being, *ta onta*. It is about *ta onta* that, as he puts it, his predecessors asked *posa kai poia*: ‘how many beings there are and of what sort’ (*Sophist* 242<sup>c</sup>5–6). That this text (and/or related ones, perhaps, which have not survived)<sup>38</sup> is on Aristotle’s mind in *Metaph. A* is confirmed by his use of the crucial catchphrase ‘how many and what sort’. This phrase is used by Aristotle for the account he takes himself to have vindicated in *A* 7 (988<sup>b</sup>17), and it is clearly alluded to in his introduction in *A* 3, when he says that the first philosophers disagreed as to the amount [*plêthos*] and kind [*eidos*] of the *archai* (983<sup>b</sup>19).<sup>39</sup> This is just after his admission in

<sup>38</sup> On our very scattered evidence for pre-Aristotelian proto-doxography, see the work of Jaap Mansfeld, especially Mansfeld 1986.

<sup>39</sup> This double mode of inquiry – into the question, ‘how many and what sort’ – can also of course be applied to specific kinds of beings: e.g., in the *Philebus*, both sounds (17b7–8) and pleasures (19b3). (For the doxographic import of this passage, see the forthcoming work of Phillip Horky.) For the for-

A 3 that his predecessors were engaged in an investigation of being, the reading spelled out in Z 1.

Now this prior, Platonic reading *does* seem to involve presenting the ancient monists as committed to a kind of reductionism: for it reads their accounts of their *archai* as accounts of *what things really are*. The upshot is confusing and even seems backwards from our point of view: for to us it seems natural to interpret Thales' water as the source of other beings, and much more tendentious to take it as what all things really are. But from Aristotle's point of view, apparently, it was the other way around. This interpretive inheritance helps to explain why Aristotle's reading in A 3 'presses' the ancients in the direction of reductionism. But, complicating matters still further, there is a countervailing pressure here as well, for Aristotle is now *using* these theories as accounts *not* of *ta onta* but of the *archai*. And – barring some fairly elaborate loop of argument – a cause or first principle is *not* to be identified with the being of which it is a cause or first principle. The result in A 3 is a sort of interpretive impasse, leaving it underdetermined whether we should read the earliest philosophers as material reductionists, or merely classic or 'reservoir' monists. It is ironic that in leaving the door open to the latter readings Aristotle's account becomes much more plausible by our interpretive lights. For it evidently results not as a direct response to the evidence, but as a further twist to a very programmatic inherited reading, here reshaped to fit the local demands of Aristotle's own project. The following sections will bring out some further respects in which A 3 is highly responsive to earlier interpretive traditions.

### 3. Thales, the Theologians and Hippo

Aristotle now turns to a rational reconstruction of the thought of Thales, leader or founder [*archêgos*, another pun on *archê*] of the early philosophers, which leads him to consider whether his starting-point should be earlier still:

“However they do not all say the same about the number and kind of such a principle, but Thales, the founder of this sort of philosophy, says [a] it is water (hence he also declared that [b] the earth rests on water), perhaps getting this opinion from seeing that [c] the nurture of all things is moist, and that [d] the hot itself arises from this and [e] the animal lives by this (and [f] that from which they come to be is a principle of all things) – he got this opinion because of this, and [g] because the seeds of all things have a moist nature, and [h] water is the origin of the nature of moist things.

mula in Aristotle cf. *De Caelo* 277<sup>b</sup>25; *EN*. 1115<sup>a</sup>5, 1135<sup>a</sup>14; *GC*. 329<sup>b</sup>3; *HA*. 505<sup>b</sup>23;  *Mete*. 338<sup>a</sup>23; *PA*. 660<sup>a</sup>7; *Ph*. 194<sup>b</sup>17; *Pol*. 1299<sup>a</sup>31; *Rh*. 1368<sup>b</sup>32, 1369<sup>b</sup>29.

There are some who think that the very ancient <thinkers>, who lived long before the present generation and first discussed divine matters, also held this opinion about nature. For they made Ocean and Tethys the parents of generation, and the oath of the gods water, called by them Styx. For what is oldest is most honoured, and what is most honoured is what one swears by. Well then, whether this opinion about nature is actually primitive and ancient may perhaps be unclear, but at any rate Thales is said to have declared himself in this fashion about the first cause. For Hippo no one would think worthy to include with these <thinkers>, because of the shoddiness of his thought.” (983<sup>b</sup>20–4<sup>s</sup>)

The treatment of Thales is much fuller than that given to the other first philosophers. His selection of the *archê* [a] is followed by [b] as a corollary. This is perhaps to give a taste of the sort of *use* which the first philosophers made of their *archai*, though it has been argued that Thales’ reasoning is more likely to have been the other way around.<sup>40</sup> Aristotle then turns to assign empirical reasons [‘he saw’, *horôn*, b23] in [c]–[g] for Thales’ selection of the moist, i.e., as [h] clarifies, of water. Nothing comparable is offered for the later philosophers listed; perhaps the grounds offered here are to suggest the *kind* of reasons relied on by the others, *mutatis mutandis*.

The reasoning attributed to Thales is avowedly speculative.<sup>41</sup> The first reason mentioned, [c], is qualified with a ‘perhaps’ [*isôs*], and though this is not repeated with the others there is no obvious reason to give them greater credence. When Aristotle returns to Thales at 984<sup>a</sup>2, ‘he is said’ [*legetai*] is applied even to his opinion about the *archê*. This combination of extensive and charitable rational reconstruction with scrupulous modesty about the evidence is striking. Evidently Aristotle is determined to claim Thales as the first of his philosophical ancestors: this requires him to attribute to Thales both a version of ‘material monism’ and some rational basis for his views, but Aristotle refuses to pretend that either is well-attested.

The reasons ascribed to Thales unfold in a stuttering, spontaneous-looking way, and it is hard to tell how many are intended as fully independent or distinct. At any rate [d]–[f] seem to constitute a unit, arguing for the primacy of moisture on the basis of its priority to heat. Exactly how this argument works depends on a delicate textual question. In the translation above, with Primavesi, I follow mss *α* in reading *kai to zôion toutôî zôn*, so that the ‘this’ [*toutôî*] by which

<sup>40</sup> E.g. Cherniss 1935, 4 and 1951, 321–2. The *doxa* is repeated at *De Caelo* 294<sup>a</sup>29–30.

<sup>41</sup> As Ross notes, Aristotle always speaks of Thales’ views with caution: cf. *De Caelo* 294<sup>a</sup>29; *De Anima* 405<sup>a</sup>19, 411<sup>a</sup>8; *Pol.* 1259<sup>a</sup>6, 18. Cf. Snell 1942, 171–2. Cherniss suggests that Hippo is not only the source of the reasoning Aristotle here attributes to Thales, but of that attribution: Hippo “may have sought in this way to lend it [*sc.* his doctrine of the *archê*] authority after the fashion of antiquity” (1951, 321).

an animal is said to live is presumably heat.<sup>42</sup> This reading gives a reasonably straightforward argument: water is what heat comes from [d];<sup>43</sup> animals live by heat [e]; that from which something comes is its *archê* [f]; implicit conclusion, water is the *archê* of heat and, by a kind of transitivity, of the animal life which depends on it.<sup>44</sup> This would serve as a neat counterargument against the rival candidacy of fire as *archê*, in which case it would be unlikely to predate Hip-pasus and Heraclitus; but presumably Thales could have offered it simply as an argument from observation. Moisture and heat are both signs of life; if moisture is prior to heat, it is plausibly prior to all life.

