A HISTORY
OF
GREEK PHILOSOPHY

FROM THE EARLIEST PERIOD TO THE
TIME OF SOCRATES

WITH A GENERAL INTRODUCTION

TRANSLATED FROM THE GERMAN OF

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with the Author's sanction

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THE PHILOSOPHY OF THE GREEKS

IN ITS

HISTORICAL DEVELOPMENT.

THE PRE-SOCRATIC PHILOSOPHY.

§ II. HERACLEITUS, EMPEDOCLES, THE ATOMISTS, ANAXAGORAS.

I. HERACLEITUS.[1]

1. *The general standpoint and fundamental conceptions of the doctrine of Heraeleitus.*

While in the Eleatic School the doctrine of the Unity of all Being had led to the denial of the possibility of plurality and Becoming, contemporaneously[2] with that

[1] Schleiermacher, *Herakleitos der Dunkle*, etc.; *Mus. d. Alterthumsw.* i. 1807, p. 313 sqq. (now in Schleiermacher's *Werke*, 3 *Abth.* i. 1 sqq.); Bernays, *Heraclitea*, Bonn, 1848; *ibid. Rhein. Mus. N. F.* vii. 90 sqq., ix. 241 sqq.; *ibid. Die Heraklitischen Briefe*, Berl. 1869; Lassalle, *Die Philosophie Herakleitos des Dunkeln*, 1858. 2 vols.; Gladisch, *Herakleitos und Zoroaster*, 1859; Schuster, *Herakleitos von Ephesus*, 1873; Teichmüller, *Neue Stud. z. Gesch. d. Begriffe*. 1. H. *Herakleitos*, 1876.

[2] In Diog. ix. 1, the prime of Heracleitus is placed in the 69th Olympiad (404–500 B.C.), no doubt on the authority of Apollodorus, who takes his dates almost entirely from Eratosthenes. Similarly, Euseb. *Chron.* gives Ol. 70; Syncellus, p. 283, C. Ol. 70, 1. He is described as a contemporary of Darius I. in the interpolated letters (Diog. ix. 13, cf. Clemens, *Strom.* i. 302 B; Epictet. *Enchirid.* 21), in which that prince invites him to his court, and Heracleitus declines the invitation. Eusebius, however, and Syncellus, p. 254 C, place his prime in Ol. 80, 2; *ad.* 81, 2; in the

school there arose in Asia Minor, at the opposite pole of the Greek civilised world, a system which developed

80th or 81st Olympiad, and this statement seems to derive confirmation from the fact that, according to Strabo, xiv. 1, i. 25, p. 642 (in comparison with his evidence no weight can be attached to the 8th of the so-called Heraclitean letters, p. 82, Bern.), Hermodorus the Ephesian, who, we are told by Pliny, *H. Nat.* xxxiv. 5, 21, and Pomponius, *Digest.* i. 1, tit. 2, *l.* 2, § 4, assisted the Roman decemviri in their legislation (Ol. 81, 4; 452 B.C.), was no other than the friend of Heracleitus, whose banishment the philosopher could not forgive his countrymen. (Strabo *l. c.*, Diog. ix. 2, &c.; vide *infra.*) From this Hermann inferred (*De Philos. Ionic. Ætatt.* p. 10, 22), and Schwegler agrees with him (*Rom. Gesch.* iii. 20; otherwise in *Gesch. d. Griech. Phil.* 20, Köstlin's edition, where also, p. 79, the reference of Parmenides to Heracleitus, which Bernays conjectured, but which is irreconcileable with Hermann's computation, is admitted) that Heracleitus was born about Ol. 67 (510 B.C.) and died about Ol. 82 (450 B.C.). I have shown, however, in my treatise *De Hermodoro Ephesio et Hermod. Plat.* (Marb. 1859), p. 9 sqq. that this opinion is not justifiable. The statement of Eusebius repeated by Syncellus is in itself not nearly so trustworthy as that of Diogenes, taken from Apollodorus; Hermann urges in its favour that Eusebius determines the date of Anaxagoras and Democritus more accurately than Apollodorus, but this is not the case. On the contrary, the statement loses all weight by its glaring contradiction with the earlier utterances of the same author. Where Eusebius found the statement, and on what it is based, we do not know; but if we remember that the prime of Heracleitus (not his death, as Hermann says: the words are *clarus habebatur, cognoscebatur, ἤκμαζε*) is here made to coincide almost exactly with the legislation of the decemviri, it appears probable that it arose from the supposition that Hermodorus, the friend of Heracleitus, entered into connection with the decemviri immediately after his banishment, and that his banishment coincided with the *ἀκμή* of the philosopher. Now the assertion of Diogenes can hardly be founded upon any accurate chronological tradition; it is far more likely (as Diels acknowledges, *Rh. Mus.* xxxi. 33 sq.) that its author knew only of the general statement that Heracleitus had been a contemporary of Darius I., and that in accordance with this, he placed his prime in the 69th Olympiad; *i.e.* in the middle of Darius's reign (Ol. 64, 3–73, 4). But that this theory is at any rate approximately correct, and that the death of Heracleitus cannot be placed later than 470–478 B.C., we find extremely likely for other reasons. For though we may not lay much stress on the circumstance that, according to Sotion, ap. Diog. ix. 5, Heracleitus was regarded by many as a pupil of Xenophanes, the allusion to him by Epicharmus, which we have found probable vol. i. p. 532, would imply that his doctrine was known in Sicily as early as 470 B.C.; and since he himself instances as

the same presupposition in a contrary direction, and regarded the one Being as something purely in motion and subject to perpetual change and separation. The author of this system is Heracleitus.[1]

men to whom varied knowledge has not brought wisdom, only Xenophanes, Pythagoras and Hecatæus in addition to Hesiod, this looks as if the later philosopher, and especially his antipodes Parmenides, were unknown to him. Moreover, the statements about Hermodorus do not by any means compel us to regard Heracleitus as later. For first, the theory that Hermodorus, who took part in the decemvirs' legislation, was the same person as the friend of Heracleitus is not based even by Strabo (as I have shown, *l. c.* p. 15) on trustworthy tradition, but merely on a probable conjecture; and secondly, we have no reason to assume that Hermodorus was of the same age as Heracleitus. Supposing him to have been 20 or 25 years younger, it would be quite possible to admit his participation in the lawgiving of the decemviri, without on that account altering the date of Heracleitus' death to the middle of the fifth century. We certainly cannot place the banishment of Hermodorus and the composition of Heracleitus' work earlier than 478 B.C., for the rise of democracy at Ephesus would scarcely have been possible before the deliverance from the Persian dominion. On the other hand this event may have given rise to the deliverance. Both theories are compatible with that supposition: on the one hand, that Heracleitus died in 475 B.C.; on the other, that Hermodorus assisted the decemviri in 452 B.C. Aristotle fixes the age of Heracleitus at 60, if the reading of the manuscripts in Diog. viii. 52 be correct: Ἀριστοτέλης γὰρ αὐτὸν (Empedocles) ἔτι τε Ἡράκλειτον ἑξήκοντα ἐτῶν φησι τετελευτηκέναι. Sturz, however, instead of Ἡράκλειτον reads Ἡρακλείδης, and Cobet has admitted this conjecture, which is favourably regarded by many authorities (more than a conjecture he does not consider it), into the text. It does not commend itself to me as indispensable; for it is perfectly conceivable that Aristotle may have connected the two men together in reference to their age, and the biographer of Empedocles, here referred to by Diogenes (that these words, as well as the context, are derived from Apollodorus seems to me doubtful, in spite of the observations of Diels, *Rh. Mus.* xxxiii. 38), may have also quoted what he had taken the opportunity to say about Heracleitus, in the same way that in § 55 Philolaus is mentioned with Heracleitus. On the other hand it is very possible that Ἡράκλειτον may have been a mistake for Ἡρακλείδης; and we must therefore leave this question undecided like many others respecting the chronology of Heracleitus.

[1] The native city of Heracleitus, according to the unanimous testimony of the ancients, was Ephesus. Metapontum is substituted by Justin, *Cohort.* c. 3, but this is merely a hasty inference from a passage in which Heracleitus is named in connection with

The doctrine of Heracleitus,[1] like that of the Hippasus of Metapontum; as was customary, in accordance with Arist. *Metaph.* i. 3, 984 a, 7. His father, according to Diog. ix. 1, &c., was called Blyson, but others name him Heracion (whom Schuster, p. 362 sq., conjectures to have been his grandfather). That he belonged to a family of position is evident from the statement of Antisthenes, ap. Diog. ix. 6, that he resigned the dignity of βασιλεὺς to his younger brother; for this was an office hereditary in the family of Androclus, the Codrid, founder of Ephesus (Strabo, xiv. 1, 3, p. 632; Bernays, *Heraclitea*, 31 sq.). He held decidedly aristocratic opinions (vide *infra*), while his fellow-citizens were democrats; this explains why his friend Hermodorus should have been exiled (Diog. ix. 2) and he himself regarded with little favour (Dometr. *ibid.* 15). The persecution for atheism, however, which Christian authors infer from this (Justin. *Apol.* i. 46; *Apol.* ii. 8; Athenag. *Supplic.* 31, 27), is perhaps wholly derived from the fourth Heracliteau letter (cf. Bernays, *Herakl. Br.* 35), and is rendered improbable by the silence of all ancient authorities. Concerning the last illness and death of Heracleitus all kinds of unauthenticated and sometimes contradictory stories are to be found in Diog. ix. 3 sqq., Tatian, *C. Græc.* c. 3, and elsewhere (cf. Bernays, *Herakl. Briefe*, p. 55 sq.). If they have any historical foundation (Schuster thinks, p. 247, they may have a good deal), we cannot now discover it. Lassalle's opinion (i. 42), that they arose merely from a mythical symbolising of the doctrine of the passage of opposites into one another, appears to me far-fetched. The disposition of Heracleitus is described by Theophrastus as melancholy (*ap.* Diog. ix. 6; cf. Pliny, *H. N.* vii. 19, 80), and this is confirmed by the fragments of his writings. But the anecdotes which Diogenes (ix. 3 sq.) relates concerning his misanthropy are worthless; not to speak of the absurd assertion that he wept, and Democritus laughed, over everything (Lucian, *Vit. Auct.* c. 13; Hippolyt. *Refut.* i. 4; Sen. *De Ira*, ii. 10, 5; *Tranqu. An.* 15, 2, &c.). As to any instructors that he may have had, ordinary tradition seems entirely ignorant; which proves that the ancients (Clemens, *Strom.* i. 300 c, sqq.; Diog. ix. 1; *Procem.* 13 sqq.; similarly Galen, c. 2) found it impossible to connect him with any school. It is, therefore, manifestly an error to represent him as a pupil of Xenophanes, which is done by Sotion, *ap.* Diog. ix. 5, or as a scholar of Hippasus, which is asserted by another account (*ap.* Suid. Ἡράκλ.), probably a misconception of Arist. *Metaph.* i. 3; or to connect him, as Hippolytus does, *loc. cit.*, with the Pythagorean διαδοχή. But that he claimed to have learned everything from himself, to have known nothing in his youth and all things afterwards (Diog. ix. 5; Stob. *Floril.* 21, 7; Procl. *in Tim.* 106 E), seems merely an inference from some misapprehended utterances in his works.

[1] Our most trustworthy source of information in regard to the doctrine of Heracleitus is to be found in the fragments of his own work. This work was written in Ionic prose, and according to Diog. ix. 5,

Eleatics, developed itself in express contradiction to

12; Clem. *Strom.* v. 571 C, bore the title περὶ φύσεως. We are told in Diog. ix. 5 that it was divided into three λόγοι, εἷς τε τὸν περὶ τοῦ παντὸς καὶ τὸν πολιτικὸν καὶ θεολογικόν. It is quite possible (as Schuster remarks, p. 48 sqq. in opposition to Schleiermacher, *Werke* 3, *Phil.* ii. 25 sqq.) that the work may have contained several sections, each devoted to a particular subject; and this may be brought into connection with the fact that, according to Diog. 12, it also bore the title of Μοῦσαι; if, like Schuster, p. 57, we think of the *three* muses of the older mythology. (On the other hand, two more titles are given in Diog. 12, which are certainly spurious; cf. Bernays' *Heracleit.* 8 sq.) But there is no doubt that the Μοῦσαι originate with Plato, *Soph.* 242 D; not (as Schuster, p. 329, 2, is inclined to suppose) with Heracleitus; and the names of the three sections given by Diogenes (as Schuster observes, p. 54 sq.) with the Alexandrian catalogues, and that these names correctly described the contents of the work is quite uncertain, as is proved, among other evidence, by the double titles of the Platonic dialogues. The fragments we possess contain very little that could be assigned to the second section, and still less that is appropriate to the third, if the former were really devoted to politics and the latter to theology; and it is the same thing, as we shall find, with the other traditions concerning the doctrine of Heracleitus (cf. Susemihl, *Jahrb. f. Philol.* 1873, H. 10, 11, p. 714 sq.). I believe it to be impossible to recover the plan of the work, with any certainty, from the fragments in existence; and Schuster's attempt at such a reconstruction is founded on suppositions that are generally doubtful, and in some cases, it appears to me, more than doubtful. That this was the sole work of Heracleitus is unquestionable, not only because of the indirect testimony of Aristotle, *Rhet.* iii. 5, 1407 b, 16; Diog. ix. 7; and Clemens, *Strom.* i. 332 B, where mention is made of a σύγγραμμα in the singular, and not of συγγράμματα, but because no other work was either quoted or commentated on by the ancients. In Plutarch, *Adv. Col.* 14, 2 Ἡρακλείτου δὲ τὸν Ζωροάστρην, we should read, with Dübner, Ἡρακλείδου (vide Bernays, *Rh. Mus.* vii. 93 sq.), an amendment which of itself settles Schleiermacher's doubt as to the genuineness of this writing, and the trustworthiness of Plutarch's statements concerning Heracleitus (*l. c.*). David, *Schol. in Arist.* 19 b, 7; Hesych. *Vir. Ill.* Ἡράκλ.; Schol. Bekker, *in Plat.* p. 364, mention Heracleitus's συγγράμματα; but this is only a proof of their carelessness. The Heracleitean letters cannot possibly be considered genuine. Concerning a metrical version of the Heracleitean doctrine, vide *infra*, p. 21, 1. Whether Heracleitus really deposited his work in the temple of Artemis, as is stated in Diog. ix. 6 and elsewhere, cannot be ascertained; if he did, it could not be for the sake of secrecy, as Tatian, *C. Gr.* c. 3, suggests. Nor can we suppose that his well-known obscurity (cf. Lucret. i. 639), which procured for him the title of σκοτεινὸς among later writers (such as Pseudo-Arist., *De Mundo*, c. 5, 396 b, 20; Clem. *Strom.* v. 571,

the ordinary mode of thought. Look where he will,

C), proceeded from discontent and misanthropy (vide Theophrastus, *ap. Diog.* 6, and Luc. *Vit. Auct.* 14); or from a wish to conceal his opinions (vide Diog. 6; Cic. *N. D.* i. 26, 74; iii. 14, 35; *Divin.* ii. 64, 133, &c.). Against the latter view, vide Schleiermacher, p. 8 sqq.; Krische, *Forschungen*, p. 59. Schuster says in its favour (p. 54, 72 sq., 75 sqq.) that Heracleitus had every reason to conceal opinions which might have brought upon him an indictment for atheism; but on the other hand it is noticeable that in his fragments those judgments on religious usages and political conditions, which would have given the most violent offence, are enunciated in the plainest and boldest manner possible (vide *infra*, opinions of Heracleitus on ethics and politics), while those propositions which are difficult to understand, on account of the obscurity of the language, are precisely those which could in no way have endangered the philosopher, however clearly he might have expressed them. Not one of the ancients asserts that Heracleitus was *purposely* obscure in his writings, in order to avoid persecution. The cause of his obscurity seems to have lain partly in the difficulty of philosophic expositions at that epoch, and partly in his own peculiar character. He clothed his profound intuitions in the most pregnant, solemn, and for the most part, symbolical expressions possible, because these suited him best, and seemed best to correspond with the weight of his thoughts; and he was too sparing of words and too little practised in the art of composition to escape the ambiguity of syntactical arrangement, which was noticed by Aristotle (*Rhet.* iii. 5, 1407 b, 14; cf. Demetr. *De Elocut.* c. 192). He himself characterises his language as a language adapted to the subject, when in Fr. 39, 38 (ap. Plut. *Pyth. Orac.* c. 6, 21, p. 397, 404; Clemens, *Strom.* i. 304 C. and pseudo-Iambl. *De Myster.* iii. 8, refer to the first of these fragments, and not to some different utterance, and pseudo-Iambl. *De Myster.* iii. 15 to the second), according to the most probable acceptation of these fragments (which Lucian, *l. c.*, confirms), he compares his discourses to the earnest and unadorned words of an inspired sybil, the oracular sayings of the Delphic god. This oracular tone of the Heraclitean utterances may be connected with the censure of Aristotle (*Eth. N.* vii. 4, 1146 b, 29; *M. Mor.* ii. 6, 1201 b, 5), who says he had as much confidence in his opinions as others had in their knowledge. When results, merely, without demonstration are to be set forth in a statuesque style, the distinction between the several gradations of certainty can neither be felt nor represented. The confidence with which Heracleitus stated his convictions is seen, among other examples, in the expression (*Fr.* 137; Olympiod. *in Gorg.* 87 vide Jahn's *Jahrb. Suppl.* xiv. 267; cf. Diog. ix. 16): λέγω τοῦτο καὶ παρὰ Περσεφόνῃ ὤν. Vide also *infra*, where 'the one on whom he relies more than on thousands,' is primarily himself. A remark attributed to Socrates on the difficulty of Heracleitus's exposition is given in Diog. ii. 22; ix. 11 sq. In Diog. ix. 15 sq., mention is also made of some ancient commentators of Heracleitus's work. Brandis (*Gr. Röm. Phil.* i. 154), with good reason, on account of other passages, Diog. vi. 19, and ix. 6, doubts whether the Antisthenes here alluded to is the Socratic philosopher (vide Schleiermacher, p. 5), and Lassalle makes the unfortunate suggestion, i. 3, that in Eus. *Pr. Ev.* xv. 13, 6, Antisthenes the Socratic is not called Ἡρακλειωτικός, but Ἡρακλείτειός, τις ἀνὴρ τὸ φρόνημα; cf. part II. a, 261. 4. In my quotation of the fragments, in the following pages, I use Schuster's enumeration, but at the same time mention from whence the fragments are taken.

nowhere can our philosopher find true knowledge.[1] The mass of men has no intelligence for eternal truth, though it is clear and obvious; that which they daily encounter, continues strange to them; whither their own road leads is hidden from them; what they do when they are awake, they forget, as if it were done in sleep;[2] the order of the world, glorious as it is,

[1] Frag. 13, *ap.* Stob. *Floril.* 3, 81: ὁκόσων λόγους ἤκουσα οὐδεὶς ἀφικνεῖται (- ἔεται) ἐς τοῦτο ὥστε γινώσκειν, ὅτι σοφόν ἐστι πάντων κεχωρισμένον. After γιγνώσκειν older editions have ἢ γὰρ θεὸς ἢ θηρίον; this was repudiated by Gaisford on the ground of the MSS., and was manifestly interpolated by some commentator who referred the σοφὸν πάντων κεχωρισμένον to the seclusion of the wise, in mistaken allusion to Arist. *Polit.* i. 2, 1253 a, 29; cf. Lassalle, i. 344 sq.; Schuster's defence of the authenticity of the words p. 44, does not convince me. In the words ὅτι σοφὸν, etc., Lassalle refers σοφὸν to the divine wisdom, and therefore explains them thus: 'That the absolute is exempt from all sensible existence, that it is the negative.' To me it seems more likely that the true meaning is this: 'None attains to understand that wisdom is separated from all things,' that is, has to go its own way, diverging from general opinion. This does not contradict ἔπεσθαι τῷ ξυνῷ, as Schuster (p. 42) believes, for ξυνὸν is something different from the opinion of the people. Schuster's explanation, which is that of Heinze (*Lehre vom Logos*, p. 32), 'that wisdom is the portion of none,' as far as I can see, does not harmonise any better with his conception of ξυνὸν. In order to decide with certainty as to the sense of the words, we should know the connection in which they stand.

[2] *Fr.* 3, 4, *ap.* Arist. *Rhet.* iii. 5, 1407 b, 16; Sext. *Math.* vii. 132 (who both say that this was the beginning of Heracleitus's work); Clem. *Strom.* v. 602 D; Hippol. *Refut.* ix. 9: τοῦ λόγου τοῦδ' ἐόντος al.: τοῦ ὄντος or τοῦ δέοντος; the latter, which is the usual reading in our Aristotelian text, is inadmissible, if only for the reason that in that case the ἀεὶ cannot be connected with the preceding context, whereas Aristotle expressly remarks that we do not know whether it belongs to what goes before, or what follows it; it seems to me Aristotle must

have read τοῦδε ὄντος, and Heracleitus must have written: τοῦδ' ἐόντος or τοῦδε ἐόντ. αἰεὶ ἀξύνετοι γίνονται ἄνθρωποι καὶ πρόσθεν ἢ ἀκοῦσαι καὶ ἀκούσαντες τὸ πρῶτον· γινομένων γὰρ πάντων κατὰ τὸν λόγον τόνδε ἀπείροισιν (so Bern. Mull. Schust. read) ἐοίκασι πειρώμενοι ἐπέων καὶ ἔργων τοιούτων ὁκοίων ἐγὼ διηγεῦμαι κατὰ φύσιν διαιρέων ἕκαστον καὶ φράζων ὅκως ἔχει· τοὺς δὲ ἄλλους ἀνθρώπους λανθάνει ὁκόσα ἐγερθέντες ποιοῦσι (-έουσι) ὅκωσπερ ὁκόσα εὕδοντες ἐπιλανθάνονται. In this much disputed fragment I think, with Heinze, *l. c.* 10, and elsewhere, that ἀεὶ is to be connected with ἐόντος; the λόγος, in my opinion, refers indeed primarily to the discourse, but also to the contents of the discourse, the truth expressed in it; a confusion and identification of different ideas, united and apparently included in one word, which should least of all surprise us in Heracleitus. He says: 'This discourse (the theory of the world laid down in his work) is not recognised by men, although it ever exists (*i.e.* that which always exists, contains the eternal order of things, the eternal truth), for although all happens according to it (and thus its truth is confirmed by all facts universally) men behave as if they had never had any experience of it, when words or things present themselves to them, as I here represent them' (when the views here brought forward are shown them by instruction or by their own perceptions). Schuster, 18 sq., refers the λόγος to the 'revelation which nature offers us in audible speech.' But even if we are to understand by γινομένων πάντων, etc., and the ἔργων τοιούτων, etc., that all corresponds with the λόγος of which Heracleitus is speaking, the λόγος is not described as the discourse of nature; and nature is not only not mentioned as the discoursing subject, but is not named at all. In order to ascribe this signification to the λόγος, we must suppose that τοῦδε refers to a previous definition of the λόγος as λόγος τῆς φύσεως. That there was any such previous definition, is improbable, as this passage stood at the commencement of Heracleitus's work; and even if its first words (as Hippolytus states) ran thus: τοῦ δὲ λόγου τοῦδε, we need not refer the δὲ to anything besides the title of the writing (in which λόγος περὶ φύσιος may have occurred); we need not suppose with Schuster, p. 13 sqq., that a long introduction, and one, as it seems to me, so little in harmony with the tone of the rest, preceded what Heracleitus had said, according to Aristotle, ἐν τῇ ἀρχῇ τοῦ συγγράμματος, according to Sextus ἐναρχόμενος τῶν περὶ φύσεως. If so, however, the twice repeated ὅδε, as in the commencement of Herodotus's history, can only refer to the Heracleitean work itself. Cf. also *Fr.* 2, Clem. *Strom.* ii. 362 A: οὐ γὰρ φρονέουσι τοιαῦτα πολλοὶ ὁκόσοι (for which perhaps we should read: ὁκόσοις cf. οἷς ἐγκυροῦσι ap. M. Aur. iv. 46) ἐγκυρσεύουσιν, οὐδὲ μαθόντες γινώσκουσι ἑαυτοῖσι δὲ δοκέουσι. *Fr.* 1, Hippol. *l. c.*: ἐξεπάτηνται οἱ ἄνθρωποι πρὸς τὴν γνῶσιν τῶν φανερῶν, etc. M. Aurel. iv. 46: ἀεὶ τοῦ Ἡρακλειτείου μεμνῆσθαι ὅτι γῆς θάνατος ὕδωρ γενέσθαι, etc., μεμνῆσθαι δὲ καὶ τοῦ "ἐπιλανθανομένου ᾗ ὁδὸς ἄγει·" καὶ ὅτι "ᾧ μάλιστα διηνεκῶς ὁμιλοῦσι λόγῳ," τῷ τὰ ὅλα διοικοῦντι, "τούτῳ διαφέρονται, καὶ οἷς καθ' ἡμέραν ἐγκυροῦσι, ταῦτα αὐτοῖς ξένα φαίνεται·" καὶ ὅτι "οὐ δεῖ ὥσπερ καθεύδοντας ποιεῖν καὶ λέγειν" . . . καὶ ὅτι οὐ δεῖ "παῖδας τοκέων" [sc. λόγους λέγειν

for them does not exist.[1] Truth seems to them incredible;[2] they are deaf to it, even when it reaches their ears;[3] to the ass chaff is preferable to gold, and the dog barks at everyone he does not know.[4] Equally incapable of hearing and speaking,[5] their best course would be to conceal their ignorance.[6] Irrational as they are, they abide by the sayings of the poets and

or something of the kind], τοῦτ' ἔστι κατὰ ψιλὸν καθότι παρειλήφαμεν. The words marked as a quotation I agree with Bernays, *Rh. Mus.* vii. 107, in regarding as cited from Heracleitus, but manifestly only from memory, and therefore not altogether literally. The words in Hippocr. π. διαιτ. i. 5 (if taken from Heracleitus) must belong to the same connection: καὶ τὰ μὲν πρήσσουσι οὐκ οἴδασιν, ἃ [l. οἷδασι, τὰ] δὲ οὐ πρήσσουσι δοκέουσιν εἰδέναι, καὶ τὰ μὲν ὁρῶσιν οὐ γινώσκουσιν, ἀλλ' ὅμως αὐτοῖσι πάντα γίνεται δι' ἀνάγκην θείην καὶ ἃ βούλονται καὶ ἃ μὴ βούλονται.

[1] In this sense, as blaming the ordinary mode of conception, I understand, at any rate conjecturally, the fragmentary words in Theophrast. *Metaph.* 314 (*Fr.* 12, 15, Wimm.): ὥσπερ σὰρξ (for which Wimmer conjectures σωρὸς, and Bernays *ap.* Schuster, p. 390, σάρον, off-scourings; σάρος, which signifies the same, is still nearer) εἰκῆ κεχυμένον ὁ κάλλιστος, φησὶν Ἡράκλειτος, κόσμος. Schuster supposes this to be Heracleitus's own opinion; but neither of the two explanations he proposes, is satisfactory to me.

[2] This at least *may* be the meaning of *Fr.* 37; Clem. *Strom.* v. 591 A: ἀπιστίη γὰρ διαφυγγάνει μὴ γινώσκεσθαι. The preceding words in Clemens I do not believe to be from Heracleitus, partly because βάθη τῆς γνώσεως is an expression which reminds us so strongly of Christian language (cf. 1 *Cor.* ii. 10; *Rev.* ii. 24; 1 *Cor.* viii. 1, 7; 2 *Cor.* x. 5, and other passages), and partly because for the reasons already given, *supra*, p. 6. I cannot agree with Schuster, who, p. 72, finds in this fragment a recommendation to guard against persecution by means of mistrustful precaution.

[3] *Fr.* 5; Theod. *Cur. Gr. Aff.* 70, p. 13; Clem. *Strom.* v. 604 A: ἀξύνετοι ἀκούσαντες κωφοῖς ἐοίκασι· φάτις αὐτοῖσι μαρτυρέει (the proverb witnesses concerning them) παρεόντας ἀπεῖναι.

[4] *Fr.* 28; Arist. *Eth. N.* x. 5, 1176 a, 6: Ἡράκλειτός φησιν, ὄνοι σύρματ' ἂν ἑλέσθαι μᾶλλον ἢ χρυσόν. *Fr.* 36; Plut. *An Seni s. ger. resp.* c. 7, p. 787: κύνες γὰρ καὶ βαύζουσιν ὃν ἂν μὴ γινώσκωσι καθ' Ἡράκλειτον. I give to these and similar sayings, which have only reached us in fragments, the signification which seems to me the most probable, without absolutely vouching for it.

[5] *Fr.* 32; Clem. *Str.* ii. 369 D: ἀκοῦσαι οὐκ ἐπιστάμενοι οὐδ' εἰπεῖν.

[6] *Fr.* 31; ap. Stob. *Floril.* 3, 82: κρύπτειν ἀμαθίην κρέσσον (ἢ ἐς τὸ μέσον φέρειν); this addition seems later. Plutarch differs somewhat in his interpretation, as we find in several places; cf. Schleierm. p. 11; Mull. 315; Schuster, 71.

the opinions of the multitude without considering that the good are always few in number; that the majority live out their lives like the beasts, only the best among mortals preferring one thing, namely undying glory, to all besides;[1] and that one great man is worth more than thousands of evil persons.[2] Even those who have earned the fame of superior wisdom in most cases fare very little better at the hands of Heracleitus. He sees in them far more diversity of knowledge than real intelligence. On Hesiod and Archilochus, on Pythagoras, Xenophanes and Hecatæus, but above all, on Homer, he passed the severest judgments;[3] a few only of the so-called seven wise men are treated by him with more respect.[4] How-

[1] *Fr.* 71, as this is restored by Bernays, *Heracl.* 32 sq.; cf. Schuster, 68 sq. (in preference to Lassalle, ii. 303): from Procl. *in Alcib.* p. 255; Creuz. iii. 115, Cous.; Clem. *Strom.* v. 576 A: τίς γὰρ αὐτῶν [sc. τῶν πολλῶν] νόος ἢ φρήν; δήμων ἀοιδοῖσι ἕπονται καὶ διδασκάλῳ (l. -λων) χρέονται ὁμίλῳ, οὐκ εἰδότες ὅτι πολλοὶ κακοὶ ὀλίγοι δὲ ἀγαθοί. αἱρέονται γὰρ ἓν ἀντὶα πάντων οἱ ἄριστοι κλέος ἀέναον θνητῶν, οἱ δὲ πολλοὶ κεκόρηνται ὥκωσπερ κτήνεα. The remainder is an explanatory addition of Clemens. In my interpretation of the last proposition, I differ from Bernays, Lassalle (ii. 436 sq.) and Schuster, who make θνητῶν dependent on κλέος. Bernays sees in the juxtaposition of the words, κλέος ἀέναον θνητῶν, an ironical allusion to the worthlessness of that which even the best desire. Lassalle finds in them the thought that fame is the realised infinity of finite man.

[2] *Fr.* 30, according to Bernays, *loc. cit.* p. 35; *ap.* Theodor. *Prodr.* (Laz. *Miscel.* p. 20); cf Symmachus, *Epist.* ix. 115; Diog. ix. 16: ὁ εἷς μύριοι παρ' Ἡρακλείτῳ ἐὰν ἄριστος ᾖ. Olympiodor. *in Gorg.* p. 87 (Jahn's *Jaeb. Supplementb.* xiv. 267) gives: εἷς ἐμοὶ ἀντὶ πολλῶν. Similarly, Seneca, *Ep.* 7, 10, represents Democritus as saying: *Unus mihi pro populo est et populus pro uno*, and it is possible that Democritus, in whom we shall find other echoes of Heracleitus, may have taken this saying from him.

[3] Cf. on this point *Fr.* 22 sq. (*sup.* vol. i. p. 336, 5; 510, 4); *Fr.* 25 (*infra*, p. 16, 1); *Fr.* 134; Diog. ix. 1: τὸν δ' Ὅμηρον ἔφασκεν ἄξιον ἐκ τῶν ἀγώνων (which we must primarily refer to the ἀγῶνες μουσικοί) ἐκβάλλεσθαι καὶ ῥαπίζεσθαι καὶ Ἀρχίλοχον ὁμοίως. *Fr.* 76 (vide *inf.* p. 32, 1). Heracleitus censures Homer, because he would do away with strife.

[4] Bias especially, *Fr.* 18; Diog. i. 88. Also Thales, *Fr.* 9; also 23. The Heracleitus who is mentioned

ever great then may be the differences between the theory of Heracleitus and that of the Eleatics, they are both equally opposed to the ordinary theory of the world.

According to Heracleitus, the radical error in the popular mode of presentation consists in its attributing to things a permanence of Being which does not belong to them. The truth is that there is nothing fixed and permanent in the world, but all is involved in constant change,[1] like a stream in which new waves are continually displacing their predecessors;[2] and this means not

by Alcæus, *ap.* Diog. i. 76, can hardly be our philosopher.

[1] Plato, *Theæt.* 160 D: κατὰ . . . Ἡράκλειτον . . . οἷον ῥεύματα κινεῖσθαι τὰ πάντα. *Ibid.* 152 D (*inf.* p. 18, 2); *Crat.* 401 D: καθ' Ἡράκλειτον ἂν ἡγοῖντο τὰ ὄντα ἰέναι τε πάντα καὶ μένειν οὐδέν. *Ibid.* 402 A: λέγει που Ἡράκλ. ὅτι πάντα χωρεῖ καὶ οὐδὲν μένει, καὶ ποταμοῦ ῥοῇ ἀπεικάζων τὰ ὄντα λέγει ὡς δὶς ἐς τὸν αὐτὸν ποταμὸν οὐκ ἂν ἐμβαίης. *Ibid.* 412 D: τὸ πᾶν εἶναι ἐν πορείᾳ, τὸ . . . πολὺ αὐτοῦ . . . τοιοῦτόν τι εἶναι, οἷον οὐδὲν ἄλλο ἢ χωρεῖν. *Soph.* 242 C sqq.; vide *inf.* p. 38, 1; Arist. *Metaph.* iv. 5, 1010 *a*, 13 (vide next note). *Ibid.* 1, 6, sub init.: ταῖς Ἡρακλειτείοις δόξαις, ὡς ἁπάντων τῶν αἰσθητῶν ἀεὶ ῥεόντων καὶ ἐπιστήμης περὶ αὐτῶν οὐκ οὔσης. *Ibid.* xiii. 4, 1078 b, 14: τοῖς Ἡρακλειτείοις λόγοις ὡς πάντων τῶν αἰσθητῶν ἀεὶ ῥεόντων. *De An.* i. 2, 405 a, 28 (after the quotation, 538, 2, 3): ἐν κινήσει δ' εἶναι τὰ ὄντα κἀκεῖνος ᾤετο καὶ οἱ πολλοί. *Top.* i. 11, 104 b, 21: ὅτι πάντα κινεῖται καθ' Ἡράκλειτον. *Phys.* viii. 3, 253 b, 9 (*infra*, p. 15, 1); *De Cœlo*, iii. 1, 298 b, 29 (*inf.* p. 21, 1). Also later writers, as Alex. *in Top.* p. 43; *Schol. in Arist.* 259 b, 9; *in Metaph.* iv. 8, p. 298, 10 *Bon.*; Pseudo-Alex. *in Metaph.* xiii. 4, 9, p. 717, 14, 765, 12 Bon.; Ammon. *De Interpr.* 9; *Schol. in Ar.* 98 a, 37; Diog. ix. 8; Lucian, *V. Auct.* 14; Sext. *Pyrrh.* iii. 115; Plut. *Plac.* i. 23, 6; Stob. *Ecl.* i. 396, 318. The same theory is presupposed by Epicharmus, vide *supra*, vol. i. 529 sq.

[2] Plato, *Crat.* 402 A, vide previous note; Plut. *de Ei ap. D.* c. 18: ποταμῷ γὰρ οὐκ ἔστιν ἐμβῆναι δὶς τῷ αὐτῷ καθ' Ἡράκλειτον, οὐδὲ θνητῆς οὐσίας δὶς ἅψασθαι κατὰ ἕξιν, ἀλλ' ὀξύτητι καὶ τάχει μεταβολῆς "σκίδνησι καὶ πάλιν συνάγει" . . . "πρόσεισι καὶ ἄπεισι." I consider that these words are from Heracleitus, and Schleiermacher is also of that opinion, vide p. 30. The words in the sixth Heraclitean letter (as Bernays rightly observes, p. 55): [ὁ θεὸς] "συνάγει τὰ σκιδνάμενα" point to this. On the other hand, the words, οὐδὲ . . . κατὰ ἕξιν, appear to me to be an explanatory addition of Plutarch. Heracleitus can scarcely have spoken of θνητὴ οὐσία; and we can hardly help seeing in κατὰ ἕξιν (which Schuster, p. 91, finds a difficulty) the

merely that all individual existences are fleeting, but that *any* continuance in the state of a thing is a delusion, as we are distinctly assured by Heracleitus himself, as well as by all our other authorities from Plato and Aristotle onwards.[1] Nothing remains what it is, every-

Aristotelian Stoic form of expression. The same expression is used by Plut. *de s. Num. Vind.* c. 15, and p. 559; *Qu. Nat.* 2, 3, p. 912; Simpl. *Phys.* 17 a, m, 308 b; Plut. *Qu. Nat.* adds, ἕτερα γὰρ ἐπιῤῥεῖ ὕδατα; more fully Cleanthes, *ap.* Eus. *Pr. Ev.* xvi. 20, 1: Ἡράκλ. . . . λέγων οὕτως· ποταμοῖσι τοῖσιν αὐτοῖσιν ἐμβαίνουσιν ἕτερα καὶ ἕτερα ὕδατα ἐπιῤῥεῖ (the rest cannot be regarded as Heracleitean). In Heracleitus, *Alleg. Hom.* c. 24, p. 51, Mehl. we find: ποταμοῖς τοῖς αὐτοῖς ἐμβαίνομέν τε καὶ οὐκ ἐμβαίνομεν, εἰμέν τε καὶ οὐκ εἰμεν, which may be explained thus: 'We only seem to descend into the same river, identical with itself; in truth, we do not descend into the same, for during our descent it is changing; and so we ourselves are and are not, because we also are constantly changing' (Schuster's interpretation, p. 88—'we are in it, and at the same time no longer in it,' is less satisfactory to me). The words, however, likewise admit of another interpretation: 'In truth we do not go down into the same river, and we are not the same (after εἶμεν we may supply οἱ αὐτοί from the preceding context) as before.' Arist. *Metaph.* iv. 5, 1010 a, 12, is in favour of this interpretation: (Κρατύλος) Ἡρακλείτῳ ἐπετίμα εἰπόντι, ὅτι δὶς τῷ αὐτῷ ποταμῷ οὐκ ἔστιν ἐμβῆναι· αὐτὸς γὰρ ᾤετο οὐδ' ἅπαξ; for if Heracleitus had also said this, there was no reason for the censure. So does Seneca, *Ep.* 58, 23: *Hoc est, quod ait Heraclitus: 'in idem flumen bis descendimus et non descendimus.'* The latter passage might be quoted in favour of Schleiermacher's conjecture, *l. c.* 143, that in Heracleitus (*Alleg. Hom.* l. c.) "δὶς" should be inserted after ποταμοῖς τοῖς αὐτοῖς; but it seems to me more probable that the '*bis*' in Seneca is an explanatory addition taken from the famous proposition: 'We cannot descend twice into the same river.' Schuster's restoration of the text of Heracleitus from the above quotations (p. 86 sqq.) is not at all clear to me. All the expressions here cited need not necessarily be taken from one and the same place.

[1] Schuster, p. 201 sq., has been at much pains to prove that Heracleitus, in the sentences quoted above, merely intended to express the thought 'that nothing in the world escapes the final destruction.' I cannot, however, satisfy myself that his argument is really satisfactory. In the first place, it may well be doubted whether the original expression of the Heracleitean doctrine (as he believes, vide p. 86), is to be found in the words πάντα χωρεῖ καὶ οὐδὲν μένει, *Crat.* 402 A (vide the last note but one). It is not altogether clear from this passage whether these were actually the words of Heracleitus: it is also very improbable that, if they were, he should not often have recurred to his original view; and in that

thing passes into its opposite, all comes out of all; all is all. The day is sometimes longer, sometimes shorter;

case we might conjecture that he would not always have employed one and the same formula. Why the expression adduced by Schuster should be more authentic than the others that have been handed down to us; why the πάντα ῥεῖν which is mentioned by Aristotle three times (*De Cœlo*, iii. 1, *Metaph.* 1, 6, and *De An.* i. 2, vide, *infra*, p. 22, 4); or the corresponding passage, οἷον ῥεύματα κινεῖσθαι τὰ πάντα, which is quoted in Plato as a saying of Heracleitus, *Theæt.* 160 D, should not equally reproduce his own words; why he should have said πάντα χωρεῖ, and not (according to *Crat.* 401 D) ἰέναι τὰ πάντα καὶ μένειν οὐδέν, it does not appear. Whatever expression Heracleitus may have employed, the chief question is, what he meant by it. And he himself leaves no doubt upon this point. The river, which *labitur et labetur in omne volubilis ævum*, would have been a very inappropriate illustration of the proposition that all things in time come to an end; but it is perfectly just in regard to the constant change of things. This is clearly marked by Heracleitus as the point of comparison, when he says that we cannot go down twice into the same river. Whether the river flowed on eternally, or at some time or other came to an end, is, in reference to this point, quite immaterial. But even if the explanations of Heracleitus had been less equivocal than they are, the opinion of the writers who were acquainted with his works, not as we know them, in small fragments, but in their whole connection, would be decisive. These writers are unanimously agreed that he denied any permanent state of things. Schuster says (p. 207 sq.) that Plato was the first to ascribe this meaning to πάντα χωρεῖ—that Aristotle followed his example, but betrayed in *Phys.* viii. 3, that he had not himself found a definite explanation of the words in Heracleitus's work. For my part, I can charge neither Plato nor Aristotle, nor even Plutarch, nor Alexander, who were equally in possession of this much read book, with so careless and superficial an account; and I do not see what can justify us, even irrespectively of Heracleitus's own assertions, in opposing their unanimous declarations with a theory which cannot bring forward a single witness in its defence. For even *Phys.* viii. 3 proves nothing. Aristotle here says, 253 b, 9: φασί τινες κινεῖσθαι τῶν ὄντων οὐ τὰ μὲν τὰ δ' οὔ, ἀλλὰ πάντα καὶ ἀεί, ἀλλὰ λανθάνειν τὴν ἡμετέραν αἴσθησιν. πρὸς οὓς καίπερ οὐ διορίζοντας ποίαν κίνησιν λέγουσιν, ἢ πάσας, οὐ χαλεπὸν ἀπαντῆσαι. He therefore expressly attributes to Heracleitus (with whom this passage is primarily concerned) the assertion that all things are involved in perpetual change. He fails, however, to find in Heracleitus a distinct explanation as to the kind of change that is here meant; and he goes on to show in regard to all kinds of change,—increase and diminution, transformation and change of place (cf. Part II. 290, 3rd ed.), that they cannot go on uninterruptedly. But what follows from this? What is there to show that Aristotle's account of the matter may not have

and so is the night; heat and moisture alternate; the sun is at one period nearer to us and at another farther

been correct; viz., that Heracleitus distinctly maintained the perpetual variation of things, and proved it (as we shall find) by many examples, but that he did not, like Aristotle, distinguish logically the various kinds of change, and therefore in places where he announced his proposition in a general manner, he held to the indeterminate conception of the motion (or the flux) of all things, without explaining wherein this motion consisted; whether the place, or the size, or the material constitution of things, or all these at once, were constantly changing. In Plato, also, *Theæt.* 181 B sqq., the proposition that, according to the Heracleitean doctrine, πάντα πᾶσαν κίνησιν ἀεὶ κινεῖται, everything is perpetually changing its place as well as its constitution (is subject to a constant ἀλλοίωσις as well as a περιφορά), is indeed declared to be the proper sense of the doctrine, but in such a manner that we can plainly see that it was Plato who first discriminated these two kinds of motion. Schuster is of opinion that to assume the perpetual change of individuals would lead to the greatest difficulties. If we suppose that their *shape* is perpetually changing (which no one, so far as I know, ascribes to Heracleitus), this is contradicted by the continuance of the earth, sea, and sky, of souls after death, etc. If they are constantly changing their *substance* for some other substance, this theory is compatible neither with the period of the world's conflagration, nor with the following period in which all is sea (vide *infra*, *Her. Cosm.*), nor even with the present cosmical period; it would only be in keeping with the idea that everything is, at every moment, changing all its old parts for new; that the world is every moment, as by magic, disappearing and reappearing—which we can hardly suppose to have been the opinion of Heracleitus. But in order to refute the accounts of his doctrine by these consequences, two things must first be demonstrated. First, that Heracleitus, in case the accounts are correct, himself drew these inferences; and secondly, that he found difficulty in them. And neither of these two presuppositions can I admit. How do we know that Heracleitus, if he held the perpetual transformation of substances, regarded this transformation as taking place momentarily, and not gradually, now quickly, and now slowly? or that he ever said to himself, 'If all is constantly changing, this must be true of the smallest particles of matter?' How again do we know that from his point of view such an absolute transformation of substances would seem unthinkable? Even on this presupposition, the apparent permanence of particular things, even their continuance till the end of the world, would be perfectly explicable, if we also suppose that what they lose on one side would be made up to them on the other; which, according to p. 559 sq., 3rd ed., seems to have been actually Heracleitus's opinion. Cf. with the preceding observations, Susemihl, *l. c.* 725 sq.; Siebeck, *Zeischr. f. Phil.* lxvii. 245 sq.; Teichmüller, *Neue Studien*, i. 118 sqq. The

away. The visible passes into the invisible, the invisible again into the visible; one thing takes the place of another, or is lost by means of the other; the great is nourished by the small, the small by the great. From man, too, nature takes some parts, while at the same time she gives him others; she makes him greater by giving to him, and less by taking away, and both coincide.[1] Day and night are the same; that is,

last-mentioned author believes that Heracleitus opposed his doctrine of the flux of all things to the assertion of Xenophanes that the Deity is unmoved. I cannot agree with this conjecture—for Xenophanes denies motion only of the Deity (vide *supra*, vol. i. p. 543; 566), whereas the proposition of Heracleitus refers to things, and not to the Deity as such.

[1] This is in the passage of the Pseudo-Hippocrates, π. διαίτης, i. 4 sqq., which Bernays, *Heracl.* 10 sqq., supposes (irrespectively of many additions by Hippocrates himself) to have been taken from the work of Heracleitus, though perhaps only the writing or the information of some disciple of Heracleitus may have been made use of (further details, p. 570, third edition). I take from it what seems to me, at any rate, according to the sense, to belong to Heracleitus; where words are wanting in our text, this is indicated; ἔχει δὲ ὧδε· γενέσθαι καὶ ἀπολέσθαι τωυτὸ, ξυμμιγῆναι καὶ διακριθῆναι τωυτό. This latter word, however, is certainly not Heracleitean in this acceptation; the reduction of generation and decay to the combination and separation of matter rather betrays (as will be shown, *l. c.*) the influence of Anaxagoras: ἕκαστον πρὸς πάντα καὶ πάντα πρὸς ἕκαστον τωυτό . . . χωρεῖ δὲ πάντα καὶ θεῖα καὶ ἀνθρώπινα ἄνω καὶ κάτω ἀμειβόμενα· ἡμέρη καὶ εὐφρόνη ἐπὶ τὸ μήκιστον καὶ ἐλάχιστον . . . πυρὸς ἔφοδος καὶ ὕδατος· ἥλιος ἐπὶ τὸ μακρότατον καὶ βραχύτατον . . . φάος Ζηνὶ σκότος Ἀΐδῃ, φάος Ἀΐδῃ σκότος Ζηνί (vide *infra*) φοιτᾷ [καὶ μετακινεῖται·] κεῖνα ὧδε καὶ τάδε κεῖσε πάσην ὥρην, διαπρησσόμενα κεῖνά τε τὰ τῶνδε, τὰ δέ τ' αὖ τὰ κείνων. (Here come the words καὶ τὰ μὲν πρήσσουσι, &c., given *supra*, p. 7, 2, but which do not apply here) φοιτεόντων δ' ἐκείνων ὧδε τῶνδέ τε κεῖσε συμμισγομένων πρὸς ἄλληλα, τὴν πεπρωμένην μοίρην ἕκαστον ἐκπληροῖ καὶ ἐπὶ τὸ μέζον καὶ ἐπὶ τὸ μεῖον. φθορὴ δὲ πᾶσιν ἀπ' ἀλλήλων, τῷ μέζονι ἀπὸ τοῦ μείονος καὶ τῷ μείονι ἀπὸ τοῦ μέζονος. αὐξάνεται καὶ τὸ μέζον ἀπὸ τοῦ ἐλάσσονος . . . ἐσέρπει δὲ ἐς ἄνθρωπον μέρεα μερέων, ὅλα ὅλων . . . τὰ μὲν ληψόμενα τὰ δὲ δώσοντα· καὶ τὰ μὲν λαμβάνοντα πλεῖον ποιέει, τὰ δὲ διδόντα μεῖον. πρίουσιν ἄνθρωποι ξύλον, ὁ μὲν ἕλκει, ὁ δὲ ὠθέει, (Aristophanes uses the same figure, Wasps, 694) τὸ δ' αὐτὸ τοῦτο ποιέουσι (similarly c. 16) μεῖον δὲ ποιέοντες πλεῖον ποιέουσι (in making the wood smaller, they make it πλεῖον; i.e., they make more pieces out of it) τὸ δ' αὐτὸ καὶ φύσις

there is one essence which is now light,[1] now dark;[2] beneficial and destructive,[3] upper and under,[4] beginning

ἀνθρώπων· so it is with the nature of man; τὸ μὲν (nominative) ἀθέει, τὸ δὲ ἕλκει, τὸ μὲν δίδωσι, τὸ δὲ λαμβάνει, καὶ τῷ μὲν δίδωσι, τῷ [τοῦ] δὲ λαμβάνει, καὶ τῷ μὲν δίδωσι, τοσούτῳ πλέον (and that to which it gives, becomes more by so much), τοῦ δὲ λαμβάνει, τοσούτῳ μεῖον.

[1] Frag. 25, Hippol. *Refut.* ix. 10: ἡμέρα γάρ, φησὶ (sc. Ἡράκλ.), καὶ νύξ ἐστιν ἓν, λέγων ὧδέ πως· διδάσκαλος δὲ πλείστων Ἡσίοδος· τοῦτον ἐπίστανται πλεῖστα εἰδέναι, ὅστις ἡμέρην καὶ εὐφρόνην οὐκ ἐγίνωσκεν, ἔστι γὰρ ἕν.

[2] So ἔστι ἓν is to be understood. Schuster, p. 67, explains it thus: 'Day and night are the same; that is to say, a division of time'—a proposition, the profundity of which, in my opinion, would better suit the Platonic Dionysodorus or some Sophist of the same stamp, than Heracleitus. What Heracleitus meant by the unity of day and night is clear from *Fr.* 67 (*infra*, p. 17, 3). His censure of Hesiod refers to *Theog.* 124, where Ἡμέρα is represented as the daughter of Νύξ. If he also censured Hesiod for believing in lucky and unlucky days, whereas one day is like another (Plut. *Cam.* 19; Sen. *Ep.* 12, 7), it must have been in some other passage, for there is no allusion to it here.

[3] *Fr.* 83; Hippol. *l. c.*: θάλασσά φησιν, ὕδωρ καθαρώτατον καὶ μιαρώτατον (which, however, according to Teichmüller's just observation, *N. Stud.* i. 29, is not to be translated 'troubled' or 'dirty,' as Schuster has it, p. 249; it means impure, and primarily refers to the bad taste and undrinkableness of sea-water): ἰχθύσι μὲν πότιμον καὶ σωτήριον, ἀνθρώποις δὲ ἄποτον καὶ ὀλέθριον. Here comes in the example of the physicians (*Fr.* 81) who τέμνοντες καίοντες πάντη βασανίζοντες κακῶς τοὺς ἀρρωστοῦντας ἐπαιτιῶνται μηδὲν ἄξιον μισθῶν λαμβάνειν παρὰ τῶν ἀρρωστούντων ταῦτα ἐργαζόμενοι τὰ ἀγαθὰ καὶ τὰς νούσους, ἐπαιτιῶνται, &c., may be thus explained: 'They complain that they receive nothing corresponding to the reward they deserve—nothing worthy of them, as a reward; they accordingly consider the evils they inflict on men as something very valuable—as ἀγαθά.' We get the same result if, in accordance with the Göttingen edition of Hippolytus and Schuster, p. 246, we substitute μισθὸν for μισθῶν. Bernays (*Rhein. Mus.* ix. 244; *Heraclit. Br.* 141) proposes ἐπαιτέονται μηδὲν ἄξιοι μισθῶν λαμβάνειν, &c., 'they ask, little as they deserve a reward, payment from the sick.' In this case it is not Heracleitus himself who concludes from the conduct of the physicians that good and evil are identical; but Hippolytus draws this conclusion, in taking the ironical ἀγαθὰ of Heracleitus as earnest. That he may be allowed the full credit of this I will not dispute. The addition which Schuster, p. 247, is disposed to make to the fragment, from *Ep. Heracl.* vi. 54, does not seem to me to have originated with Heracleitus.

[4] *Fr.* 82; Hippol. ix. 10: γναφείῳ φησὶν, ὁδὸς εὐθεῖα καὶ σκολιὴ . . . μία ἐστὶ, φησὶ, καὶ αὐτή· καὶ τὸ ἄνω καὶ τὸ κάτω ἓν ἐστι καὶ τὸ αὐτό. (The upper, *e.g.* in the revolution of the heavens and the transition of the elements one into another, becomes

and end.[1] Mortal and immortal[2] are the same. Sickness and health, hunger and satiety, labour and refreshment are alike; the Deity is day and night, summer and winter, war and peace, plenty and want; all is one, all becomes all.[3] From the living comes death, and from the dead life, from the young old age, and from the old youth; from the waking, sleep, and from the sleeping, wakefulness. The stream of generation and destruction never stands still; the clay out of which things are made is for ever being moulded into new forms.[4]

under, and vice versâ; upper and lower are consequently the same essence. Meantime it is a question whether the words καὶ τὸ ἄνω . . . τὸ αὐτὸ belong to Heracleitus, or merely contain an inference drawn by the author from 'ὁδὸς ἄνω' &c.) ὁδὸς ἄνω κάτω μία καὶ αὐτή. We shall have more to say on this subject further on.

[1] *Fr.* 58; Porphyr. *in Schol. Ven. in Il.* xiv. 200: ξυνὸν ἀρχὴ καὶ πέρας ἐπὶ κύκλου περιφερείας κατὰ Ἡράκλειτον.

[2] Cf. *Fr.* 60, *infra*, chapter on *Her. Anthrop.*

[3] *Fr.* 84; ap. Stob. *Floril.* iii. 84: νοῦσος ὑγείην ἐποίησεν ἡδὺ καὶ ἀγαθὸν, λιμὸς κόρον, κάματος ἀνάπαυσιν. *Fr.* 67; Hippol. *Refut.* ix. 10: ὁ θεὸς ἡμέρη εὐφρόνη, χειμὼν θέρος, πόλεμος εἰρήνη, κόρος λιμός. Philo. *Leg. Alleg.* ii. 62 A: Ἡρακλειτείου δόξης ἑταῖρος, κόρον καὶ χορτασμοσύνην (cf. *infra*, chapter on *Her. Cosm.* last page) καὶ ἓν τὸ πᾶν καὶ πάντα ἀμοιβῇ εἰσάγων.

[4] *Fr.* 59; Plut. *cons. ad. Apoll.* 10, p. 106: πότε γὰρ ἐν ἡμῖν αὐτοῖς οὐκ ἔστιν ὁ θάνατος; καὶ ᾗ φησιν Ἡράκλειτος, ταὐτό τ' ἔνι (Schleiermacher, p. 80, conjectures: ταὐτό τ' ἐστι; Bernays, *Rh. Mus.* vii. 103, Schuster, p. 174, &c.: ταὐτῷ τ' ἔνι; the latter alteration seems to me to lose the sense of the passage; and in both I am dissatisfied with the τε; I should therefore prefer "ταὐτὸ τὸ") ζῶν καὶ τεθνηκὸς καὶ τὸ ἐγρηγορὸς καὶ τὸ καθεῦδον, καὶ νέον καὶ γηραιόν· τάδε γὰρ μεταπεσόντα ἐκεῖνά ἐστι κἀκεῖνα πάλιν μεταπεσόντα ταῦτα. ὡς γὰρ ἐκ τοῦ αὐτοῦ πηλοῦ δύναταί τις πλάττων ξῷα συγχεῖν καὶ πάλιν πλάττειν καὶ συγχεῖν καὶ τοῦτο ἓν παρ' ἓν ποιεῖν ἀδιαλείπτως· οὕτω καὶ ἡ φύσις ἐκ τῆς αὐτῆς ὕλης πάλαι μὲν τοὺς προγόνους ἡμῶν ἀνέσχεν, εἶτα συνεχεῖς αὐτοῖς ἐγέννησε τοὺς πατέρας, εἶτα ἡμᾶς, εἶτ' ἄλλους ἐπ' ἄλλοις ἀνακυκλήσει. καὶ ὁ τῆς γενέσεως ποταμὸς οὗτος ἐνδελεχῶς ῥέων οὔποτε στήσεται, καὶ πάλιν ἐξ ἐναντίας αὐτῷ ὁ τῆς φθορᾶς εἴτε Ἀχέρων εἴτε Κωκυτὸς καλούμενος ὑπὸ τῶν ποιητῶν. ἡ πρώτη οὖν αἰτία ἡ δείξασα ἡμῖν τὸ τοῦ ἡλίου φῶς, ἡ αὐτὴ καὶ τὸν ζοφερὸν ἄγει ἀδην. I agree with Bernays (*l. c.*) as to the probability of Plutarch's having taken, not merely the words ταὐτὸ . . . γηραιὸν from Heracleitus, but the whole drift of the passage; and that the image especially of the clay and its moulding

All life and consciousness of life[1] is founded on this constant motion, which alone constitutes the existence of things; nothing *is* this or that, but *becomes* whatever it is, in the movement of the life of nature; things are not to be conceived as permanent, and finished once for all; they are continually being reproduced[2] in the

—in all probability also that which is said of the stream of Becoming and decay, of light and Hades—is chiefly borrowed from the same source. As to the meaning of those words, Plutarch says: 'Heracleitus declares the living to be identical with the dead, the waking with the sleeping, &c., because both pass into one another (for as the living becomes dead when it dies, so the dead becomes living when the living feeds upon it; as the young becomes old through the lapse of years, so the old becomes young by the propagation of the species), and it cannot be urged that this was too trivial for the profound philosopher (Lassalle, i. 160); for in the first place the thought that in a certain sense the dead again becomes the living, and the old, young, was sufficiently remote from the ordinary presentation, and secondly, the inference would be in any case peculiar to Heracleitus, that consequently the living and the dead are one and the same. In themselves, however, the words might likewise signify: the living is *at the same time* dead, and vice versâ, because the living only arose from the destruction of a previous existence; and the dead is undergoing the transition to that existence; waking is sleeping, and sleeping waking; because in waking all the powers are not in full activity, and in sleep they are not all at rest; youth is age, because it only arises from that which has long been in existence; and age is youth, because it only consists in constant renewal; and even the more abstract expressions that life is at the same time death, &c., allow of justification (cf. Plut. *De Ei.* ap. D c. 18, p. 392). The unity of death and life is referred to in *Fr.* 139 (*Etymol. Magn.* v. *βίος*; Eustath. *in Il.* p. 31, 6): *τῷ οὖν βίῳ ὄνομα μὲν βίος ἔργον δὲ θάνατος.*

[1] Hence the statements in *Plac.* i. 23: *Ἡρ. ἠρεμίαν καὶ στάσιν ἐκ τῶν ὅλων ἀνῄρει· ἔστι γὰρ τοῦτο τῶν νεκρῶν.* Iambl. ap. Stob. i. 906: *τὸ μὲν τοῖς αὐτοῖς ἐπιμένειν κάματον εἶναι τὸ δὲ μεταβάλλειν φέρειν ἀνάπαυσιν.* Numen. ap. Porph. *Antr. Nymph.* c. 10: *ὅθεν καὶ Ἡράκλειτος (-ον) ψυχῆσι, φάναι τέρψιν, μὴ θάνατον, ὑγρῇσι γενέσθαι,* that is to say, the fiery seeks to be transformed into the moist (vide *infra*, chapter on *Her. Anthrop.*)

[2] Plato *Theaet.* 152 D: *ἐγὼ ἐρῶ καὶ μάλ' οὐ φαῦλον λόγον· ὡς ἄρα ἓν μὲν αὐτὸ καθ' αὑτὸ οὐδέν ἐστιν, οὐδ' ἄν τι προσείποις ὀρθῶς οὐδ' ὁποιονοῦν τι, ἀλλ' ἐὰν ὡς μέγα προσαγορεύῃς, καὶ σμικρὸν φανεῖται, καὶ ἐὰν βαρύ, κοῦφον, ξύμπαντά τε οὕτως, ὡς μηδενὸς ὄντος ἑνὸς μήτε τινὸς μήτε ὁποιουοῦν· ἐκ δὲ δὴ φορᾶς τε καὶ κινήσεως καὶ κράσεως πρὸς ἄλληλα γίγνεται πάντα ἃ δὴ φαμεν εἶναι οὐκ ὀρθῶς προσαγορεύοντες· ἔστι μὲν γὰρ οὐδέποτ' οὐδὲν, ἀεὶ δὲ γίγνεται.* 156 E: *αὐτὸ μὲν καθ' αὑτὸ μηδὲν εἶναι . . . ἐν δὲ τῇ πρὸς ἄλληλα ὁμιλίᾳ πάντα γίγνεσθαι καὶ παντοῖα ἀπὸ τῆς κινήσεως . . . οὐδὲν εἶναι ἓν αὐτὸ καθ' αὑτὸ ἀλλὰ τινὶ ἀεὶ γίγνεσθαι, τὸ δ' εἶναι πανταχόθεν ἐξαιρετέον.* In the first of these passages, this opinion is generally ascribed to all the ancient philosophers, except Parmenides, and especially to Heracleitus, Empedocles, and Protagoras; and the *τινὶ* is only applicable to Protagoras. However, it has already been proved, and we shall see, further on, that the words quoted correctly represent the doctrine of Heracleitus.

[1] Further details hereafter.

[2] *Fr.* 85; Theophr. *De Vertig.* 9, p. 138; Wimm.: *εἰ δὲ μὴ* (this is no doubt correct; Bernays, *Heracl.* 7, reads: *εἰ δὴ*), *καθάπερ Ἡράκλειτός φησι, καὶ ὁ κυκεὼν διΐσταται μὴ κινούμενος* (thus Wimmer reads, following Usener and Bern.; the older editions leave out *μὴ*, which, however, in spite of Lassalle, i. 75, is decidedly required by the context. Cf. Lucian, *Vit. Auct.* 14: *ἔμπεδον οὐδὲν, ἀλλά κως ἐκ κυκεῶνα πάντα συνειλέονται, καί ἐστι τωυτὸ τέρψις ἀτερψίη, γνῶσις ἀγνωσίη, μέγα μικρὸν, ἄνω κάτω περιχωρέοντα καὶ ἀμειβόμενα ἐν τῇ τοῦ αἰῶνος παιδιῇ.* The anecdote in Plut. *Garrulit.* c. 17, p. 511, can scarcely have any connection with this doctrine. The *κυκεὼν* of Heracleitus is mentioned by Chrysippus, ap. Philodem. *Nat. De.* Col. vii.; according to Petersen's emendation, to which, however, Sauppe prefers another and simpler version. Epicurus, ap. Diog. x. 8, calls Heracleitus a *κυκητής.*

[3] Procl. *in Tim.* 101 F: *ἄλλοι δὲ καὶ τὸν δημιουργὸν ἐν τῷ κοσμουργεῖν παίζειν εἰρήκασι, καθάπερ Ἡράκλειτος.* Clem. *Paedag.* i. 90 C: *τοιαύτην τινὰ παίζειν παιδιὰν τὸν ἑαυτοῦ Δία Ἡράκλειτος λέγει. Fr.* 49; Hippol. *Refut.* ix. 9: *αἰὼν παῖς ἐστι παίζων, πεττεύων· παιδὸς ἡ βασιληίη.* Luc. *l. c.*: *τί γὰρ ὁ αἰὼν ἐστι; παῖς παίζων, πεσσεύων, διαφερόμενος* (or better, as Bernays reads): *συνδιαφερ. = ἐν τῷ διαφέρεσθαι συμφερόμενος.* Bernays (*Rhein. Mus.* vii. 108 sqq.) illustrates these passages excellently from Homer, *Il.* xv. 360 sqq.; Philo. *Incor. M.* 950 B (500 M.); Plut. *De Ei.* c. 21, p. 393, where, however, the game of draughts is not specially mentioned. There is probably an allusion to the *παῖς πεσσεύων* in the *πεττευτής*, Plato, *Laws*, x. 903 D.

flux of phenomena by means of active forces; they merely mark the points where the opposing streams of natural life cross each other.[1] Heracleitus therefore likens the world to a mixture which must continually be stirred that it may not decompose,[2] and the world-creating power he compares to a child who, in play, draws his pebbles this way and that.[3] While, therefore, Parmenides denies Becoming, in order to maintain the conception of Being in its purity, Heracleitus denies

Being that he may maintain in full force the law of Becoming; while Parmenides declares that the notion of change and of movement is merely a delusion of the senses, Heracleitus asserts the same of the notion of permanent Being; while Parmenides regards the ordinary mode of thought as erroneous in principle because it assumes generation and destruction, Heracleitus comes to a similar conclusion precisely for the opposite reason.

But the metaphysical proposition that all things are in a continual flux becomes with Heracleitus a physical intuition. The living and moving element in nature seems to him to be fire; if all things are conceived in perpetual motion and change, it follows that all things are fire. This second proposition does not seem to have been developed from the first by conscious reflection, but the law of change which he everywhere perceives, presents itself to him through the direct action of the imagination under this symbolical aspect, the more general import of which he cannot therefore separate in his own consciousness from the sensible form in which it is contained. In this way we must understand the assertion[1] that Heracleitus held

[1] Arist. *De Coelo*, iii. 1, 298 b, 29: οἱ δὲ τὰ μὲν ἄλλα πάντα γίνεσθαί τέ φασι καὶ ῥεῖν, εἶναι δὲ παγίως οὐθέν, ἓν δέ τι μόνον ὑπομένειν, ἐξ οὗ ταῦτα πάντα μετασχηματίζεσθαι πεφυκεν· ὅπερ ἐοίκασι βούλεσθαι λέγειν ἄλλοι τε πολλοὶ καὶ Ἡράκλειτος ὁ Ἐφέσιος. *Metaph.* i. 3, 384 a, 7: Ἵππασος δὲ πῦρ ὁ Μεταποντῖνος καὶ Ἡράκλειτος ὁ Ἐφέσιος (ἀρχὴν τιθέασι). *Ibid.* iii. 4, 1001 a, 15: ἕτεροι δὲ πῦρ οἱ δ' ἀέρα φασὶν εἶναι τὸ ἓν τοῦτο καὶ τὸ ὄν, ἐξ οὗ τὰ ὄντα εἶναί τε καὶ γεγονέναι. Pseudo-Alex. *on Metaph.* xii. 1, p. 643, 18 Bon.: ὁ μὲν γὰρ Ἡράκλειτος οὐσίαν καὶ ἀρχὴν ἐτίθετο τὸ πῦρ. Diog. ix. 8: πῦρ εἶναι στοιχεῖον. Clemens, *Cohort.* 43 A: τὸ πῦρ ὡς ἀρχέγονον σέβοντες. The same is said in the verse, ap. Stob. *Ecl.* i. 282 (cf. Plut. *Plac.* i. 3, 25) ἐκ πυρὸς γὰρ πάντα καὶ εἰς πῦρ πάντα τελευτᾷ, which, however, in this form is evidently spurious, and an imitation of the well-known verse of Xenophanes (*sup.* vol. i. p. 567, 4), which, however, as is proved

fire to be the first element, the principle or primitive matter of all things.[1] 'This world,' he says, 'the same for all, has been made neither by one of the gods nor by any man; but was, and is, and shall be, an ever living

by Simpl. *Phys.* 111 b, contains much that is truly Heracleitean. For, after Simplicius has given as the doctrine of Heracleitus, ἐκ πυρὸς πεπερασμένου πάντα εἶναι καὶ εἰς τοῦτο πάντα ἀναλύεσθαι, he afterwards says: Ἡράκλειτος "εἰς πῦρ" λέγων "καὶ ἐκ πυρὸς τὰ πάντα." As these words are made into a hexameter in Stobæus, and as we elsewhere (ap. Proc. *in Tim.* 36 C; Plut. *Plac.* ii. 21; *Qu. Plat.* viii. 4, 9, p. 1007; cf. also the πυρὸς ἀμοιβήν, *infra*, p. 27, 1) meet with fragments of verse bearing Heracleitus's name, we may suppose that there was a version of his doctrine, made in hexameters to assist the memory, which probably emanated from the Stoics. Schuster, p. 354, conjectures the author of it to have been Scythinus, who, according to Hieronymus, ap. Diog. ix. 16, rendered the work of Heracleitus into verse; and refers to versified fragments in Stob. i. 26.

[1] On this Teichmüller remarks (*N. Stud.* i. 118 sq., and similarly, p. 135, 143 sq., although he quotes my very words, from 'The metaphysical proposition'): 'According to this, therefore, Heracleitus first discovered the metaphysical truth, and then made the deduction, which depends upon the observation of things.' I really thought I had said the contrary sufficiently clearly to have been safe from such a misrepresentation of my opinion. Even the 'metaphysical' proposition is obviously not to be understood as an *à priori* one: I am speaking of the law of change, which Heracleitus everywhere *perceived*, and I have shown, p. 13 sq., on what kind of perceptions the philosopher based his proposition. I derive the proposition from observation, and expressly remark that it did *not* precede the assertion 'All is fire' in the consciousness of Heracleitus. I certainly do not suppose, however, in regard to this fire, that Heracleitus was thinking merely of the actual fire that 'we see, and hear crackling,' etc.; nor that any man ever thought that the whole world had been and would be again such a visible crackling fire; nay more, that it was so always, even at the present time. Heracleitus says of the world, not only ἦν καὶ ἔσται, but ἦν ἀεὶ καὶ ἔστι καὶ ἔσται πῦρ ἀείζωον. Consequently, I cannot but think that this view is symbolical. That fire was to Heracleitus '*only* a symbol for the law of change,' I never said, but it is imputed to me by Teichmüller, who naively quotes the very words which refute him ('Heracleitus did *not* separate the more general meaning of this conception from its sensible form'), as evidence. But if Heracleitus, in asserting the world to be fire, did not mean to assert the absurdity that it was visible fire, the conception of fire must have had a signification with him, transcending its directly sensible content; that is to say, it was a symbolical conception.

fire, kindled and extinguished in due measure:'[1] fire, never resting, rules in all.[2] He thus indicates his reason for calling the world a fire; it was, as Simplicius[3] and Aristotle[4] observe, in order to express the absolute

[1] *Fr.* 46 (Clemens *Strom.* v. 599 B. Plut. *An. Pr.* 5, 2, p. 1014; Simpl. *De Cœlo* 132 b, 31, 19; *Schol. in Arist.* 487 b, 46, 33): κόσμον τόνδε τὸν αὐτὸν ἁπάντων οὔτε τις θεῶν οὔτε ἀνθρώπων ἐποίησεν· ἀλλ' ἦν ἀεὶ καὶ ἔσται, πῦρ ἀείζωον, ἁπτόμενον μέτρα καὶ ἀποσβεννύμενον μέτρα. To the latter definition I shall presently recur. The words τὸν αὐτὸν ἁπάντων about which Schleiermacher (p. 91) is uncertain, I consider genuine, on account of their very difficulty, though they are wanting in Plutarch and Simplicius; the ἁπάντων, I refer, as masculine, to the gods and men, so that the words would indicate the reason why none of these can have made the world; namely, because they all, as parts of the world, are contained in it. Lassalle, ii. 56 sq., says: 'the one and same out of all things, that which, springing from all, is internally identical;' but the force of this explanation is not clear. That the world is the same *for* all, Heracleitus remarks also ap. Plut. *De Superst.* 3, vide *inf.* chapter on *Her. Anthrop.* We need not enquire with Schuster (p. 128), *who* supposed the world to have been created by a man, nor need we, with Teichmüller, *N. Stud.* i. 86, answer the question by a reference to the Oriental apotheosis of princes (they were not so foolish in Egypt or Persia as to regard a favourite prince as the creator of the world). 'No god and no man' means, as has already been observed, vol. i., p. 559, 1, no one absolutely. To the Greeks of the time of Heracleitus, indeed, the notion that the world was made by one of the gods would have been scarcely less strange than the idea that a man made it. The eternity here ascribed to the world by Heracleitus does not contradict the assertion of Aristotle that all his predecessors considered the world as become, or created: this has already been pointed out, vol. i. p. 440, 1; 570; cf. also *infra, Her. Cosm.*

[2] *Fr.* 68; Hippol. *Refut.* ix. 10: τὰ δὲ πάντα οἰακίζει κεραυνός. Hippocr. π. διαιτ. i. 10, end (vide *infra*, p. 27, note). We meet with the same world-ruling fire, also under the name of κεραυνός, in the hymn of Cleanthes (Stob. *Ecl.* i. 30), verse 7 sq. where that Stoic, who we find from other indications especially resembled Heracleitus, exalts Zeus as 'He that holds in his hands the ἀείζωοντα κεραυνὸν (the πῦρ ἀείζωον): ᾧ σὺ κατευθύνεις κοινὸν λόγον, ὃς διὰ πάντων φοιτᾷ.

[3] *Phys.* 8 a: καὶ ὅσοι δὲ ἓν ἔθεντο τὸ στοιχεῖον . . . καὶ τούτων ἕκαστος εἰς τὸ δραστήριον ἀπεῖδε καὶ τὸ πρὸς γένεσιν ἐπιτήδειον ἐκείνου, Θαλῆς μέν, etc. Ἡράκλειτος δὲ εἰς τὸ ζωογόνον καὶ δημιουργικὸν τοῦ πυρός. *Ibid.* 6 a, m: τὸ ζωογόνον καὶ δημιουργικὸν καὶ πεπτικὸν καὶ διὰ πάντων χωροῦν καὶ πάντων ἀλλοιωτικὸν τῆς θερμότητος θεασάμενοι ταύτην ἔσχον τὴν δόξαν.