Now on this reading, it is left open in [d]–[f] *how* or in what sense heat and animal life are ‘from’ moisture; but plausibly the moisture in question is that of seeds or nurture, noted in [c] and [g] respectively – so there is a certain redundancy here, with [d]–[f] explaining [c] and prompting [g] in turn. The advantage of this reading is that it can explain why [g] is introduced with the resumptive ‘-- because of this, and...’ [*dia te dê touto...kai dia*]. This phrasing frames the preceding as amounting to a *single* piece of reasoning, one sufficiently complex or digressive that forward movement now needs to be explicitly resumed.<sup>45</sup>

It has long been noted that at least some of the reasoning here attributed to Thales has been drawn by Aristotle from the later hydromonist Hippo – [g]

<sup>42</sup> The mss family  $\beta$  has instead *kai toutô zôn*, ‘and it lives by this’, so that heat, continuing as subject, is said to live by moisture, and animals are not invoked. This may actually seem preferable as far as sense goes. For it suggests that we read ‘and it lives by this’ as epexegetical of the preceding phrase, giving an explanation of *how* the hot is ‘from’ the moist. (And it does seem to have been a common Presocratic doctrine that fire is ‘nourished’ by moisture, so that the fire of the heavenly bodies must depend on exhalations from the sea (*Meteorology* II.2, 354<sup>b</sup>33–5a32) (see also following note).) This reading also gives a cleaner argument to [d]–[f] as a whole, as a simple syllogism that the moist is *archê* of the hot. My reasons for nonetheless preferring  $\alpha$  (even apart from considerations of textual tradition and authority) are given above.

<sup>43</sup> This may sound odd to us, but the hot and the moist were standardly linked in both cosmological-meteorological and biological-medical contexts. For the medical version, see *On Regimen* I and Lloyd 1964. The view that the sun was somehow nourished by moist exhalations seems to have been widespread, and not restricted to Heracliteans (though this is controversial: cf. Cherniss 1935, 133–6, Kirk 1954, 264ff, and Graham 2006, 58–62). In the *Meteorology* Aristotle reports the reasoning behind this view as involving an inference from observable fires: “the fire we are familiar with lives as long as it is fed, and the only food for fire is moisture” (355<sup>a</sup>3–5).

<sup>44</sup> The latter does not *quite* follow, since the ‘by’ relation which links heat to animal life, represented by the dative at b24, is perhaps not quite the same thing as one thing ‘coming from’ [*ek*] the other: but the general relation of priority here is plausibly a transitive one.

<sup>45</sup> Cf. Ross *ad loc.*, who speaks of Aristotle as offering “two reasons” to Thales *in toto*, from nutriment and from seed (1959, 129, cf. 125).

certainly, and perhaps the rest as well.<sup>46</sup> In *De Anima*, Aristotle explicitly ascribes [g] to Hippo, as a basis for holding that the soul is water:

“Of more superficial writers, some have also declared it <the soul> to be water, such as Hippo. They seem to have been persuaded by the fact that the seed of all things is moist. For he even refutes those who say that the soul is blood, <arguing> that the seed is not blood. For this is the first soul.”<sup>47</sup>

Moreover, we have good evidence that [b]-[f] should be attributed to Hippo as well. According to Hippolytus, Hippo claimed that water and fire are both *archai*, but that water begets fire, which in turn overmasters it to form the cosmos (*Ref.* I.16). In other words, that the hot is ‘from’ the wet ([d]) is the most basic principle of Hippo’s cosmogony. Moreover, Aristotle’s [b], the not-obviously-pertinent doctrine that the earth rests on the sea, is close to explicit in our one surviving ‘fragment’ of Hippo’s work. Preserved in a Homeric scholion, this is a lumbering syllogism arguing that since it goes deeper than wells, springs etc., the sea must be the source of fresh water:

“All drinking waters come from the sea. For the wells from which we drink are surely not deeper than the sea is. If they were, the water would come not from the sea but from somewhere else. But in fact the sea is deeper than the waters. Now all waters that are higher than the sea come from the sea.”<sup>48</sup>

This reads like an argument for [b], and a plausible one at that: how could the sea could be the source of wells and springs, unless they percolate up from seas *beneath* the earth?

If we take these points together, it seems that the great bulk of Aristotle’s report on Thales may in fact have derived from Hippo. (That is: it derives from a source which drew on Hippo’s doctrines, whether or not this source also attributed them to Thales.) Now this should be put together with the fact that the report is immediately followed by Aristotle’s digression (or retrogression) into the poets. As Bruno Snell argued in an important paper, this passage, together with certain proto-doxographic passages of Plato’s *Theaetetus* and *Cratylus*, is almost certainly derived from a landmark of ancient doxography, the sophist Hippias’ anthology of ‘related ideas’.<sup>49</sup> Before getting into why this is signifi-

<sup>46</sup> Cf. Ross *ad loc* (1958, 129), with references to Burnet, Zeller and Döring. Simplicius *In Ph.* IX.23.21–9 attributes [c] to Thales and Hippo alike.

<sup>47</sup> 405<sup>b</sup>1–5, my translation. The moistness of seed is also noted in the brief account of Hippo at Hippolytus *Ref.* I.16.

<sup>48</sup> *Schol. Homer. Genev.* 197, 19 Nicole, on *Iliad* XXI.195 = DK38B1, trans. Barnes 1987.

<sup>49</sup> DK86B6; cf. Snell 1944, Mansfeld 1983, 1986, Frede 2004. A thorough and helpful study of Hippias’ work, which anticipates much of my argument in this section, is Patzer 1986. The title of the work

cant, we need to see what exactly Aristotle does in this excursus. It moots the question of whether the ancient ‘theologians’ (clearly including Homer and Hesiod, and doubtless Orpheus and Musaeus to boot) shared Thales’ *doxa* about the *arché* and expressed it in their depictions of Ocean, Styx, and so forth. After explaining why ‘some people’ think they did, Aristotle dismisses the claim with no real explanation, saying only that it ‘may perhaps be unclear’ whether this doctrine is indeed so ancient (984<sup>a</sup>2).<sup>50</sup> Since the argument given in favour of the particular allegorical interpretation at stake is valid,<sup>51</sup> Aristotle’s scepticism appears to be about the very idea of allegorically mining such texts for *phusikai doxai*.