[4] *De An.* i. 2, 405 a, 25: καὶ Ἡράκλειτος δὲ τὴν ἀρχὴν εἶναί φησι ψυχήν, εἴπερ τὴν ἀναθυμίασιν, ἐξ ἧς τἆλλα συνίστησιν· καὶ ἀσωμάτωτόν τε (Torstrik has this, instead of the δὴ of the Vulgate; I prefer δὲ, in accordance with Cod. SX 10), καὶ ῥέον ἀεί· τὸ δὲ κινούμενον κινουμένῳ γινώσκεσθαι. Further details concerning this passage, *infra*, p. 26, 1, and *Her. Anthrop.*, note 4. Aristotle himself says in Heracleitean language, *Meteor.* ii. 3, 357 b, 32: τὸ τῶν ῥεόντων ὑδάτων καὶ τὸ τῆς φλογὸς ῥεῦμα. *De Vita et m.* c. 5, 470 a, 3: τὸ δὲ πῦρ ἀεὶ διατελεῖ γινόμενον καὶ ῥέον ὥσπερ ποταμός. Similarly Theophr. *Fr.* 3 (*De Igne*), 3.

life of nature, and to make the restless alternation of phenomena comprehensible. Fire is not to him an unvarying substance, out of which things derived were compounded, but which in this union remains qualitatively unchanged, like the elements of Empedocles or the primitive substances of Anaxagoras; it is the essence which ceaselessly passes into all elements, the universal nourishing matter which, in its eternal circulation, permeates all parts of the cosmos, assumes in each a different constitution, produces individual existences, and again resolves itself; and by its absolute motion causes the restless beating of the pulse of nature. By fire, the fire-flash or lightning,[1] Heracleitus understood not merely visible fire, but heat in

[1] The κεραυνός has already come before us, p. 22, 2, in a connection in which it can only signify fire as the creative principle of the world, and not merely lightning in the special sense. πρηστήρ, however, has doubtless the same general significance in *Fr.* 47; Clemens, *Strom.* v. 599 C: πυρὸς τροπαὶ πρῶτον θάλασσα θαλάσσης δὲ τὸ μὲν ἥμισυ γῆ, τὸ δὲ ἥμισυ πρηστήρ, whether Heracleitus may have discriminated πρηστὴρ according to the most literal interpretation of the word (as Stob. *Ecl.* i. 594, asserts) from κεραυνός, or considered both alike as lightning. Lassalle, ii. 75 sq. would distinguish πρηστὴρ from πῦρ by making πρηστὴρ the cosmical elementary fire, the basis of all things, and at the same time the visible fire; while he regards πῦρ as the visible fire only. But this theory finds no support in the passage just quoted—the only place where Heracleitus names πρηστήρ; nor in the fact that πρηστὴρ (as Lassalle says) 'was *already* the designation in use among the Orphics for the impure, *i.e.* material, sensible, fire:' which means that in an Orphic fragment ap. Proc. *in Tim.* 137 C, therefore in a poem centuries later than Heracleitus, these words occur: πρηστὴρ ἀμυδροῦ πυρὸς ἄνθος.

general, the warm matter, or dry vapours, according to the language of later writers;[1] and for this reason he even substituted for fire the breath, the ψυχή,[2] perhaps also aether.[3] But it would imply a misconception

[1] When Aristotle *l. c.* (vide previous note) says that Heracleitus sought the soul in the *ἀναθυμίασις*, *ἐξ ἧς τἆλλα συνίστησιν*, it is plain that this *ἀναθυμίασις* cannot be separated from the *πῦρ* which is elsewhere declared to be Heracleitus's primitive matter. Schuster thinks (p. 162) it is useless to enquire whether Aristotle meant the same thing by the two words; to me there seems no reason to doubt so clear an expression. If, in one place fire, and in another the *ἀναθυμίασις* is designated as the principle from which Heracleitus thought all things arose, we can only suppose (unless we charge Aristotle with the most obvious contradiction) that one and the same thing is intended by both terms. Aristotle indeed says (cf. p. 26, 1) exactly the same of the *ἀναθυμίασις* that Plato says of the all-permeating essence. Philoponus (*in h. l. c.* 7), therefore, rightly interprets Aristotle, when he says: *πῦρ δὲ* [Ἡρ. *ἔλεγεν*] *οὐ τὴν φλόγα* (*ὡς γὰρ Ἀριστοτέλης φησὶν ἡ φλὸξ ὑπερβολή ἐστι πυρός*)· *ἀλλὰ πῦρ ἔλεγε τὴν ξηρὰν ἀναθυμίασιν. ἐκ ταύτης οὖν εἶναι καὶ τὴν ψυχήν.* The expression *ὑπερβολὴ πυρὸς* for flame is not to be regarded as Heracleitean; the quotation only refers to what Aristotle said in his own name (*Gen. et Corr.* ii. 3, 330 b, 25; *Meteor.* i. 3, 340 b, 21); not to an utterance of his concerning Heracleitus. Against Lassalle's interpretation of *ἀναθυμίασις* (i. 147 sqq.; ii. 328 sqq.), cf. Part III. b, 23, 2nd ed.

[2] Aristotle expressly says this in the passage we have just been discussing. Cf. also *Fr.* 89 ap. Clem. *Strom.* vi. 624 D; Philo *Aetern. Mundi*, 958 C (cf. Procl. *in Tim.* 36; Julian *Orat.* V. 165 D. Spanh.; Olympiodor. *in Gorg. Jahn's Jahrbb. Supplementb.* xiv. 357, 542): *ψυχῇσι θάνατος ὕδωρ* (al. *ὑγρῇσι*) *γενέσθαι, ὕδατι δὲ θάνατος γῆν γενέσθαι· ἐκ γῆς δὲ ὕδωρ γίνεται, ἐξ ὕδατος δὲ ψυχή.* Philo indeed explains *ψυχὴ* as *ἀήρ*, and Plutarch *De Ei*, 18, p. 392, represents Heracleitus as saying *πυρὸς θάνατος ἀέρι γένεσις καὶ ἀέρος θάνατος ὕδατι γένεσις*; that this is incorrect is clear from our previous quotations, and others which are yet to come (chap. on *Her. Cosm.*).

[3] Aether is not named in any of the fragments of Heracleitus; but that the conception was not unknown to him appears probable from the predicate *αἴθριος*, which he gives to Zeus (*Fr.* 86, vide *infra*, p. 555, 3, 3rd ed.) from the Platonic derivation of aether from *ἀεὶ θέω*, *Crat.* 410 B, and still more from the fact that Pseudo-Hippocr. *De Carn.* i. 425 K. declares that *θερμὸν* appears to him to be the same as what was called by the ancients aether; the Stoics, too, identified the upper fire with aether (vide Part III. 124, 4; 129, 2; 2nd ed.). It is not, however, quite certain, for the Stoics may have arrived at their conception through the Aristotelian doctrine, and the treatise *π. σαρκῶν* is (judging from the doctrine of the elements which it contains, and other indica-

of his whole system to say, as Aenesidemus[1] does, that he supposed all things to consist of warm air. In accordance with this larger import of the word, Heracleitus says of his fire, that it is never destroyed,[2]

tions) much later than Aristotle. The further supposition (Lass. ii. 89 sq.) that aether was the highest creative principle of Heracleitus, and that he held three stages of fire, in which it manifested itself more or less purely, viz. aether, *πῦρ*, and *πρηστὴρ*, has no real foundation, though its author has taken much pains to prove it. Lassalle thinks that this theory alone can explain the assertion of Aenesidemus, that air is the first principle of Heracleitus; but I have shown (Part III. b, 23 sq., 2nd ed.) that we do not require it for this purpose. He also urges that in Ambrosius *Hexaem.* i. 6 T., 1, 8 Maur., and also in Ps.-Censorinus *Fr.* 1, 4, in the enumeration of the elements, air (which can only have come there by a confusion with aether), and not fire, takes the highest place, as if that enumeration were necessarily according to a strict order, and as if Censorinus had not immediately after remarked: the Stoics place *aether above* air; and below air, water. He lays great stress on the quotation, *l. c.* [*mundus constat*] *quattuor elementis, terra, aqua, igne, aëre. cujus principalem solem quidam putant, ut Cleanthes*; but *cujus* does not refer, as Lassalle supposes, to *aër*, but to *mundus*; for Cleanthes regarded the sun as the *ἡγεμονικὸν τοῦ κόσμου* (vide Part III. a, 125, 1, 2nd ed.). He relies on the Stoical discrimination of aethereal and common fire, in regard to which it is a question whether it was borrowed from Heracleitus, and which (even in Heracl. *Alleg. Hom.* c. 26) does not absolutely coincide with the distinction said to have been made by our philosopher between aether and fire. He thinks that the apathy of aether (ps.-Censorinus, *l. c.*) which contradicts the Stoic doctrine, must have been taken from Heracleitus, whereas it is far more likely that its source is Aristotle's *Physics* (vide Part II. b, 331, 2nd ed.) from which we must also derive the conceptions of Ocellus, 2, 23, and the spurious fragments of Philolaus (Lassalle, however, considers them authentic), which were discussed vol. i. 399, 1; cf. *l. c.* p. 358.

[1] Ap. Sext. *Math.* x. 233; ix. 360; cf. Tertull. *De An.* c. 9, 14; Part III. b, 23 sq.

[2] *Fr.* 66, Clem. *Paedag.* ii. 196 C: *τὸ μὴ δῦνον πῶς ἄν τις λάθοι*; that the subject of *δῦνον* is *πῦρ* or *φῶς* we see from the addition of Clemens: *λήσεται μὲν γὰρ ἴσως τὸ αἰσθητὸν φῶς τις, τὸ δὲ νοητὸν ἀδύνατόν ἐστιν.* Schleiermacher's emendations (p. 93 sq.) seem to me unnecessary. Heracleitus may very well have said—'No one can hide himself from the divine fire, even when the all-seeing Helios has set.' The *τις* is also defended by Lassalle, ii. 28 (who pertinently reminds us of Cornut. *N. Deor.* 11, p. 35); Schuster, p. 184; and Teichmüller, *N. Stud.* i. 184. Schuster, however, refers it to Helios, who obeys the laws which are inherent in fire; but with this I cannot agree.

that it is not like sunlight connected with a particular and therefore changing phenomenon, but is the universal essence, which is contained in all things as their substance.[1] We must not, however, reduce it on that account to a metaphysical abstraction, as Lassalle does. When Heracleitus speaks of fire, he is not thinking merely of 'the idea of Becoming as such,' 'the unity in process (*processirende Einheit*) of Being and non-Being,' &c.;[2] there is not a word to imply that he means only the 'ideal logical entity of fire,' and not the definite substance perceived in the sensation of heat, or that fire, as a principle, is absolute, immaterial, and different from every kind of material fire.[3] His own

[1] Cf. Plato, *Crat.* 412 C sqq., who, in his playful etymology of δίκαιον, probably borrowed from Heracleitus, proceeds quite in the style of Heracleitus when he says, ὅσοι γὰρ ἡγοῦνται τὸ πᾶν εἶναι ἐν πορείᾳ, τὸ μὲν πολὺ αὐτοῦ ὑπολαμβάνουσι τοιοῦτόν τι εἶναι, οἷον οὐδὲν ἄλλο ἢ χωρεῖν, διὰ δὲ τούτου παντὸς εἶναί τι διεξιὸν, δι' οὗ πάντα τὰ γιγνόμενα γίγνεσθαι· εἶναι δὲ τάχιστον τοῦτο καὶ λεπτότατον. It must be the subtlest in order to penetrate all things, and also the τάχιστον, ὥστε χρῆσθαι ὥσπερ ἑστῶσι τοῖς ἄλλοις (the same predicates which Aristotle attributes to the ἀναθυμίασις). This, the δίκαιον, receives different explanations; one says: ὁ μὲν γάρ τίς φησι τοῦτο εἶναι δίκαιον, τὸν ἥλιον . . . another: ἐρωτᾷ, εἰ οὐδὲν δίκαιον οἴμαι εἶναι ἐν τοῖς ἀνθρώποις ἐπειδὰν ὁ ἥλιος δύῃ (perhaps a play on the words μὴ δῦνον). Another understands by it fire in the abstract: ὁ δὲ οὐκ αὖ τὸ πῦρ φησὶν, ἀλλὰ τὸ θερμὸν τὸ ἐν τῷ πυρὶ ἐνόν. This seems to me one of the evidences for the view taken of the Heracleitean fire in the text, which Schuster, p. 159, has missed. Other evidences are to be found in Aristotle's reduction of πῦρ to the ἀναθυμίασις (*supra* 24, 1) and in Heracleitus's own utterances (20, 1; 22, 1; 22, 2). When Schuster observes: 'Fire is everything in the world, but it is for the most part extinguished,' he in fact asserts the same thing as the words he censures (fire is the universal essence, &c.). Vide the explanation of these words, p. 22 sq.

[2] As Lassalle supposes, i. 361; ii. 7, 10.

[3] *Ibid.* ii. 18, 30. Lassalle's verbose and prolix defence of these assertions, when closely examined, proves little. He first maintains that fire consists in this: 'that it is not Being but pure process;' from which, however, even if the proposition were more accurate than it is, nothing would follow in regard to *Heracleitus's* conception of fire. He appeals to the above-mentioned

utterances, on the contrary, as well as the statements of ancient writers, leave no doubt that it was fire as a definite substance in which he sought the principle and essence of all things.

The primitive fire, however, changes into the most various forms, and this, its transmutation, is the production of things derived. All things, says Heracleitus, are exchanged for fire, and fire for all things, as wares for gold, and gold for wares;[1] and herein he gives us to

passages of the *Cratylus*; but the θερμὸν ἐν τῷ πυρὶ ἐνὸν, even if it really corresponds with Heracleitus's opinion, is not immaterial, but only the same matter which communicates its heating power to fire; and if it be urged that some explain δίκαιον, like Anaxagoras, from νοῦς, this explanation does not relate to fire but to the δίκαιον, and it is not derived from Heracleitus but from Anaxagoras. Lassalle further supports his view by reference to two passages in Ps. Hippocr. π. διαίτ. i. 10, and *De Carn.* i. 425 K. And the thoughts there expressed have certainly a Heracleitean stamp, for in the first passage, primarily in regard to man, it is said of the θερμότατον καὶ ἰσχυρότατον πῦρ, ὅπερ πάντων ἐπικρατέεται διέπον ἅπαντα κατὰ φύσιν, that πάντα διὰ παντὸς κυβερνᾷ καὶ τάδε καὶ ἐκεῖνα, οὐδέποτε ἀτρεμίζον; and in the second: δοκέει δέ μοι ὃ καλέομεν θερμὸν ἀθάνατόν τε εἶναι καὶ νοεῖν πάντα καὶ ὁρᾶν καὶ ἀκούειν, καὶ εἰδέναι πάντα καὶ τὰ ὄντα καὶ τὰ μέλλοντα ἔσεσθαι. What conclusion is to be drawn from this against the identity of Heracleitus's fire with physical vital heat (the πῦρ τεχνικὸν of the Stoics) I do not see. Diogenes (vide *sup.* 287, 7) says precisely the same of air, as these Heracleitean philosophers say of πῦρ or θερμόν. Lassalle, ii. 22, thinks he has found the true doctrine of Heracleitus in Marc. Capella, vii. 738, although that writer does not mention Heracleitus; but the *materia informis* and the four elements in the passage might have shown him that this is simply a Stoic-Platonic exposition. In vol. ii. 27, he also attempts to prove the immateriality of the Heracleitean primitive fire from Chalcid. *in Tim.* c. 323, p. 423 M (*fingamus enim esse hunc ignem sine cerum et sine ullius materiæ permixtione ut putat Heraclitus*); here he has misunderstood the words of this Neo-Platonist (who is besides not a very authentic source). An *ignis sine materiæ permixtione* is not an immaterial fire (of which I never remember to have found a trace in any of the ancient philosophers—not even among the Neo-Platonists), but a fire which is not adulterated by any admixture of burning substances. The same may be said of Lassalle's statement (i. 360; ii. 121) that Sext. *Math.* x. 232, asserts: 'According to Heracleitus the first principle was not a material body.' I pass over some further observations.

[1] *Fr.* 57; Plut. *De Ei.* c. 8, end

understand that the derived arises out of the primitive matter, not merely by combination and separation, but by transformation, by qualitative change; for in the barter of wares for gold, the substance does not remain, but only the worth of it. Any other conception would be altogether irreconcileable with the fundamental doctrine of this philosopher concerning the flux of all things. It is, therefore, decidedly untrue to assert, like some of our authorities, that, according to Heracleitus, things are formed by means of the union and separation of substances,[1] if this is intended in the sense given to such expressions by Empedocles, Anaxagoras, and Democritus. But such language is also inaccurate and misleading if we understand by it, as some have done,[2] that

p. 388: *πυρός τ' ἀνταμείβεσθαι πάντα, φησὶν ὁ Ἡράκλειτος, καὶ πῦρ ἁπάντων, ὥσπερ χρυσοῦ χρήματα καὶ χρημάτων χρυσός.* Heracl. *Alleg. Homer.* c. 43, p. 92, therefore says: *πυρὸς γὰρ δὴ, κατὰ τὸν φυσικὸν Ἡράκλειτον, ἀμοιβῇ τὰ πάντα γίνεται.* Similarly Simpl. *Phys.* 6 a, and Diog. ix. 8: *πυρὸς ἀμοιβὴν τὰ πάντα*, also Eus. *Pr. Ev.* xiv. 3, 6: *ἀμοιβὴν γὰρ (πυρὸς) εἶναι τὰ πάντα.*

[1] Aristotle is not among these; he says indeed in *Metaph.* i. 8, 988 b, 34: *τῇ μὲν γὰρ ἂν δόξειε στοιχειωδέστατον εἶναι πάντων ἐξ οὗ γίγνονται συγκρίσει πρώτου, τοιοῦτον δὲ τὸ μικρομερέστατον καὶ λεπτότατον ἂν εἴη τῶν σωμάτων*, but he only here brings forward what may from his own standpoint be urged for the theory that fire is the primitive element; he does not say that Heracleitus himself proved it in this way. On the other hand, Hermias, *Irris.* c. 6, expounds the doctrine of Heracleitus (rather confusedly) thus: *ἀρχὴ τῶν ὅλων τὸ πῦρ· δύο δὲ αὐτοῦ πάθη, ἀραιότης καὶ πυκνότης, ἡ μὲν ποιοῦσα, ἡ δὲ πάσχουσα, ἡ μὲν συγκρίνουσα, ἡ δὲ διακρίνουσα*, and Simpl. *Phys.* 310 a, says of Heracleitus and other physicists: *διὰ πυκνώσεως καὶ μανώσεως τὰς γενέσεις καὶ φθορὰς ἀποδιδόασι, σύγκρισιν δέ τις ἡ πύκνωσίς ἐστι καὶ διάκρισις ἡ μάνωσις.* The same origin of things from fire is presupposed by Lucret. i. 645 sqq., in combating the Heracleitean doctrine, but we cannot infer anything from this as to the doctrine itself. In the *Plac.* i. 13, and Stob. i. 350, the theory of atoms is ascribed to Heracleitus; apparently, if we may judge from Stobæus, through a confusion with Heracleides.

[2] Aristotle says (*Phys.* i. 6, 189 b, 8) of the philosophers who only assume one primitive matter: *πάντες γε τὸ ἓν τοῦτο τοῖς ἐναντίοις σχηματίζουσιν, οἷον πυκνότητι καὶ*

Heracleitus believed things to arise out of fire by condensation and rarefaction, and to resolve themselves into fire again.[1] It is undeniable that when fire passes into moisture, and moisture into earth, condensation takes place, and, in the opposite case, rarefaction. But from Heracleitus' point of view, rarefaction and condensation were not the cause but the consequence of the change of substance; as he represents the process, it is not that the closer juxtaposition of the fiery atoms makes moisture arise out of fire, and solid earthy particles out of moisture; but, on the contrary, that from the rarer element is produced a denser, since fire is changed into moisture, and moisture into earth; and that consequently in order to reproduce fire out of the other substances, not merely a decomposition of their primi-

μανότητι (Anaximenes and Diogenes) *καὶ τῷ μᾶλλον καὶ ἧττον* (Plato). It would, however, follow not that Heracleitus regarded the derived as arising from rarefaction and condensation, but only from the development of opposites from the primitive matter; and this is quite correct. Only the later writers ascribe to him rarefaction and condensation. Thus in Diog. ix. 8 sq.: *πυρὸς ἀμοιβὴν τὰ πάντα, ἀραιώσει καὶ πυκνώσει γινόμενα . . . πυκνούμενον γὰρ τὸ πῦρ ἐξυγραίνεσθαι συνιστάμενόν τε γίνεσθαι ὕδωρ, πηγνύμενον δὲ τὸ ὕδωρ εἰς γῆν τρέπεσθαι*, etc. Plut. *Plac.* i. 3, 25 (Stob. i. 304): *Ἡράκλειτος . . . ἀρχὴν τῶν ὅλων τὸ πῦρ . τούτου δὲ κατασβεννυμένου κοσμοποιεῖσθαι τὰ πάντα. πρῶτον μὲν γὰρ τὸ παχυμερέστατον αὐτοῦ εἰς αὐτὸ συστελλόμενον γῆν γίνεσθαι, ἔπειτα ἀναχαλωμένην τὴν γῆν ὑπὸ τοῦ πυρὸς φύσει ὕδωρ ἀποτελεῖσθαι, ἀναθυμιώμενον δὲ ἀέρα γίνεσθαι.* Simpl. *Phys.* 6 a; Heracleitus and Hippasus *ἐκ πυρὸς ποιοῦσι τὰ ὄντα πυκνώσει καὶ μανώσει.*

[1] Which is manifestly the case in the first of the passages quoted from Simplicius; Simplicius reduces condensation and rarefaction to *σύγκρισις* and *διάκρισις*, in the same manner that Aristotle had already done, *Phys.* viii. 7, 10, p. 260 b, 7; 265 b, 30; condensation, he says, results from the parts of a body drawing more closely together, and rarefaction from their keeping farther apart. He further says that the proper expression for derivation from *one* primitive matter would be condensation and rarefaction; and from *more* than one, union and separation; remarks which Schleiermacher (p. 39) has no ground for thinking '*wunderlich*.'

tive constituents, but an entire transformation, a qualitative change of the parts, as well as of the whole, is necessary. The language he uses to describe the passage of one element into another shows this clearly enough, for, instead of rarefaction and condensation, of the union and separation of substances, we read only of transmutation, of the extinction and kindling of fire, of the life and death of the elements;[1] terms which are employed by no other natural philosopher. But the most decisive argument is that any theory, which assumes a primitive matter of unchangeable quality, would be inconsistent with the fundamental principles of Heracleitus. Fire with him means something entirely different from the elements of the early physicists; the elements are that which, amidst the change of particular things, remains unchangeable; the fire of Heracleitus is that which by means of constant transmutation produces this change.[2]

It follows then from the flux of all things that everything, without exception, unites in itself opposite qualities. Each change is a transition from one condition to the opposite condition;[3] if everything changes

[1] ἀμοιβή (vide *supra*, p. 27, 1), τροπή (*Fr.* 47, *supra*, 23, 1), σβέννυσθαι and ἅπτεσθαι (*supra*, p. 22, 1; cf. Plut. *Plac.* i. 3; *supra*, 28, 2) ζώη and θάνατος (p. 24, 2).

[2] Why fire is subject to this continual transformation, Heracleitus does not say; the only theory that would correspond to his doctrine is this, that it does so because this is inherent in its nature—because it is the ἀείζωον. When, however, Lassalle asserts that the physical, and not the logical, dialectical nature of motion was Heracleitus's principle of derivation, he is in error; a logical principle separate from a physical principle was altogether unknown to him. If we further enquire, how he knows that all things change, the only answer is—he knows this from experience, as he apprehends experience (vide *supra*, p. 21, 1).

[3] 'No,' says Schuster, 241, 1, 'only into a state that is different from the previous state.' But the subsequent state only differs from the previous state, because a part of the previous characteristics have been exchanged for such as could not coexist in the same subject and in the same relation; and such characteristics we call opposites. Every difference leads back to partial opposition, and every change fluctuates between two conditions, which, when conceived in a perfectly definite manner, exclude one another.

and only exists in this mutation, things are but a middle-term between opposites; and whatever point we may seize in the flux of Becoming, we have only a point of transition and limit, in which antagonistic qualities and conditions encounter one another. While, therefore, all things, according to Heracleitus, are perpetually involved in transmutation, everything has at every moment opposite principles in itself; it is and it is not; and we can predicate nothing of a thing the opposite of which does not equally and simultaneously belong to it.[1] The whole life of nature is a ceaseless alternation of opposite conditions and phenomena, and each particular thing is, or rather *becomes*, that which it is, only through the perpetual emergence of the opposites midway between which it stands.[2] Or, as this is ex-

[1] Cf. besides what is said on p. 11 sq., the statement of Aenesidemus, ap. Sext. *Pyrrh.* i. 210: 'The sceptics say that the opposite appears in all things, the Heracleiteans, that it actually belongs to all things;' and the corresponding statement of Sextus himself, *ibid.* ii. 59, 63: Gorgias teaches μηδὲν εἶναι: Heracleitus, πάντα εἶναι (that is to say, everything is all); Democritus teaches that honey is neither sweet nor bitter, Heracleitus that it is sweet and bitter at once.

[2] Cf. Diog. ix. 7 sq.: πάντα τε γίνεσθαι καθ' εἱμαρμένην καὶ διὰ τῆς ἐναντιοτροπῆς ἡρμόσθαι τὰ ὄντα . . . γίνεσθαί τε πάντα κατ' ἐναντιότητα. Stob. *Ecl.* i. 58: Ἡράκλ. τὸ περιοδικὸν πῦρ ἀΐδιον, εἱμαρμένην δὲ λόγον ἐκ τῆς ἐναντιοδρομίας δημιουργὸν τῶν ὄντων. Philo. *Qu. rer. div. h.* 510 B (503 M), after illustrating the proposition, πάνθ' ὅσα ἐν κόσμῳ σχεδὸν ἐναντία εἶναι πέφυκεν, by many examples: ἓν γὰρ τὸ ἐξ ἀμφοῖν τῶν ἐναντίων, οὗ τιμηθέντος γνώριμα τὰ ἐναντία. οὗ τοῦτ' ἐστιν, ὃ φασιν Ἕλληνες τὸν μέγαν καὶ ἀοίδιμον παρ' αὐτοῖς Ἡράκλειτον κεφάλαιον τῆς αὐτοῦ προστησάμενον φιλοσοφίας αὐχεῖν ὡς εὑρέσει καινῆς. *Ibid. Qu. in Gen.* iii. 5, and p. 178, after a similar explanation: *hinc Heraclitus libros conscripsit de natura, a theologo*

pressed by Heracleitus: All arises from division; strife is the father and lord of all things, the law and order of the world;[1] the unlike is joined together,[2] high and deep

nostro mutuatus sententias de contrariis, additis immensis atque laboriosis argumentis. The last words would imply that Heracleitus, like the Pseudo-Hippocrates (vide *supra*, p. 15, 1), had proved his doctrine of opposites by numerous examples.

[1] *Fr.* 75; Hippol. *Refut.* ix. 9: πόλεμος πάντων μὲν πατήρ ἐστι πάντων δὲ βασιλεύς, καὶ τοὺς μὲν θεοὺς ἔδειξε τοὺς δὲ ἀνθρώπους, τοὺς μὲν δούλους ἐποίησε τοὺς δὲ ἐλευθέρους. Philodem. π. Εὐσεβείας Col. 7. Chrysippus said, Zeus and the πόλεμος are the same, as Heracleitus also taught, vide *supra*, p. 17, 2; Plut. *De Is.* c. 48, p. 370: Ἡράκλειτος μὲν γὰρ ἄντικρυς πόλεμον ὀνομάζει πατέρα καὶ βασιλέα καὶ κύριον πάντων. Procl. *in Tim.* 54 A: Ἥρ. . . . ἔλεγε· πόλεμος πατὴρ πάντων. *Fr.* 77: Orig. *c. Cels.* vi. 42: εἰ δὲ χρὴ τὸν πόλεμον ἐόντα ξυνὸν καὶ Δίκην ἔριν εἶν, καὶ γινόμενα πάντα κατ' ἔριν καὶ χρεώμενα, where Schleiermacher's readings, εἰδέναι for εἰ δὲ and ἔριν for ἐρεῖν, are less bold than he himself supposes. I am not more certain than he is about beginning with χρεώμενα, for Lassalle's interpretation (i. 115 sq.), 'bestir themselves,' cannot be proved to be Greek; Brandis's σωζόμενα does not seem to me like Heracleitus. Schuster's conjecture, p. 199, appears preferable, καταχρεώμενα, 'applying themselves to.' Aristotle (vide next note) confirms the words γινόμενα, &c. Hence the censure of Homer, ap. Eudem. *Eth.* vii. 1, 1235 a, 25: καὶ Ἡράκλειτος ἐπιτιμᾷ τῷ ποιήσαντι "ὡς ἔρις ἔκ τε θεῶν καὶ ἀνθρώπων ἀπόλοιτο." οὐ γὰρ ἂν εἶναι ἁρμονίαν μὴ ὄντος ὀξέος καὶ βαρέος, οὐδὲ τὰ ζῷα ἄνευ θήλεος καὶ ἄρρενος ἐναντίων ὄντων. The same is related by Plutarch, *l. c.* (on which cf. Schuster, p. 197 sq.): Chalcid. *in Tim.* c. 295; *Schol. Venet. z. Il.* xviii. 107; Simpl. *in Categ. Schol. in Ar.* 88 b, 30, who, in making good this censure, οἰχήσεσθαι γάρ φησι πάντα, perhaps has taken some words from Heracleitus's book. This doctrine of πόλεμος is also referred to in Plut. *De Sol. Anim.* 7, 4, p. 964; but it is a mistake to represent the philosopher as *blaming* Nature, because she is πόλεμος.

[2] Arist. *Eth. N.* viii. 2, 1155 b, 4: καὶ Ἡράκλειτος τὸ ἀντίξουν συμφέρον καὶ ἐκ τῶν διαφερόντων καλλίστην ἁρμονίαν καὶ πάντα κατ' ἔριν γίνεσθαι. The ἀντίξουν is to be understood, in the spirit of the figurative language of Heracleitus, in the most literal sense, of two pieces of wood, which are cut in an opposite direction, in order to be added to one another, or propped against each other: the συμφέρον also, primarily denotes that which reciprocally, or jointly, bears another. However, it would be quite in the manner of Heracleitus if here again he included, under the same idea, the different conceptions designated by one word; and, therefore, meant by the συμφέρον, the compatible, and by the ἀντίξουν, the hostile. But I cannot, like Schuster, p. 227, limit their meaning to this. Cf. on this passage, Hippocr. π. διαιτ. i. 643 K. οἰκοδόμοι ἐκ διαφόρων σύμφορον

must unite, in order that a concord, male and female, a new life, may be produced.[1] What separates, unites with itself[2]: the structure of the world rests upon opposite tension, like that of the bow and the lyre;[3]

ἐργάζονται, etc., and Alexander, *Aphrod.* ap. David *Schol. in Arist.* 81 b, 33, who explains the nature of the ἀντικείμενα in the λαβδοειδῆ ξύλα ἅτινα μετὰ ἀντιθέσεώς τινος σώζει ἄλληλα.

[1] Arist. in the two passages just quoted. The pseudo-Hippocr. shows more at length, π. διαιτ. i. 18, that every harmony consists of high and low tones: τὰ πλεῖστα διάφορα μάλιστα ξυμφέρει καὶ τὰ ἐλάχιστα διάφορα ἥκιστα ξυμφέρει, etc. (Cf. the καλλίστη ἁρμονία in the last note.) He continues: μάγειροι ὕψα σκευάζουσιν ἀνθρώποισι διαφόρων συμφόρων, παντοδαπὰ ξυγκρίνοντες, ἐκ τῶν αὐτῶν οὐ τὰ αὐτὰ, βρῶσιν καὶ πόσιν ἀνθρώποις, etc., which sounds somewhat like Heracleitus. The comparison, too, of the opposites in the world with the opposition of sounds in speech, which is made by Hippocr. i. 23; Arist. *De Mundo*, c. 5, 396 b, 7 sqq.; Plut. *Tranq. An.* c. 15, p. 474 (the last in immediate connection with the example of high and low tones), may have previously been made by Heracleitus. That he proved his doctrine of opposites by numerous examples, we are told by Philo (*supra*, p. 31, 2), and so out of the many that are to be found in Hippocr. *l. c.* c. 15 sqq.; Pseudo-Arist. *l. c.*; Philo, *Qu. Rer. Div. Hær.* 509 D sqq.; Hösch; and others, here and there one may have been derived from Heracleitus.

[2] *Fr.* 80, Hippol. *Ref.* ix. 9: οὐ ξυνίασι ὅκως διαφερόμενον ἑωυτῷ ὁμολογέει· παλίντροπος ἁρμονίη ὅκωσπερ τόξου καὶ λύρης. Plato, *Soph.* 242 C sqq. Some make Being a plurality, others, after the Eleatic manner, a Unity. Ἴδωμεν δὲ καὶ Σικελικαί τινες ὕστερον Μοῦσαι (Heracleitus and Empedocles) ξυννενοήκασιν, ὅτι συμπλέκειν ἀσφαλέστερον ἀμφότερα καὶ λέγειν, ὡς τὸ ὂν πολλά τε καὶ ἓν ἔστιν ἔχθρᾳ δὲ καὶ φιλίᾳ συνέχεται. διαφερόμενον γὰρ ἀεὶ ξυμφέρεται, φασὶν αἱ συντονώτεραι τῶν Μουσῶν, αἱ δὲ μαλακώτεραι τὸ μὲν ἀεὶ ταῦθ' οὕτως ἔχειν ἐχάλασαν, ἐν μέρει δὲ τοτὲ μὲν ἓν εἶναί φασι τὸ πᾶν καὶ φίλον ὑπ' Ἀφροδίτης, τοτὲ δὲ πολλὰ καὶ πολέμιον αὐτὸ αὑτῷ διὰ νεῖκός τι. *Ibid. Symp.* 187 A: τὸ ἓν γάρ φησι (Ἡράκλ.) διαφερόμενον αὐτὸ αὑτῷ ξυμφέρεσθαι ὥσπερ ἁρμονίαν τόξου τε καὶ λύρας. I assume, with Schuster, p. 230, that the most authentic text is that of Hippolytus; only in regard to παλίντροπος vide the following note. The divergences in the Platonic quotations show that neither ἓν nor ὂν was the subject to διαφερόμενον; nor, of course, the κόσμος, so often mentioned by Plutarch. It seems to me better to understand διαφερόμενον itself as subject; they do not comprehend how that which separates comes together: it is a ἁρμονία παλίντροπος (or, the harmony, i.e., the world, is παλίντροπος).

[3] Vide previous note. Plut. *De Is.* c. 45, p. 369: παλίντονος γὰρ ἁρμονίη κόσμου ὅκωσπερ λύρης καὶ τόξου καθ' Ἡράκλειτον. Similarly, without mention of Heracleitus, but otherwise word for word the

whole and divided, congruous and incongruous, accordant and discordant, must unite in order that from all one may come, as all come from one.[1] In a word, the whole world is ruled by the law of opposition.

same, *De Tranqu. An.* c. 15, p. 473, while on the other hand we read, *De An. Procr.* 27, 2, p. 1026: 'Ηράκλειτος δὲ παλίντροπον ἁρμονίην κόσμου ὅκωσπερ λύρης καὶ τόξου. Simpl. *Phys.* 11 a: ὡς Ἡράκλειτος τὸ ἀγαθὸν καὶ τὸ κακὸν εἰς ταὐτὸν λέγων συνιέναι δίκην τόξου καὶ λύρας. Porphyry, *Antr. Nymph.* c. 29: καὶ διὰ τοῦτο παλίντονος ἡ ἁρμονία καὶ (al. ἢ) τοξεύει δι' ἐναντίων. The text, however, is here no doubt corrupt; Lassalle (i. 96 sq., 112) takes 'shoot through' as synonymous with 'penetrate'; but this seems to me impossible, and I can credit neither Porphyry nor Heracleitus with so monstrous an image as a harmony shooting with a bow. Schleiermacher, p. 70, conjectures instead of τοξένει: τόξου, εἰ; so that the meaning would be: 'And therefore Harmony is called a "strained back" harmony and a harmony of the bow because it is brought about by contradictions.' In this case we should have expected, instead of εἰ δι' ἐν, ὅτι δ. τ. ἐ. Perhaps some words have been lost, and Porphyry may have written κ. δ. τ. παλίντροπος ἡ ἁρμονία κόσμου ὡς λύρας καὶ τόξου, ὅτι δ. ἐν, or, as Schuster more simply proposes (page 231) ἡ ἁρμονία λύρας καὶ τόξου εἴπερ δι' ἐν. The meaning of this expression has always been a difficulty, even in ancient times. If, according to the precedent of Plato's Eryximachus and of Plutarch, the ἁρμονίη λύρης were understood of the harmony of tones, there would be no corresponding meaning for the ἁρμονίη τόξου, and if the ἁρμονίη τόξου were referred to the stretching of the bow, there would be a difficulty about the ἁρμονίη λύρης; and the predicate παλίντονος or παλίντροπος would suit neither interpretation. Bernays seems to have been the first to discover the right meaning (*Rh. Mus.* vii. 94) in explaining ἁρμονία by the combination or form of the lyre and the bow, i.e. of the Scythian and ancient Greek bow, which being bent at the two ends so greatly resembles a lyre in shape that in Arist. *Rhet.* iii. 11, 1412 b, 35, the τόξον is called φόρμιγξ ἄχορδος. Schuster also, p. 232, takes this view, only, instead of the Scythian, he understands the ordinary bow, which appears to me less appropriate. It is this form which is designated by the predicate παλίντροπος (bent backwards) or παλίντονος, which I prefer; τόξον παλίντονον seems a bow of the form alluded to, as Wex shows, *Zeitschr. für Alterthumsw.* 1839, 1161 sqq. It is, therefore, a similar image to the one spoken of, *supra*, p. 32, 2. The conjecture which Gladisch tries to support, *Zeitschr. für Alt.* 1846, 961 sqq.; 1848, 217 sqq., that in the above passages βαρέος instead of λύρης, and ὄξεος instead of τόξου, is to be read (according to Bast, *Krit. Vers. über den Text d. Plat. Gastmahls*, 1794, p. 41 sq.), besides being unnecessary, is very daring in the face of so many and such trustworthy testimonies. Bergk's slighter alteration (*Ibid.* 1847, 35) "τόξου καὶ νεύρης" can also be dispensed with. Rettig, *Ind. Lectl. Bern.* 1865, agrees with the interpretation of Bernays, only he thinks the comparison of Heracleitus has reference not to the form, but to the force of the bow and of the lyre. 'As the two conflicting moments of the extinguished and re-kindled fire condition the phenomenon, so the straining apart of the arms of the bow and lyre conditions the tension' (p. 16). This conception also is compatible with the words, and contains a suitable sense. Lassalle, i. 105 sqq., opposes Bernays, but the ground on which he does so appears to me not very important, and two of the passages to which he refers, Apul. *De Mundo*, c. 21, and Iambl. ap. Stob. *Floril.* 81, 17, have nothing to do with the question. The statement of Porphyry (noticed above), even were the text of it in order, could equally prove nothing. Synes. *De Insomn.* 133 A, compares the harmony of the world with that of the lyre, and explains the latter by the harmony of tones: which makes it probable, indeed, that in his explanation of Heracleitus's words he is following Plato, but cannot affect our judgment concerning Heracleitus's own opinion. Lassalle himself understands our view as 'a harmony of the lyre *with* the bow' (p. 111). He observes (p. 113), '*Der Bogen sei die Seite des Hervorfliessens der Einzelheit und somit der Unterschiede; die Leyer die sich zur Einheit ordnende Bewegung derselben.* The bow is the side whence flows forth singularity, and therefore differences, the lyre is the movement which reduces them to order: an allegory of which, indeed, no Neo-Platonist need be ashamed, but which the most skilful commentator would find it impossible to harmonise with Heracleitus's words. The harmony of the world is, indeed, *compared* to that of the lyre and the bow, which must, therefore, be something known and given in experience, the point of the comparison lies in the παλίντονος or παλίντροπος; but where is the mention of a harmony of the lyre *with* the bow; and what, on the other hand, are we to understand by the antitype—a harmony of differences, changing into its opposite?

[1] *Fr.* 98; Arist. *De Mundo.* c. 5, 396 b, 19: συνάψειαι οὖλα [καὶ] οὐχὶ οὖλα, συμφερόμενον [καὶ] διαφερόμενον, συνᾷδον [καὶ] διᾷδον· καὶ ἐκ πάντων ἓν καὶ ἐξ ἑνὸς πάντα. The words καὶ ἐξ πάντων, &c., which Schleiermacher, p. 79, separates from the first quotation, appear to me to belong to it. The οὖλα οὐχὶ οὖλα (the καὶ in each case was most likely wanting in Heracleitus, although they may have been found in the text of the work on the world) is thus explained by Hippocrates: π. διαιτ. c. 17: οἰκοδόμοι ἐκ διαφόρων σύμφορον ἐργάζονται, τὰ μὲν ξηρὰ ὑγραίνοντες τὰ δὲ ὑγρὰ ξηραίνοντες, τὰ μὲν οὖλα διαιρέοντες τὰ δὲ διῃρημένα συντιθέντες. Schuster, p. 285, gives to οὖλος the signification, woolly, compact, sprightly; for he says Heracleitus here gives examples taken from the three arts of weaving, architecture and music. But this does not follow from the context of the passage, π. κόσμου; συμφερόμενον and διαφερόμενον contain no special allusion to architecture, and the ἐκ πάντων ἓν, &c., would also contradict this inter-

On account of these statements Heracleitus is censured by Aristotle and his commentators for denying the law of contradictories.[1] Later writers on the other hand maintain that it is his merit to have first recognised the unity of opposites, the identity of Being and non-Being, and to have made it the foundation of his system.[2] Whether this be regarded as a merit or a defect, neither view of it is absolutely true. Heracleitus could only be said to deny the law of contradictories if he maintained that opposite qualities could belong to the same subject, not merely at the same time, but in the same respect. But this he does not say. He observes,

pretation, and would seem to show that the expressions should be taken in a wider sense; as in all the arts, one arises, ἐκ πολλῶν, and vice versâ, but not ἐκ πάντων.

[1] Arist. *Metaph.* iv. 3, 1005 b, 23: ἀδύνατον γὰρ ὑντινοῦν ταὐτὸν ὑπολαμβάνειν εἶναι καὶ μὴ εἶναι, καθάπερ τινὲς οἴονται (vide vol. i. 553, 1) λέγειν Ἡράκλειτον. *Ibid.* c. 4, init., where Heracleitus is not indeed named, but is evidently intended; *ibid.* c. 7, end: ἔοικε δ' ὁ μὲν Ἡρακλείτου λόγος, λέγων πάντα εἶναι καὶ μὴ εἶναι, ἅπαντα ἀληθῆ ποιεῖν. Similarly c. 8, init.; *ibid.* xi. 5, 1062 a, 31: ταχέως δ' ἄν τις καὶ αὐτὸν τὸν Ἡράκλειτον . . . ἠνάγκασεν ὁμολογεῖν, μηδέποτε τὰς ἀντικειμένας φάσεις δυνατὸν εἶναι κατὰ τῶν αὐτῶν ἀληθεύεσθαι· νῦν δ' οὐ συνιεὶς ἑαυτοῦ τί ποτε λέγει, ταύτην ἔλαβε τὴν δόξαν. *Ibid.* c. 6, 1063 b, 24; *Top.* viii. 5, 155 b, 30: ἀγαθὸν καὶ κακὸν εἶναι ταὐτὸν, καθάπερ Ἡράκλειτός φησιν. *Phys.* i. 2, 185 b, 19: ἀλλὰ μὴν εἰ τῷ λόγῳ ἓν τὰ ὄντα πάντα . . . τὸν Ἡρακλείτου λόγον συμβαίνει λέγειν αὐτοῖς· ταὐτὸν γὰρ ἔσται ἀγαθῷ καὶ κακῷ εἶναι καὶ μὴ ἀγαθῷ καὶ ἀγαθῷ, ὥστε ταὐτὸν ἔσται ἀγαθὸν καὶ οὐκ ἀγαθὸν καὶ ἄνθρωπος καὶ ἵππος. The commentators express themselves similarly. Alex. *ad Metaph.* 1010 a, 6; 1012 a, 21, 29; 1062 a, 25, 36 b, 2, p. 265, 17; 294, 30; 295, 19; 296, 1, 624 sq. Bon.; Themist. *Phys.* 16, b (113 Sp.); Simpl. *Phys.* 11 a, unt. 18, a, m; cf. Lassalle, i. 80. Asklepius, *Schol. in Arist.* 652, a, 11 sq. attributes to Heracleitus the proposition, ἕνα ὁρισμὸν εἶναι πάντων τῶν πραγμάτων, but he only said this συμβολικῶς or γυμναστικῶς. Simplicius and Aristotle, however (vol. i. p. 553, 1), cannot help confessing that an inference is here ascribed to Heracleitus, which he never drew and could scarcely have recognised in this form. Cratylus may perhaps have given more occasion to it. Plato, *Theæt.* 182, c. sqq. calls this assertion only a consequence of Heracleitus's view.

[2] Hegel, *Gesch. d. Phil.* i. 305; Lassalle, i. 81 sq.

indeed, that one and the same essence assumes the most opposite forms, and that in everything, the opposite conditions and qualities between which, as subject to Becoming, it fluctuates, are united. But that it unites them in one and the same respect, he does not say—for the reason, no doubt, that such a conception (which as far as we know was first expressly noticed by Plato and Aristotle [1]) never occurred to him. Nor on the other hand has he spoken of the unity of opposites, the unity of Being and non-Being, in so general a manner, and the general view does not follow so absolutely from the expressions he uses. To say that 'One and the same essence is light and dark, day and night; one and the same process is generation and destruction,' is one thing; to say that 'there is no difference between day and night, between Being and non-Being as such,' is quite another; to maintain the unity of opposites in the concrete is not identical with maintaining it in the abstract; to assert that opposites are found in the same subject, is not to assert their identity. The former view alone can be deduced from the examples which Heracleitus brings forward, and he had no occasion to go farther, since his concern was not with speculative logic, but with physics. We must not, however, suppose [2] that his proposition meant no more than this: 'Each thing displays very different qualities, either simultaneously, if it be suddenly brought into connection with several other things, or successively, if it be opposed to one, and that a variable thing;' in the language of Her-

[1] Cf. Part II. a, 527, 1, third edition.

[2] Schuster, p. 236 sqq.

bart, that the co-existence of contraries is merely the product of an accidental opinion. Of such an idea neither Heracleitus' own utterances nor the ancient accounts of him bear any trace. On the contrary, he says quite universally and with no limitation whatever, that the things which are apparently opposed to each other—such as day and night, war and peace, above and below—are one and the same; and the limits of his reflection are indicated by the fact that he has not as yet enquired under what conditions, and in what sense, this coincidence of opposites would be possible.

But though it is necessary that all things should be sundered into opposites, it is equally necessary that the opposites should again combine to form a unity; for that which is most opposed originates from one and the same; it is one essence which, in the course of its changes, produces opposites and again cancels them; which in all things produces itself, and in the working of conflicting principles sustains all as one.[1] In

[1] *Fr.* 67; Hippol. *Refut.* ix. 10: *ὁ θεὸς ἡμέρη εὐφρόνη, χειμὼν θέρος, πόλεμος εἰρήνη, κόρος λιμός· ἀλλοιοῦται δὲ ὅκωσπερ ὅταν συμμιγῇ θυώμασι· ὀνομάζεται καθ' ἡδονὴν ἑκάστου.* Bernays, *Rh. Mus.* ix. 245, in the second clause of this fragment where the text is evidently defective, would substitute *θύωμα* for *θυώμασι*; Schuster, p. 188 would introduce *οἶνος* before *θυώμασι*. To me it seems still simpler to read *ὅκως ἀήρ* instead of *ὅκωσπερ* (*ἀήρ* in the old orthography is very like *περ*). In the conclusion *καθ' ἡδονὴν* is not to be translated, as by Schuster and others, 'at pleasure;' for (even irrespectively of Schuster's interpretation, 'each one makes a label for it at pleasure') in that way we get no suitable sense, since the forms which the primitive matter assumes in its transformation are something objectively given, and cannot be described by any comparisons we may choose. It is rather to be explained thus: it (the air mixed with perfumes) is named according to the smell (vide vol. i. p. 291, 2) of any one of these perfumes. (We do not say we smell air, but we smell myrrh, &c.) The Stoics (ap. Stob. *Ecl.* i. 66) express themselves similarly of the *πνεῦμα*, which penetrates all things: *τὰς δὲ προσηγορίας μεταλαμβάνον διὰ τὰς τῆς ὕλης, δι' ἧς κεχώρηκε, παραλλάξεις.* Here we have nothing to do with appellations at pleasure. Teichmüller, *N. Stud.* i. 66 sq., thinks the disputed sentence can be explained without altering the text, by making the subject to *συμμιγῇ* and *ὀνομάζεται*, *θεός*, by which is meant fire. For my part I cannot conceive, even from Heracleitus's point of view, a god who becomes mixed with perfumes. *Καθ' ἡδονὴν* Teichmüller likewise translates 'at pleasure.'

separating itself from itself, it unites itself with itself;[1] out of strife comes existence, out of opposition, union; out of unlikeness, coincidence; One comes out of all;[2] all things submit to the Deity for the concord of the whole; even the unlike unites itself to God and becomes like; even that which appears to men an evil, is for them a good;[3] and out of all things is produced that hidden harmony of the world with which the beauty of the visible cannot compare.[4] This is the

[1] Plato, *Soph. l. c.*, vide *supra*, p. 33, 2; cf. 252 B, where the difference between Heracleitus and Empedocles is said to be that Empedocles represents these states of union and separation as alternating, and Heracleitus recognises in the separation itself a continual and contemporaneous union.

[2] Cf. p. 35. 1.

[3] *Schol. Ven.* ad *Il.* iv. 4: *πόλεμοι καὶ μάχαι ἡμῖν δεινὰ δοκεῖ τῷ δὲ θεῷ οὐδὲ ταῦτα δεινά· συντελεῖ γὰρ ἅπαντα ὁ θεὸς πρὸς ἁρμονίαν τῶν (ἄλλων ἢ καὶ* evidently only a different reading) *ὅλων οἰκονομῶν τὰ συμφέροντα, ὅπερ καὶ Ἡράκλειτος λέγει, ὡς τῷ μὲν θεῷ καλὰ πάντα καὶ δίκαια, ἄνθρωποι δὲ ἃ μὲν ἄδικα ὑπειλήφασι, ἃ δὲ δίκαια.* Cf. Hippocr. *π. διαίτ.* c. 11: *πάντα γὰρ ὅμοια, ἀνόμοια ἐόντα· καὶ σύμφορα πάντα, διάφορα ἐόντα· διαλεγόμενα οὐ διαλεγόμενα, γνώμην ἔχοντα, ἀγρώμονα* (speaking and not speaking, rational and irrational, as the two main divisions of the *πάντα*). *ὑπεναντίος ὁ τρόπος ἑκάστων, ὁμολογούμενος . . . . ἃ μὲν οὖν ἄνθρωποι ἔθεσαν, οὐδέκοτε κατὰ ταυτὸ ἔχει οὔτε ὀρθῶς οὔτε μὴ ὀρθῶς· ὁκόσα δὲ θεοὶ ἔθεσαν αἰεὶ ὀρθῶς ἔχει· καὶ τὰ ὀρθὰ καὶ τὰ μὴ ὀρθὰ τοσοῦτον διαφέρει.* (So Littré; preferably, Bernays, *Heracl.* 22: *ἔχει καὶ τὰ ὀρθῶς καὶ τὰ μὴ ὀρθῶς. τοσ. διαφ.*) Cf. the quotations from Aristotle and Simplicius, p. 32; 33, 3.

[4] Plut. *An. Procr.* 27, 5, p. 1026: *ἁρμονίη γὰρ ἀφανὴς φανερῆς κρείττων καθ' Ἡράκλειτον, ἐν ᾗ τὰς διαφορὰς καὶ τὰς ἑτερότητας ὁ μιγνὺς θεὸς ἔκριψε καὶ κατέδυσεν.* The first part of this fragment is also in Hippol. ix. 9: *ὅτι δὲ . . . ἀφανὴς ὁ ἀόρατος . . . ἐν τούτοις λέγει· ἁρμονία ἀφανὴς φανερῆς κρείττων. ἐπαινεῖ καὶ προθαυμάζει πρὸ τοῦ γινωσκομένου τὸ ἄγνωστον αὐτοῦ καὶ ἀόρατον τῆς δυνάμεως. ὅτι δέ ἐστιν ὁρατὸς ἀνθρώποις . . . ἐν τούτοις λέγει· ὅσων ὄψις ἀκοὴ μάθησις, ταῦτα ἐγὼ προτιμέω, φησί,*

τουτέστι τὰ ὁρατὰ τῶν ἀοράτων . . . (c. 10) οὕτως Ἡράκλειτος ἐν ἴσῃ μοίρᾳ τίθεται καὶ τιμᾷ τὰ ἐμφανῆ τοῖς ἀφανέσιν . . . ἔστι γάρ, φησίν, ἁρμονίη ἀφανὴς φανερῆς κρείττων καὶ· ὅσων . . . προτιμέω, οὐ τὰ ἀφανῆ προτιμήσας. On the ground of this last quotation it is conjectured by Schuster (p. 24; in opposition to him, vide Teichmüller, *N. St.* i. 154 sqq.) that the words of Heracleitus ran thus: ἐς τί γὰρ ἁρμονίη ἀφανὴς φανερῆς κρείττων; 'Why should an invisible harmony be better than a visible?' But acute as this conjecture is, it cannot be substantiated by the text of Hippolytus, if we consider this in its whole context. As the words ἁρμονίη, &c., are quoted, c. 9, without ἔστι, and as these words cannot be taken to mean that the invisible is better than the visible, Hippolytus cannot (as I wrongly admitted to be possible in the *Jenaer L. T.* 1875, Art. 83) have had the interrogative ἐς τί, but merely ἔστι in his text of Heracleitus. Nor are we forced by the passage in c. 10 to the theory of another text; for he does not here conclude, as we should expect from Schuster's reading, that the visible was preferred by Heracleitus to the invisible, but that both are made equal: since at one time he calls the ἁρμονίη ἀφανὴς the better, and at another he gives the preference to the ὅσων ὄψις, &c. That this conclusion is false is quite clear, but we are not justified in disallowing the employment of the passage in c. 9, because of the 'want of understanding' that it evinces. However Hippolytus may have misinterpreted the words of Heracleitus, the use which he makes of them shows how he read the passage, and refutes the theory according to which he makes the same passage in one of the two quotations, immediately succeeding one another, express the contrary of what it is said to express in the other. This theory seems the more inadmissible, since Plutarch entirely agrees with the first citation of Hippolytus, and with the reading of ἔστι in the second. I cannot endorse Schuster's judgment that the 'obscure account' in Plut. *l. c.* can have no weight in opposition to the 'clear testimony' of Hippolytus. The only thing that seems to me clear in Hippolytus is that in his quotation in c. 9, he coincides with Plutarch. That which Schuster calls Hippolytus's clear testimony which refutes Plutarch, is, in fact, only his own conjecture, which is supported neither by the MS. of Hippolytus, nor by the connection of the passage. On the other hand, Plutarch's statement concerning what he had read in Heracleitus (and nothing else is in question here) is not in the least obscure; it is perfectly evident that he only found in Heracleitus the assertion that the invisible harmony is better than the visible; and not the question, 'Why should the invisible harmony be better than the visible?' Plutarch further says of the ἁρμονία φανερὴ, that God has hidden in it the διαφοραὶ and ἑτερότητες; these expressions certainly do not belong to Heracleitus, nor does Plutarch cite them as belonging to him. But that some Heracleitean sentence was floating in Plutarch's mind (probably some words in connection with the double harmony)—we see from Philo, *Qu. in Gen.* iv. 1, p. 237 Auch.: *arbor est secundum Heraclitum natura nostra, quæ se obducere atque abscondere*

divine law to which all things are subject,[1] the δίκη whose decrees nothing in the world can transgress;[2] *amat*. 'The tree' does not, indeed, belong, as Schuster thinks (*Fr.* 74, p. 193, 'Nature loves to hide herself, like a tree:' Teichmüller follows him, *N. Stud.* i. 183), to the citation from Heracleitus; it refers to the tree previously mentioned by Philo, the oak of Mamre, *Gen.* xviii. 1, which is allegorised in this way; and if it appears otherwise in our Latin text, the two translators, or one of them, must be answerable for it. (The Armenian text, as I am informed by Petermann, stands literally thus: 'The tree, according to Heracleitus our nature, loves to conceal and to hide itself.') The proposition which is supported by Themistocles, *Or.* v. 69 b (φύσις δὲ καθ' Ἡράκλ. κρύπτεσθαι φιλεῖ, similarly in the second recension of *Or.* v. or xii. 159 b), and by Philo, *De Prof.* 476 C; Julian, *Or.* vii. 216 C (Strabo x. 3, 9, p. 467, does not belong to this) that nature κρύπτεσθαι καὶ καταδύεσθαι φιλεῖ. The words added by Themistocles (in both places) καὶ πρὸ τῆς φύσεως ὁ τῆς φύσεως δημιουργός, are evidently not taken from Heracleitus (Lassalle i. 24, is inclined to think they are; so is Schuster, 316, 1, but the passages he adduces in support of this view from the writings of the Stoic and Neo-Platonic period are not convincing to me). From all this it is clear that the visible harmony can neither, with Schleiermacher (p. 71), be considered to mean the elements (while the invisible harmony refers to organic beings); nor with Lassalle (i. 97 sqq.), the 'veiled and internally hidden harmony of the universe,' which is not visible; still less, however, can we agree with Plutarch, who describes the ἁρμονία φανερὰ, not (as Lassalle says) as hidden, but, on the contrary, as that *in which* the ἁρμονία ἀφανὴς conceals itself. The *invisible* harmony must be the same as nature, who hides herself: the inner regularity of Being and Becoming; and by the *visible* harmony must be meant either the external phenomenon of this regularity, or musical harmony in particular; so that the sense would then be: 'The inner harmony of the world is more glorious than any concord of tones.' Schuster connects into one fragment the words on the visible and invisible harmony with those which Hippolytus further quotes, ὅσων ὄψις, &c.; but the manner in which Hippolytus mentions the two statements does not justify this; and the sense of the words (as we have explained it above) makes such a connection impossible.

[1] *Fr.* 123; Stob. *Floril.* iii. 84: τρέφονται γὰρ πάντες οἱ ἀνθρώπινοι νόμοι ὑπὸ ἑνὸς τοῦ θείου. κρατέει γὰρ τοσοῦτον ὁκόσον ἐθέλει καὶ ἐξαρκέει πᾶσι καὶ περιγίνεται.

[2] *Fr.* 64; Plut. *De Exil.* 11, p. 604: ἥλιος γὰρ οὐχ ὑπερβήσεται μέτρα, φησὶν ὁ Ἡράκλειτος· εἰ δὲ μή, Ἐρινύες μιν Δίκης ἐπίκουροι ἐξευρήσουσιν. Somewhat differing from this, *ibid. De Is.* 48, p. 370: ἥλιον δὲ [sc. Ἡράκλειτος φησὶν] μὴ ὑπερβήσεσθαι τοὺς προσήκοντας ὅρους· εἰ δὲ μή, γλῶττας μιν δίκης ἐπικούρους ἐξευρήσειν. Instead of Ἐρινύες and the unintelligible γλῶτται Bernays (*Heracl.* 15; *Rh. Mus.* ix.

the dependence or necessity by which all things are ruled.[1] The same universal order, conceived as efficient[2]

259, 3) conjectures λύσσαι to have been the word used by Heracleitus. Lassalle, i. 351 sqq., defends γλῶτται, and supports his reading by Philostratus, *Apoll.* i. 25, 2, who mentions four images of birds (ἴυγγες), reminding us of divine retribution, named from the θεῶν γλῶτται of the Magi; and he thinks that he has hereby proved not only that the handmaidens of Dike were called 'tongues' among the Persians, but that Heracleitus was acquainted with the religious doctrines and symbols of the Magi. This is certainly a mistake; for even if pictures of the wryneck as symbolical of '*respice finem*' were used by the Persians and called the tongues of the gods, it would not follow that the Erinnyes were called tongues of the gods or simply γλῶτται. But even Bernays's suggestive conjecture has to be given up; for Schuster, p. 184, and previously Hubmann (cf. Schuster, p. 357), propose κλῶθας for γλώττας (the spinners, the Moiræ, who, as goddesses of Death, know how to find the sun when it would overstep the measure of their life). Cf. further concerning δίκη, Orig. *c. Cels.* vi. 42 (vide *sup.* p. 32, 1), and what is quoted p. 26, 1, from Cratylus. Clemens, *Strom.* iv. 478 B, Δίκης ὄνομα οὐκ ἂν ᾔδεσαν, does not seem to belong here.

[1] Plut. *Plac.* i. 27: Ἡράκλ. πάντα καθ' εἱμαρμένην, τὴν δὲ αὐτὴν ὑπάρχειν καὶ ἀνάγκην. So Theodoret, *Cur. Gr. Aff.* vi. 13, p. 87; Diog. ix. 7; Stob. i. 58; *supra*; Stob. i. 178 (*Plac.* i. 28): Ἡράκλειτ. οὐσίαν εἱμαρμένης ἀπεφαίνετο λόγον τὸν διὰ οὐσίας τοῦ παντὸς διήκοντα, αὕτη δ' ἐστὶ τὸ αἰθέριον σῶμα, σπέρμα τῆς τοῦ παντὸς γενέσεως καὶ περιόδου μέτρον τεταγμένης. πάντα δὲ καθ' εἱμαρμένην, τὴν δ' αὐτὴν ὑπάρχειν ἀνάγκην· γράφει γοῦν· ἔστι γὰρ εἱμαρμένη πάντως. Here there is a break in the text which is the more to be regretted, as Heracleitus' own words are about to follow, whereas what goes before has such a Stoical sound that it is of little consequence to us whether the words from αὕτη to γενέσεως are (according to Schleiermacher's conjecture, p. 74) an interpolation relating to οὐσία, or not. If the text, as I believe, is in its right order, the meaning would be this: he explained the εἱμαρμένη as the λόγος, which permeates the matter of the world (the αἰθέριον σῶμα), as the σπέρμα, &c. Simpl. *Phys.* 6, a: Ἡράκλειτος δὲ ποιεῖ καὶ (cf. as to this reading, Schleiermacher, p. 76) τάξιν τινὰ καὶ χρόνον ὡρισμένον τῆς τοῦ κόσμου μεταβολῆς κατά τινα εἱμαρμένην ἀνάγκην. Cf. ap. Ps. Hippocr. π. διαιτ. i. 4 sq. (vide *sup.* p. 7, 2; 15, 1, the expressions) δι' ἀνάγκην θείην, τὴν πεπρωμένην μοίρην, and Plut. *An. Procr.* 27, 2, p. 1026: ἣν εἱμαρμένην οἱ πολλοὶ καλοῦσι . . . Ἡράκλειτος δὲ παλίντροπον ἁρμονίην κόσμου, etc., *ibid. De Ei*, c. 9, p. 388. But here we cannot be certain how much is taken from Heracleitus.

[2] *Fr.* 24: Diog. ix. 1: εἶναι γὰρ ἓν τὸ σοφὸν, ἐπίστασθαι γνώμην ἥτε οἱ ἐγκυβερνήσει πάντα (Neut. plur.) διὰ πάντων. Instead of the senseless οἱ ἐγκυβ. Schleiermacher conjectures, p. 109 (cf. Lassalle, i. 334 sq.), οἵῃ κυβερνήσει, Bernays, *Rh. Mus.* ix. 252 sq., οἰακίζει,

force, is called the world-ruling wisdom, the λόγος,[1]

Schuster, p. 66, οἵῃ τε κυβερνήσει, or οἵῃ (οἵῃ τε) κυβερνῆσαι, and κυβερνᾷν is often found in a similar connection, with Heracleitus and others, as Schuster and Lassalle prove. *Fr.* 14; *Orig. c. Cels.* vi. 12: ἦθος γὰρ ἀνθρώπειον μὲν οὐκ ἔχει γνώμην, θεῖον δὲ ἔχει. Plut. *De Is.* 76: ἡ δὲ ζῶσα . . . φύσις ἄλλως τε ἔσπακεν ἀπορρόην καὶ μοῖραν ἐκ τοῦ φρονοῦντος, ὅπως κυβερνᾶται τὸ σύμπαν, καθ' Ἡράκλειτον. Instead of ἄλλως τε, Schleiermacher, p. 118, here reads ἄλλοθεν; Bernays, *Rhein. Mus.* ix. 255: ἀμυστί. Only the expression τὸ φρονοῦν ὅπως κυβερνᾶται τὸ σύμπαν is to be considered Heracleitean (it appears to me too well attested to be affected by the observations of Heinze, which will be discussed *infra*, p. 45, *n.*); the ἀπορρόη and μοῖρα have quite a Stoic sound.

[1] On the Logos of Heracleitus, cf. Heinze, *Die Lehre vom Logos in d. Gr. Phil.* 9 sqq.; Schuster, p. 18 sqq. Teichmüller, *N. Stud.* i. 167. That Heracleitus designated the reason that works in the world, among other names by that of the Logos, cannot be actually proved from *Fr.* 3 (*sup.* p. 7, 2), but the truth to which the whole world bears witness, approximates to the conception of reason inherent in the world. *Fr.* 7; Sext. *Math.* vii. 133, is less doubtful: διὸ δεῖ ἕπεσθαι τῷ ξυνῷ. τοῦ λόγου δὲ ἐόντος ξυνοῦ ζώουσιν οἱ πολλοὶ ὡς ἰδίαν ἔχοντες φρόνησιν (as if in their opinions they had a private reason of their own). By the λόγος κοινὸς, in opposition to the ἰδία φρόνησις, can only be meant Reason as the common principle; and this it is, so far as it makes laws that are binding on the whole world. Schuster's explanation of the λόγος as the 'speech of the visible world,' is founded on two presuppositions, viz., that *Fr.* 7 stood in immediate connection with the third fragment discussed p. 7, 2, and that in that fragment λόγος meant the 'speech of Nature.' Of these suppositions, the former cannot be proved, and the latter, as above remarked, is very unlikely. The κοινὸς λόγος must surely mean essentially the same with Heracleitus as with his successors, the Stoics (cf. Part III. a, 126, 2, second edition). When, therefore, Sextus, *l. c.* and viii. 8 explains the κοινὸς λόγος by means of τὰ κοινῇ φαινόμενα, he is rightly opposed by Lassalle, ii. 284, and wrongly defended by Schuster, p. 23. Sextus himself, vii. 133, had previously explained the λόγος as the θεῖος λόγος. Reason appears as something objective, and different from the thought of the individual, since we find in *Fr.* 79, Hippol. ix. 9: οὐκ ἐμοῦ, ἀλλὰ τοῦ λόγου (so Bernays, *Rh. Mus.* ix. 255, and afterwards generally for δόγματος) ἀκούσαντας ὁμολογέειν σοφόν ἐστιν, ἓν πάντα εἰδέναι (cf. p. 45, *n.*); but the interpretation 'not listening to me, but to the speech as such, the contents of the speech, the reasons' (cf. Schuster, 83, 228) is also admissible. On the other hand, in the definitions quoted in the previous note and at p. 31, 2, from Stobæus, of the εἱμαρμένη, the λόγος is no doubt taken from the Stoic terminology; ap. Clem. *Strom.* v. 599 C, the διοικῶν λόγος καὶ θεὸς is not found, as Lassalle thinks (ii. 60), in the citation from Heracleitus, but in the interpretation by the Stoics of Heracleitus's words; this interpretation itself is very inexact,

Zeus or the Deity [1]—and so far as it produces the endless series of cosmical periods, and of the varying conditions dependent on them, the Æon.[2] All these conceptions signify with Heracleitus one and the same thing,[3] and the world-forming force as active subject is not here distinguished from the universe and the universal order.[4] This force, however, also coincides with the

and is expressly described by Clemens as an addition of his own (δυνάμει γὰρ λέγει, 'the meaning of his statement is'). Also in Marcus Aurelius, iv. 46 (vide *sup.* p. 8, *n.*), it is the Stoic who adds to the words, ᾧ μάλιστα διηνεκῶς ὁμιλοῦσι λόγῳ, these: τῷ τὰ ὅλα διοικοῦντι. Originally scarcely more was intended by them than by the parallel passage: οἷς καθ' ἡμέραν ἐγκυροῦσι, that which is constantly presented to the eyes of men. Lassalle, ii. 63, thinks he has discovered in *Fr.* 48, vide *inf.* p. 65, 1, the pre-existence of the Logos, but we shall find that λόγος here means nothing more than relation. To sum up the results of the whole: Heracleitus taught indeed that Reason ruled in the world, and called this universal Reason the λόγος, but the concept of λόγος was not nearly so prominent with him as with the Stoics. Lassalle's exposition requires to be essentially limited in reference to this; his conjectures as to the connection of this doctrine with the Zoroastrian dogma of the word of Creation and of law, find no support (as Heinze, p. 56, acknowledges) in the sayings of Heracleitus; for these presuppose nothing that transcends the Greek language and the Greek ideas.

[1] Besides what is quoted *supra*, p. 19, 3; 32, 1; 38, 1, cf. *Fr.* 140; Clem. *Strom.* v. 604 A: ἓν τὸ σοφὸν μοῦνον λέγεσθαι ἐθέλει καὶ οὐκ ἐθέλει (oder οὐκ ἐθ. κ. ἐθ.) Ζηνὸς οὔνομα. I cannot here discuss the interpretations of these words by Bernays, *Rh. Mus.* ix. 256; Schuster 345, and others. To me the best interpretation seems to be this: 'One thing, the only wise, wills and also wills not to be named by the name of Zeus.' It wills to be named so because in truth it is that which we honour under that name; but it also wills not, because with this name presentations are connected which are not consistent with that primitive essence. That the form Ζηνὸς is chosen instead of Διὸς, to indicate its derivation from ζῆν, I agree with other writers in thinking probable; but do not lay any great stress upon it.

[2] Cf. the quotations on p. 19, 3. What Heracleitus says about the Æon, perhaps gave occasion to the assertion of Ænesidemus (or Sextus), that the statement that time is identical with the πρῶτον σῶμα (discussed in Part III. b, 24) emanated from Heracleitus.

[3] For example the πόλεμος is called sometimes Zeus, sometimes δίκη, and the Æon is explained as Zeus, and δημιουργός.

[4] The modern commentators on

primitive matter of the world; the Deity or the law of

the Heracleitean philosophy are not quite agreed as to how Heracleitus conceived the reason ruling in the world. According to Bernays, *Rh. Mus.* ix. 248 sqq., he conceived it as conscious intelligence. Lassalle (i. 325, 335 sqq., *et passim*) sees in it only the objective law of reason; and Heinze (*Lehre vom Logos*, 28 sqq.), agreeing with Peipers (*Die Erkenntnisstheorie Platos*, i. 8 sq.) comes to a similar conclusion. Lastly, Teichmüller (*N. Studien*, i. 181 sqq.), differing from both views, is of opinion that self-consciousness cannot be separated from Heracleitus's world-ruling wisdom; but Heracleitus, as I assume, not only did not discriminate as yet between subjective and objective reason, but represented this reason as subject to an alternation of sleep and waking, of weaker and stronger actuality; as to any personality in regard to it, it never occurred to him at all. This last proposition is certainly not compatible with the self-consciousness which Teichmüller recognises in Heracleitus's world-ruling wisdom; for where self-consciousness is, there is also personality, whether the word be used or not, and whether the characteristics which belong to the conception of personality be present in more or less force. Nor is there any proof of the theory that Heracleitus believed the self-consciousness of the divine λόγος to be sometimes extinguished and again revived; this follows as little in the doctrine of Heracleitus from the analogy of alternating cosmical conditions, as in the doctrine of the Stoics. If he conceived the divine wisdom as a self-conscious thinking, he must have supposed it always to be such; for he describes it as the ἀείζωον (vide, *supra*, p. 22, 1), the μὴ δῦνον (*supra*, p. 25, 2), the all-governing power, which even in the present state of the world, despite the partial transmutation of the primitive fire into other substances, is not extinguished. That Heracleitus, however, defined the world-ruling wisdom as self-conscious, could only be affirmed or denied if we were sure that he had ever proposed to himself the question of its self-consciousness. But this is highly improbable. He speaks of the intelligence which rules all things, of the divine wisdom (vide *supra*, p. 42, 2), of the μὴ δῦνον from which nothing is hidden; he says in *Fr.* 79 (vide *supra*, p. 43, *n.*) ἓν πάντα εἰδέναι; we have no occasion to change εἰδέναι for εἶναι (as in the Oxford edition of Hippolytus, Lassalle, i. 339, Heinze, p. 28 sq.); for εἰδέναι in this place expresses nothing more than the other passages we have just been considering, or than the ἓν σοφὸν, *Fr.* 140 (p. 44, 1). But though these conceptions, founded on human self-consciousness, contain implicitly the character of personal self-conscious thought, it is not to be supposed that Heracleitus saw this clearly, or that he expressly said to himself, the Reason that rules the world must be conceived as a personality; had he said so, he could not possibly have conceived it at the same time as the substance through the transmutations of which all things come into existence. The question, indeed, of the personality of the primitive essence in this sense was never raised in the ancient philosophy

the universe is not separated from the primitive fire;[1] the primitive essence forms all things out of itself, by its own power, according to the law inherent in it. Our philosopher's theory of the universe is therefore the most outspoken pantheism;[2] the divine essence by the necessity of its nature is constantly passing over into the changing forms of the finite, and the finite abides only in the divine, which in undivided unity is the substance, cause and law of the world.

(which has not even a word to express 'personality')—nor in the other sense, until the time of Carneades and Plotinus; and consequently we find not unfrequently that thought, knowledge, reason, and so forth, are attributed to natures which we from our point of view could not conceive as personalities. So it is with Heracleitus. He recognises in the world a reason which guides and penetrates all things, and he ascribes predicates to this reason which we could only ascribe to a personal being; but he is wanting, not merely in the more definite conception of personality, but even in the discrimination of reason from matter. Anaxagoras was the first to separate them definitely and on principle; and to this the celebrated passage relates in *Metaph.* i. 3, 984 b. 15, where Aristotle says that Anaxagoras first perceived in *νοῦς* the cause of the order in nature, which (as Teichmüller, 189 sq., rightly observes in opposition to Heinze, *l.c.* 35 sq.) cannot serve as a proof that Heracleitus did not ascribe knowledge to the Deity. As in this passage, the God of Xenophanes is not alluded to, because he is not introduced as a principle that explains nature (*αἴτιος τοῦ κόσμου*), so the *γνώμη* of Heracleitus is passed over, because it is not opposed to matter as an independent principle.

[1] Vide *supra*, p. 22, 1, 2; 31, 2; Clemens *Coh.* 42 C: *τὸ πῦρ θεὸν ὑπειλήφατον Ἵππασος . . . καὶ . . . Ἡράκλ.* Hippol. *Refut.* ix. 10: *λέγει δὲ καὶ φρόνιμον τοῦτο εἶναι τὸ πῦρ καὶ τῆς διοικήσεως τῶν ὅλων αἴτιον· καλεῖ δὲ αὐτὸ χρησμοσύνην καὶ κόρον· χρησμοσύνη δέ ἐστιν ἡ διακόσμησις κατ' αὐτόν, ἡ δὲ ἐκπύρωσις κόρος.* Sext. *Math.* vii. 127. Vide *inf.* p. 82, 1. Heracleitus held the *περιέχον* to be rational, and thought the *θεῖος λόγος* came into man through the breath. On account of this identity of fire with the Deity, the south as the starting point of light and heat is called the sphere of bright Zeus, *Fr.* 86; *Strabo* i. 6, p. 3: *ἠοῦς γὰρ καὶ ἑσπέρας τέρματα ἡ ἄρκτος, καὶ ἀντίον τῆς ἄρκτου οὖρος αἰθρίου Διός.* I cannot give any more exact interpretation of these words. Schuster, 257 sq., understands by *οὖρος αἰθρίου Διὸς* the south pole; but Teichmüller rightly objects that we cannot expect to find this conception with Heracleitus. He himself thinks that by *οὖρος*, Arcturus is meant; but *οὖρος αἰθρίου Διὸς* would be a strange designation in that case, and how far Arcturus can be called one of the boundary points between morning and evening is not at all clear. The words assert nothing more than that north and south lie between east and west; and the *οὖρος αἰθρίου Διὸς* only signifies the region of light.

[2] In this pantheistic sense we must understand the anecdote related by Aristotle, *Part. An.* i. 5, 645 a, 16, namely, that Heracleitus called out to strangers who had scruples about visiting him in his kitchen: *εἰσιέναι θαῤῥοῦντας, εἶναι γὰρ καὶ ἐνταῦθα θεούς.* Cf. Diog. ix. 7: *πάντα ψυχῶν εἶναι καὶ δαιμόνων πλήρη.*

2. *Cosmology.*

If we enquire further how, in the beginning of our world, the transition of the primitive essence into derived existence was accomplished, we are told that, according to Heracleitus, fire was first changed by the Divine Creative Reason into air, and then into moisture, which is as it were the seed of the world; from this the earth arises, and the sky and all that they contain.[1] Here we cannot help seeing the influence of the physical doctrine of the Stoics, which, for the very reason that it professed to be merely a reproduction and elucidation of Heracleitus's doctrine, has so greatly biassed and confused the views of subsequent writers in regard to the latter.[2] So much, however, is certain: that,

[1] Clem. *Strom.* v. 599 sqq. D. That Heracleitus held the world to be underived is shown by *Fr.* 46 (p. 22, 1), that he held it also to be derived by *Fr.* 47: *μηνύει τὰ ἐπιφερόμενα* (*Fr.* 47): "*πυρὸς τροπαὶ πρῶτον θάλασσα· θαλάσσης δὲ τὸ μὲν ἥμισυ γῆ τὸ δὲ ἥμισυ πρηστήρ.*" *δυνάμει γὰρ λέγει* (vide p. 44, *n.*), *ὅτι πῦρ ὑπὸ τοῦ διοικοῦντος λόγου καὶ θεοῦ τὰ σύμπαντα δι' ἀέρος τρέπεται εἰς ὑγρὸν τὸ ὡς σπέρμα τῆς διακοσμήσεως, ὃ καλεῖ θάλασσαν, ἐκ δὲ τούτου αὐθις γίνεται γῆ καὶ οὐρανὸς, καὶ τὰ ἐμπεριεχόμενα.* Concerning *πρηστὴρ*, cf. p. 23, 1.