This is often taken as a blanket dismissal by Aristotle of the poets from philosophical discussion. But in fact his stance is subtler and more complex, as some parallel texts later in the *Metaphysics* help to bring out. The issue arises again at the start of A 4, when Aristotle notes, perhaps prompted by Hippias once more, that Hesiod might be credited with discovery of the final cause; and here too the question is basically punted (984<sup>b</sup>31–2).<sup>52</sup> In B 4, Aristotle for a third time invokes the poets only to dismiss them. He complains, “the school of Hesiod and all the mythologists thought only of what was plausible to themselves, and had no regard to us” (1000<sup>a</sup>9–11), in treating ambrosia and nectar as somehow, mysteriously, causes of immortality. He brushes them aside as not worth serious investigation; “those, however, who use the language of proof we must cross-examine and ask why, after all, things which consist of the same elements are, some of them, eternal in nature, while others perish” (1000<sup>a</sup>18–22). Here we seem to have what was never explicit in A 3–4: a programmatic statement of demarcation between poetry and philosophy. Still, even here matters are not so simple. It is striking that the phrasing of Aristotle’s initial complaint, that the

described in B6 is unknown; the title *Sunagôgê* (‘Collection’) would be appropriate, and is attested for Hippias, but the content attributed to it in DK86B4 is difficult to square with the description in B6.

<sup>50</sup> See Mansfeld 1985a, 132–4 and Palmer 2000, 184–5. Note that this does *not* mean or entail that the poets were themselves unclear: Aristotle’s remarks about the unclear state of our knowledge about certain views (cf. 984<sup>b</sup>18) should not be conflated with his complaints that various authors have expressed themselves unclearly. The latter criticism is used principally against *philosophers*, notably Xenophanes and Empedocles (986<sup>b</sup>21–5, 993<sup>a</sup>22–4, cf. 985<sup>a</sup>4–6 etc.), rather than poets (contra Mansfeld 1986, 41–44). On the ‘criterion of clarity’ and Aristotle’s use elsewhere of the *theologoi*, see Palmer 2000.

<sup>51</sup> Water=Oath, Oldest=Most Honoured, Oath=Most Honoured; therefore Water=Most Honoured and therefore Water=Oldest, i.e. water is the *arché*. Not a valid syllogism for class inclusions, of course, but these are identities.

<sup>52</sup> Thus Frede 2004, for instance, overstates the extent to which Aristotle is concerned in *Metaph.* A 3 or elsewhere to ‘make a clear cut’ between the philosophers and their predecessors. Palmer 2000 and Sassi 2002, 66–70, offer more nuanced views. Palmer 2000, 182 indeed makes a strong case for the claim that “it is not the case that for Aristotle the history of philosophy begins with Thales.”

poets look down on and take no care for us, is taken from a text whose influence on A 3 I have already noted (and will return to), Plato's proto-doxography in the *Sophist*: there it is complained that the earlier *philosophers* were unclear, with the same sarcastic suggestion that this shows a self-involved contempt for their audience.<sup>53</sup> Moreover, Aristotle's main complaint here is that the mythologists – and philosophers like Empedocles – are arbitrary in their deployment of causal principles. And this criticism presupposes that we *can* legitimately attribute to the mythologists just the same kind of theoretical claims as the philosophers. This presupposes that the question left hanging in A 3 – is it legitimate to interpret the mythologists in such a way that their works yield *doxai* equivalent to those of the philosophers? – is in fact to be answered in the affirmative. (The same also seems to be assumed in *Metaph.* Λ 6 and N 4.) The exercise is not illegitimate; the problem is rather that it is usually pointless. For once we have extracted *doxai* from the poets, there is no way for us to 'cross-examine' them for their reasoning, unlike the philosophers. (I will have more to say about Aristotle's dialectical examinations of 'witnesses' in section VI.<sup>54</sup>) Homer may well have had opinions on some of the same questions as Thales, and that they were allegorically expressed is not an insuperable barrier to interpretation. What Homer did not have was an *argument*. The lengths to which Aristotle has just gone in reconstructing arguments for Thales points up the importance of this contrast for him.

Now why would Aristotle bother with this excursus, given that it leads nowhere but a mental shrug? Two answers suggest themselves, and they are complementary. First, Aristotle is throughout A 3ff. very interested in the question of who discovered what *first*. This is one of the most obvious respects in which his project in A 3ff. is, broadly speaking, a historical one – and continuous with other Peripatetic exercises in historiography, which even included the writing of 'heurematographies'.<sup>55</sup> (I discuss this further in section (VI).) Hence for instance the mooted regression back to Hesiod at the start of A 4. But, second, it also seems highly plausible that Aristotle is here again responding to his source, the doxographical text of Hippias. Though we do not know as much as we would like to about this work on 'related ideas', it clearly emphasised continui-

<sup>53</sup> Both passages use *dligôrêsan* and deny that the earlier thinkers worried [*phrontízein*] about our understanding (*Sophist* 243<sup>a</sup>6-7; *Metaph.* 1000<sup>a</sup>10-1). Frede 2004, 43 notes the parallels.

<sup>54</sup> Cf. also 988<sup>b</sup>17 on the use of earlier philosophers as 'witnesses', and *Eudemian Ethics* 1216<sup>b</sup>26-35, discussed below. The basic criticism here goes back at least as far as Plato's *Protagoras*, where Socrates retroactively rejects Protagoras' proposal that they discuss ethical issues via the poets. Poets cannot be interrogated about what they say; people interpret them differently and these conflicts can never be decided. So we should set the poets aside and test our own *logoi* in discussion (*Prot.* 347<sup>c</sup>-8a).

<sup>55</sup> See Zhmud 2006.

ties between the poets and the philosophers. Aristotle is here considering and rejecting that approach. In doing so he is performing not a demarcation of philosophy from poetry, but rather a demarcation of *his own historical method* from the indiscriminate, florilegium-like doxography of the sophist.

It is in turning back from the poets to Thales that Aristotle finally mentions Hippo – who, I have argued, is likely the real originator of the hydromonistic ideas presented earlier. He does so with an abrupt sideswipe: “Hippo no one would think worthy to include with these <thinkers> [*meta toutôn*], because of the shoddiness [*euteleia*] of his thought” (983<sup>b</sup>4a3–5). Air and fire will each get a pair of advocates: Aristotle here considers the possibility of adding Hippo to round out the hydromonist team, and rejects it. There is an odd air of thinking-aloud here, especially marked because the ‘these’ [*toutôn*] has no antecedent – the question is clearly not whether Hippo should be ranked with the *theologoi*, who anyhow have just been dismissed. Rather the *toutôn* looks forward: Aristotle is speaking as if he has *already* listed the other monists he is about to name, or as if he already has such a list (literally?) in view. This suggests that we should once again consider Aristotle’s engagement here with predecessor texts.<sup>56</sup> We already have good reason to believe that the excursus into the poets is a response to a counterpart passage in Hippias’ work on related ideas. Now we have no direct evidence that Hippo was included in Hippias’ work. However, the fragment of Hippo on sea water is from a scholion to *Iliad* XXI.195, where it is introduced as coming from the third book of Crates’ *Homeric Studies*<sup>57</sup> and is followed by a standardized claim that Homer ‘said the same thing’. And we might well wonder how Crates, a scholar and (probably Stoic) philosopher of the second century BC, came by Hippo’s *ipsissima verba* on this particular point. Content and context here point to the same answer. For that Homer is in agreement with the natural scientists as regards Ocean is, after all, just the point which Snell traced back to Hippias’ work on related ideas. And Mansfeld has noted that to make this point Hippias must have practised something very like allegorical interpretation and that the Stoics may well have drawn on his allegories for their own.<sup>58</sup>

<sup>56</sup> I do not mean the phrase ‘predecessor text’ to imply anything about exactly *how* Aristotle used either Hippias or the *Sophist*. But I do mean suggest a closer relation than would be conveyed by ‘source’. These texts do not just supply Aristotle with raw materials; their mode of presentation has detectable effects on his own.