[2] In Clemens's commentary on the words of Heracleitus we must refer the following expressions to the doctrine and terminology of the Stoics: *λόγος καὶ θεὸς τὰ σύμπαντα διοικῶν*, on which cf. p. 44, *n.*; *σπέρμα τῆς διακοσμήσεως*; also the addition *δι' ἀέρος*, which is perpetually recurring in Stoic writings, and was required by the Stoic doctrine of the elements (cf. Part III. a, 136. 4, 137, 2, 169, 1, second edition), but has no place in the language of Heracleitus, and

according to Heracleitus, in the formation of the world,[1] the primitive fire was first changed into water or sea; and from this, by means of a second transformation developing itself in opposite directions, came on the one hand the solid element, the earth; and on the other the warm and volatile element, the hot wind;[2] a theory which makes the relation between Heracleitus and Thales the same as that between Thales and Anaximander,[3] who was, of all the older Ionians, the philosopher with whom Heracleitus was most closely allied. We are told nothing more, however, about his opinion concerning the formation of the world.

The three forms assumed by the primitive essence

contradicts (as will presently be shown) his theories on the transition of substances into one another. Among the Stoics we find in the formula τροπὴ πυρὸς διʼ ἀέρος εἰς ὕδωρ that διʼ ἀέρος always occurs as an interpolation; and in none of our authorities is it said 'fire is changed into air, and air into water.' This circumstance seems to indicate that an older exposition must have been in use, in which only the transition of fire into water is spoken of, as in the 47th fragment of Heracleitus.

[1] I agree with Schuster (p. 148 sq.) that *Fr.* 47 treats of the origin of the world from the primitive fire and not, as it has been thought, since Schleiermacher, of the transmutation of the elements in the world. For we have no reason to mistrust the assertion of Clemens that *Fr.* 47 referred to the forming of the world, and was connected with *Fr.* 46 (*sup.* p. 22, 1). (In the ἐπιφερόμενα, however, there is no 'immediate' connection with *Fr.* 46.) The *Placita* also, in the passage quoted p. 28, 2, refer to a description by Heracleitus of the formation of the world, though they contain a wrong account of it, viz., that through the separation of the grossest portions from fire, earth was first formed; from earth water, and from water air. The second part of this exposition is derived from the Stoic doctrine of the elements (Part III. a, 169, 1), but that earth should proceed immediately from fire is contrary even to the theory of the Stoics.

[2] This does not mean that the one half of the sea was to be earth and the other fire, so that nothing more would remain of it; the words θαλάσσης δὲ, &c., assert only that the sea includes (potentially) in itself earth and fire in equal parts, so that both might equally proceed from it. Cf. Teichmüller, *N. Stud.* i. 54 sq.

[3] Cf. concerning him, vol. i. 250 sq.; concerning the similar view of Xenophanes, vol. i. p. 569.

in the beginning are regarded by Heracleitus in the present condition of the world as the limits between which the alternation of substances, the rotation of Becoming and decay moves. He denominates the change (as Diogenes says[1]) as the way upwards and downwards, and supposes the world to originate in this way. Fire, he said, changes by condensation into water, and water into earth; earth on the other hand becomes fluid and changes into water, from the evaporation of which almost all other things are derived. The former of these processes he called the way downwards, the latter the way upwards. This exposition cannot,[2] like the fragment in Clemens, apply to the genesis of the world, but only to the transmutation of matter in the world at the present time.[3] This is what Plato means by the

[1] ix. 8, according to the quotation on p. 78, 1: καὶ τὴν μεταβολὴν ὁδὸν ἄνω κάτω τόν τε κόσμον γίνεσθαι κατὰ ταύτην. πυκνούμενον γὰρ τὸ πῦρ ἐξυγραίνεσθαι συνιστάμενόν τε γίνεσθαι ὕδωρ, πηγνύμενον δὲ τὸ ὕδωρ εἰς γῆν τρέπεσθαι· καὶ ταύτην ὁδὸν ἐπὶ τὸ κάτω εἶναι λέγει. πάλιν τʼ αὐτὴν [l. αὖ] τὴν γῆν χεῖσθαι ἐξ ἧς τὸ ὕδωρ γίνεσθαι, ἐκ δὲ τούτου τὰ λοιπά, σχεδὸν πάντα ἐπὶ τὴν ἀναθυμίασιν ἀνάγων τὴν ἀπὸ τῆς θαλάττης. αὕτη δʼ ἐστὶν ἡ ἐπὶ τὸ ἄνω ὁδός. γίνεσθαι δʼ ἀναθυμιάσεις, etc. (p. 52, 2.)

[2] As Schuster believes, 155 sq. 148.

[3] Schuster indeed thinks it is clear from the connection that here also the formation of the world is intended. But Diogenes has already completed his observations on Heracleitus's doctrine of the origin and conflagration of the world in the previous words (p. 77, 1, 2); with καὶ τὴν μεταβολὴν he passes on to another point. No more can be concluded from the words τὸν κόσμον γίνεσθαι κατὰ ταύτην. For 1, κατὰ ταύτην refers not only to the ὁδὸς κάτω but to the ὁδὸς ἄνω κάτω: the previous context speaks of this as one simple way, not of two ways, ὁδὸς ἄνω and ὁδὸς κάτω; according to Schuster, however, only what is said of the ὁδὸς κάτω (πυκνούμενον . . . λέγει) applies to the making of the world, and what follows applies to its destruction. 2. The persistent use of the present forms, γίνεσθαι, ἐξυγραίνεσθαι, etc., shows decidedly that something now going on is alluded to, not something that formerly happened. 3. The formation of the universe would be very inadequately described in the words which Schuster points out, for nothing is said of the formation of the heavens (cf. p. 47, 1). 4. The words πάλιν τʼ αὖ τὴν γῆν, etc., cannot possibly

way downward and the way upward,[1] and later writers without exception [2] who comment on the meaning of the expression take the same view. We have, moreover, an observation of Heracleitus himself on the vicissitudes of matter, and the principal forms which he supposes it to assume, and this entirely agrees with the statement of Diogenes. 'For souls,' he says, 'it is death to become water, and for water it is death to become earth, but water comes from earth, and souls from water.'[3] Schuster would refer this sentence to living beings only, whose souls are continually forming themselves from the watery constituents of their body, and again resolving themselves into those constituents; just as the latter are constantly changing from water to earth, and from earth back again to water.[4] But this interpretation contradicts the unanimous testimony of our witnesses,[5] which we have the less reason to doubt, since

contain a description of the ἐκπύρωσις, for it is said the rest came out of the water, which is almost entirely to be explained by the evaporation of the earth and of the water. Schuster therefore reads: ἐκ δὲ τούτου τὸ πῦρ, τὰ λοιπὰ σχεδόν, etc. But this alteration of the text would only be allowable, if the received text would bear no admissible construction. It makes, however, very good sense, though not the same that Schuster ascribes to it; whereas in his reading, the simple thought that fire arises from water by the evaporation of the water would be expressed by the confused and obscure expression τὰ λοιπὰ σχεδὸν πάντα, etc. What can be meant by λοιπὰ πάντα? Fire is the only thing which, in the conflagration of the world, still continues to arise from water.

[1] *Phileb.* 43 A. The wise maintain that our body can never be in a state of rest. ἀεὶ γὰρ ἅπαντα ἄνω τε καὶ κάτω ῥεῖ. There is no question here of the origin and destruction of the world, but simply of the mutation of things in the world.

[2] E. g. Philo. *De Ætern. M.* 958 A: τὰ στοιχεῖα τοῦ κόσμου . . . δολιχεύοντα (traversing a δόλιχος, that is, a path returning into itself) ἀεὶ καὶ τὴν αὐτὴν ὁδὸν ἄνω καὶ κάτω συνεχῶς ἀμείβοντα, as Heracleitus expresses it (vide following note). Max. Tyr. 41, 4: μεταβολὴν ὁρᾷς σωμάτων καὶ γενέσεως, ἀλλαγὴν ὁδῶν ἄνω καὶ κάτω κατὰ τὸν Ἡράκλειτον.

[3] *Fr.* 89; *sup.* p. 24, 2.

[4] *Loc. cit.* 268 sq., 157, 165.

[5] Philo, *loc. cit.* 958 C, adduces this passage in proof of his remark

we are told by Aristotle that Heracleitus denominated fire, which constitutes the substance of all things, as soul.[1] We are, therefore, fully justified in maintaining that Heracleitus considered fire, water, and earth, as the fundamental forms which matter assumed in its transformation. Some of the later authors indeed try here to introduce four elements by interpreting 'the soul' of Heracleitus as air, or regarding it as intermediate between fire and water.[2] But this cannot out-weigh the distinct declaration of Heracleitus; more especially since the general tendency of that period to misinterpret the ancient philosophers on this point, was especially encouraged by the Stoic commentators, who could not resist identifying their own conceptions with those of Heracleitus.[3] For the same reason little

on the rotation of the elements, and Clemens, *Strom.* vi. 624 A. thinks that Heracleitus is here imitating some Orphic verses which he quotes, but which in truth rather imitate the language of Heracleitus in asserting that from the ψυχὴ comes water, from water earth, and *vice versâ*. See the authors quoted in note 2, *infra*, who also refer the passage to the elements generally.

[1] Cf. p. 22, 4; 24, 1.

[2] Cf. Plut. *De Ei.* c. 18, p. 392, who thus gives the passage quoted above from *Fr.* 89: πυρὸς θάνατος ἀέρι γένεσις καὶ ἀέρος θάνατος ὕδατι γένεσις. Also Philo, *loc. cit.*, who thus explains it: ψυχὴν γὰρ οἰόμενος εἶναι τὸ πνεῦμα τὴν μὲν ἀέρος τελευτὴν γένεσιν ὕδατος, τὴν δ' ὕδατος γῆς πάλιν γένεσιν αἰνίττεται. Max. Tyr. 41, 4; Schl. p. 285 R: ζῇ πῦρ τὸν γῆς θάνατον καὶ ἀὴρ ζῇ τὸν πυρὸς θάνατον· ὕδωρ ζῇ τὸν ἀέρος θάνατον, γῆ τὸν ὕδατος (which, however, is no longer attributed expressly to Heracleitus). Plut. Plac. i. 3; vide *sup.* p. 28, 2; Max. Tyr. *l. c.* The last writer does not ascribe the four elements to Heracleitus, but says in his own name that fire passes into air, air into water, water into earth, and earth again into fire.

[3] Schuster, 157 sq., indeed believes, and Teichmüller (*N. Stud.* i. 62 sqq.) partly agrees with him, that Heracleitus in his doctrine of the elements did not omit the air. It seems to me, however, that there is no adequate proof of this. Heracleitus may very well have spoken when he had occasion to do so, of the air (as I have said p. 38, 1, in regard to *Fr.* 67); but it does not follow that he reckoned it as one of the fundamental forms of matter —what we may call his elements. As Anaxagoras and Democritus represented the air as an assem-

importance is to be attached to the fact that some of the later representations speak of a direct transmutation of fire into earth,[1] or of earth into fire.[2] Nor must

blage of different kinds of substances (vide *inf.* 815, 3, 708, third edition), so Heracleitus may have seen in it something intermediate between water and fire, a transitional form, or a series of transitional forms. The fact that Plutarch introduces air into the passage from Heracleitus, discussed *supra*, p. 24, 2; 51, 2, cannot weigh against the clear meaning of Heracleitus's own words. If Ænesidemus substituted air for fire as the primitive matter of Heracleitus (vide Part III. b, 23), this can be explained (as shown, *loc. cit.*) without assuming that Heracleitus ascribed to air a similar part as to earth, water and fire. The opinion of Ænesidemus concerning Heracleitus's primitive essence (which in any case is mistaken) cannot be brought forward as a proof of this theory.

[1] Plut. *Plac.*, *loc. cit.*

[2] Max. Tyr.; cf. p. 51, 2. In that sense we might understand Diog. ix. 9: γίνεσθαι ἀναθυμιάσεις ἀπό τε γῆς καὶ θαλάττης, ἃς μὲν λαμπρὰς καὶ καθαράς, ἃς δὲ σκοτεινάς· αὔξεσθαι δὲ τὸ μὲν πῦρ ὑπὸ τῶν λαμπρῶν, τὸ δὲ ὑγρὸν ὑπὸ τῶν ἑτέρων. But this is not necessary. For even if Lassalle's theory (ii. 99) that only the pure vapours rise from the sea, and only the dark and foggy vapours from the earth, as well as the opposite theory that the pure and clear vapours arise from the earth, and the dark from the sea, is contradicted by the fact (which Teichmüller points out, *N. Stud.* i. 57) that the vapours arising from earth and sea are alike obscure, and though it might be more correct on that account to represent clear and dark vapours as rising both from earth and sea, this is not quite the point in question. For, in the first place, Diogenes is not saying that the earth, as this elementary body, changes into fiery vapours; γῆ here designates the land in contradistinction to sea, with the exclusion of the water in the lakes, rivers, marshes, and the ground moist with rain. And secondly, it is a question whether the clear and dark vapours ascend at the same time side by side, and are not all at first dark and moist, becoming afterwards bright. The dark would then serve to feed the clouds, the bright would go to make the stars and the bright sky. Schleiermacher. p. 49 sq., defends the idea of a direct transformation of earth into fire, on the ground that Aristotle, whose meteorology appears to be essentially dependent on Heracleitus, speaks of a dry evaporation side by side with a moist; and, therefore, of a direct transition of earth into fire. But the dependence of Aristotle upon Heracleitus cannot be proved either in a general sense or in regard to this particular point. There is lastly not the smallest ground for the conjecture of Ideler (*Arist. Meteorol.* i. 351) that Heracleitus may have borrowed the doctrine of the double evaporation from the Orphic poems; what is said by Plato, *Crat.* 402 B, and by Clemens, *Strom.* vi. 629, cannot be quoted in support of it.

we seek in Heracleitus a conception of the elements in the Empedoclean or Aristotelian sense;[1] his meaning is simply that the three kinds of matter mentioned above are the first manifestations of the primitive matter in its transformation—the first bodies, to which all others may be reduced, and which are produced one from the other in the given order;[2] and this regular

[1] Empedocles understands by his so-called elements (he himself, as is well known, does not use the word) invariable primitive substances, which as such never pass over into each other. Aristotle makes his elements pass over into each other, but he does not derive them from any matter preceding them in time; for the πρώτη ὕλη has never existed as such; it is only the ideal presupposition of the elements, their common essence, that exists merely under these four forms. Heracleitus, on the contrary, represents fire as existing for itself before the framing of the world, and only changing in course of time into water and earth.

[2] The question whether Heracleitus, 'in kindling wood for his hearth-fire, always reflected that this earth must change first into sea and then into πρηστήρ, before it could rise into fire' (Schuster, 166), is one which the history of philosophy is not required to answer. He probably did not think every time he looked at the Caystros, that it was not the same river as before, nor torment himself at every draught of water as to whether the dryness of his soul would not suffer thereby. The only question which concerns us is this: how Heracleitus on his own presuppositions explained common phenomena like the burning of wood? If nothing has been told us on this subject we have no right therefore to disbelieve in those presuppositions. We certainly do not know how Heracleitus explained the burning of wood, nor even that he tried to explain it. *If* he tried, the answer was not far to seek. He did not require (as Schuster thinks) to regard the wood absolutely as earth. He might consider that earth and water were mingled in it: that when it is consumed, the earth, so far as it does not change into water, remains behind as ashes. The remainder, together with the water contained in the wood, first changes into dark vapour, then into light vapour, first into smoke, then into fire (which, according to Theophrastus, *De Igne*, *Fr.* iii. 3, is burning smoke, and according to Arist. *Meteor.* ii. 2, 355 a, 5, is supposed by many physicists, as Diogenes, *supra*, p. 295, to be nourished by moisture). Here he had an explanation, which was not more inconsistent with appearances than many others, and accommodated itself admirably to his other theories. Or he might regard the burning as a coming forth of the fire contained in the περιέχον (vide *inf.* p. 81 sq.), and as an escape of the burning particles of wood into the περιέχον. Definite evidence concerning the scientific theories of a philosopher cannot be outweighed

progression is equally maintained on both sides, as he expresses in the sentence: the way upwards and the way downwards is the same.[1] This expression also shows us that change of substance is with Heracleitus likewise change of place; the nearer a body approaches to the fiery nature, the higher it rises; the farther removed it is from that nature, the lower it sinks; as even sensible observation would go far to prove.[2]

by the impossibility of reconciling certain facts with those theories, so long as we are in ignorance whether and in what way the philosopher himself tried to reconcile them. Did Democritus and Plato regard wood as incombustible, because according to their theory earth cannot be converted into fire? vide *infra*, p. 708, 2, third edition, Part II. a, 676, 2.

[1] *Fr.* 82, ap. Hippocr. *De Alim.* ii. 24 K; Tert. *Adv. Marc.* ii. 28, and more fully ap. Hippol. vide *sup.* p. 49, 1; also p. 50, 1. Lassalle (i. 128, 173 sqq.) is not content with referring the upward and downward way to the stages of the elemental process, and the identity of the two ways to the sameness of these stages; he thinks the above proposition also means that the world is constant unity, constant adjustment of the two contradictory moments of Being and Nothing, of the tendency to γένεσις and to ἐκπύρωσις or negation. But this is to make the dark philosopher darker than he already is. There is no passage, either from or about Heracleitus, which warrants our understanding the ὁδὸς ἄνω and κάτω as anything except the way from earth to fire, and *vice versâ*; even in Diog. ix. 8 it is only Lassalle's wrong translation (cf. the words quoted, p. 49, 1), which explains μεταβολὴ as the change *into one another* of the πόλεμος and ὁμολογία, the moment that leads from Being to non-Being, and from non-Being to Being (vide also ii. 246, and with another combination of the words, ii. 137). Diogenes himself never leaves us in any doubt as to the meaning of the ὁδὸς ἄνω and κάτω. It is a singular objection to make (*l. c.* 173 sq.) that the quality of the elementary stages of transmutation cannot be described as ὁδὸς μία. The *way* from fire through water to earth is the same as that from earth through water to fire, although the direction pursued in the one case is different from that pursued in the other.

[2] That the way upward and downward does not involve any change of place I cannot admit. Lassalle attempts to prove this very diffusely (ii. 241–260), and Brandis (*Gesch. d. Entw.* i. 68) agrees with him on the point. Lassalle's argument has little force: 'Motion upward and downwards,' he says, 'is rectilinear: the motion of Heracleitus is circular' (this is only true so far as he represents the transmutation of matters under the figure of a circle); 'the sea lies deeper than the earth'

The transformation of matter moves therefore in a circle; when its elementary nature has attained in earth its greatest distance from its primitive form, it returns through the earlier stages to its commencement. The uniformity and fixed order of this movement is the one thing that is permanent in the flux of the world's life. Matter is incessantly changing its nature and its place, and consequently nothing, as to its material ingredients, ever remains the same as it was before; everything is subject to a continual transformation, and therefore to a continual loss of its material parts, and

(that is, than the terra firma, not deeper than the sea-bottom); 'but if we understand the ὁδὸς ἄνω as relating to place, it must be higher' (an argument by which we might prove that Plato and Aristotle knew nothing of the natural places of the elements); 'in regard to place, the above and below, the way upward and the way downward are not identical' (vide previous note and p. 16, 4). 'Plato and Aristotle could not have been silent about the ὁδὸς ἄνω κάτω, if this expression had been used in a literal sense, and not merely as a figure.' (Why not? Are they not silent about many conceptions of great importance in the system of Heracleitus? Plato, however, does mention, *Phileb.* 43 A, the doctrine that everything constantly ἄνω τε καὶ κάτω ῥεῖ, and in *Theæt.* 181 B, he says that this doctrine makes everything to be perpetually changing its place as well as its nature); 'Diog. ix. 8 sq. does not speak of any graduated motion in regard to place' (see preceding note). 'Aristotle, *Phys.* viii. 3, expressly denies that ἄνω and κάτω are to be understood in regard to place' (this is not the case; if it were so he would also expressly deny that Heracleitus taught the perpetual transmutation of matter); 'Ocellus (i. 12) places the διέξοδος κατὰ τόπον and κατὰ μεταβολὴν in opposition to each other.' How we are to understand by ἄνω anything except upwards with reference to space; or by κάτω anything but downwards, Lassalle does not explain. It is obvious that the ancient writers, one and all, who mention the doctrine of Heracleitus, understood it in the way that has hitherto been customary. Lassalle (ii. 251) himself indeed finds himself obliged to admit that Heracleitus may also have employed the expression ὁδὸς ἄνω for the procession of the elements, and in that there must be a change of place. As fire occupies the upper portion of the world, Stob. *Ecl.* i. 500, reckons Heracleitus among those who regard the sky as πύρινος; this is not incompatible with the statement in Diog. ix. 9, that he never precisely explained the nature of the περιέχον.

this loss must perpetually be compensated by the influx of other parts passing on the way upwards, or the way downwards, into its place and into its nature. The appearance of permanent Being then can only arise from this: that the parts which flow off on the one side are replaced by the addition of others in the same proportion; to water must be added as much moisture from fire and earth as it has itself lost in fire and earth, &c.; the permanent element in the flux of things is not matter, but the proportion of matters; the world as a whole will remain the same, so long as the elements pass over into each other in the same proportion; and each individual thing will remain the same so long as the same equality in change of matter takes place in this particular place in the world. Each thing is consequently that which it is, only because the opposite streams of matter, the advancing and the retreating stream, meet in it in this definite direction and in this definite proportion.[1] The regularity of this process is what Heracleitus calls by the name of Harmony, δίκη, Fate, world-ruling wisdom, &c.; while, on the other hand, the flux of all things arises from the change of substances, and the universal law of strife

[1] In favour of this acceptation of Heracleitus's doctrine, we certainly cannot adduce *Fr.* 48 (on which, cf. p. 65, 1) as direct evidence, supposing these words to refer, not to the change of the elements into one another, but to the destruction of the world. But from what we know of his theory concerning the flux of all things, it is difficult to see how he could otherwise have explained the circumstance that particular things and the world as a whole seem to continue for a longer or shorter period unchanged. This theory is established by the well-known example of the river (p. 11, 2), which Aristotle (*Meteor.* ii. 3, 357 b, 30 sq.) uses in this sense; and also by Aristotle's own assertion (*sup.* p. 13, *n.*) that according to Heracleitus all things were for ever changing, only we do not notice it.

from the opposition of the upward and downward way.

If we imagine this theory logically applied to all parts of the world, the result would be a natural scientific system in which the different classes of the Real would correspond to so many stages of the universal process of transformation. Heracleitus, however, was in all probability far from entertaining the idea of a comprehensive description of nature; and the fact that besides the anthropological theories presently to be considered, nothing remains to us of his natural philosophy except a few astronomical and meteorological statements,[1] is probably to be explained as much by the incompleteness of his own exposition as by the deficiencies in our information concerning it. The point which is most commonly mentioned, and which stands almost alone in this connection, is his well-known theory of the daily renewal of the sun. He not only thought, as some other philosophers did, that the fire of the sun is fed by ascending vapours,[2] but that the sun itself is

[1] From the utterance of Philo. *Qu. in Gen.* iii. 5, quoted p. 31, 2, we can only conclude that Heracleitus proved his doctrine of the oppositions of Being by a number of examples. There is no question of the detailed system of physics to which Lassalle (ii. 98) finds allusion here.

[2] Arist. *Meteor.* ii. 2, 354 a, 33: διὸ καὶ γελοῖοι πάντες ὅσοι τῶν πρότερον ὑπέλαβον τὸν ἥλιον τρέφεσθαι τῷ ὑγρῷ. That Heracleitus is classed among these, we see from what follows. In Diog. ix. 9, there is a full account of Heracleitus's theory of the stars: τὸ δὲ περιέχον ὁποῖόν ἐστιν οὐ δηλοῖ· εἶναι μέντοι ἐν αὐτῷ σκάφας ἐπεστραμμένας κατὰ κοῖλον πρὸς ἡμᾶς, ἐν αἷς ἀθροιζομένας τὰς λαμπρὰς ἀναθυμιάσεις ἀποτελεῖν φλόγας, ἃς εἶναι τὰ ἄστρα. Of these the sun diffuses more heat and warmth than the rest, because the moon moves in an atmosphere that is not so pure and is nearer the earth, and the other heavenly bodies are too distant: ἐκλείπειν δ' ἥλιον καὶ σελήνην ἄνω στρεφομένων τῶν σκαφῶν· τούς τε κατὰ μῆνα τῆς σελήνης σχηματισμοὺς γίνεσθαι στρεφομένης ἐν αὐτῇ κατὰ μικρὸν τῆς σκάφης. What Diogenes says is asserted in the

a burning mass of vapour;[1] and as he supposed that these vapours were consumed and burned up during the day, and were produced afresh on the morrow, he arrived at the proposition that the sun was new every day;[2] so

Placita, ii. 22, 27, 28, 29; Stob. i. 526, 550, 558; *Schol. in Plat.* p. 409 Bekk. of the sun and moon; but Stobæus speaks of the sun in Stoic language as ἄναμμα νοερὸν ἐκ τῆς θαλάσσης. The boat-shaped form of the sun is likewise alluded to by Ach. Tat. *in Arat.* p. 139 B. Similarly Anaximander (whom Heracleitus follows so much) represents the fire of the heavenly bodies as fed by vapours, and as streaming out of the husky coverings that surround it. Cf. vol. i. p. 251. The latter he conceives in a different manner from Heracleitus, who keeps to the old notion of the ship of the sun and moon. Stob. i. 510, no doubt incorrectly, calls the heavenly bodies πλήματα πυρός. In the *Plac.* ii. 25, 6: Ἡράκλειτος (τὴν σελήνην) γῆν ὁμίχλῃ περιειλημμένην. Schleiermacher, p. 57, rightly alters the name to Ἡρακλείδης. According to Diog. ix. 7; *Plac.* ii. 21; Stob. i. 526; Theod. *Cur. Gr. Aff.* i. 97, p. 17, Heracleitus ascribed to the sun the diameter of a foot. Perhaps, however, this may be a misunderstanding of a statement relating to this apparent diameter, and not concerned with the question of his real magnitude. At any rate, it would better accord with the importance Heracleitus ascribes to the sun (*inf.* p. 60, 2), if he supposed his size to be something commensurate. But it is quite possible he may have said, 'the sun is only a foot broad, and yet his light fills the whole world.'

[1] Arist. *Probl.* xxiii. 30, end: διὸ καὶ φασί τινες τῶν ἡρακλειτιζόντων, ἐκ μὲν τοῦ ποτίμου ξηραινομένου καὶ πηγνυμένου λίθους γίνεσθαι καὶ γῆν, ἐκ δὲ τῆς θαλάττης τὸν ἥλιον ἀναθυμιᾶσθαι.

[2] Plato, *Rep.* vi. 498 A: πρὸς δὲ τὸ γῆρας ἐκτὸς δή τινων ὀλίγων ἀποσβέννυνται πολὺ μᾶλλον τοῦ Ἡρακλειτείου ἡλίου, ὅσον αὖθις οὐκ ἐξάπτονται. Arist. *Meteor.* ii. 2, 355 a, 12: ἐπεὶ τρεφομένου γε [sc. τοῦ ἡλίου] τὸν αὐτὸν τρόπον, ὥσπερ ἐκεῖνοί φασι, δῆλον ὅτι καὶ ὁ ἥλιος οὐ μόνον, καθάπερ ὁ Ἡράκλειτός φησι, νέος ἐφ' ἡμέρῃ ἐστίν, ἀλλ' ἀεὶ νέος συνεχῶς, which Alex. in *h. l.* rightly explains thus: οὐ μόνον, ὡς Ἡράκλειτός φησι, νέος ἐφ' ἡμέρῃ ἦν ἦν, καθ' ἑκάστην ἡμέραν ἄλλος ἐξαπτόμενος, τοῦ πρώτου ἐν τῇ δύσει σβεννυμένου. The words, νέος ἐφ' ἡμέρῃ ἥλιος are quoted by Proclus, *in Tim.* 334 D, from Heracleitus. To these words (and not to some other passage as Lassalle, ii. 105, thinks) allusion is doubtless made by Plotinus, ii. 11, 2, p. 97 D: Ἡρακλείτῳ, ὃς ἔφη ἀεὶ καὶ τὸν ἥλιον γίγνεσθαι. One of the scholiasts of Plato represents the sun of Heracleitus as going down into the sea and being extinguished in it, then moving under the earth towards the east and being there rekindled. This may be brought into connection with the quotation from Diogenes (cf. preceding note) in the following manner: After the sun's fire is burnt out, i.e., after it has been changed into water (for this we must in any case substitute

that even the apparent permanence which the continuous ebb and flow of matter lends to things belongs to the sun only for this short time.[1] Aristotle expressly denies[2] that he applied this notion to the other heavenly bodies: when, therefore, we are told that he supposed the moon and the stars to be fed by exhalations—that he regarded the moon, like the sun, as a cup filled with fire,[3] and the stars as masses of fire, we must consider the first assertion, at any rate, as an arbitrary extension

for the extinction in the sea), the boat-shaped husk, in which it was contained, goes in the way described to the east, in order there to be filled with burning vapours. Only the sun's *fire* would then be renewed every day, his envelope on the other hand would continue; but this makes no difference in regard to the hypothesis; for as the fire is what alone is seen by us as the sun, it might still be said that the sun was every day renewed; and if Heracleitus really believed in these reservoirs of fire of the sun and stars (which the singular explanation quoted from him of eclipses and the phases of the moon scarcely allows us to doubt), it was more natural that he should suppose them solid and therefore durable, than as consisting of vapours, and passing away with their content. Lassalle, ii. 117, thinks that, according to Heracleitus, the solar fire was not completely changed into moisture during any part of the day, but that this process was completed in the course of the sun's nightly progress round the other hemisphere (we have no right to speak of the other hemisphere as far as Heracleitus is concerned); and that this is the foundation of the statement of the Platonic scholiast. But such is obviously not his opinion, nor can those writers have entertained it, who simply attribute to this philosopher the statement that the sun was extinguished at his setting. Schuster's remark (p. 209) that if Heracleitus regarded Helios as a god, he would not have supposed him to be generated afresh every day, but only to change his substance, likewise contradicts all our evidence and the words of Heracleitus himself.

[1] *Fr.* 64 (*sup.* p. 41, 2) seems to refer to this duration of existence; but it may also relate to the boundaries of its course, for the daily life of the sun would have a longer duration if it pursued its course farther. The measurements of time and space here coincide.

[2] *Meteor. l. c.* 355 a, 18: ἄτοπον δὲ καὶ τὸ μόνον φροντίσαι τοῦ ἡλίου, τῶν δ' ἄλλων ἄστρων παριδεῖν αὐτοὺς τὴν σωτηρίαν, τοσούτων καὶ τὸ πλῆθος καὶ τὸ μέγεθος ὄντων. Also in *Probl. loc. cit.* it is only the sun which is formed from the vapours of the sea.

[3] Vide p. 621, 2; cf. Olymp. *in Meteor.* f. 6 a, p. 149 Ideler. On the other side, cf. Bernays, *Heracl.* 12 sq.

of his actual words.[1] He appears to have thought little of the stars, because their influence on our world is small.[2] As to his explanations of other celestial phenomena, the statements that have come down to us are so fragmentary that we can glean hardly anything from them as to his real doctrine.[3]

[1] Still more may be said against the theory that Heracleitus supposed the sun to be nourished by the evaporations of the sea, the moon by those of the fresh waters, and the stars by those of the earth (Stob. *Ecl.* i. 510 : cf. 524; Plut. *Plac.* ii. 17). Here the theory of the Stoics is most likely ascribed to Heracleitus. This philosopher, as we have shown, was silent as to the nourishment of the stars, and he could not have believed that the earth was directly transmuted into the same vapours from which the fiery element was fed (cf. p. 52). The Heracleiteans, who are spoken of in the Aristotelian problems (vide p. 58, 1), make quite another application of the difference between salt water and fresh.

[2] Cf. *Fr.* 50, ap. Plut. *Aqua an ign. util.* 7, 3, p. 957 : εἰ μὴ ἥλιος ἦν, εὐφρόνη ἂν ἦν; or, as it is expressed in Plut. *De Fortuna*, c. 3, p. 98 : ἡλίου μὴ ὄντος ἕνεκα τῶν ἄλλων ἄστρων εὐφρόνην ἂν ἡγοῦμεν. Cleanthes, who among the Stoics seems most to have resembled Heracleitus, ascribed such importance to the sun, that he declared it to be the seat of Deity (Part III. a, 125, 1), and this we are told of the Heracleitean school (Plat. *Crat.* 413 B; cf. *sup.* p. 26, 1 : τὸν ἥλιον διαΐοντα καὶ κάοντα ἐπιτροπεύειν τὰ ὄντα. Heracleitus himself, however, did not (cf. *sup.* p. 25, 2) maintain this; had he done so, he could not have said that the sun was extinguished daily. In Plut. *Qu. Plat.* vii. 419 we have no right (Schuster, p. 161, thinks the contrary) to refer anything beyond the words ὥρας αἱ πάντα φέρουσι to Heracleitus.

[3] After the words quoted p. 52, 2; 57, 2, Diogenes thus continues : ἡμέραν τε καὶ νύκτα γίνεσθαι καὶ μῆνας καὶ ὥρας ἐτείους καὶ ἐνιαυτούς, ὑετούς τε καὶ πνεύματα καὶ τὰ τούτοις ὅμοια κατὰ τὰς διαφόρους ἀναθυμιάσεις. τὴν μὲν γὰρ λαμπρὰν ἀναθυμίασιν φλογωθεῖσαν ἐν τῷ κύκλῳ τοῦ ἡλίου ἡμέραν ποιεῖν, τὴν δὲ ἐναντίαν ἐπικρατήσασαν νύκτα ἀποτελεῖν· καὶ ἐκ μὲν τοῦ λαμποῦ τὸ θερμὸν αὐξανόμενον θέρος ποιεῖν, ἐκ δὲ τοῦ σκοτεινοῦ τὸ ὑγρὸν πλεονάζον χειμῶνα ἀπεργάζεσθαι. ἀκολούθως δὲ τούτοις καὶ περὶ τῶν ἄλλων αἰτιολογεῖ. Heracleitus, according to this, derived the change of day and night, as well as that of the seasons, which is coupled with it, in the fragment quoted (p. 38, 1) from the alternate preponderance of the fiery element and the moist. That he mentioned the seasons we know from Plutarch (vide previous note). His explanation of the other phenomena mentioned above is referred to by Stob. *Ecl.* i. 594 : Ἡράκλ. βροντὴν μὲν κατὰ συστροφὰς ἀνέμων καὶ νεφῶν καὶ ἐμπτώσεις πνευμάτων εἰς τὰ νέφη, ἀστραπὰς δὲ κατὰ τὰς τῶν θυμιωμένων ἐξάψεις, πρηστῆρας δὲ κατὰ νεφῶν ἐμπρήσεις καὶ σβέσεις.

How Heracleitus conceived the form and structure of the universe we are not expressly told. As, however, the transformation of matter has a limit in fire above and in the earth beneath, and as this qualitative change coincides in Heracleitus with ascent and descent in space, he must have conceived the universe as limited above and below; whether he thought it spherical in form we do not know,[1] and in respect of the earth the contrary theory seems the more probable.[2] Nor can we prove that he held the diurnal revolution of the heavens.[3] But he must at any rate have regarded the world as a

In the statement of Olympiodorus (*Meteorol.* 33 a; i. 284 *Id.*), that Heracleitus believed the sea to be a transpiration from the earth, there seems to be (as Ideler rightly conjectures) some confusion with Empedocles, to which *Fr.* 48, quoted p. 65, 1, may have given rise.

[1] Hippokr. π. διαιτ. (*sup.* p. 15, 1) says indeed : φάος Ζηνὶ, σκότος Ἀΐδῃ, φάος Ἀΐδῃ, σκότος Ζηνί. φοιτᾷ κεῖνα ὧδε καὶ τάδε κεῖσε πᾶσαν ὥρην. But in the first place, it would not certainly follow from this that the world was spherical; for if the heavens turned sideways around the earth, and the earth were supposed cylindrical in form, as we find among the earlier and later Ionians (*sup.* vol. i. p. 275 sq.), the under world would still be illuminated as soon as the sun in consequence of this revolution went below the horizon. And secondly, we do not know whether the author is correctly expressing Heracleitus's meaning; his statement is certainly quite incompatible with that philosopher's doctrine of the daily extinction of the sun. Lassalle's supposition that it is not entirely extinguished cannot be admitted (cf. p. 58, 2) as a solution of the difficulty. Besides the same light which illuminated the upper world could not in that case be also in Hades.

[2] As not only Anaximander and Anaximenes, but also Anaxagoras, Democritus, and doubtless also Diogenes, ascribed to the earth the form of a cylinder or plate, it is very unlikely that Heracleitus should have conceived it otherwise. The theory of its being a sphere seems to have been confined to the Pythagoreans and the adherents of their astronomy, until towards the end of the fifth century.

[3] His ideas about the daily extinction of the sun and the boat of the sun, and of the moon, point rather to a free movement of the several heavenly bodies, such as was held by Anaximenes (*sup.* vol. i. p. 275 sq.). Heracleitus, who troubled himself little about the stars and astronomy, never seems to have reflected that the daily rising and setting of all the heavenly bodies presupposed some common cause.

coherent whole, as indeed he clearly says,[1] for only in that case would the circular movement be possible, in which all comes from one, and one from all, and the contrarieties of existence are bound together by an all-embracing harmony. When, therefore, Heracleitus is reckoned by later writers among those who taught the unity and limitedness of the world,[2] this is in fact correct, though he doubtless never himself employed those expressions.

If there be only one world, this must be without beginning or end, for the divine creative fire can never rest. In this sense Heracleitus says expressly that the world has ever been and will ever be.[3] This, however, does not exclude the possibility of change in the condition and constitution of the universe; such a theory might rather seem to be required by the fundamental law of the mutability of all things, though it is not so in truth; for that law would have been sufficiently observed if the whole had maintained itself in spite of the change of its parts, and nothing individual had had any fixed existence. Heracleitus might well have held this theory, as the two physicists, Anaximander and Anaximenes, had held it before him; and to Anaximander he was in many respects closely allied. Indeed, the ancient writers almost unanimously attribute to him the theory that the present world will at some

[1] *Fr.* 46, 98; *supra*, 35, 1.

[2] Diog. ix. 8: πεπεράσθαι τε τὸ πᾶν καὶ ἕνα εἶναι κόσμον. Theodoret, *Cur. Gr. Aff.* iv. 12, p. 58; Simpl. *Phys.* 6 a; Arist. *Phys.* iii. 5, 205 a, 26: οὐθεὶς τὸ ἓν καὶ ἄπειρον οὐσίαν ἐποίησεν οὐδὲ γῆν τῶν φυσιολόγων is not counter to this, for Heracleitus's primitive matter is not unlimited. Lassalle (ii. 154), who refers the passage to Heracleitus, has overlooked the additional words καὶ ἄπειρον.

[3] Cf. p. 22, 1.

future time be dissolved in fire, and that from the conflagration a new world will be produced, and so *ad infinitum*. The history of the universe, therefore, moves forward in a continuous alternation of reproduction and destruction according to fixed periods of time.[1] This theory, however, has recently been warmly disputed, first by Schleiermacher[2] and afterwards by Lassalle.[3] But Lassalle has not sufficiently distinguished between two notions, which may certainly both be characterised by the expressions, the 'burning up' of the universe or the 'destruction' of the universe, but which in fact are far removed from one another. The question is not whether an *annihilation* of the world in the strict

[1] For the destruction of the world the Stoics always use the expression ἐκπύρωσις. It cannot be proved to have been used by Heracleitus. Clemens, *Strom.* v. 549, ii., says expressly, ἣν ὕστερον ἐκπύρωσιν ἐκάλεσαν οἱ Στωικοί.

[2] *Loc. cit.* 94 sqq. Likewise by Hegel, *Gesch. d. Phil.* i. 313; and Marbach, *Gesch. d. Phil.* i. 68. Neither of these authors, however, enters into details with regard to it.

[3] ii. 126, 240. Brandis, who had strongly maintained the Heracleitean destruction of the world by fire against Schleiermacher (*Gr. Röm. Phil.* i. 177 sq.), seems to have been persuaded by Lassalle to abandon this theory (*Gesch. d. Entw.* i. 69 sq.). In order to explain the statements of the ancients, he puts forward the conjecture that Heracleitus held a double kind of motion; one which is without opposite, and which he characterised as rest and peace; and one which is involved in the opposites of cosmical conditions; and he so expressed himself in regard to these two motions, that their ideal separation might be taken for a temporal separation: 'It is even possible that he himself might have so apprehended them.' The latter theory virtually reasserts the Heracleitean conflagration of the world; for if a period of oppositionless motion follows a period of motion involving oppositions, this is as much as to say the διακόσμησις is followed by an ἐκπύρωσις. We can hardly, however, attribute to Heracleitus a merely ideal separation of these two motions, and to me it is still more inconceivable that he should have spoken of an oppositionless motion (in itself a *contradictio in adjecto*). As this view will be refuted in the following pages, I need not here enter into it more particularly. Lassalle's lengthy discussion can of course be noticed only in regard to its essential content.

sense, an absolute destruction of its substance was intended; this Heracleitus, of course, could not maintain, since to him the world is only the definite form of existence of the divine fire, and the divine fire is consequently the substance of the world. He has also declared, as explicitly as possible, that he did not maintain it. What we are concerned with is simply this: Did Heracleitus believe that the present state of the world, and the distribution of elemental substances on which it is based, remains on the whole unchanged, despite the continual transformation of the particular? Or did he consider that from time to time all the different substances return into the primitive substance, and are again reproduced from it?

That this latter was his opinion seems to be proved by his own statements. It is true that some of these leave us uncertain whether he meant a continual production of individual things from fire, and a corresponding return of these into fire, or a simultaneous transformation of the universe into fire, and a fresh creation immediately succeeding it.[1] In others the language he uses can scarcely apply to anything except the future conversion of the world into fire—the destruction of the world, to which the authors who transmit these statements to us do in fact apply them. 'Fire,' says Heracleitus, 'will come upon all things to order them and to seize them;'[2] and in another frag-

[1] Such as the ἀπτόμενον μέτρα καὶ ἀποσβεννύμενον μέτρα; *sup.* p. 22, 1; the εἰς πῦρ καὶ ἐκ πυρὸς τὰ πάντα, p. 20, 1, and the quotation, p. 27, 1.

[2] *Fr.* 68, ap. Hippol. ix. 10: πάντα τὸ πῦρ ἐπελθὸν κρινεῖ καὶ καταλήψεται. Here the use of the future tense (which is certified in the case of the first verb by the second) makes it probable that it is not a continuous transformation

ment he described, as Clemens informs us, the new formation of the earth in the sea[1] which preceded the burning of the world. Aristotle says still more unequivocally: Heracleitus and Empedocles are of opinion that the world is sometimes in its present state, and then again is destroyed and enters upon a new state, and that this

of all things into fire which is spoken of, as in the present, πάντα οἰακίζει κεραυνὸς (*sup.* p. 22, 2); but a transformation of this kind at some definite future time; and that Hippolytus is therefore justified in quoting the words as an authority for the ἐκπύρωσις.

[1] *Fr.* 48; Clem. *Strom.* v. 599 D (Eus. *Pr. Ev.* xiii. 13, 33): ὅπως δὲ πάλιν ἀναλαμβάνεται (sc. ὁ κόσμος, how the world will again be taken back into the primitive essence; the expression is Stoic, cf. Part III. a, 140, 6; and in respect to the corresponding ἀναχωρεῖν, cf. *ibid.* 130, 3): καὶ ἐκπυροῦται, σαφῶς διὰ τούτων δηλοῖ· "θάλασσα διαχέεται καὶ μετρέεται εἰς τὸν αὐτὸν λόγον ὁκοῖος πρῶτον (Eus. πρόσθεν) ἦν ἢ γενέσθαι γῆ." That these words really refer to the return of the earth into the sea, from which it arose when the cosmos was formed (vide p. 47 sq.), the distinct language of Clemens forbids us to doubt. There is all the less reason to cancel γῆ, with Lassalle (ii. 61), or with Schuster (129, 3), to substitute γῆν. As the sea then became in its greater part earth, so now the earth must again become sea, in accordance with the universal law of the transmutation of matter (cf. p. 49 sq.). Diogenes also uses χεῖσθαι (*sup.* p. 49, 1) to designate this transformation of the earth into water. Lassalle, *l. c.*, explains the words, εἰς τὸν αὐτὸν λόγον 'according to the same law.' But in this the meaning of εἰς is too little regarded. It signifies rather 'to the same size,' or more accurately (since λόγος designates the proportion, in this case a proportion of magnitude), 'so that its magnitude stands to that which it had as earth, in the same proportion as previously, before it became earth.' (Vide also Peiper's *Erkenntnisstheorie Plato's*, 8.) I cannot admit, with Heinze (*Lehre v. Log.* 25), that in that case ὁκόσος must be substituted for ὁκοῖος. ὁ αὐτὸς οἷος signifies the same as ὁ αὐτὸς ὡς (the same magnitude as that which was previously). Heinze cancels γῆ like Lassalle, and explains the passage thus: 'The sea is changed into the same λόγος, that is, into the same fire of the nature of which it was previously before it arose independently.' But even if it is the same nature which is explained now as primitive fire, and now as λόγος, it does not follow that these conceptions are themselves interchangeable, and that the same expression which designates this essence on the side of its intelligence, could be used for a designation of the material substratum as such. A pantheist may say, 'God is spirit and matter;' he will not therefore say, 'the derived substances are resolved into the primeval *spirit*,' but 'they are resolved into the primitive *matter*.'

goes on without ceasing.[1] Heracleitus (he observes elsewhere[2]) says that all will at last become fire; and that this does not relate merely to the *successive* transformation of individual bodies into fire, but to a state in which the collective totality of things has *simultaneously* assumed the form of fire is clear from the language used,[1] and still more from the connection. For Aristotle says, *loc. cit.*, that it is impossible that the world can consist of one single element, or pass over into a single element, as would be the case if all, according to Heracleitus's theory, were to become fire.[2] The Stoics from the first understood Heracleitus in no other way;[3] and it is very improbable that in so doing they should merely have adopted Aristotle's view, and not have formed their opinion from the philosopher's own assertions. There are many other testimonies to the same effect,[4] and though much trouble has been taken to

[1] *De Cœlo*, i. 10, 279 b, 12: *γενόμενον μὲν οὖν ἅπαντες εἶναί φασιν* (sc. *τὸν οὐρανὸν*) *ἀλλὰ γενόμενον οἱ μὲν ἀΐδιον, οἱ δὲ φθαρτὸν ὥσπερ ὁτιοῦν ἄλλο τῶν φύσει συνισταμένων, οἱ δ' ἐναλλὰξ ὁτὲ μὲν οὕτως, ὁτὲ δὲ ἄλλως ἔχειν φθειρόμενον καὶ τοῦτο ἀεὶ διατελεῖν οὕτως, ὥσπερ Ἐμπεδοκλῆς ὁ Ἀκραγαντῖνος καὶ Ἡράκλειτος ὁ Ἐφέσιος.* The words *ὁτὲ — ἄλλως ἔχειν* may either be translated: 'it is now in this condition and now in that,' or, 'it is sometimes in the same condition as now, and sometimes in another.' This does not affect the present question; but the use of *φθειρόμενον* seems to favour the second rendering. As Prantl rightly observes, this word can only be connected with *ἄλλως ἔχειν*, so that the sense is the same as if it stood: *ὁτὲ δὲ, φθειρόμενον, ἄλλως ἔχειν.* But if *ἄλλως ἔχειν* describes the state of things after the destruction of the world, *οὕτως ἔχειν* must apply to the opposite of this, the world's present condition. In the *τοῦτο ἀεὶ διατελεῖν οὕτως*, *τοῦτο* evidently refers to the whole, *ὁτὲ μὲν οὕτως ὁτὲ δὲ ἄλλως ἔχειν*: 'this, the alternation of the world's conditions, is always going on.' Lassalle, ii. 173, would refer it exclusively to the *φθειρόμενον*, and explains it thus: 'this destruction is eternally fulfilling itself;' so that, as he says, an alternation in time of the construction and destruction of the world, as part of Heracleitus's doctrine (and in that case as part of Empedocles's also) is positively excluded by this passage. It is obvious, however, that the words in themselves cannot have this meaning. It may seem strange that Aristotle should ascribe to Heracleitus the opinion that the world is derived, whereas Heracleitus himself (*sup.* p. 22, 1) so distinctly describes it as underived. But Aristotle is speaking only of this present world, of the framework of the sky (*οὐρανὸς*); as to the rest, he acknowledges, 280 a, 11: *τὸ ἐναλλὰξ συνιστάναι καὶ διαλύειν αὐτὸν* (here also is a striking refutation of Lassalle's emendation) *οὐδὲν ἀλλοιότερον ποιεῖν ἐστὶν, ἢ τὸ κατασκευάζειν αὐτὸν ἀΐδιον ἀλλὰ μεταβάλλοντα τὴν μορφήν.* Alexander (ap. Simpl. *De Cœlo*, 132 b, 32 sqq.; Schol. 487 b, 43) observes quite in accordance with this: 'If Heracleitus calls the *κόσμος* eternal, he must understand by the word: *οὐ τήνδε τὴν διακόσμησιν, ἀλλὰ καθόλου τὰ ὄντα καὶ τὴν τούτων διάταξιν, καθ' ἣν εἰς ἑκάτερον ἐν μέρει ἡ μεταβολὴ τοῦ παντὸς, ποτὲ μὲν εἰς πῦρ ποτὲ δὲ εἰς τὸν τοιόνδε κόσμον.* Also vol. i. p. 570, 1.

[2] *Phys.* iii. 5, 205 a, 3: *ὥσπερ Ἡράκλειτός φησιν ἅπαντα γίνεσθαί ποτε πῦρ. Meteor.* i. 14, 342 a, 17 sq. is also applied by commentators to Heracleitus; here there is mention of the theory that the sea is becoming smaller by drying up. But a reference is the more uncertain, as a theory of this kind is nowhere attributed to Heracleitus, though it *is* ascribed to Democritus. Vide *infra*, chapter on Democritus.

[1] *ἅπαντα*, not *πάντα* merely.

[2] Lassalle (ii. 163), who is determined to banish the Heracleitean conflagration of the world, even out of Aristotle, simply ignores this context; yet he seems to have a misgiving on the subject, and so resorts to the following desperate expedient. In the passage of the *Physics*, which at a later date passed into the second half of the eleventh book of the *Metaphysics* (which book was compiled, as is well known, from the *Physics*), the proposition from which the words in question are taken (*Phys.* 205, a, 1–4; *Metaph.* 1067 a, 2–4) may first have been transferred from the Metaphysics.

[3] There is no direct evidence of this, but, as the first teachers among the Stoics attached themselves in their physics to Heracleitus, whose doctrines were explained by Cleanthes and Sphærus (Diog. ix. 15; vii. 174, 178), and as the theory of the *ἐκπύρωσις* was taught in the Stoic school from its commencement, and especially by Cleanthes (vide Part III. a, 132 sq. second edition), there can be no doubt of it. As I have shown in the *Hermes*, xi. 4 ff., the proofs, which, according to Theophrastus, *Fr.* 30 (Philo, *Ætern. M.* 959 C sqq., p. 510 sqq. Mang.), were even in his time brought forward against the Aristotelian eternity of the world by the advocates of an alternate formation and destruction —are to be referred to the founder of the Stoa. If they do not originate with him, they must be all the more directly derived from the Heracleitean school.

[4] Diog. ix. 8 (p. 77, 1; 78, 1); M. Aurel. iii. 3 (*Ἡράκλ. περὶ τῆς τοῦ κόσμου ἐκπυρώσεως τοσαῦτα φυσιολογήσας*): Plut. *Plac.* i. 3, 26; Alex. *Meteorol.* 90 a, m, p. 260 Id., where Lassalle's attempt (ii. 170) to do away with the *ἐκπύρωσις* is as impossible as in the passage quoted p. 66, 2 (Lassalle, ii. 177 sq. in regard to him, Bernays' *Heraklit. Briefe*, 121 sq.). Also Simpl. *loc. cit.* 132 b, 17 (487 b, 33), and *Phys.* 6 a, 111 b, 257 b (where Lassalle indeed thinks no writer could express himself more

discover statements to the contrary, not one trustworthy testimony has been found in all the post-Aristotelian literature, to prove that the alternate formation of the world and its destruction by fire was ever denied to have been a doctrine of Heracleitus;[1] no such denial

clearly *against* the ἐκπύρωσις, than Simplicius does in the words: ὅσοι ἀεὶ μέν φασιν εἶναι κόσμον, οὐ μὲν τὸν αὐτὸν ἀεί, ἀλλὰ ἄλλοτε ἄλλον γινόμενον κατά τινας χρόνων περιόδους ὡς Ἀναξιμένης τε καὶ Ἡράκλειτος). Themist, *Phys.* 33 b, p. 231 Sp.; Olympiodorus, *Meteorol.* 32 a, p. 279 Id.; Euseb. *Pr. Ev.* xiv. 3, 6; Philo, *Ætern. M.* 940 B (489 M). In this last passage Heracleitus is not named, but he is certainly intended. He is named in the passage in Clemens, *Strom.* v. 599 B, which is no doubt taken from the same source, and is partly similar in language (here again Lassalle, ii. 159, seeks to explain away the obvious meaning). Cf. *Strom.* v. 549 C. Lucian, *V. auct.* 14. Further details *infra*, p. 77, 1.

[1] Lassalle, ii. 127, after Schleiermacher, appeals first to Max. Tyr. xli. 4, end: μεταβολὴν ὁρᾷς σωμάτων καὶ γενέσεως, ἀλλαγὴν ὁδῶν ἄνω καὶ κάτω κατὰ τὸν Ἡράκλειτον . . . διαδοχὴν ὁρᾷς βίου καὶ μεταβολὴν σωμάτων, καινουργίαν τοῦ ὅλου. 'This writer,' he concludes, 'was acquainted with no other renewal of the world than the partial one which is constantly occurring.' He had no occasion to speak of any other in this place: he is here simply mentioning the *fact of experience* that the destruction of one thing is the birth of another; but the ἐκπύρωσις is not an object of experience, of ὁρᾶν. Lassalle further quotes, M. Aurel. x. 7: ὥστε καὶ ταῦτα ἀναληφθῆναι εἰς τὸν τοῦ ὅλου λόγον, εἴτε κατὰ περίοδον ἐκπυρουμένου εἴτε ἀϊδίοις ἀμοιβαῖς ἀνανεουμένου; and asks, with Schleiermacher, 'to whom except Heracleitus can we refer this latter theory of ἐκπύρωσις which is opposed to that of the Stoics?' It has already been shown, in the previous note, that Marcus Aurelius attributes ἐκπύρωσις to Heracleitus; when he speaks of those who substitute a perpetual for a periodical renovation of the world, this must refer to the Stoical opponents of the destruction by fire (among whom we may count Aristotle and his school); and the same holds good of Cic. *N. De.* ii. 33, 85; Ps.-Censorin. *Fr.* 1, 3. A third citation of Schleiermacher (p. 100), and Lassalle (i. 236; ii. 128) is Plut. *Def. orac.* 12, p. 415: καὶ ὁ Κλεόμβροτος· ἀκούω ταῦτ', ἔφη, πολλῶν καὶ ὁρῶ τὴν Στωϊκὴν ἐκπύρωσιν, ὥσπερ τὰ Ἡρακλείτου καὶ Ὀρφέως ἐπινεμομένην ἔπη. οὕτω καὶ τὰ Ἡσιόδου καὶ συνεξαπατῶσαν. But though this seems to show that certain opponents of the Stoic ἐκπύρωσις sought to withdraw from it the support of Heracleitus as well as of other authorities, the passage does not inform us in the least on what the attempt was based, or whether the censure that the Stoics misapplied the sayings of Heracleitus had any foundation in fact. Lassalle makes a still greater mistake when he quotes (i. 232) on his own behalf, Philo, *De Vint.* 839 D (243 M): ὅπερ οἱ

can be discovered even among those Stoics who were

μὲν κόρον καὶ χρησμοσύνην ἐκάλεσαν, οἱ δὲ ἐκπύρωσιν καὶ διακόσμησιν, and says that in this passage κόρος and ἐκπύρωσις, χρησμοσύνη and διακόσμησις are synonymous. So also the treatise of Philo on the imperishableness of the world, which Lassalle also quotes, ascribes to Heracleitus the relative destruction of the world which was held by the Stoics; cf. p. 67, 3. The same is the case with Diog. ii. 8 (*infra*, p. 77), whose words Lassalle (ii. 136) is obliged to twist into their opposite, in order then to discover in them an 'exceedingly important argument' against the burning of the world. Nor can we gather much from Plotinus, v. 1, 9, p. 490: καὶ Ἡράκλειτος δὲ τὸ ἓν οἶδεν ἀΐδιον καὶ νοητόν, for the theory that the Deity or the primitive fire is eternal, was as little denied by the Stoics, in spite of their ἐκπύρωσις, as by Heracleitus. In Simpl. *De Cœlo*, 132 b, 28 (Schol. 487 b, 43), we first meet with the assertion that Heracleitus δι' αἰνιγμάτων τὴν ἑαυτοῦ σοφίαν ἐκφέρων οὐ ταῦτα, ἅπερ δοκεῖ τοῖς πολλοῖς, σημαίνει, for he also writes κόσμον τόνδε, &c. (*supra*, p. 22, 1), and in agreement with this we read, Stob. *Ecl.* i. 454: Ἡράκλειτος οὐ κατὰ χρόνον εἶναι γενητὸν τὸν κόσμον, ἀλλὰ κατ' ἐπίνοιαν. But what can we infer from this? It is inconvenient for the Neo-Platonists to find in Heracleitus, in place of their own doctrine of the eternity of the world, an alternate genesis and destruction, and so in his case, as in others, they declare that this is not to be understood chronologically, but ideally. But Simplicius himself repeatedly says that Heracleitus spoke of such an alternation (vide previous note), and Stobæus presupposes him to have done so. Lassalle, ii. 142, thinks he has found valuable evidence in favour of his view in the treatise περὶ διαίτης of the Pseudo-Hippocrates, where it is said, in the first book, that all things consist of fire and water; that these are always in conflict with each other, but neither is able entirely to overcome the other; and therefore the world will always be as it now is. But although the first book of the work περὶ διαίτης may contain much that is Heracleitean, it combines with it (as is now generally admitted) such heterogeneous elements that we are not the least justified in regarding the treatise as an authentic record of the physics of Heracleitus. This is evident when we consider the doctrine which forms the corner stone of its whole physiology and psychology: that all things are composed of fire and water. The question as to the date of this treatise is therefore of secondary importance as far as Heracleitus is concerned, though it would certainly be interesting in relation to the history of philosophy in the fifth century, if Teichmüller (*N. Stud.* i. 249 sqq.) could succeed in proving that it falls between Heracleitus and Anaxagoras. But that is far too early a date. There are no traces in it, certainly, of the existence of the Platonic and Aristotelian philosophy; nor can we, I admit, infer an acquaintance of the author with Aristotle's theory of the elements from C, 4 *sub init.*, where fire is described as warm and dry, and water as cold and moist, especially as, according to Plato, *Symp.* 186 D; 188 A;

Soph. 242 D, and the quotation concerning Alcmæon, vol. i. 525, 1, these four natural qualities had previously been insisted on with great emphasis by the physicians; and as water seems to have been called by Archelaus (*infra*, p. 847, 3, 3rd ed.) τὸ ψύχρον as well as τὸ ὑγρόν. But though these considerations might lead us (with Bernays, *Herakl.* 3 sq., and Schuster, pp. 99, 110) to assign the treatise to the Alexandrian period, everything is against the theory that it belongs to the second third of the fifth century. An exposition so detailed, entering into particulars of all kinds with the unmistakeable aim of empirical completeness, and in many parts of the first book quite overladen with such discussions, is very far from the style of that period, as it appears in all the philosophical fragments of the fifth century. Even the fragments of Diogenes and Democritus, and the treatise of Polybus, found among the works of Hippocrates (περὶ φύσιος ἀνθρώπου), are evidently much more simple and ancient in expression. The author of the περὶ διαίτης indeed tells us that he belongs to an epoch advanced in literature, when he speaks of the *many* (c. 1), who have already written about the diet most compatible with health, and also ii. 39 of all those who (ὁκόσοι) have written on the effect of what is sweet, fat, &c. That there should have existed a whole literature on these subjects before the time of Hippocrates is highly improbable. Teichmüller, indeed, reminds us that Heracleitus in *Fr.* 13, *vide supra* (p. 7. 1), appeals to his study of the earlier literature; but this is irrelevant, 1st, because Heracleitus is there speaking only of λόγοι which he has heard, not of a literature which he has studied; and 2nd, the question is not whether there were any writings at all at that time (including the poems of Hesiod, Homer, Xenophanes and others), but whether there was an extensive literature on these particular subjects. For the above reasons, we cannot build on the evidence of Heracleitus's 22nd fragment (*sup.* vol. i. p. 336, 5; 363, 5). Another argument is that the author of the treatise does not know of the doctrines of the Atomists, of Empedocles and Anaxagoras. It would be more exact to say that he does not mention them; but in the case of a writer who never mentions other opinions as such, and only quotes from them what he has himself adopted, this does not prove that he was unacquainted with them, and still less that they were not in existence. But even that cannot be said. C. 4 is explained by the author thus: 'Nothing is generated or destroyed absolutely, but everything changes merely by combination and separation: when therefore he speaks of generation he is only describing the ξυμμίσγεσθαι, and when he speaks of destruction, the διακρίνεσθαι.' It seems to me clear that this is not Heracleitean; and when Schuster (p. 274) maintains that it is so (without authority indeed from any of the fragments or from other evidence), I can only account for it by his own denial (discussed p. 12, 1) of the doctrine of the flux of all things. We do not find this identification of generation with the union, and of destruction with the separation of underived and imperishable substances, before Empedocles, Leucippus and Anaxagoras; and when Teichmüller, p. 262, asks why one author may not have been allied on this point with Xenophanes (Parmenides must surely be intended; for Xenophanes never formally denied generation and destruction), and Anaxagoras with our author, the simple answer is this: because Anaxagoras, Empedocles and Leucippus were known to all antiquity as the authors of systems which have for their common foundation the conception of generation and destruction; whereas nobody knows anything of the treatise περὶ διαίτης from which Teichmüller derives this fundamental conception; because a compiler, like our author, who is so entirely wanting in acuteness and logical perception as to confuse Heracleitus's πάντα χωρεῖ with the above mentioned doctrine based on the presuppositions of Parmenides,—can never have been the discoverer of that doctrine; because lastly, as will appear from the following comparison, the reminiscence of passages from Anaxagoras and Empedocles is unmistakable. Cf. περὶ διαίτ. c. 4:—

οὕτω δὲ τούτων ἐχόντων πουλλὰς καὶ παντοδαπὰς ἰδέας ἀποκρίνονται ἀπ' ἀλλήλων καὶ σπερμάτων καὶ ζῴων, οὐδὲν ὁμοίων ἀλλήλοισιν.

ἀπόλλυται μὲν οὐδὲν ἀπάντων χρημάτων οὐδὲ γίνεται ὅ τι μὴ καὶ πρόσθεν ἦν· ξυμμισγόμενα δὲ καὶ διακρινόμενα ἀλλοιοῦται· νομίζεται δὲ παρὰ τῶν ἀνθρώπων, etc.

νομίζεται δὲ π. τ. ἀνθρ. τὸ μὲν ἐξ Ἄιδου ἐς φάος αὐξηθὲν γενέσθαι.

οὔτε εἰ ζῶον ἀποθανεῖν οἷόν τε . . . ποῦ γὰρ ἀποθανεῖται; οὔτε τὸ μὴ ὂν γενέσθαι, πόθεν γὰρ ἔσται;

ὅ τι δ' ἂν διαλέγωμαι γενέσθαι ἢ ἀπολέσθαι τῶν πολλῶν εἵνεκεν ἑρμηνεύω.

ταῦτα δὲ (γενέσθαι ἀπολέσθαι) ξυμμίσγεσθαι καὶ διακρίνεσθαι δηλῶ . . . γενέσθαι ξυμμιγῆναι τωὐτὸ, ἀπολέσθαι, μειωθῆναι, διακριθῆναι τωὐτό.

Anaxagoras Fr. 3 (p. 798, 3rd edit.): τουτέων δὲ οὕτως ἐχόντων χρὴ δοκέειν ἐνεῖναι πολλά τε καὶ παντοῖα ἐν πᾶσι τοῖς συγκρινομένοις καὶ σπέρματα πάντων χρημάτων καὶ ἰδέας παντοίας ἔχοντα.

Fr. 6 (798, 2): σπερμάτων . . . οὐδὲν ἐοικότων ἀλλήλοις.

Fr. 8 (*ibid.*) ἕτερον δὲ οὐδέν ἐστιν ὅμοιον οὐδενὶ ἄλλῳ.

Fr. 22 (793, 1): τὸ δὲ γίνεσθαι καὶ ἀπόλλυσθαι οὐκ ὀρθῶς νομίζουσιν Ἕλληνες οὐδὲν γὰρ χρῆμα γίνεται οὐδὲ ἀπόλλυται ἀλλ' ἀπ' ἐόντων χρημάτων συμμίσγεταί τε καὶ διακρίνεται.

Anax. ap. *Arist.* (p. 793, 4): τὸ γίγνεσθαι καὶ ἀπόλλυσθαι ταὐτὸν καθέστηκε τῷ ἀλλοιοῦσθαι.

Emped. v. 40 (611, 1, 3rd edit.): οἱ δ' ὅτε μὲν κατὰ φῶτα μιγὲν φάος αἰθέρος ἵκῃ . . . τότε μὲν τόδε φασὶ γενέσθαι.

Emp. 92 (609, 1): τοῦτο δ' ἐπαυξήσειε τὸ πᾶν τί κε καὶ πόθεν ἔλθόν; πῇ δέ κε καὶ ἀπολοίατ';

Emp. 44 (611, 1): νόμῳ δ' ἐπίφημι καὶ αὐτὸς (referring to the use of the word γίγνεσθαι etc.).

Anax. Fr. 22 (793, 1): καὶ οὕτως ἂν ὀρθῶς καλοῖεν τό τε γίνεσθαι συμμίσγεσθαι καὶ τὸ ἀπόλλυσθαι διακρίνεσθαι.

ὁ νόμος γὰρ τῇ φύσει περὶ τούτων ἐναντίος, c. 11. *νόμος γὰρ καὶ φύσις . . . οὐχ ὁμολογέεται ὁμολογεόμενα· νόμον γὰρ ἔθεσαν ἄνθρωποι αὐτοὶ ἑωυτοῖσιν, οὐ γινώσκοντες περὶ ὧν ἔθεσαν· φύσιν δὲ πάντων θεοὶ διεκόσμησαν.*

C. 28: *ψυχὴ μὲν οὖν αἰεὶ ὁμοίη καὶ ἐν μέζονι καὶ ἐν ἐλάσσονι.*

Empedocles, v. 44, also Democritus (*infra*, 694, 4, 705, 2, 3rd edit.) *νόμῳ γλυκὺ, νόμῳ πικρὸν* etc. *ἐτεῇ δὲ ἄτομα καὶ κενόν* (instead of *ἐτεῇ* later accounts have *φύσει*).

Anaxag. Fr. 8 (804, 1): *νόος δὲ πᾶς ὅμοιός ἐστι καὶ ὁ μέζων καὶ ὁ ἐλάσσων.*

I know not whether Teichmüller would represent Anaxagoras in the last quotation as plagiarising from the author of *περὶ διαίτης*. It seems to me quite unmistakable that the latter has here adopted a proposition which was necessary to Anaxagoras on account of his main point of view, but which is not at all compatible with the theory of souls being compounded from fire and water. I think it has been sufficiently shown that this writer was preceded by all the physicists of the fifth century down to Democritus; but there is yet another proof from another side. Even the discovery on which he most prides himself, that living natures, the human soul and all things, are compounded out of fire and water (c. 4–6, 35 *et pass.*) is not his own, but is borrowed from Archelaus the physicist (*infra*, p. 847, 3rd edit.), and when (c. 3) he attributes to fire the power of moving all things, and to water that of nourishing all things, scarcely half the idea is original; for Archelaus had represented the warm as in motion and the cold at rest. In accordance with all this, our treatise must be regarded as the work of a physician in the first decades of the fourth century, who, in writing it, made use of the physical theories then most prevalent in Athens—in the first place those of Archelaus, and next those Heracleitean theories which had there become known through Cratylus. This circumstance makes it probable that it was written in Athens, though possibly by an Ionian. The above theory of date and place of composition agrees with what is said in the work (c. 23): *γραμματικὴ τοιόνδε· σχημάτων σύνθεσις, σημῆα φωνῆς ἀνθρωπίνης . . . δι' ἑπτὰ σχημάτων ἡ γνῶσις ταῦτα πάντα ἄνθρωπος διαπρήσσεται* (he speaks the sounds described by the *σχήματα*) *καὶ ὁ ἐπιστάμενος γράμματα καὶ ὁ μὴ ἐπιστάμενος*: if by the seven *σχήματα*, which in this connection can hardly mean anything else than letters, the seven vowels are meant, these as *φωνήεντα* might still be called in preference *σημῆια φωνῆς*: for it was only after the time of Euclides (403 B.C.) that there were seven in use in Athens. A much more trustworthy mark of this later time is to be found, however, in the way our author opposes *νόμος* to *φύσις* (c. 11, vide *supra*). This opposition is unknown prior to the Sophists. Teichmüller's objection (p. 262) proves nothing. The question is not: Can we suppose such a difference to have existed between the philosophical and the popular point of view? can we prove that the words *νόμος* and *φύσις* were separately used? But

opposed to the doctrine of the burning of the universe,[1] as held by their own school. From Aristotle onwards, therefore, it has been the unanimous, or all but unanimous, tradition of ancient authors that Heracleitus taught that the world would be destroyed by fire and would then be formed anew.

Some have attempted to refute this theory by older and more authentic evidence. Plato distinguishes the opinion of Heracleitus from that of Empedocles thus: 'Heracleitus,' he says, 'held that the existent was *continually* coming together, even in separating itself; whereas Empedocles, instead of a continual concomitance of union and separation, maintained a *periodic* alternation of these two conditions.'[2] How could this language have been justified, it may be asked, if Heracleitus, as well as Empedocles, had taught that there was an alternation between the condition of divided and contradictory Being and a condition of the world in which all things become fire, and consequently all distinction of things and substances ceases? But, in the first place, Heracleitus, even if he maintained that the world was destroyed by fire, need not necessarily have presupposed that in this destruction all opposition and all movement would be for a time extinct as in the Sphairos of Empedocles: he might have thought that, in accordance with the living nature of fire, a new appearance of the elemental contradictories, a new creation of

can we prove that they were opposed to each other formally and on principle in the language and thought of the earlier period? With Heracleitus human laws derive their support from the divine law (*supra*, p. 41, 1). With this author they stand in a natural contradiction.

[1] Cf. Part III. a, 142, second edition.

[2] *Sup.* p. 33, 2.

the world was beginning. If even he ascribed to the state in which all was resolved into fire a longer duration, he need not have considered it a state of absolute oppositionless unity; for fire in his view is the living and eternally moved principle, and its existence is a perpetual appearing and disappearing of opposites. Supposing, however, that he had explained in neither of these ways how the periodical dominion of fire was compatible with the flux of all things, the question remains whether Plato would on that account have refrained from comparing him with Empedocles in the manner quoted above. For the two philosophers are in fact opposed to each other in their principles, as he says: 'Empedocles supposes that there existed at first a state of perfect union of all substances; only after the cancelling of this state, does he allow separation to enter; and by the abolition of this separation union is again established. Heracleitus, on the other hand, declares that union is already present in and with separation; that every sundering is at the same time a coalition, and *vice versâ*. He did not intend to retract this principle in his doctrine of a periodic change in the conditions of the world; if the two doctrines are not compatible, it is a contradiction which he has not observed.' Is it inconceiveable that Plato, where he wishes to characterise the relation of the Heracleitean and Empedoclean principles shortly and decisively, should confine himself to their general presuppositions, without enquiring whether their other theories were altogether consistent with these? Is not this, at any rate, much easier to believe than that Aristotle and all his successors so grossly misunderstood the system of Heracleitus, as we must suppose, if we reject their evidence as to the conflagration of the universe?[1]

Now, as already observed, the alternation of cosmical conditions was not involved in Heracleitus's doctrine of the flux of all things; and if he really imagined that after the conflagration there would be a period in which nothing would exist except the primitive fire, and that in this fire all oppositions would be absolutely cancelled, such a doctrine would be incompatible with the creative vitality of that fire, and with the proposition that the Real is perpetually sundering from itself, in order again to be united. But the question here is not what might be deduced from the Heracleitean principles, but to what extent the philosopher himself drew the inference; and nothing justifies us in supposing that he never set up any theory that did not necessarily and logically follow from his general principles,[2] or which if logically developed might not clash with them. The daily extinction of the sun does not in truth follow from the proposition of the flux of all things; closely considered it rather contradicts the theory which may easily be deduced from the presuppositions of Heracleitus, that the mass of elemental substances

[1] Aristotle, however, says, *Phys.* viii. 3, 253 b, 9, in reference to Heracleitus, although he distinctly attributes to him the doctrine of the conflagration of the world: φασί τινες κινεῖσθαι τῶν ὄντων οὐ τὰ μὲν τὰ δ' οὔ, ἀλλὰ πάντα καὶ ἀεί, while he has previously (c. l. 250 b, 26) ascribed to Empedocles the proposition: ἐκ μέρει κινεῖσθαι καὶ πάλιν ἠρεμεῖν.

[2] If all the elementary substances are involved in perpetual transmutation according to a fixed succession, and herein, a like quantity of one substance is constantly arising out of a like quantity of the other (vide *supra*, p. 56), it necessarily follows that the collective amount must remain the same.

(fire, water, and earth) must always remain the same; for that of fire would be considerably diminished without perpetual compensation. But we cannot on that account deny that Heracleitus held the theory. The pre-existence of the soul and its existence after death cannot, strictly speaking, be brought into connection with the ceaseless change of all things; but we shall nevertheless find that Heracleitus believed in it. It is the same in regard to the case before us. He could not only have done without the conflagration of the world, but he could even have carried out his leading ideas more consistently, if, instead of a periodical genesis and destruction of the universe, he had taught, like Aristotle, that the universe was without beginning or end, while its parts were continually changing. But this thought is so far in advance of ordinary opinion that even philosophy was long in attaining to it.[1] Not one of the ancient philosophers had any idea of explaining the constitution of the world, except in the form of a cosmogony; not even Plato in his exposition can dispense with this form. In comparison with the prevailing notions, it was much that a philosopher should assert, like Heracleitus, that the world, according to its substance, was without beginning. Before the system of the world as such was declared to be underived, and an eternity of the world in the Aristotelian sense was asserted, an attempt was made to combine

[1] The Eleatics alone declared Being to be underived; but Parmenides and his followers do not understand by this Being the world as such, for they deny multiplicity and change. Xenophanes, on his side, as has been shown (*sup.* vol. i. 569 sq.), held such changes within the world itself, that his theory likewise is far removed from that of Aristotle.

the pre-supposition of an origin of the world with the newly won perception of the impossibility of an absolute beginning, by the theory that the world was indeed eternal according to its essential nature, but that its condition was subject from time to time to so complete a change that a new formation of the world became necessary. If this was not the most logical or the most scientific theory, it was at any rate the theory then most obvious to philosophy, and which Heracleitus found in Anaximander and Anaximenus, his immediate predecessors, in the ancient Ionian school, and this is enough to silence all opposition to the unanimous tradition of antiquity.