<sup>57</sup> “Then in the third book [of his *Homeric Studies*] he says that the later natural scientists also agreed that the water which surrounds the earth for most of its extent is Ocean, and that fresh water comes from this.” Trans. Barnes 1987.

<sup>58</sup> “It is therefore entirely possible that at least some of Hippias’ quotations were taken over by the Stoics, and that they lived on in the professional literature explaining the poets, or the Poet, as well as

Given this consonance of content and function (and the virtual exclusion of Hippo from the mainstream of non-medical doxography), I would suggest that Crates' source is almost certain to have been Hippias or some closely derivative text. And this is worth factoring back in to our reading of A 3, for it entails that Hippo figured in the work which we have already seen is Aristotle's source for the excursus. If we grant that Aristotle's source is Hippias in [b], and then in the excursus as well, it becomes very plausible that he is also the source for the rest of the hydromonist reasoning [c]-[g] which comes in between (and which I have already argued should be attributed to Hippo). Finally, it is then natural to suppose that Aristotle's belated *praeteritio* of Hippo is prompted by the text he has been using all along.<sup>59</sup> In explicitly excluding Hippo, Aristotle is doing just the same thing as in the excursus: responding to Hippias' indiscriminateness with a correction, and a raising of the doxographic bar. If this is on the right track, then the *whole* of the present passage represents a sustained engagement with this crucial predecessor text, one involving both considerable appropriation of material and half-submerged methodological critique. As I noted in (II), and will argue further in (VI), the other text which has this complex intertextual role in A 3 is Plato's *Sophist*. I do not want to speculate, hopelessly, about the physical details of Aristotle's methods of composition.<sup>60</sup> But it is clear that his work here is marked by ongoing access, recourse and responsiveness to both texts (or, perhaps, extracts or other derivatives of them) – the equivalent of, in our time, having them open on his desktop.

All this helps to explain what would otherwise be something of a puzzle, Aristotle's gratuitous *praeteritio* of the hydromonist Hippo. It is, after all, always simplest just not to mention what one considers undeserving of mention. No doubt Hippo irritates Aristotle both as a materialist about the soul (scorned in *De Anima*) and as a throwback: a belated material monist who does not fit into the progressivist story told here. But this does not explain why Aristotle bothers to name him, and it remains hard to see why Hippo should be singled out for scorn when Diogenes of Apollonia, for instance, is not. The natural explana-

in the doxographical accounts" (1985a, 143). We cannot be sure that Hippias cited *Iliad* XXI, 195–6, but it would have been extremely pertinent (cf. Guthrie vol. 1, 60; Mansfeld 1983, 88 n. 17, 90, 93 n. 35). Xenophanes 21B30, also on the ocean as source, follows almost at once in the Geneva scholia *ad* XXI, 196. Patzer 1986 agrees that DK38B1 would have fit Hippias' purposes in relation to the *locus* discussed by Snell.

<sup>59</sup> Patzer 1986, 40–1 also finds it likely that Aristotle's reference to Hippo is prompted, in a polemical spirit, by his inclusion in Hippias

<sup>60</sup> Frustratingly little is known of the practicalities of Greek reading, writing and reference in Aristotle's time or earlier. For discussion of these questions see the work of Tiziano Dorandi, including Dorandi 1997.

tion is that Aristotle is here responding critically to the inclusion of Hippo *in someone else's text*: and we can make a very good guess as to who that someone was. I will come back to this question at the end, when I try to draw some conclusions about the mix of genres in A 3.

#### 4. Enumeration of the early materialists

“Anaximenes and Diogenes set down air as prior to water and the first principle above all, among the simple bodies; Hippasus of Metapontium and Heraclitus of Ephesus set down fire; and Empedocles the four <elements>, adding earth to those already mentioned as a fourth (for <he says> these always remain and do not become, except in quantity or smallness, being combined into one and separated out of one). Anaxagoras of Clazomenae, who was prior to him in age but later in his works, says that the first principles are infinite. For he says that almost all the homogeneous bodies, like water and fire, come to be and are destroyed through combination and separation alone; otherwise they are not generated or destroyed, but remain eternally.” (984<sup>a</sup>5–16)

Aristotle's enumeration here involves a complex layering of systematic and chronological ordering principles. Overall and at the highest level, A 3–6 proceeds systematically, by a division [*diairesis*] into the four types of cause offered as *archai*. But these causes are discussed in their chronological order of discovery. Within the discussion here of the first of these causes, the material, this organizational pattern – first systematic division, then chronology – is reproduced locally. The systematic progression is from one *archê*, to many (Empedocles), to infinitely many (Anaxagoras). This diaretic sequence (used also at *Physics* I.2) seems to have a powerful hold on Aristotle's thinking about the *archai*; in order to execute it, he departs from the birth order of Anaxagoras and Empedocles,<sup>61</sup> overshoots Parmenides, and outruns his initial plan inasmuch as Anaxagoras and Empedocles should not count among the materialists advertised at 983<sup>b</sup>6–8.

<sup>61</sup> The interpretation of the contrast here has been controversial: for the term translated as meaning that Anaxagoras was later [*husteros*] in his activity might equally well be read as expressing philosophical inferiority. Of the two, Aristotle does seem to have the higher opinion of Empedocles (see O'Brien 1968). On the other hand, 984<sup>b</sup>15–20 does not entail that Anaxagoras' work cannot have been later than Empedocles'; and it is hard to see why Anaxagoras' inferiority would be relevant here, least of all as an excuse for discussing him after Empedocles. If anything, given the progressivist orientation of A 3, Aristotle's presentation should be in order of ascending merit. For recent discussion and references, see Menn (ms), Sider 2005, 3–11 and Curd 2007, 130–7, as well as O'Brien 1968 and Mansfeld 1979–80. For our purposes the important point is fortunately the unambiguous one: Aristotle is warning that birth-order and diaretic order have here come apart, and that he has deviated from the former.

Thus Aristotle must soon backtrack to Parmenides (an odd combination of monist and dualist, 984<sup>b</sup>3-4) and the discovery of the moving cause. (This prolepsis of Empedocles and Anaxagoras cannot be an attempt at completeness in listing material *archai*, since the atomists and Platonists remain offstage until much later: rather Aristotle is setting out the range of *kinds* of answer to the diairetic question, ‘how many *archai*?’.) Finally, at the lowest organizational level, the same layering of organizational principles is reproduced within the setting out of the monistic positions. We again get a systematic division of the candidate *archai* by type, into water, air and fire; but these are listed in chronological order of introduction; and the internal ordering of at least two pairs, Thales-Hippo and Anaximenes-Diogenes, is surely chronological.<sup>62</sup>

So reliance on chronology features at multiple levels in the construction of *Metaph.* A 3. (It also explains why, having decided to begin with Thales, Aristotle immediately wonders whether he should move back to earlier thinkers still.) And in this A 3 continues a chronological perspective adopted before the outset of the predecessor survey: for in A1 and A2, Aristotle muses repeatedly on the *origins* of philosophy, in order to identify wisdom with non-utilitarian knowledge (A 1, 981<sup>b</sup>14-24) and non-productive science (A 2, 982<sup>b</sup>11).