As every process in the world has its fixed measure, so also the duration of the changing cosmical periods is accurately defined;[1] and with this is probably connected the statement (the correctness of which is not thoroughly established) that Heracleitus believed in a great year which, according to some, he reckoned at 10800, and according to others at 18000 solar years.[2]

[1] Diog. ix. 8: *γεννᾶσθαί τ' αὐτὸν [τὸν κόσμον] ἐκ πυρὸς καὶ πάλιν ἐκπυροῦσθαι κατά τινας περιόδους ἐναλλὰξ τὸν σύμπαντα αἰῶνα· τοῦτο δὲ γίνεσθαι καθ' εἱμαρμένην.* Simpl. *Phys.* 6 a (*sup.* p. 42, 1); similarly 257 b, u; *De Cœlo*, 132 b, 17 (*Schol.* 487 b, 33); Eus. *Pr. Ev.* xiv. 3, 6: *χρόνον τε ὡρίσθαι τῆς τῶν πάντων εἰς τὸ πῦρ ἀναλύσεως καὶ τῆς ἐκ τούτου γενέσεως.*

[2] By the great year, says Censorinus, *Di. Nat.* 18, 11, we are to understand the period which elapses before the seven planets again find themselves in the same sign as they were when it began. This year is fixed by Linus and Heracleitus at 10800 solar years; others determine it differently. On the other hand, Stobæus says, *Ecl.* i. 264 (Plut. *Plac.* ii. 32): *Ἡράκλειτος [τὸν μέγαν ἐνιαυτὸν τίθεται] ἐκ μυρίων ὀκτακισχιλίων ἐνιαυτῶν ἡλιακῶν.* Bernays, *Rhein. Mus. N. F.* vii. 108, thinks that this number was deduced from Hesiod's verses, ap. Plut. *Def. Orac.* 11, p. 415; but it is not easy to see how this could be done. Schuster, on the other hand (p. 375 sq.), gives the preference to the statement in the *Placita*, for he conjectures that Heracleitus may have assigned to

The separation of opposites, or the formation of the world, was called by Heracleitus, strife; the union of what was separated, peace or concord. The state of divided Being he called also want; that of the unity which was introduced by the conflagration, satiety.[1] In this contradiction the life of the world moves, in small things as in great; but it is only one essence which manifests itself in the change of forms: the creative fire is all that comes into being and passes away. The Deity is war and peace, want and satiety.[2]

the world (as he did to man, vide *inf.* p. 87, 4) a period of 30 years, and to each cosmical year twelve centuries instead of twelve months; of the 36000 years which we get in this way, the ὁδὸς ἄνω and κάτω would each occupy 18000. This seems to me altogether too uncertain, and the *Placita* also speak differently: they must therefore, as Schuster thinks, have confused the duration of the διακόσμησις with that of the whole cosmical year. Lassalle, ii. 191 sqq., advances the opinion (corresponding with his hypothesis about the sun, *sup.* p. 58, 2) that Heracleitus's great year is equivalent to the time which elapses before all the atoms in the universe have passed through the circle of Being, and have arrived at the form of fire. Not only is this entirely different from what is said by our authorities, but it is (even irrespectively of the atoms which are absolutely incompatible with his physical theories) much too far-fetched and subtle for Heracleitus; indeed, in itself it is wholly unnatural. Each year must have some definite point where it begins and ends; and so has the 'great year,' if we understand by it what is always understood in other passages. Lassalle's 'great year' might equally well begin and end at any moment.

[1] Diog. according to the previous quotation: τῶν δ' ἐναντίων τὸ μὲν ἐπὶ τὴν γένεσιν ἄγον καλεῖσθαι πόλεμον καὶ ἔριν, τὸ δ' ἐπὶ τὴν ἐκπύρωσιν ὁμολογίαν καὶ εἰρήνην. Hippol. *Refut.* ix. 10; *sup.* p. 17, 3; 46, 1; Philo, *Leg. Alleg.* ii. 62 A; *sup.* p. 17, 3; *De Vict. sup.* p. 68 *n.* The κόρος and the χρησμοσύνη are alluded to by Plutarch in the passage of *De Ei.* c. 9, discussed in vol. iii. a, 140, 6, second edition. Heracleitus, however, is not mentioned, and the whole statement probably refers to a Stoical interpretation of myths. The Stoics had naturally borrowed the expression κόρος and χρησμοσύνη from Heracleitus; but we have no right to take for granted that what Plutarch here says of the duration of both states is also from Heracleitus, especially as the Stoics themselves seem by no means unanimous about it. Seneca, *Ep.* 9, 16 (*l. c.* p. 131, 2), expresses himself as if the ἐκπύρωσις were merely a short episode between successive worlds.

[2] *Sup.* pp. 17, 3; 38, 1; 46, 1.

3. *Man—his Knowledge and his Actions.*

Man, like everything else in the world, in the last resort originates from fire. But in this respect there are great differences between the two parts of his nature. The body considered in itself is rigid and lifeless; when, therefore, the soul has departed from it, it is to Heracleitus only an object of aversion.[1] In the soul, on the other hand, the infinite portion of man's nature,[2] the divine fire in its purer form has been preserved.[3] The soul consists of fire, of warm and dry vapours,[4] which consequently

[1] *Fr.* 91, vide *inf.* p. 83, 3; *Fr.* 51 (ap. Plut. *Qu. Conv.* iv. 4, 3, 6; Orig. *c. Cels.* v. 14, 24; cf. Schleiermacher, 106): νέκυες κοπρίων ἐκβλητότεροι.

[2] *Fr.* 90; Diog. ix. 7. Tert. *De An.* 2; cf. Schuster, 270, 391 sq., ψυχῆς πείρατα οὐκ ἂν ἐξεύροιο πᾶσαν ἐπιπορευόμενος ὁδόν· οὕτω βαθὺν λόγον ἔχει. I agree in the main with Schuster that πείρατα refers to the limit to which the soul goes, the limit of its nature; but it seems to me the alteration which he proposes in the text can be dispensed with. Still less can I endorse Lassalle's emendations (ii. 357).

[3] It is so far not without reason that Chaleid. *in Tim.* c. 249 (as shown by Lassalle, ii. 341) ascribes to Heracleitus the Stoic doctrine so familiar to the ancients generally, of the constant interdependence between the human spirit and the Divine. In what form however, and how definitely he brought forward this doctrine, we cannot learn from this late testimony.

[4] The best authority for this is the passage from Aristotle discussed p. 22, 4; 23, 1; where the ἀναθυμίασις means the same as what is elsewhere called πῦρ. Although this fire is called ἀσωματώτατον, we must not conclude with Themistius (vide *inf.*) that it was ἀσώματον, or with Lassalle, ii. 331, that it was something absolutely immaterial; the meaning is that it was the rarest, the least palpable substance, the substance which comes nearest to actual incorporeality. The reason given for this definition, viz. that the soul must be moved, in order that it may know things that are moved, is a conjecture of Aristotle, who has already (*De An.* 404 b, 7 sq.) stated the general presupposition on which he bases it. Cf. also Philop. *De An.* C, 7 (*supra*, p. 24, 1); Themist. *De An.* 67 a, u (ii. 24 *Sp.*): καὶ Ἡράκλειτος δὲ ἣν ἀρχὴν τίθεται τῶν ὄντων, ταύτην τίθεται καὶ ψυχήν· πῦρ γὰρ καὶ οὗτος· τὴν γὰρ ἀναθυμίασιν ἐξ ἧς τὰ ἄλλα συνίστησιν (so Arist.) οὐκ ἄλλο τι ἢ πῦρ ὑπολαπτέον, τοῦτο δὲ καὶ ἀσώματον καὶ ῥέον ἀεί. Arius Did. ap. Eus. *Pr. Ev.* xv. 20, 1: ἀναθυμίασιν μὲν οὖν ὁμοίως τῷ Ἡρακλείτῳ τὴν ψυχὴν ἀποφαίνει Ζήνων. Tert. *De An.* c. 5: *Hippasus et*

on that account are also called 'soul.'[1] The purer this fire is, the more perfect is the soul: 'the driest soul is the wisest and best;'[2] it strikes, we are told, through the

Heraclitus ex igni (*animum effingunt*). Macrob. *Somn.* i. 14: *Heraclitus physicus* [*animum dixit*] *scintillam stellaris essentiæ* (i.e., of the heavenly fire). Nemes. *Nat. Hom.* c. 2, p. 28: Ἡράκλ. δὲ τὴν μὲν τοῦ παντὸς ψυχὴν (this is not of course Heracleitus's expression) ἀναθυμίασιν ἐκ τῶν ὑγρῶν, τὴν δὲ ἐν τοῖς ξώοις ἀπό τε τῆς ἐκτὸς καὶ τῆς ἐν αὐτοῖς ἀναθυμιάσεως ὁμογενῆ (scil. τῇ ἀναθυμιάσει, or better: τῇ τοῦ παντὸς) πεφυκέναι. Similarly Plut. *Plac.* iv. 3, 6. According to Sext. *Math.* ix. 363; Tert. *De An.* 9, 14, it was said by some that Heracleitus held the soul to be air. For the explanation of this, cf. Part III. b, 23, 26.

[1] *Fr.* 89; *sup.* p. 24, 2; 50 sq.; i. 614 sq.

[2] *Fr.* 54, 55. This proposition is very commonly attributed to Heracleitus, but the readings of the MSS. are so various that it is difficult to decide how it originally stood. Stob. *Floril.* 5, 120, has αὕη ψυχὴ σοφωτάτη καὶ ἀρίστη. Our MS. gives αὕη ξηρὴ, another αὐγὴ ξηρή. In the fragment of Musonius, *ibid.* 17, 43, the readings vary between αὕη without ξηρὴ, αὐγὴ ξηρὴ and αὖ γῆ ξηρή. Instead of αὕη Porph. *Antr. Nymph.* c. 11, has: ξηρὰ ψυχὴ σοφωτάτη; similarly Glykas, *Annal.* 74, 116 (Schleiermacher, p. 130): ψυχὴ ξηροτέρη σοφωτέρη. Similarly Plut. *v. Rom.* c. 28: αὕτη γὰρ ψυχὴ ξηρὴ (al. αὕη γ. ψ. καὶ ξ.) ἀρίστη καθ' Ἡράκλειτον, ὥσπερ ἀστραπὴ νέφους διαπταμένη τοῦ σώματος (that this addition is also taken from Heracleitus seems probable, partly from the connection in Plutarch, and partly from the passage about to be quoted from Clemens). Plut. *Def. Orac.* 41, p 432: αὕτη γὰρ ξηρὰ ψυχὴ καθ' Ἡράκλειτον. On the other hand we find in Pseudo-Plut. *De Esu Carn.* i. 6, 4, p. 995: "αὐγὴ ξηρὴ ψυχὴ σοφωτάτη" κατὰ τὸν Ἡράκλειτον ἔοικεν (sc. λέγειν); or, according to another reading, αὐγῇ ξηρῇ ψυχὴ σοφ. κ. τ. Ἡρ. ἔοικεν. Similarly Galen. *Qu. An. Mores*, etc. c. 5, vol. iv. 786 K, and to the same effect Hermias *in Phædr.* p. 73: αὐγὴ ξυνὴ ψυχὴ σοφωτάτη, and Clemens *Pædag.* ii. 156 C, without mention of Heracleitus: αὐγὴ δὲ ψυχὴ ξηρὰ σοφωτάτη καὶ ἀρίστη . . . οὐδέ ἐστι κάθυγρος ταῖς ἐκ τοῦ οἴνου ἀναθυμιάσεσι, νεφέλης δίκην σωματοποιουμένη. Philo, ap. Eus. *Pr. Ev.* viii. 14, 67 has: οὖ γῆ ξηρὴ, ψυχὴ σοφωτάτη καὶ ἀρίστη, and that the true reading in this place is not, as in some texts, αὐγὴ or αὐγῇ (one text has ξηρῇ ψυχῇ) but οὖ γῆ, is clear from the passage in Philo's *De Provid.* ii. 109: *in terra sicca animus est sapiens ac virtutis amans* (for further details, cf. Schleiermacher, p. 129 sq.). Schleiermacher supposes that there were three different expressions: οὖ γῆ ξηρὴ, ψυχὴ, &c., αὕη ψυχὴ, &c., αὐγὴ ξηρὴ ψυχὴ, &c. But this is very improbable; and even if the first of the three fragments is distinct from the other two, these latter seem to be originally identical. How the expression really stood, and how its different versions are to be explained, cannot be positively determined. I do not think, however, that the

bodily veil like lightning through clouds.[1] If, on the other hand, the soul-fire is polluted by moisture, reason is lost;[2] and in this way Heracleitus explains the phenomena of intoxication; the drunken man is not master of himself because his soul is moistened.[3] As, however, everything is subject to perpetual change, and is constantly being produced anew, so it is with the soul: not only did its fire come from without into the body, but it must be fed from the fire without in order to sustain itself—a theory which was obviously suggested by the process of breathing, if once the soul were compared to the vital air.[4] Heracleitus consequently

proposition, "αὐγὴ ξηρὴ ψυχὴ σοφωτάτη," is Heracleitean. The subject ψυχὴ as part of the predicate has something very disturbing in it, and αὐγὴ ξηρὴ would be a singular pleonasm, for there is no αὐγὴ ὑγρά; the rise of moisture is an extinction of the beam. If, therefore, the words were originally so written by Heracleitus (as certainly seems probable from the frequency with which they are quoted), we must suppose that there was some difference in the punctuation. If Heracleitus wrote that the moist soul was imprisoned by the body, but that the dry soul διίπταται τοῦ σώματος, ὅκως νέφεος αὐγὴ· ξηρὴ ψυχὴ σοφωτάτη καὶ ἀρίστη (and something of the kind seems to be presupposed in Plut. *V. Rom.* 28), everything would be fully explained. Schuster, p. 140, suggests that Plutarch's ἀστραπὴ would be much more applicable than αὐγή; whereas Teichmüller, *N. Stud.* i. 65, shows that αὐγὴ stands also for lightning; cf. *Il.* xiii. 244; Hes. *Theog.* 699; Sophocl. *Phil.* 1199 (βροντᾶς αὐγαῖς μ' εἶσι φλογίζων). Schuster's explanation: 'If the gas is dry, the soul is wisest,' is (even irrespectively of the gas) contradicted by what is said above—that it would only be possible to speak of an αὐγὴ ξηρὰ, and to declare the dry αὐγὴ to be wise, supposing there were also an αὐγὴ ὑγρά. Would anyone say: 'if the beam,' or 'if the flame, is dry?'

[1] I doubt whether that which is ascribed to Heracleitus by Tertullian (*De An.* 14), as well as by Ænesidemus and Strabo, is authentic, viz., that the soul, *in totum corpus diffusa et ubique ipsa, velut flatus in calamo per cavernas, ita per sensualia variis modis emicet.*

[2] Cf. the proposition quoted *sup.* p. 24, 2, which primarily has a more general meaning.

[3] *Fr.* 53; Stob. *Floril.* 5, 120: ἀνὴρ ὅκόταν μεθυσθῇ ἄγεται ὑπὸ παιδὸς ἀνήβου σφαλλόμενος, οὐκ ἐπαΐων ὅκη βαίνει, ὑγρὴν τὴν ψυχὴν ἔχων. Cf. Plut. *Qu. Conv.* iii., *Proœm.* 2, and Stob. *Floril.* 18, 32.

[4] Cf. vol. i. p. 485, 2.

supposed[1] that Reason or warm matter entered into us through the atmosphere,[2] partly through the breath, partly through the organs of the senses.[3] When these avenues are closed in sleep, the light of reason is ex-

[1] *Sup.* p. 42, 2; Sext. *Math.* vii. 127 sqq.: ἀρέσκει γὰρ τῷ φυσικῷ [Ἡρακλείτῳ] τὸ περιέχον ἡμᾶς λογικόν τε ὂν καὶ φρενῆρες . . . τοῦτον δὴ τὸν θεῖον λόγον κατ' Ἡράκλειτον δι' ἀναπνοῆς σπάσαντες νοεροὶ γινόμεθα, καὶ ἐν μὲν ὕπνοις λανθάνοις κατὰ δὲ ἔγερσιν πάλιν ἔμφρονες· ἐν γὰρ τοῖς ὕπνοις μυσάντων τῶν αἰσθητικῶν πόρων χωρίζεται τῆς πρὸς τὸ περιέχον συμφυΐας ὁ ἐν ἡμῖν νοῦς, μόνης τῆς κατὰ ἀναπνοὴν προσφύσεως σωζομένης οἱονεί τινος ῥίζης . . . ἐν δὲ ἐγρηγορόσι πάλιν διὰ τῶν αἰσθητικῶν πόρων ὥσπερ διά τινων θυρίδων προκύψας καὶ τῷ περιέχοντι συμβάλλων λογικὴν ἐνδύεται δύναμιν. ὅνπερ οὖν τρόπον οἱ ἄνθρακες πλησιάσαντες τῷ πυρὶ κατ' ἀλλοίωσιν διάπυροι γίνονται, χωρισθέντες δὲ σβέννυνται, οὕτω καὶ ἡ ἐπιξενωθεῖσα τοῖς ἡμετέροις σώμασιν ἀπὸ τοῦ περιέχοντος μοῖρα κατὰ μὲν τὸν χωρισμὸν σχεδὸν ἄλογος γίνεται, κατὰ δὲ τὴν διὰ τῶν πλείστων πόρων σύμφυσιν ὁμοειδὴς τῷ ὅλῳ καθίσταται. The image of the embers is employed in another connection by the pseudo-Hippocrates, π. διαίτ. i. 29. That Sextus here reproduces the conception of Heracleitus in his own words, or those of Ænesidemus, is plain. The assertion, Sext. vii. 349 (cf. Tert. *De An.* 15), that the soul, according to Heracleitus, was outside the body, is merely an inference. *Ibid. M.* viii. 286, according to Heracleitus's express declaration: μὴ εἶναι λογικὸν τὸν ἄνθρωπον, μόνον δ' ὑπάρχειν φρενῆρες τὸ περιέχον. Similarly the so-called Apollonius of Tyana, *Epist.* 18: Ἡράκλ. . . . ἄλογον εἶναι κατὰ φύσιν ἔφησε τὸν ἄνθρωπον.

[2] That this is the meaning of the περιέχον is clear from the words of Sextus; we are connected with the air outside us by means of our breath, and with the light outside us by means of our eyes. This mode of conception is not strange in Heracleitus; if reason is identical with fire, it is quite natural that it should enter man with the animating and warming breath, and be nourished by light and air. Only if we refine away Heracleitus's primitive fire to a metaphysical abstraction, as Lassalle does, have we any right to find fault with this sort of language from him. Lassalle (i. 305 sqq.) understands by the περιέχον 'the universal and actual process of becoming,' or (ii. 270) the objective, world-forming law, which is called the περιέχον, because it overcomes all things. But περιέχειν does not mean 'overcome' (certainly not, as Lass. i. 308 represents it, with the accusative of the object), and τὸ περιέχον never means anything else than 'the surrounding.' In the passage from Sextus no other meaning can be thought of. Moreover it seems to me (as to Lassalle, i. 307) improbable that Heracleitus himself ever made use of the expression περιέχον.

[3] Whether Heracleitus imagined that the soul was also developed from the blood, and was sustained by it (cf. p. 79, 4), is not quite clear.

tinguished, and man is limited in his presentations to his own world—to the subjective fancies of dreams,[1] though in reality he still cannot withdraw himself from the movement of the universe.[2] When these avenues are opened, in awaking, the light of reason is again kindled; when the connection with the outer world through respiration ceases, this light goes out for ever.[3]

But Heracleitus (as subsequently Empedocles, in a somewhat different manner) brought mythical notions of life and death into a connection with these physical theories, which was certainly not required by his philosophical presuppositions. From these presuppositions we could only deduce that the soul, like everything else perpetually reproducing itself in the flux of natural life, retains its personal identity so long as this production proceeds in the same manner and in the same proportion: that, on the contrary, it is destroyed, as an individual, when the formation of soul-substance ceases at this definite point; and since soul-substance, according to Heracleitus, consists in warm vapours which are partly developed from the body and partly drawn in with the breath, the soul cannot survive the body. Heracleitus seems to have contented himself with the vague notion that life continues so long as the divine fire animates the man, and that it ceases when that fire

[1] Plut. *De Superst.* c. 3, p. 166: ὁ Ἡράκλειτός φησι, τοῖς ἐγρηγορόσιν ἕνα καὶ κοινὸν κόσμον εἶναι, τῶν δὲ κοιμωμένων ἕκαστον εἰς ἴδιον ἀποστρέφεσθαι.

[2] M. Aurel. vi. 42: καὶ τοὺς καθεύδοντας, οἶμαι, ὁ Ἡράκλειτος ἐργάτας εἶναι λέγει καὶ συνεργοὺς τῶν ἐν τῷ κόσμῳ γινομένων.

[3] *Fr.* 91, ap. Clem. *Strom.* iv. 530 D: ἄνθρωπος ἐν εὐφρόνῃ φάος ἅπτει ἑαυτῷ· ἀποθανὼν ἀποσβεσθείς. ζῶν δὲ ἅπτεται τεθνεῶτος εὕδων· ἀποσβεσθεὶς ὄψεις ἐγρηγορὼς ἅπτεται εὕδοντος.

leaves him. He personifies this divine element and says that men are mortal gods and gods immortal men; our life is the death of the gods, and our death their life.[1] So long as man lives the divine part of his nature is bound up with the baser substances, from which in death he again becomes free.[2] Souls, he says, traverse the way upwards and the way downwards; they enter into bodies because they require change and become weary of continuing in the same state.[3] He

[1] *Fr.* 60, the original form of which is doubtless given by Hippol. *Refut.* ix. 10, in the words: ἀθάνατοι θνητοί, θνητοὶ ἀθάνατοι, ζῶντες τὸν ἐκείνων θάνατον, τὸν δὲ ἐκείνων βίον τεθνεῶτες. Schleiermacher, putting together the following passages: Heracl. *Alleg. Hom.* c 24, p. 61 Mehl.; Max. Tyr. *Diss.* x. 4, end (xli. 4 ad fin.); Clem. *Paedag.* iii. 215 A; Hierocl. *in Carm. Aur.* p. 186 (253); Porph. *Antr. Nymph.* c. 10, end; Philo, *Leg. Alleg.* i. p. 60 C (*Qu. in Gen.* iv. 152); cf. Luc. *V. Auct*, 14, deduces from them this view: ἄνθρωποι θεοὶ θνητοί, θεοί τ' ἄνθρωποι ἀθάνατοι, ζῶντες τὸν ἐκείνων θάνατον, θνήσκοντες τὴν ἐκείνων ζωήν. Against him and Lassalle, i. 136 sq., vide Bernays, *Heracleit. Briefe*, 37 sq.; cf. also, p. 17, 4; and Clem. *Strom.* iii. 434 C: οὐχὶ καὶ Ἡράκλειτος θάνατον τὴν γένεσιν καλεῖ;

[2] Heracleitus's theory was consequently expounded by Sext. *Pyrrh.* iii. 230; Philo, *L. Alleg.* 60 C, and others, in similar language to that of the Pythagoreans and Platonists. Whether the passage in Sextus, *l. c.*, Ἡρ. φησὶν, ὅτι καὶ τὸ ζῆν καὶ τὸ ἀποθανεῖν καὶ ἐν τῷ ζῆν ἡμᾶς ἐστι καὶ ἐν τῷ τεθνάναι, contains Heracleitus's own words, or is merely an inference from the utterance quoted above, is doubtful. Still less can we be sure from the passage in Philo that Heracleitus himself employed the comparison of the σῶμα with the σῆμα (*sup.* vol. i. 482, 1, 2).

[3] Iambl. ap. Stob. *Ecl.* i. 906: Ἡράκλειτος μὲν γὰρ ἀμοιβὰς ἀναγκαίας τίθεται ἐκ τῶν ἐναντίων ὁδόν τε ἄνω καὶ κάτω διαπορεύεσθαι τὰς ψυχὰς ὑπείληφε, καὶ τὸ μὲν τοῖς αὐτοῖς ἐπιμένειν κάματον εἶναι, τὸ δὲ μεταβάλλειν φέρειν ἀνάπαυσιν. The same, *ibid.* 896, in regard to the different theories of the deterioration of the soul it is said: καθ' Ἡράκλειτον δὲ τῆς ἐν τῷ μεταβάλλεσθαι ἀναπαύλης . . . αἰτίας γιγνομένης τῶν καταγωγῶν ἐνεργημάτων. These statements are illustrated and confirmed by Æn. Gaz. *Theophr.* p 5, *Boiss.*: ὁ μὲν γὰρ Ἡράκλειτος διαδοχὴν ἀναγκαίαν τιθέμενος ἄνω καὶ κάτω τῆς ψυχῆς τὴν πορείαν ἔφη γίνεσθαι. ἐπεὶ κάματος αὐτῇ τῷ δημιουργῷ συνέπεσθαι καὶ ἄνω μετὰ τοῦ θεοῦ τόδε τὸ πᾶν συμπεριπολεῖν καὶ ὑπ' ἐκείνῳ τετάχθαι καὶ ἄρχεσθαι, διὰ τοῦτο τῇ τοῦ ἡρεμεῖν ἐπιθυμίᾳ καὶ ἀρχῆς (the dominion over the body) ἐλπίζει κάτω φησὶ τὴν ψυχὴν φέρεσθαι. Here, however, the Heracleitean doctrine is

applied also to individual souls that which could only be said logically of the universal soul, or of the divine animating fire. We see from various traces that he attributed a further existence to souls escaped from their bodies. In one of his fragments he says that there awaits man after his death that which he now neither hopes nor believes;[1] in another he promises a reward to

interpreted in a Platonic sense. Heracleitus certainly never spoke of the Demiourgos; and the other similarities between this passage and the Phædrus may be occasioned (as Lassalle, ii. 235 sq., seeks to prove), not so much by the influence of Heracleitus's writings on Plato, as by that of Plato's on Æneas. Æneas, p. 7, says of Heracleitus: ᾧ δοκεῖ τῶν πόνων τῆς ψυχῆς ἀνάπαυλαν εἶναι τὴν εἰς τόνδε τὸν βίον φυγήν; and Numen. ap. Porph. *De Antro Nymph.* c. 10 (*sup.* p. 18, 1), agrees with this in the quotation: "ψυχῇσι τέρψιν," μὴ θάνατον from Heracleitus (this, as Schuster, p. 191, supposes, is an addition of Numenius referring to the proposition quoted p. 24, 2, and an addition that is contrary to the meaning of Heracleitus, who represents the τέρψις as consisting precisely in the transmutation, the θάνατος of the soul), "ὑγρῇσι γενέσθαι," τέρψιν δὲ εἶναι αὐταῖς τὴν εἰς τὴν γένεσιν πτῶσιν. The propositions of Heracleitus are, however, most authentically given by Plotinus in the passage (iv. 8, 1) pointed out by Lassalle, i. 131: ὁ μὲν γὰρ Ἡράκλειτος . . . ἀμοιβάς τε ἀναγκαίας τιθέμενος ἐκ τῶν ἐναντίων, ὁδόν τε ἄνω καὶ κάτω εἰπὼν, καὶ "μεταβάλλων ἀναπαύεται" καὶ "κάματός ἐστι τοῖς αὐτοῖς μοχθεῖν καὶ ἄρχεσθαι" (here Lassalle, following Creuzer, would substitute ἄγχεσθαι, but, as he himself observes, the passage from Æneas is in favour of ἄρχεσθαι) εἰκάζειν ἔδωκεν (as to the reasons of the soul's descent) ἀμελήσας σαφῆ ἡμῖν ποιῆσαι τὸν λόγον. When Pluterch. *De Sol. Anim.* 7, 4. p. 9664, says of Empedocles and Heracleitus that they blame Nature (cf. p. 32, 1): ὡς ἀνάγκην καὶ πόλεμον οὖσαν . . . ὅπου καὶ τὴν γένεσιν αὐτὴν ἐξ ἀδικίας συντυγχάνειν λέγουσι τῷ θνητῷ συνερχομένου τοῦ ἀθανάτου καὶ τέρπεσθαι τὸ γενόμενον παρὰ φύσιν μέλεσι τοῦ γεννήσαντος ἀποσπωμένοις, it is a question whether the latter part of this passage from ὅπου onwards is (as Schuster supposes, 185, 1) really founded on Heracleitean utterances. It reminds us most obviously of Empedocles, *inf.* p. 3, 656, 2, third edit.

[1] *Fr.* 69, ap. Clem. *Strom.* iv. 532 B; *Cohort.* 13 D; Theod. *Cur. Gr. Aff.* viii. 41, p. 118; Stob. *Floril.* 120, 28; ἀνθρώπους μένει ἀποθανόντας ἅσσα οὐκ ἔλπονται οὐδὲ δοκέουσι. Perhaps there is a reference to the same subject in *Fr.* 17, ap. Clem. *Strom.* ii. 366 B; Theod. i. 88, p. 15: ἐὰν μὴ ἔλπηται ἀνέλπιστον οὐκ ἐξευρήσει, ἀνεξερεύνητον ἐὸν καὶ ἄπορον. Instead of ἔλπηται and ἐξευρήσει, Theodoret has ἐλπίξητε and εὑρήσετε. Schuster, p. 45, conjectures ἔλπηαι.

those who have fallen gloriously;[1] in a third he speaks of the condition of souls in Hades;[2] in two others he makes mention of the dæmons[3] and heroes,[4] and assigns

[1] *Fr.* 120, ap. Clem. *Strom.* iv. 494 B; Theod. *Cur. Gr. Aff.* ix. 39, p. 117: *μόροι γὰρ μέζονες μέζονας μοίρας λαγχάνουσι*, cf. *Fr.* 119, ap. Theod.: *ἀρηϊφάτους οἱ θεοὶ τιμῶσι καὶ οἱ ἄνθρωποι*, I cannot, with Schuster, p. 304, regard these passages as ironical.

[2] *Fr.* 70 Plut. *Fac. Lun.* 28, end, p. 943: Ἡράκλ. εἶπεν ὅτι αἱ ψυχαὶ ὀσμῶνται καθ' ᾅδην. The meaning of these words is obscure. Schuster's explanation: Souls scent out Hades, reach after it greedily as a restorative, is the less satisfactory to me, as Plutarch gives the sentence in proof that souls in the other world can feed themselves on vapours. In this connection we might bring forward what Aristotle quotes, *De Sensu*, c. 5, 443 a, 23: *ὡς εἰ πάντα τὰ ὄντα καπνὸς γένοιτο, ῥῖνες ἂν διαγνοῖεν*. Bernays, *Rh. Mus.* ix. 265, refers it, in a far-fetched manner, as it seems to me, to the conflagration of the world. In these propositions we can hardly look for any special reference.

[3] *Fr.* 61, Hippol. *Refut.* ix. 10: *ἔνθαδε εἰόντι* [Bern. *ἐόντας*] *ἐπανίστασθαι καὶ φύλακας γίνεσθαι ἐγερτὶ ζώντων* (so Bern. instead of *ἐγερτιζόντων*) *καὶ νεκρῶν*. I refer these words to the dæmons assigned as the protectors of men, cf. Hes. *E. καὶ ἡμ.* 120 sqq., 250 sqq. Lassalle i. 185 sees in them a resurrection of souls, but this is a mistake, at any rate if regard to the expression; for *ἐπανίστασθαι* does not here signify to rise again, but to raise oneself, namely, to be overseers of men. I must express myself still more decidedly against the idea that Heracleitus enunciated the doctrine of the resurrection of the body (Lassalle, ii. 204). Lassalle does not mean indeed by this resurrection the *ἀνάστασις σαρκὸς* in the Christian sense, which Hippolytus, *l.c.*, finds to be clearly taught (*φανερῶς* must be substituted for *φανερᾶς*); he means only this: that all the particles of matter which had previously formed a human body, find themselves again united at a later period of the world in a similar body. This conception is not only much too far-fetched for Heracleitus, and entirely without support from any of his writings, but it is quite incompatible with his point of view: these particles of matter do not exist any longer in the later period of the world; they are as these definite substances entirely destroyed in the stream of Becoming; they have become other substances; and if even they may have been partially changed again into the constituents of human bodies, there is no ground for the supposition that from those particular substances which arose from some particular body, and from no others, a body will afterwards again be formed. Schuster (p. 176) prefers this reading: [*δαίμων ἐθέλει*] *ἐνθάδε ἐόντι ἐπίστασθαι καὶ φυλακὸς* (= *φύλαξ*) *γίνεσθαι ἐγερτὶ ζ. κ. ν.* But Hippolytus, as it seems to be, would then have had greater difficulties in finding the resurrection of the flesh, than in the ordinary text with its *ἐπανίστασθαι*.

[4] *Fr.* 130, Orig. *c. Cels.* vii. 62: *οὔτε γιγνώσκων θεοὺς οὔτε ἥρωας οἵτινές εἰσι.*

the dæmons as guardians, not only to the living, but to the dead; and he is said to have taught that all things are full of souls and dæmons.[1] It is doubtless, therefore, his opinion that souls enter the body from a higher existence, and after death, when they have proved themselves worthy of this privilege, they return as dæmons into a purer life;[2] in regard to details, however, he seems to have retained the ordinary notions concerning Hades.[3]

Whether Heracleitus enquired more particularly concerning the corporeal life of man cannot be discovered with certainty[4] from the very little that has been handed down to us by tradition on this subject. On the other hand, there are many passages quoted from him in which he applies his standpoint to the cognitive faculty and moral action of man.

[1] Diog. ix. 7, cf. p. 46, 2.

[2] And in an individual life; not as Theodoretus, v. 23, p. 73, says, in the soul of the world.

[3] Cf. the similar eschatology of Pindar, *supra*, vol. i. p. 70.

[4] We find from *Fr.* 62 ap. Plut. *Def. Orac.* c. 11; *Plac.* v. 24; Philo, *Qu. in Gen.* ii. 5, end p. 82 Auch.; Censorin. *Di. Nat. C.* 16, cf. Bernays, *Rh. Mus.* vii. 195 sq., that he reckoned the life of a man at thirty years, because a man in his thirtieth year might have a son —who was himself a father, and therefore human nature completes its circuit in that time. Reference is made to this circle in *Fr.* 73, ap. Clem. *Strom.* iii. 432 A: "*ἐπειδὰν* (l. *ἔπειτα*) *γενόμενοι ζώειν ἐθέλουσι μόρους τ' ἔχειν*," *μᾶλλον δὲ ἀναπαύεσθαι* (this, in spite of Schuster's representations, p. 193, 1, I consider to be an emendation of Clemens, referring perhaps to the view of the *μεταβολὴ* discussed *supra*, p. 84, 3, or else a protest of the Christian against the philosopher who treats death simply as the end of life; it would not agree with the *κακίζειν τὴν γένεσιν* which Clemens finds in the passage) "*καὶ παῖδας καταλείπουσι μόρους γενέσθαι*." No great weight, however, is to be attached to these observations. What is said in Hippocr. *π. διαιτ.* i. 23 end, on the seven senses, and *ibid.* c. 10, on the abdomen, and on the three revolutions of fire in the human body, can hardly be taken from Heracleitus; the statement (of Joh. Sicel, Walz, *Rhett.* vi. 95, quoted by Bernays, *Herael.* 19), that Heracleitus pursued anatomical enquiries, is more than doubtful.

In regard to cognition, he could only place its highest problem in that which to him was the central point of all his convictions, viz. in seizing the eternal essence of things in the flux of the phenomenon, and in freeing ourselves from the deceitful appearance which presents to us a permanent Being of the changeable. He therefore declares that wisdom consists in one thing, in knowing the reason which rules all;[1] we must follow the common reason, not the particular opinions of individuals;[2] if a discourse is to be reasonable it must be founded on that which is common to all, and the only thing which is thus common is thought.[3] Only the rational cognition of the Universal can therefore have any value for him: the sensual perception he must, of course, regard with mistrust. What our senses perceive is merely the fleeting phenomenon, not the essence;[4] the eternally living fire is hidden from them by a hundred veils;[5] they show us as something stiff

[1] *Supra*, p. 42, 2. This knowledge, however, is itself according to Lassalle, ii. 344, conditional on a 'revelation to oneself of the objective and absolute.' Lassalle in support of this relies partly on Sext. M. viii. 8, Ænesidemus defined the ἀληθὲς as the *μὴ λῆθον τὴν κοινὴν γνώμην*; and partly on the fragment quoted p. 25, 2. Sextus, however, does not say that Ænesidemus had this definition from Heracleitus, and if he did, we could not conclude very much from it. The fragment calls fire the *μὴ δῦνον*, which is something quite different from the *μὴ λῆθον*. Though it is very possible that Heracleitus may have said that the Divine or Reason was knowable to all, there is, even apart from Lassalle's modernising view of this thought,—no proof of it to be discovered.

[2] *Fr.* 7; cf. p. 43, 1.

[3] *Fr.* 123; Stob. *Floril.* 3, 84: *ξυνὸν ἐστι πᾶσι τὸ φρονεῖν· ξὺν νόῳ λέγοντας ἰσχυρίζεσθαι χρὴ τῷ ξυνῷ πάντων, ὅκωσπερ νόμῳ πόλις καὶ πολὺ ἰσχυροτέρως· τρέφονται γὰρ, κ.τ.λ. sup.* p. 41, 1. On the meaning of the words, cf. p. 43, 1.

[4] Arist. *Metaph.* i. 6, sub init.: *ταῖς Ἡρακλειτείοις δόξαις, ὡς τῶν αἰσθητῶν ἀεὶ ῥεόντων καὶ ἐπιστήμης περὶ αὐτῶν οὐκ οὔσης.*

[5] Diog. ix. 7: *τὴν ὅρασιν ψεύδεσθαι* (ἔλεγε). Lucret. *Rer. Nat.* i. 696: *credit enim (Heraclitus) sensus ignem cognoscere vere, cetera non credit*, fire being the only sensible phenomenon in which the substance of things displays itself according to its true nature.

and dead what is really the most movable and living of all things.[1] Or, as the later theory of the Heracleitean school expresses it, all sensation arises from the collision of two motions; it is the common product of the influence of the object on the particular organ, and the activity of the organ which receives this influence in its own peculiar manner into itself. Sensation, therefore, shows us nothing permanent and absolute, but only a single phenomenon as this presents itself in the given case and to some definite perception.[2] Although, therefore, we may certainly learn from sensible observation,

[1] *Fr.* 95, ap. Clem. *Strom.* iii. 434 D, where, according to Teichmüller's just observation, *N. St.* i. 97 sq., instead of Πυθαγόρας δὲ καὶ should be read: Πυθαγόρᾳ καί: *θάνατός ἐστιν ὁκόσα ἐγερθέντες ὁρέομεν, ὁκόσα δὲ εὕδοντες ὕπνος*: 'as we see in sleep, dreams, so we see in waking, death.' The opening words of this fragment are thus interpreted by Lassalle, ii. 320: 'What we see, being awake, and hold to be life, is in truth the constant passing away of itself.' But this constant passing away, in which, according to Heracleitus, the life of nature consists, he would never have described by the sinister word death. Schuster, 274 sq., in order to avoid the degradation of the sensuous perception, here gives, as it appears to me, an interpretation very far-fetched and unlike Heracleitus, which Teichmüller rightly discards.