This interleaving of chronological and systematic principles is perhaps developed from Aristotle’s predecessor text here, the proto-doxography of Plato’s *Sophist*. As I noted in (II), at 242c, the Eleatic Visitor launches into a somewhat jokey sketch of earlier thought about *ta onta, posa te kai poia estin*:

“It strikes me that Parmenides and everyone else who has set out to determine how many real things there are and what they are like, have discoursed to us in rather an off-hand fashion.... They each and all seem to treat us as children to whom they are telling a story. According to one there are three real things, some of which now carry on a sort of warfare with one another, and then make friends and set about marrying and begetting and bringing up their children. Another tells us that there are two – Moist and Dry, or Hot and Cold – whom he marries off, and makes them set up house together. In our part of the world the Eleatic set, who hark back to Xenophanes or even earlier, unfold their tale on the assumption that what we call ‘all things’ are only one thing. Later, certain Muses in Ionia and Sicily perceived that safety lay rather in combining both accounts and saying that the real is both many and one and is held together by enmity and friendship.”<sup>63</sup>

<sup>62</sup> Why Hippasus precedes Heraclitus is a mystery, since Heraclitus is standardly taken to be the earlier of the two figures. (For detailed argument that Hippasus should be assigned a birth date of roughly 510–500 B.C., see von Fritz 1945, 242–5.) Aristotle never explicitly refers elsewhere to Hippasus, and so little is known of him that it is hard to guess what non-chronological basis Aristotle might have for listing him first – apart from his distaste for Heraclitus.

<sup>63</sup> Trans. Cornford 1934.

The specifics of Plato's story here are admittedly very different from the narrative of A 3, and in some respects rather baffling. Here monism seems to be an Eleatic invention (though the Eleatics here include Xenophanes), contrasted with unattributed three- and two-archai cosmogonies of a vaguely mythological, Hesiodic character.<sup>64</sup> The upshot is a 'countdown' diairesis from three archai to two to one (a form also found in another important ur-doxography, Isocrates, *Antidosis* 268), followed by synthetic views. But this is also presented in part chronologically, with the Ionian and Sicilian Muses being marked as later than the Eleatics, and the origins of the latter movement noted, albeit vaguely. (It is tempting to further suppose that the three- and two-archai theories are presented first as being pre-Eleatic; but there are no explicit chronological markers here.) Despite the very different content of his story, Aristotle in A 3 seems to be looking back to the Visitor's account, as I noted in (II). The question here too is 'how many and of what sort', as pursued through an investigation of being; and though his topic is the archai, Aristotle is concerned to keep his account in contact with the Platonic reading of the same tradition as one about *einai* and *ta onta*. Both Plato and Aristotle combine diairetic ordering principles with chronological ones, and indeed Aristotle follows Plato in positing a division into three 'phases' (though in Plato, as I have noted, the first two are not necessarily chronologically ordered). They are the three phases, indeed, that we still find in standard histories of Presocratic philosophy, viz materialists, Eleatics, and a post-Parmenidean synthesis.

## 5. The Progress of Inquiry and the Discovery of the Moving Cause

"From these one might think that the only cause is the one mentioned as belonging to the material type. But as they advanced in this way, the facts themselves showed them the way and joined in forcing them to investigate. For however much all destruction or generation may be from some one or even many, why does this happen and what is the cause? For at any rate the underlying substrate itself doesn't make itself change. I mean, for instance, that neither the wood nor the bronze is a cause of each of them changing, nor does the wood make a bed nor the bronze a statue, but something else is a cause of the change. To investigate this is to search for the other cause, as we would say, that from which comes the beginning of motion. Well then, those who at the very beginning touched on this subject, and said that the underlying substrate was one, didn't give themselves a hard time about it; but some of those who

<sup>64</sup> Cornford *ad loc.* is silent on the identities of the two- and three-archai theorists. Pherecydes is often mentioned as a candidate for the latter: but see the cautious remarks of Schibli 1990, 195–6.

said it was one, as if defeated by this inquiry, say that the one and nature as a whole is unmoved, not only in respect of generation and destruction – for this is an ancient <view> and they all agreed on it – but also in respect of all other change. And this is peculiar to them. So then it turned out that none of those who said that the universe was one grasped a cause of this sort, except perhaps Parmenides, insofar as he set down causes not only as one but also in a way two. But indeed for those who make <the universe? the first principles?> many, it is more possible to give an account <of such a cause>, for instance for those <who posit as *archai*> hot and cold or fire and earth. For they treat fire as having a motion-causing nature, but water and earth and the like in the opposite way.” (984<sup>a</sup>16–4<sup>b</sup>8)

This section of the chapter is shaped by a pair of fascinating but somewhat enigmatic statements at 984<sup>a</sup>18–9 and – running beyond the scope of this paper, but clearly somehow paired with the former – 984<sup>b</sup>8–11. The second reference, after the account of Parmenides and the unnamed pluralists, is as follows:

“After these <thinkers> and first principles of this kind, since they were not adequate to generate the nature of things, the truth itself, as we said, again compelled inquiry into the next kind of cause.”

I will call this pair of assertions the internal logic claim.<sup>65</sup> It is controversial whether the second allusion describes a second intervention, prompting inquiry into the final cause, or is just a recapitulation of the first. Ross argues that the ‘next’ [εχομηνέ] kind of cause must still be the efficient one (1958, 135–6), a reading supported by Aristotle’s retrospective summations at 985<sup>a</sup>11 and <sup>b</sup>21. But that does not entail that nature intervenes only once (which would require, awkwardly, taking the ‘again’ with the ‘as we said’), or that final causality is not at stake here – it certainly seems to be in view in the ensuing discussion (984<sup>b</sup>11–14). Ross offers a subtle explanation: “while the inquiry ‘what set things changing?’ did not lead to the notion of a distinct efficient cause, which is the proper answer to that inquiry, the question ‘why are things well ordered?’ did lead to that notion” (1958, 136). So reality was forced to prod the Presocratics twice. The first jab was largely ineffectual, since Parmenides and others simply redeployed a preferred material cause as efficient. The second was effective – perversely so, however, since the puzzle which should have disclosed the final cause instead resulted in the belated discovery of the efficient one. This

<sup>65</sup> For a much more nuanced discussion of the internal logic claim – of how exactly the phenomena and puzzles to which Aristotle here alludes are supposed to have shaped the thought of various groups of Presocratics – see Gabor Betegh’s contribution to this volume. My concern here is with the basic methodological presuppositions of any such claim, and the implications for Aristotle as a ‘historian of philosophy’.

reading, with its failures of fit between puzzles and solutions, seems to me very helpful in accounting for the ambivalent, confusing character of these passages.

This striking and hugely important claim – that philosophical progress in uncovering the causes was somehow enforced by the subject-matter itself, and so was presumably necessary or inevitable – seems to occur nowhere else in *Metaph. A* (though the allusion in *A 5* to Parmenides' having been compelled by the phainomena themselves seems akin, 986<sup>b</sup>31). Variants on this claim do appear occasionally in other works of Aristotle. One is in a closely parallel context in *Physics I*, after Aristotle's review of his predecessors on the question of the number and nature of the principles. The moral drawn from this survey is that the principles must be contraries: for all identify their elements and principles with the contraries, "giving no reason indeed for the theory, but constrained as it were by the truth itself" (188<sup>b</sup>27–30). Then in *PA*, both Empedocles and Democritus are said to have been led to recognise the formal cause or essence in spite of themselves. Empedocles, "led by the truth itself", was "compelled" [*anagkazetai*] to identify the nature of a thing with the ratio (642<sup>a</sup>18–21). And Democritus, because he was "carried away by the matter [or facts, *pragma*] itself", was the first to touch on the essence and definition of substance (642<sup>a</sup>24–8). These references are a curiously close match to the two versions of the internal logic claim in *A 3*, of which one, likewise, refers to the truth [*aletheia*] as forceful agent and the other to the subject-matter [*pragma*] itself. But, oddly, what is said to be compelled in *Parts of Animals* is recognition of the formal cause, to which the internal logic claim is never applied in *Metaph. A*. Indeed, strictly speaking, in *A 3* what is compelled is not recognition of any cause, but only further inquiry or search [*zêtêsis*]. In the internal logic claim as it appears in *A 3*, Aristotle's claim is not that particular aspects of reality force us to acknowledge them, but rather that a partial grasp of reality makes further explanatory puzzles irresistible.<sup>66</sup> He clearly has a point, with the first version of the claim especially: given the continuity and stability provided by a persisting *archê* or *archai*, why does change happen just when it does?

<sup>66</sup> Unfortunately Aristotle does not spell out *how* it does so. In addition to Gabor Betegh's discussion in this volume, a suggestive account is presented by Irwin 1988, 158: "<the material monists> have to explain the variation of non-essential properties at different times; and they cannot simply mention the permanent subject and its composition, since these alone do not explain why the changes happen at some times and places rather than others.... Even though they do not initially recognize the efficient cause, their own questions, not some questions raised by another theorist from within quite a different theory, require the recognition of an efficient cause". This is an attractive picture of how philosophical investigation might progress as a series of self-propelling problems and solutions. The difficulty is that it presupposes that Aristotle's monists were all along trying to explain 'the variation of non-essential properties', and it is not clear to me to what extent this was (or was seen by Aristotle as) their focus.

As scholars have noted, the internal logic claim must be an expression of two more general Aristotelian views. One is his understanding of the development of the arts and sciences as following a teleological and even cyclical progression.<sup>67</sup> Aristotle holds that all the arts and sciences have been developed and perfected many times, with the epochs of human culture divided and destroyed by recurrent natural disasters. Fragments of wisdom somehow survive in mythic form to provide the starting-point for the next civilization (cf. *Metaph.*  $\Lambda$  8). And the development of a science within each epoch exhibits something like the teleological progress to perfection characteristic of natural organisms. (Indeed, according to Cicero at *Tusc.* III.28.69, Aristotle thought that the final completion of philosophy was fast approaching.) This is presumably because of the second view, Aristotle's 'epistemological optimism'. We are naturally adapted to opt for the true over the false: humans "have a sufficient natural instinct for what is true, and usually do arrive at the truth" (*Rh.* 1355<sup>a</sup>15-8; cf. *E.E.* 1216<sup>b</sup>28-31; *EN.* 1098<sup>b</sup>27-9; *Pol.* 1264<sup>a</sup>1-4). This general orientation to the truth implies that (barring special countervailing factors of some sort) good explanations will tend to drive out bad, the false parts of theories will tend to be corrected by their successors, and the sciences, philosophy included, will tend naturally towards completion. The link between this epistemological optimism and Aristotle's progressivist conception of philosophy is made explicit in *Metaph.*  $\alpha$  1, which reads like a retrospective gloss on the project of *A* 3-10. As this crucial text explains, the investigation of the truth is in a way hard, but in another way easy. While no one gets the whole picture right, "no one fails entirely, but every one says something true about the nature of things, and while individually they contribute little or nothing to the truth, by the union of all a considerable amount is amassed" (993<sup>b</sup>1-5). Contributions to the arts and sciences build on each other and all are of value (993<sup>b</sup>11-19). So it is not surprising that Aristotle would tend to view progress in thinking about the *archai* as virtually inevitable – if anything, the puzzle would be that he does not present the internal logic claim more often, in a wider range of contexts.

All this helps to explain some of the distinctiveness of *Metaph.* *A* 3ff. vis-à-vis Aristotle's other predecessor surveys. As I noted at the outset, *A* 3 is unique in its emphasis on chronology, which is apparently irrelevant to his purposes in (say) *De Anima* I. The obvious explanation is that *A* 3 is special because of the application here of the internal logic claim. In this case, but not the others, Aristotle has a clear story of progress to tell, one in which the historical sequence

<sup>67</sup> Mansfeld 1985b, 3-10; Palmer 2000, 196-202.

of inquiries and discoveries takes on a life of its own.<sup>68</sup> Admittedly this is not a fully satisfying explanation: what we would like to know, of course, is why thought about the archai would have been uniquely self-propelling in this way. Frustratingly, so far as I can see, A 3-10 offers no answer to that question. Perhaps we can speculate that the most general and explanatory features of reality (the first causes and principles), which are also the most knowable by nature, are therefore the most able to provoke the inquiry which discovers them. But Aristotle never quite says so, or explains exactly how this ‘compelling’ takes place.

## 6. Conclusions: Dialectic and the History of Philosophy in A 3

As I noted at the outset, Aristotle’s predecessor-surveys, and Metaph. A 3ff. in particular, are naturally read as accounts of the endoxa (as per EN. 1145<sup>b</sup>3-7), and as instances of the kind of philosophical dialectic which yields support for first principles.<sup>69</sup> But Aristotle’s practice in A 3 is only an imperfect fit with his programmatic remarks elsewhere, and with his full account of dialectic in the Topics. Moreover, Aristotle’s next move in Metaphysics B is to set out *aporiai*, an operation which still belongs to dialectic, rather than to proceed to a systematic science of metaphysics.<sup>70</sup> So if A 3-10 is dialectic, it is of a kind which is preliminary even in relation to the equally dialectical investigations which follow.

What sort of dialectic A 3 should be counted as can be brought out by further comparison with Plato’s Sophist. I have already noted the parallels between Sophist 242cff. and A 3 as surveys of accounts of the primary beings or first principles, ‘how many and of what sort’ they are. But in terms of method, A 3 is still more indebted to the second phase of Plato’s doxographic discussion, Sophist 246a-9d. In this famous passage, ‘the battle of the gods and the giants’, two views are expounded and scrutinized at much greater length: a kind of materialism and what sounds very much like the middle-period theory of Forms.

<sup>68</sup> Cf. Frede 2004, 13-4.

<sup>69</sup> On Peripatetic doxography as dialectic more generally, see Mansfeld 1992 and Baltussen 1992.

<sup>70</sup> So the *Metaphysics* shows that a predecessor-review and a working out of *aporiai* are, or at least may be, distinct dialectical operations (whereas in *Physics* 1, say, they seem to be combined, cf. I8, 191<sup>a</sup>23-5). Aristotle concludes in A 10 with a reference to what sound like two distinct sets of *aporiai* (993<sup>a</sup>24-7). The identity of these is controversial, but at any rate those of A 8-9 are clearly a completion of the predecessor-review, whereas the *aporiai* of B are forward-looking. See John Cooper’s discussion in his contribution to this volume.

The Visitor launches into a critical dialogue with each faction in turn. This involves positing ‘improved’ materialists, who are willing to answer ‘in a more orderly way’ than their real-life originals. In defense of this idealization, the Visitor notes that agreement from these improved interlocutors is worth more anyway; and that our concern is not really with them but to seek the truth. In the interrogation which follows, each faction is forced to concede, on the basis of its own thesis in conjunction with further non-rejectable premises, the contradictory of that initial thesis. The Giants must admit that there are non-perceptible and by extension non-bodily existents. The Visitor then proposes to them a new criterion of being, one coherent with this newly expanded ontology: being is power [*dunamis*], the ability to affect and be affected. This new criterion can plausibly be claimed to be what the giants ‘really’ had in mind all along: for it would explain why they latched on to body as coextensive with reality, and also why they readily accept that the qualities which affect bodies must also exist. The friends of the Forms, conversely, must concede that Being is subject to motion and change: only in doing so can they properly satisfy their underlying theoretical desideratum, of showing that Being is known.

The form of each argument is thus that of a Socratic *elenchus* with an absent or reformed interlocutor, and with a positive upshot affirmed. And this upshot – that while both change and rest really exist, Being must be understood as different from both of them – generates the basic framework of the account of the ‘greatest kinds’ which the Visitor goes on to develop. Each side can thus be seen to have a positive contribution to make to that framework, once its one-sidedness is corrected. The materialists were right that what exists must have powers to act and be acted upon (a point to be pressed again at 252c–e); but they were wrong to assume that such powers could only be exercised by bodies. The friends of the Forms were right that what really is must be knowable and stable, but wrong to assume that this entailed complete stasis. As each is corrected, they converge on the correct account; and Plato presents this as something that they – or their idealized counterparts – could be brought to recognise themselves, through a literary simulacrum of dialectical question-and-answer. This question-and-answer is at once refutative and constructive; though superficially *elenctic*, it is also oriented towards sifting the true from the false, collecting insights which the correct theory can regiment into their proper places.

In the *Eudemian Ethics*, Aristotle describes a dialectical procedure along very much the lines displayed in the *Sophist*:

“We must try, by argument, to reach a convincing conclusion on all these questions, using, as testimony [*marturiois*] and by way of example, what appears to be the case.

For it would be best if everyone should turn out to agree with what we are going to say; if not that, that they should all agree in a way and *will* agree after a change of mind [*metabibazomenoi*]; for each man has something of his own to contribute in relation to the truth, and it is from such <starting-points> that we must in a way demonstrate: beginning with things that are correctly said, but not clearly, as we proceed we shall come to express them clearly, with what is more perspicuous at each stage superseding what is customarily expressed in a confused fashion." (1216<sup>b</sup>26–35, trans. Woods 1992 revised)

The 'change of mind' [*metabibazein*] envisaged here seems to be the kind of dialectical clarification and correction we find in the Sophist: as we move from confusion to clarity, everyone can be shown to ('in a way') agree, just as the idealized and reformed Gods and Giants come to do. The same point is brought out, again with *metabibazein*, at *Topics* 101<sup>a</sup>33: dialectic is useful in 'encounters', "because if we have correctly reckoned up the opinions of the many, we will speak to them not from foreign opinions but from their own, making a change [*metabibazontes*] to anything they seem to us not to have said well".<sup>71</sup> This 'change' must again be the kind of idealization or reform which makes confused views usable and ultimately convergent in dialectical discussion: as Smith says, "replacing our audience's clumsy formulations of their own views with better ones we have worked out in advance" (1993, 351).<sup>72</sup>

The kind of dialectic on display in the *Sophist*, and delineated in these Aristotelian texts – *clarification-dialectic*, we might call it – is, I think, what Aristotle also brings to bear in *Metaphysics* A 3–10. A progression from the confused to the clear and corrected is precisely what he here aims to offer: "But while he would necessarily have agreed if another had said this, he has not said it clearly", as he says of Empedocles' approach to the formal cause in A 10, 993<sup>a</sup>22–4. That everyone, once their views have been fully clarified and adjusted, has a distinctive contribution to make to the truth is then thematized in *Metaph.* α 1. The idea of 'testimony' or 'witnessing' is crucial to this procedure (cf. A 7, 988<sup>b</sup>16–18), and reveals its essentially Socratic origins. As Socrates says to Polus in the *Gorgias*, in discussion he knows how to do just one thing: how to make his interlocutor and opponent bear witness or testify to the truth of his (Socrates') views, despite his own initial affirmation of a contrary view (471<sup>e</sup>–2<sup>c</sup>). In doing

<sup>71</sup> In his only other use of *metabibazein*, in *Topics* VIII, Aristotle insists that someone who wants to *metabibazein* correctly must do so dialectically rather than eristically (161<sup>a</sup>33–4). *Metabibazein* is also used at *Phaedrus* 262<sup>b</sup>5, for step-by-step dialectical misdirection; cf. also Plato's uses at *Gorgias* 517<sup>b</sup>5 and *Laws* 736<sup>d</sup>4 (again for small incremental redirections).

<sup>72</sup> Cf. also Smith 1999, with a discussion of *metabibazein* on 3–4: "Getting everyone to agree with our view after a 'change of mind' means leading each person, *from premises he accepts*, to accept our view" (4).

so, Socrates' elicits the interlocutor's *real* beliefs, which lurk under his contrary avowed ones – for instance, that doing injustice is worse than suffering it.

So my claim is that A 3ff. belongs to a small but important set of Platonic and Aristotelian texts which exemplify clarification–dialectic: a species of argument which consists in a critical, dialogic examination of the views of others, in the course of which their implications are extracted, what is false refuted, and what is true identified for constructive use. Though clarification–dialectic is critical, the extent to which it is refutative (rather than a subsumption and harmonization) seems to vary. In *Metaph.* A 3–10, the emphasis is on finding the distinctive, though incomplete, contribution to the truth made by the views under examination. In the *Sophist* (and perhaps *De Anima* I) the emphasis is on criticism and correction, and the discussion is elenctic in form; but there is still a profoundly important positive upshot. In two other cases I would tentatively adduce, the refutation of Protagoras in the *Theaetetus* and *Metaphysics* Γ, virtually nothing survives the examination, and the path to first principles is pointed only by negation. But these differing outcomes represent variations, not so much in the method as in the value of the views examined.

This mode of argument deserves the name of dialectic for several reasons. It is clearly a descendant of the Socratic elenchus. As per Aristotle's own account of dialectic, it deals with *endoxa* (specifically the views of the wise), and takes a dialogic form (to the extent that a written engagement with one's predecessors can do so). It is a preliminary stage of inquiry, and a useful non-demonstrative way of getting clear about prospective *archai*, as per the dialectic of the *Topics* (cf. *Topics* I.2).<sup>73</sup> At the same time, clarification–dialectic does not seem to be quite identical with the dialectic discussed in the *Topics* (or for that matter with the famous programmatic remarks of N.E. VII.1<sup>74</sup>).<sup>75</sup> But then, in my view, it is difficult if not impossible to fit together everything Aristotle says about dialectic, and what seem to be his own philosophical uses of it, into a satisfactory

<sup>73</sup> Also, as we can see from A 3ff. itself, clarification–dialectic is the kind of enterprise for which a collection of *doxai* would be a necessary resource, and Mansfeld 1986, 25 has noted that such collections are proposed for dialectic in *Topics* I.14; cf. Mansfeld 1992.

<sup>74</sup> No doubt A 3ff. is preparatory to the consideration of *aporai*, and might thus be classed as an elaborate way of *tithenai ta phainomena*; but it is hardly the case that the rest of the *Metaphysics* is simply concerned to vindicate as many of those *phainomena* as possible.

<sup>75</sup> Strictly speaking, according to *Topics* I.12, a dialectical argument is either an induction [*epagôgê*] or a deduction [*sullogismos*]: I see no good way to read A 3 as either. Moreover, the dialectic described in the *Topics* (most of the *Topics*, anyway) seems to be essentially refutative, while clarification–dialectic also has a constructive function and a positive upshot. But how far all Aristotelian dialectic is supposed to be refutative in form, how the refutative dialectic of *Topics* VIII is related to any broader genre, and whether the *Topics* is actually consistent are all, to me, very murky questions. Cf. Brunschwig 1967, esp. xxix–xxx on the refutative character of dialectic, and Smith 1993 and 1999.

unitary conception.<sup>76</sup> Be that as it may, and whether or not ‘dialectic’ is really the word for it, something like clarification-dialectic remains a canonical mode of historically informed philosophical argument.<sup>77</sup>

We are now in a position to clarify the question I put to Ross at the outset: if A 3ff. belongs to the genre of clarification-dialectic, might it not also and the same time be an exercise in the history of philosophy? For clarification-dialectic is clearly not the only genre in play in A 3: it does not explain Aristotle’s emphatic and many-leveled use of chronology as an organizing principle.

This chronological emphasis cries out to be seen in a broader context. We have plenty of evidence of Aristotle’s deep and sustained interest in certain kinds of historical questions, about the history of the sciences in particular.<sup>78</sup> We know that his students and successors researched and wrote histories of philosophy, mathematics, medicine and theology; moreover, these histories belonged to a still broader project of research into the development of civilization, commonly put in terms of the *prôtos heuretês*, the ‘first discoverer’ of various arts and ideas – the subject, apparently, of a whole Peripatetic genre. A general engagement with history of all kinds also led Aristotle and his followers to assemble collections of constitutions, political histories and chronologies.<sup>79</sup> In the face of all this it seems perverse to insist that history cannot be what Aristotle is concerned with in *Metaph. A 3* – as if he might have had a comprehensive interest in every kind of history except the history of philosophy.<sup>80</sup> Perhaps the phrase ‘history of philosophy’ now imports norms which A 3 does not attempt to meet – though this seems to me highly debatable, given how contested the

<sup>76</sup> I cannot here engage with the rich and complex reading of Aristotelian dialectic offered in Irwin 1988. But if I am right to connect the method of *Metaphysics A* and  $\Gamma$  with the *Eudemian Ethics* and the *Sophist*, the gap between the *Topics* and the dialectic of the *Metaphysics* is not primarily to be explained in developmental terms. For a contrasting, restrictive view of what Aristotelian dialectic amounts to, cf. Smith 1999.

<sup>77</sup> For instance, in her Tanner lectures, *The Sources of Normativity*, Christine Korsgaard constructs an account of normativity in part by way of engagement with such predecessors as Grotius, Hume and Kant. I have elsewhere compared Korsgaard’s irenic history here with Simplicius’ Neoplatonic harmonizations of earlier philosophers (Barney 2009). This is not a coincidence: as I argue there, this mode of argument is both natural to historically informed philosophizing and, in Simplicius’ case, an Aristotelian inheritance.

<sup>78</sup> See Zhmud 2006 for a full account, especially Chapter 4.

<sup>79</sup> *Ibid.*, 136–40.

<sup>80</sup> Cf. the sensible Jaeger 1937, 354, *contra* Cherniss 1935: “We must not separate Aristotle’s interest in the history of philosophy from his historical research in all these other fields of civilization.” Zhmud 2006 points to Aristotle’s treatise *De Inundatione Nili* (preserved only in a Latin abridgement), which gives a doxographic survey of earlier opinions on a problem which Aristotle takes to have been conclusively solved. Zhmud 2006, 143–4 may go too far in inferring the *primacy* of historical motivations in Peripatetic doxography; but clearly such motivations had some independent force.

norms of ‘history of philosophy’ continue to be. Even if this is so, the more salient fact is that Aristotle’s text is deeply shaped by his concern to establish who first did what when – by the historian’s concern to tell the story of his subject.

Like clarification-dialectic, progressivist narratives are alive and well in contemporary history of philosophy. And at a more detailed level, a number of Aristotle’s moves look very familiar.<sup>81</sup> Aristotle worries about scanty evidence and calibrates his claims to reflect the quality of his information (983<sup>b</sup>22, 4a2). He refers us to the texts in support of his claims, occasionally with a slight air of bluff (985b2–3). He offers charitable interpretations of Empedocles (985<sup>a</sup>4–10) and Anaxagoras (984b14–9), and a rational reconstruction of Thales. He implicitly critiques and corrects the methods of a crucial predecessor (Hippias). If Aristotle is not a historian of philosophy, it is remarkable how many of the historian’s problems, worries, and stratagems he has managed to accumulate.

A final marker of genre deserves special mention. This is Aristotle’s praeteritio, discussed in section III, of poor old Hippo. I argued earlier for reading this as a reaction against the presence of Hippo in the text of Hippias; but it also serves a positive function for Aristotle, as part of the construction of a specifically historical genre. It is not just that, as a belated monist, Hippo is unhelpful to the storyline. It is also that to present a historical narrative is necessarily to select; and to select among philosophers is to construct a canon. Aristotle’s explicit exclusion of Hippo serves to signal this undertaking of canon-formation. Moreover, in avowing that the exclusion is based on the inferiority of Hippo’s thought [dianoia], rather than the falsity of his doctrine [doxa] (or the crudeness of his expression, or his belatedness, or any other consideration), Aristotle avows that his canon will be governed by considerations of philosophical merit. This too should look familiar if not downright modern. For to be objective as a critic and historian of philosophy means respecting just this distinction between doxa and dianoia, and giving a fair assessment of philosophical arguments whether or not we agree with their conclusions. Thus any telling of the history of philosophy as a progressive narrative depends on a certain faith that the quality of a philosopher’s dianoia will roughly correspond to his historical importance. When he drop-kicks Hippo out of canon and narrative alike, Aristotle affirms this optimistic presumption. At that moment he announces himself as something fully recognisable only in retrospect: the first historian of philosophy.

<sup>81</sup> In the terms of Rorty 1984, these features place *Metaph. A 3* in the category of both rational reconstruction and (‘Whiggish’) *Geistesgeschichte*.