[2] Theophrast. *De Sensu*, i. 1 sq.: *οἱ δὲ περὶ Ἀναξαγόραν καὶ Ἡράκλειτον τῷ ἐναντίῳ* (ποιοῦσι τὴν αἴσθησιν), which is afterwards thus explained: *οἱ δὲ τὴν αἴσθησιν ὑπολαμβάνοντες ἐν ἀλλοιώσει γίνεσθαι καὶ τὸ μὲν ὅμοιον ἀπαθὲς ὑπὸ τοῦ ὁμοίου, τὸ δ' ἐναντίον παθητικὸν, τούτῳ προσέθεσαν τὴν γνώμην. ἐπιμαρτυρεῖν δ' οἴονται καὶ τὸ περὶ τὴν ἁφὴν συμβαῖνον· τὸ γὰρ ὁμοίως τῇ σαρκὶ θερμὸν ἢ ψυχρὸν οὐ ποιεῖν αἴσθησιν.* According to this evidence, which is confirmed by Heracleitus's doctrine of the opposites in the world, there would be all the more ground for referring to the Heracleiteans as well as to Protagoras the exposition in the *Theæt.* 156 A sqq.; Plato himself refers us to them, 180 c. sq. If even the more definite development of this theory was the work of later philosophers such as Cratylus and Protagoras, yet the fundamental idea in it, viz., that the sensible perception is the product of the concurrent motion of the object and of the sense, and has consequently no objective truth, belongs to Heracleitus himself.

in so far as this shows us many qualities of things;[1] although the two nobler senses, and especially the eye, ought to be preferred to the rest,[2] in comparison with the rational perception the sensible perception has little worth; eyes and ears are bad witnesses to men if they have irrational souls.[3] But it is precisely this testimony which the generality of men follow. Hence the deep contempt for the mass of mankind, which we have already seen in this philosopher; hence his hatred for arbitrary opinion,[4] for the unreason which does not perceive the voice of the Deity,[5] for the stupidity

[1] Vide *supra*, p. 86, 2; 88, 5.

[2] *Fr.* 8. Hippol. *Refut.* ix. 9: ὅσων ὄψις ἀκοὴ μάθησις ταῦτα ἐγὼ προτιμέω; on the sense of sight especially, *Fr.* 91. *Fr.* 9, Polyb. xii. 27: ὀφθαλμοὶ γὰρ τῶν ὤτων ἀκριβέστεροι μάρτυρες, which (notwithstanding the different opinion of Bernays, *Rh. Mus.* ix. 262; Lass. ii. 323 sq.; Schuster, 25, 1) seems to me to contain nothing more than (for example) what Herodotus says (i. 8), and what Polybius understands by the passage, namely, that one can better rely on one's own sight than on the assertion of others.

[3] *Fr.* 11; Sext. *Math.* vii. 126: κακοὶ μάρτυρες ἀνθρώποισιν ὀφθαλμοὶ καὶ ὦτα βαρβάρους ψυχὰς ἐχόντων (which is no doubt more authentic than the version of it ap. Stob. *Floril.* 4, 56). Instead of the last three words, Bernays, *Rh. Mus.* ix. 262 sqq., conjectures: βορβόρου ψυχὰς ἐχόντος, because in the reading of Sextus, the genitive ἐχόντων after ἀνθρώποις is very strange, and because in the time of Heracleitus, βάρβαρος would not have had the signification of rude. It is not necessary to ascribe this signification to it, even if we adopt the usual reading; we get a better meaning if the word be taken in its original sense; one who does not understand my language, and whose language I do not understand. Heracleitus says then in his figurative mode of expression: it is of no use to hear if the soul does not comprehend the speech which the ear receives; and the strange genitive ἐχόντων seems to have been used precisely because the sentence relates primarily to the ears (though it is also of course applicable to the eyes). Cf. Schuster, 26, 2.

[4] Diog. ix. 7: τὴν οἴησιν ἱερὰν νόσον ἔλεγε. He was nevertheless accused by Aristotle, *Eth. N.* vii. 4, 1146 b, 29 (M. Mor. ii. 6, 1201 b, 5), of an over-bearing confidence in his own opinions, as has already been noticed. Schleiermacher, p. 138, compares with the passage of Diogenes the following words from Apoll. Tyan. *Epist.* 18: ἐγκαλυπτέος ἕκαστος ὁ ματαίως ἐν δόξῃ γενόμενος; but this is not quoted by Apoll. as Heracleitean.

[5] *Fr.* 138; ap. Orig. *c. Cels.* vi. 12: ἀνὴρ νήπιος ἤκουσε πρὸς δαίμονος ὁκωσπερ παῖς πρὸς ἀνδρός. The conjectural δαήμονος for δαίμονος (Bernays, *Heracl.* 15) seems to me unnecessary. For Schuster's view of this passage, cf. *inf.* 93, 2.

which is puzzled and confused by every discourse,[1] for the frivolity which wickedly plays with truth;[2] hence also his mistrust of the erudition which prefers learning from others to enquiring for itself.[3] He himself will be content after much labour to find little, like the gold-diggers;[4] he will not rashly pass judgment on the weightiest things;[5] he will not ask others, but only himself,[6] or rather the Deity, for human nature has no

[1] *Fr.* 35; Plut. *Aud. Poët.* c. 9, end, p. 28; *De Aud.* c. 7, p. 41: βλὰξ ἄνθρωπος ὑπὸ παντὸς λόγου ἑπτοῆσθαι φιλεῖ.

[2] Clem. *Strom.* v. 549 C: δοκεόντων γὰρ δ δοκιμώτατος γινώσκει φυλάσσειν· καὶ μέντοι καὶ δίκη καταλήψεται ψευδῶν τέκτονας καὶ μάρτυρας. The first half of this fragment I do not think to be satisfactorily explained, either by Schleiermacher, who would substitute δοκέοντα and γιγνώσκειν φυλάσσει, nor by Lassalle, ii. 321. Even the proposal of Schuster, 340, 1: δοκ. γ. ὃ δοκιμώτατον γίνεται γινώσκει φυλάσσειν ('so a poet decides to adopt from that which passes for credible the most credible'), does not entirely satisfy me. Lassalle, by the ψευδῶν τέκτονες understands the senses. I agree with Schuster in thinking the allusion to the poets far more probable (cf. p. 10, 3).

[3] In this sense, as has been previously remarked, we must understand the sayings of Heracleitus against Polymathy, *supra*, vol. i. 510, 4; 336, 5. The fragment on this subject, ap. Stob. *Floril.* 34, 19, Gaisford, was rightly restored to Anaxarchus.

[4] *Fr.* 19 ap. Clem. *Strom.* iv. 476 A; Theod. *Cur. Gr. Aff.* i. 88, p. 15: χρυσὸν οἱ διζήμενοι γῆν πολλὴν ὀρύσσουσι καὶ εὑρίσκουσιν ὀλίγον. How Heracleitus applied this illustration we are not told; but the turn given to it in the text seems to me the most natural. Cf. also *Fr.* 24 and 140, *sup.* p. 42, 2; 44, 1, and the *Fr.* 21 pointed out by Lassalle, ii. 312; Clem. *Strom.* v. 615 B: χρὴ γὰρ εὖ μάλα πολλῶν ἱστορας φιλοσόφους ἄνδρας εἶναι κατ' Ἡράκλειτον, where ἱστορία, independent enquiry, is to be distinguished from mere polymathy.

[5] According to Diog. ix. 73, he is reported to have said: μὴ εἰκῇ περὶ τῶν μεγίστων συμβαλλώμεθα, which does not sound like his usual language.

[6] *Fr.* 20 (ap. Plut. *adv. Col.* 20, 2, p. 1118; Suid. Ποστοῦμος. Cf. Lassalle i. 301 sq.): ἐδιζησάμην ἐμεωυτόν. The right interpretation of these words, which the above-named writers, and many of the more recent commentators, refer to the demand for self-knowledge, is probably given by Diogenes, ix. 5: ἑαυτὸν ἔφη διζήσασθαι καὶ μαθεῖν πάντα παρ' ἑαυτοῦ. (Cf. Schuster, 59, 1, 62, 1.) Whether Plotinus (iv. 8, i. p. 468) under-

intelligence, which the divine nature alone possesses;[1] human wisdom is nothing else than the imitation of nature and of the Deity.[2] Only he who listens to the divine law, the universal reason, finds truth; he who follows the deceptive appearance of the senses and the uncertain opinions of men, to him truth remains for ever hidden.[3] This does not as yet amount to a scientific theory of knowledge; nor can we even suppose that Heracleitus

stands the expression thus seems doubtful. In v. 9, 5, p. 559, he follows the interpretation according to which ἐμαυτὸν designates the object that is sought or enquired for; he says, in a discussion concerning the unity of thought and Being, ὀρθῶς ἄρα . . . τὸ ἐμαυτὸν ἐδιζησάμην ὡς ἓν τῶν ὄντων. This is, of course, not conclusive as to the original meaning of the sentence; but still less can I admit Lassalle's theory that the words ὡς ἓν τ. ὄ. also belong to Heracleitus, and that the whole proposition means, 'one must regard oneself as one of the existent things,' i.e., as existing as little as they do, and involved in the same flux. How this can be deduced from the words, I fail to see, and it does not seem to me probable that Heracleitus should have spoken of ὄντα. ὡς ἓν τῶν ὄντων seems to me an addition of Plotinus, intended to justify his application of Heracleitus's saying to the question in hand. The indecisive sentence ap. Stob. *Floril.* 5, 119, ἀνθρώποισι πᾶσι μέτεστι γινώσκειν ἑαυτοὺς καὶ σωφρονεῖν is rightly regarded by Schleiermacher as spurious.

[1] *Fr.* 14, 138, *sup.* p. 42, 2; 90, 5.

[2] Vide *Fr.* 123, *sup.* p. 41, 1. This seems to have been also the original meaning of the propositions (*Fr.* 15) quoted in the Greater Hippias, 289 A sq., as Heracleitean, though evidently not in the words of the philosopher, ὡς ἄρα πιθήκων ὁ κάλλιστος αἰσχρὸς ἀνθρωπείῳ γένει συμβάλλειν, . . . ὅτι ἀνθρώπων ὁ σοφώτατος πρὸς θεὸν πίθηκος φανεῖται καὶ σοφίᾳ καὶ κάλλει καὶ τοῖς ἄλλοις πᾶσιν. In Hippoc. περὶ διαιτ. i. c. 12 sqq. many examples, not always happily chosen, are brought forward to show that all human arts arose from the imitation of nature, though men are not conscious of it. This thought seems to belong to Heracleitus; but the development of it, as it stands here, can be but partially his. Cf. Bernays, *Heracl.* 23 sqq., Schuster, p. 286 sqq.

[3] What Sext. *Math.* vii. 126, 131, says of Heracleitus is therefore substantially true: τὴν αἴσθησιν . . . ἄπιστον εἶναι νενόμικε, τὸν δὲ λόγον ὑποτίθεται κριτήριον . . . τὸν κοινὸν λόγον καὶ θεῖον καὶ οὗ κατὰ μετοχὴν γινόμεθα λογικοὶ κριτήριον ἀληθείας φησίν. Many sceptics, on the other hand, reckon him among their number; but this only exemplifies the well-known arbitrariness of the school, Diog. ix. 7ὃ. Cf. Sext. *Pyrrh.* 209 sqq.

felt the want of such a theory, or clearly saw the necessity of giving an account to himself, before any enquiry concerning things, of the conditions of knowledge and method of investigation. The propositions quoted above, as was the case with the kindred theories of his contemporary Parmenides,[1] were essentially deductions from a physical theory which brought him into such abrupt antagonism to sensible appearance, that he thought himself obliged to mistrust the evidence of the senses. It does not follow from this that he purposed to form his system independently of experience, and by means of an *à priori* construction; for such a design would have presupposed enquiries into the theory and method of knowledge which were alike unknown to him and to the whole of the pre-Socratic philosophy. Still less are we justified by Heracleitus's own expressions, or by the statements of our most trustworthy authorities, in making the ancient Ephesian the first representative of empiricism or discovering in him a tendency to observation and induction.[2] His reflection was concerned with the objective in nature; like every other philo-

[1] Cf. vol. i. 591 sqq.

[2] Schuster (p. 19 sqq.) supports this statement mainly on the fragments (2, 3), discussed p. 7, 2. But in *Fr.* 3 there is not one word to show that the λόγος ἀεὶ ὢν is only perceived through the senses; that we should 'observe the visible world,' and 'on the ground of appearance' should follow out the true state of the case,—still less to show that this is the *only* way to arrive at the knowledge of truth. In *Fr.* 2 Schuster introduces what is irrelevant when he represents Heracleitus as blaming men, 'because they do not seek for knowledge, by enquiring into that over which they stumble every day' (that in order to know, they do not enter upon the way of observation), whereas Heracleitus blames them 'because they do not understand (or consider, φρονέουσι) that on which they stumble every day;' and do not (in what way is not stated) instruct themselves about it. Schuster likewise refers to *Fr.* 7; but I have already proved (p. 39, 4) that his explanation of this cannot

sopher he started, in fact, from perception, and formed his convictions by the development of this; but he never

be substantiated. I have also remarked, in the same place, that we have no right to give the meaning which Schuster adopts, to the sentence about the unseen harmony, nor to bring into direct connection with it the quotation on p. 90, 2: ὅσων ὄψις ἀκοὴ μάθησις ταῦτα ἐγὼ προτιμέω. In itself, however, it does not imply that the μάθησις results only from sight and hearing, but merely that the pleasures of knowledge are to be preferred to all others: how much is contributed to knowledge by thought, how much by observation, the fragment does not say. Further, in *Fr.* 7, the ξυνὸν or the λόγος ξυνὸς does not mean the 'speech of the visible world;' and those are not censured who 'indulge their own thoughts,' and 'seek in the invisible instead of the visible, each one for himself, a particular solution of the universal riddle' (Schuster 23 sq), cf. p. 43. 1: not to mention that Heracleitus, with his εἷς ἐμοὶ μύριοι (sup. p. 10. 2), certainly did follow his own thoughts; and the κοινὴ γνώμη, to which Schuster with Ænesidemus (ap. Sext. *Math.* viii. 8) refers ξυνὸν, was, for him at least, an authority. Schuster, p. 27 sq., lastly quotes Lucret. i. 690 sqq., who calls the senses that *unde omnia credita pendent, unde hic cognitus est ipsi quem nominat ignem;* but he forgets that Lucretius takes this observation, not from Heracleitus, but from his own presupposition against Heracleitus. When he wants to give the doctrine to Heracleitus, he says (vide p. 90, 4) that among all the sensuous perceptions, he ascribed truth to that of fire only (not, as Schuster says, to fire 'under all its disguises and changes,' but simple visible fire). To withhold credence from the second of these statements because the first has been misapprehended, is to invert the order of things. This supposed evidence *in favour* of Schuster's view thus turns out to be distinct evidence *against* it; its incorrectness, moreover, appears from what is quoted, *supra*, p. 88, 5; 89, 1; 90. 3, and especially from Aristotle's assertion (88, 4): that Plato followed Heracleitus in his conviction—ὡς τῶν αἰσθητῶν ἀεὶ ῥεόντων καὶ ἐπιστήμης περὶ αὐτῶν οὐκ οὔσης. The conjecture that Aristotle is here speaking only of Cratylus and the Heracleiteans, who 'on this point thought very differently from their master' (Schuster 31), is wholly inadmissible. Aristotle does not say ταῖς τῶν Ἡρακλειτείων δόξαις, but ταῖς Ἡρακλειτείοις δόξαις; now a Ἡρακλείτειος δόξα is as certainly an opinion of Heracleitus as the Ἡρακλείτειος θέσις, *Phys.* i. 2, 185 a, 7, is a proposition of Heracleitus, and the Ἡρακλείτειοι λόγοι in the parallel passage to this *Metaph.* xiii. 4 (sup. p. 11, 1) are statements of Heracleitus. Ἡρακλείτειος signifies proceeding from Heracleitus; and if by an inaccurate use of language it might be used in regard to an opinion which had been merely derived by his scholars from his doctrine, it certainly could not be used of any opinion that contradicted his own. Schuster, therefore, has recourse to

proposed to himself the question from what sources his convictions had arisen. When in this way he had arrived at theories which contradicted the assertions of our senses, he did not say, as a true empiricist must have said, that the theories must be false: he said that the senses were deceptive, and that rational knowledge alone was trustworthy. But by what process we are to attain this rational knowledge, neither Heracleitus nor any of the pre-Socratic philosophers expressly enquired. The principle ascribed to him by modern writers,[1] that the names of things explain to us their essential

another theory, viz. that Aristotle ascribes the conclusions which were drawn by Plato from the doctrine of Heracleitus to Heracleitus himself: a suspicion which would only be justifiable if the assertions of Aristotle contradicted other trustworthy authorities; whereas, in truth, they coincide with them all. But from the fact that Protagoras united his sensualism with the proposition about universal Becoming, we must not conclude with Schuster (31 sq.) that Heracleitus also attached supreme importance to the sensuous perception; certainly not if, like Schuster, we represent Cratylus as opposed to Heracleitus through his rejection of the testimony of the senses. Why should not the Sophist, who made no claim to reproduce Heracleitus's doctrine as such, diverge more easily from it than (according to Schuster's theory) a philosopher who decidedly professed that doctrine? It is not true, however, that Protagoras said 'that there was an ἐπιστήμη, and that it was the same as αἴσθησις and opinion founded upon αἴσθησις.' On account of the relativity of perceptions, he rather denied the possibility of knowledge (cf. p. 896 sqq., 3rd ed.). But if in this there lies also the presupposition that knowledge, *if* knowledge were possible, could only arise from perception, the hypothesis here admitted, viz. that there is a knowledge, is immediately opposed, and opposed for the very reason that perception cannot guarantee knowledge. So far as we can argue from Protagoras to Heracleitus, the only result is that Heracleitus, as little as Protagoras, ascribed objective truth to sensible perception. Arcesilaus the Academician, c. 9, proved the impossibility of knowledge simply from the uncertainty of perceptions (cf. Pt. III. a, 448 sq., 2nd ed.), but no one concludes from this that Plato, whose track he follows in his polemic against sense-knowledge, admitted no other kind of knowledge.

[1] Lassalle, ii. 362 sqq.; Schuster, 318 sqq. Against Lassalle, vide Steinthal *Gesch. d. Sprach.* i. 165 sqq.

nature, cannot be proved by direct evidence,[1] nor with certainty by induction, from the *Cratylus* of Plato;[2] and though it would harmonise well with Heracleitus's general modes of thought,[3] we have no right to conclude from the plays on words and etymologies[1] which occur in his fragments that he sought to justify this use of nomenclature theoretically in the manner of later writers.

What has been said of knowledge applies to action. Heracleitus does not yet accurately separate the two spheres, and has the same law for both. His judgment as to the conduct of men in the one case is not more lenient than in the other. Most men live like beasts;[2] they revel in mud and feed upon earth like the worm.[3] They are born, bring forth children, and die without pursuing any higher end in life.[4] The wise man will despise that for which the masses strive, as a worthless and perishable thing.[5] He will not take his own caprices, but the common law, for his standard;[6] will

[1] Lassalle appeals to Procl. *in Parm.* i. p. 12 Cous.: (Socrates admires) τοῦ Ἡρακλειτείου (διδασκαλείου) τὴν διὰ τῶν ὀνομάτων ἐπὶ τὴν τῶν ὄντων γνῶσιν ὁδόν. But this utterance in which Heracleitus himself is not mentioned, but only his school, is entirely founded on the Platonic *Cratylus*; and the same holds good of the passages of Ammon. *De Interpr.* 24 b, 30 b. In the second of these it is said expressly: 'Socrates shows in the *Cratylus* that names are not οὕτω φύσει ὡς Ἡράκλειτος ἔλεγεν (Socrates does not, however, name Heracleitus). The first also unmistakably alludes to the Platonic dialogue (428 E), as even Schuster acknowledges, 319 sq.; in the observation that many hold names for φύσεως δημιουργήματα, καθάπερ ἠξίου Κρατύλος καὶ Ἡράκλειτος.

[2] In the *Cratylus*, it is said by the Heracleitean of that name ὀνόματος ὀρθότητα εἶναι ἑκάστῳ τῶν ὄντων φύσει πεφυκυῖαν (383 A, cf. 428 D sqq.), and that Cratylus really maintained this is the more likely, as the astounding inferences which he draws (p. 384 B, 429 B sq., 436 B sq.) from his proposition are entirely consistent with his other caricatures of the Heracleitean doctrine (*infra*, p. 601 sq., 3rd edit.). But it does not follow from this that Heracleitus himself set up such a principle. Schuster thinks that a school, which exaggerated the doctrine of the flux of all things so greatly as Cratylus did, could not at first have hit upon it. I do not see why, so long as they did not draw from this doctrine the sceptical consequences of Protagoras. But if Cratylus was not the first to set up this principle, it did not therefore necessarily emanate from Heracleitus; between the death of this philosopher and the epoch when Plato heard the discourses of Cratylus, there are more than sixty years. Schuster seeks (p. 323 sq.) to prove that Protagoras also held the above-mentioned doctrine, which he could only have derived from Heracleitus. But the sole proof which is adduced is the myth of the Protagoras, and in that the doctrine has no place. Protagoras says, 322 A, that man on account of his kinship with the Deity early learnt the art of speech; but it does not follow from this that all linguistic designations are accurate. Lastly Schuster (p. 324 sq.) supposes that Parmenides, in the verses quoted vol. i. 604, 3, alludes to Heracleitus's occupation with descriptive names; but this conjecture, as it appears to me, is groundless.

[3] Schaarschmidt, *Samml. d. Plat. Schr.* 253 sq. disputes this, on the ground that a natural correctness and fixed character of words would be incompatible with the flux of all things; and for the same reason, Schuster p. 321, will only admit it, if his interpretation of πάντα ῥεῖ, discussed *sup.* p. 12, 1, hold good. But the flux of all things, even according to our acceptation, does not exclude the permanence of the universal law; it involves it; and as this is apprehended by Heracleitus as the Logos, the thought that the human logos (reason and speech being both included in this conception) also has truth, as part of the Divine, is perfectly consistent with his point of view.

[1] βίος and βιός, *supra*, p. 17, 4; where, however, the name is in opposition to the thing; διαφέρεσθαι and ξυμφέρεσθαι, p. 33, 2; μόροι and μοῖραι, p. 86, 1; ξὺν νόῳ and ξυνῷ, p. 88, 3; perhaps also Ζηνὸς and ζῶν, p. 44, 1; αἰδοίοισιν and ἀναιδέστατα, p. 103, 2; on the other hand, the comparison of σῶμα and σῆμα is not Heracleitean, cf. 84, 2. Still more unimportant is the use of ὄνομα as a periphrasis, p. 88, 3; 98, 5.

[2] *Supra*, p. 10, 1.

[3] Such at any rate *may* be the sense and connection of the words quoted in Athen. v. 178 sq. and Arist. *De Mundo*, c. 6, end: the first: μήτε "βορβόρῳ χαίρειν" καθ' Ἡράκλειτον; and the second: "πᾶν ἑρπετὸν τὴν γῆν νέμεται." Bernays' (*Heracl.* p. 25) conjecture that instead of these words there was originally something quite different in the text I cannot agree with.

[4] *Fr.* 73 *supra*, p. 87, 4. On account of his contemptuous sayings about mankind in general, Timon, ap. Diog. ix. 6, calls Heracleitus κοκκυστὴς ὀχλολοίδορος.

[5] So much as this may perhaps be true of the saying which Lucian *V. Auct.* 14, puts into his mouth: ἡγέομαι τὰ ἀνθρώπινα πρήγματα ὀϊζυρὰ καὶ δακρυώδεα καὶ οὐδὲν αὐτέων ὅ τι μὴ ἐπικήριον. The statement that he wept over everything (*supra*, p. 4, *n.*) seems to show that he gave utterance to sentiments of this kind.

[6] *Fr.* 7, 123, *sup.* p. 43, 1; 88, 3,

avoid nothing more than presumption, the over-stepping of the bounds which are set for the individual and for human nature;[1] and in thus subjecting himself to the order of the whole, he will reach that satisfaction which Heracleitus is said to have declared to be the highest end of life.[2] It depends only upon man himself whether he is happy. The world is always as it ought to be;[3] it must be our part to accommodate ourselves to the universal order; the character of a man is his dæmon.[4] As it is with individuals, so it is with the community. There is nothing more necessary for the state than the dominion of law; human laws are an emanation of the Divine; on them society is founded, and without them there would be no justice;[5] a nation

cf. Stob. *Floril.* 3, 84; σωφρονεῖν ἀρετὴ μεγίστη, καὶ σοφίη ἀληθέα λέγειν καὶ ποιεῖν κατὰ φύσιν ἐπαΐοντας.

[1] *Fr.* 126 ap. Diog. ix. 2: ὕβριν χρὴ σβεννύειν μᾶλλον ἢ πυρκαήν. References to a particular kind of ὕβρις will be found in *Fr.* 128 ap. Arist. *Polit.* v. 11, 1315 a, 30; *Eth. N.* ii. 2, 1105 a, 7; *Eth. Eud.* ii. 7, 1223 b, 22, etc.: χαλεπὸν θυμῷ μάχεσθαι, ψυχῆς γὰρ ὠνέεται. The emendations of this ap. Plut. *De ira* 9, p. 457; *Coriol.* 22; Iambl. *Cohort.* p. 334 K, I do not consider genuine. In regard to the meaning, in spite of *Eth. N.* ii. 2, it seems true, from the addition of ψυχῆς γὰρ ὠνέεται, to refer not to a conflict with one's own passion, but with that of others.

[2] Theod. *Cur. Gr. Aff.* xi. 6, p. 152: Epicurus regarded pleasure as the highest good; Democritus substituted ἐπιθυμία (l. εὐθυμία), Heracleitus ἀντὶ τῆς ἡδονῆς εὐαρέστησιν τέθεικεν. *Fr.* 84 ap. Stob. *Floril.* 3, 83: ἀνθρώποις γίνεσθαι ὁκόσα θέλουσιν, οὐκ ἄμεινον (there would be no happiness if all the wishes of man were fulfilled).

[3] Cf. the words quoted on p. 39, 3.

[4] *Fr.* 92; ap. Alex. Aphr. *De Fato*, c. 6, p. 16, Or.; Plut. *Qu. Plat.* i. 1, 3, p. 999; Stob. *Floril.* 104, 23: ἦθος ἀνθρώπῳ δαίμων. This only expresses the sentiment of the corresponding words in Epicharmus (*sup.* vol. i. p. 531, 3), that the happiness of man depends upon his internal condition. As to the question of necessity and freedom to which Schuster, 272, 2, adverts, nothing is said.

[5] *Fr.* 123, *sup.* 88, 3; 41, 1; *Fr.* 121; ap. Clem. *Strom.* iv. 478 B: δίκης ὄνομα οὐκ ἂν ἦσαν, εἰ ταῦτα (the laws) μὴ ἦν. The meaning of the sentence is not clear; it might possibly contain (as Schuster supposes) a censure of the masses, who, without positive laws, know nothing

must, therefore, fight for its laws as for its walls.[1] This dominion of law is equally infringed, whether the arbitrary will of an individual rules, or that of the masses. Heracleitus is indeed a friend to freedom,[2] but he hates and despises democracy, which does not understand how to obey the best, and cannot endure any pre-eminent greatness.[3] He counsels concord, through

of right. Teichmüller's explanation, which refers ταῦτα to the unjust acts of men, without which there would be no law (*N. Stud.* i. 131 sq.), has a very uncertain support in the use of Heracleitean words by Clemens, whose exegesis is very arbitrary; and in itself it seems to me improbable. If, however, it were correct, we must understand by δίκη, retributive justice especially, δίκη πολύποινος.

[1] *Fr.* 125; Diog. ix. 2: μάχεσθαι χρὴ τὸν δῆμον ὑπὲρ νόμου ὅκως ὑπὲρ τείχεος. Cf. also the sayings quoted p. 86, 1, which, however, primarily relate to death for one's fatherland.

[2] According to Clem. *Strom.* i. 302 B, he moved a tyrant, Melancomas, to lay down his authority, and refused an invitation of Darius to his court. How much may be true in these statements we cannot tell; the letters from which Diog. ix. 12 sqq. takes the second, show that the writer of the letters was acquainted with it, but nothing more. The discussion of Bernays, *Heracl. Briefe*, 13 sqq., only proves the *possibility* of the fact.

[3] *Fr.* 40; ap. Strabo, xiv. 1, 25, p. 642; Diog. ix. 2; Cic. *Tusc.* v. 36, 105; cf. Iambl. *V. Pyth.* 173; Stob. *Floril.* 40, 9 (ii. 73 Mein.): ἄξιον Ἐφεσίοις ἡβηδὸν ἀπάγξασθαι (Diog. evidently a mistake: ἀποθανεῖν) πᾶσι καὶ τοῖς ἀνήβοις τὴν πόλιν καταλιπεῖν (that is to say, they should hang themselves and leave the city to minors. Cf. Bernays, *Heraclit. Briefe*, 19, 129 sq.) οἵτινες Ἑρμόδωρον ἄνδρα ἑωυτῶν ὀνήϊστον ἐξέβαλον, φάντες· ἡμέων μηδὲ εἷς ὀνήϊστος ἔστω, εἰ δὲ μή (Diog.: εἰ δέ τις τοιοῦτος, originally perhaps εἰ δέ alone). ἄλλῃ τε καὶ μετ' ἄλλων. According to Iamblichus this saying was an answer to the request of the Ephesians, that he would give them laws; a request which, according to Diogenes (ix. 2) also, he declined. It is not probable, considering his pronounced political position, that such a request should have been preferred to him by the democratic majority; and those words were to be found in Heracleitus's work. Concerning Hermodorus, cf. my dissertation *De Hermodoro* (Marb. 1859). As to his judgment on democracy, see the anecdote, ap. Diog. ix. 3, which can only be founded on a saying of this philosopher, that he took part in children's games, telling his fellow-citizens that this was wiser than to engage in politics with *them*; also *Fr.* 127; Clem. *Strom.* v. 604 A: νόμος καὶ βουλῇ πείθεσθαι ἑνός, p. 589, 3, and Theodorides, *Anthol. Gr.* vii. 479, who calls Heracleitus θεῖος ὑλακτητὴς δήμου κύων.

which alone the state can subsist.[1] There are no traces, however, of his having attempted any scientific definition of ethics and politics.

Many of the notions and usages of the popular religion must have been reckoned by Heracleitus among human errors of opinion and action. A formal polemic against these, such as we find in Xenophanes, was not, however, his purpose. He not only employs the name of Zeus[2] for the Divine creative essence, but is generally addicted to mythological designations.[3] He speaks of Apollo in the tone of a believer, and recognises in the sayings of the Sibyl a higher inspiration.[4] He accounts for soothsaying generally by the connection of the human spirit with the Divine.[5] In the proposition as to the identity of Hades with Dionysus,[6] and still more

[1] Plut. *Garrul.* c. 17, p. 571 (also Schleiermacher, p. 82) relates of him a symbolical act which had this meaning.

[2] Cf. p. 44, 1.

[3] For example, the Erinnyes and Dike, p. 41, 2.

[4] In the sayings before mentioned, p. 6, *n.*; *Fr.* 38 (Plut. *Pyth. Orac.* 21, p. 404): ὁ ἄναξ, οὗ τὸ μαντεῖόν ἐστι τὸ ἐν Δελφοῖς, οὔτε λέγει οὔτε κρύπτει, ἀλλὰ σημαίνει, and *Fr.* 39 (*ibid.* c. 6, p. 397): Σίβυλλα δὲ μαινομένῳ στόματι, καθ' Ἡράκλειτον, ἀγέλαστα καὶ ἀκαλλώπιστα καὶ ἀμύριστα φθεγγομένη χιλίων ἐτῶν ἐξικνεῖται τῇ φωνῇ διὰ τὸν θεόν.

[5] Chalcid. *in Tim.* c. 249: *Heraclitus vero consentientibus Stoicis rationem nostram cum divina ratione connectit regente ac moderante mundana, propter inseparabilem comitatum* (on account of the inseparable connection between them) *conscium decreti rationabilis factam quiescentibus animis ope sensuum futura denuntiare. ex quo fieri, ut appareant imagines ignotorum locorum simulacraque hominum tam viventium quam mortuorum idemque asserit divinationis usum et præmoneri meritos instruentibus divinis potestatibus.* This is in the first instance Stoical, but the general thought at any rate, that the soul by virtue of its kinship to God can divine the future, may have been enunciated in some form by Heracleitus. From the Pseudo-Hippoc. π. διαίτ. i. 12 (Schuster, 287 sq.) no safe conclusion can be drawn, on account of the nature of the work.

[6] *Fr.* 132 (*inf.* p. 103, 2): ὠυτὸς δὲ Ἀΐδης καὶ Διόνυσος. As one of the gods of the lower world Dionysus was worshipped in the mysteries, especially the Orphico-Dionysiac mysteries; in the Orphic legends he is called sometimes the son of Zeus and Persephone, and sometimes the son of Pluto and Persephone. The idea, however, that he was the same person as Pluto cannot be discovered in the more ancient theology, and it is a question whether Heracleitus was not the inventor of it. With him birth and decay coincide, as every birth is a fresh destruction of what preceded it; hence arose Dionysus the god of the luxuriant creative flowing life of nature, and Hades, the god of death. Teichmüller (*N. Stud.* i. 25 sq.) interprets Dionysus as the sun, which is identical with Hades, because it arises out of the earth, and the earth again receives the light into itself. But against this we must observe, 1, that Hades is indeed the region under the earth, but not the earth itself. 2. That Heracleitus does not represent the sun as arising out of the earth, but from moisture, from vapours, and especially those of the sea (cf. 57, 2; 58, 1; 60, 1). 3. That the arising of the sun from the earth and its transition into the earth is something other than the identity of the sun and the earth. 4. That neither in Heracleitus nor in the Orphics of his time is there any proof that Dionysus meant the sun (*sup.* vol. i. p. 63 sq. 98 sq.). Teichmüller moreover makes Hades into υἱὸς αἰδοῦς, that he may ultimately extract this singular meaning from our fragment; the feast of Dionysus would be shameless, if Dionysus were not the son of shame and the shameless and the befitting the same; but this interpretation is devoid of all real foundation. Teichmüller appeals to Plut. *De Is.* 29, p. 362: καὶ γὰρ Πλάτων τὸν Ἅδην ὡς αἰδοῦς υἱὸν τοῖς παρ' αὐτῷ γενομένοις καὶ προσηνῆ θεὸν ὠνομάσθαι φησί. It is difficult to see what would follow in regard to Heracleitus if Plato *had* said this. But Plato said nothing of the kind. Of the αἰδοῦς υἱὸς there is not a word either in the *Crat.* 403 A sqq. (the only passage which Plutarch can have in view), nor anywhere else in Plato's works. And even in Plutarch it is so devoid of any admissible meaning, that one cannot help thinking there may have been some scriptural error in a text in other respects so corrupt. For αἰδοῦς υἱὸν (according to an emendation of Hercher's, kindly communicated to me, we should doubtless read πλούσιον, which comes very near to it in writing) is actually to be found in the parallel passage, Plut. *De Superst.* 13, p. 171, and refers to *Crat.* 403 A, E (κατὰ τὴν τοῦ πλούτου δόσιν . . . ἐπωνομάσθη . . . εὐεργέτης τῶν παρ' αὐτῷ). Teichmüller has not succeeded any better, p. 32 sq., in establishing the theory that Heracleitus alludes in this fragment to the coarse Dionysiac mythus in Clem. *Cohort.* 21 D sqq., which he misapprehends in regard to one point (22 A), on which he lays much stress. The narrative of Clemens contains no reference to Heracleitus: the Heracleitean fragment is in no way related to the myth; and if Clemens, at the end of his account, couples this fragment with the mention of Phallic worship, it does not follow from this that Heracleitus, in choosing his words, was thinking of this particular myth, or spoke of Dionysus in Hades in a manner for which even the myth furnishes no precedent.

in his utterances about immortality and the dæmons,[1]

[1] *Supra*, p. 85 sq.

he shows great affinity with the Orphic doctrines.[1] Yet there must have been many things objectionable to him in the established religion and in the writings of the poets which were considered as its sacred records. The opinion which is so consonant with the ordinary point of view, that the Deity dispenses happiness or misery to men as he wills, was not compatible with the philosopher's conception of the regularity of the course of nature;[2] nor was this consistent with the distinction

[1] Lassalle (i. 204–268) tries to prove that there existed an intimate relationship between Heracleitus and the Orphics, and that they exercised great influence over him. But the passage on which he chiefly relies, Plut. *De Ei.* c. 9, p. 388, does not give, as he believes, a representation of Heracleitus's theology, but a Stoic interpretation of Orphic myths. Lassalle thinks that Plutarch would not have given to the Stoics the honourable designations of θεολόγοι and σοφώτεροι, but he has overlooked, firstly, that by σοφώτεροι (which here signifies rather shrewd than wise) are meant, not the *interpreters*, but the *inventors* of the mythus, consequently the Orphics; secondly, that θεολόγοι is no title of honour, and that Plutarch speaks elsewhere of the Stoic *theology*; and thirdly, that the theory expounded in c. 9 is afterwards, c. 21, called mischievous. It does not follow in the least from Philo, *De Vict.* 839 D (*supra*, p. 63, *n.*), that the expressions κόρος and χρησμοσύνη, which Plutarch uses, were foreign to the Stoics (as Lassalle says). Even were the points of contact between Heracleitus and the Orphic fragments (which Lassalle seeks to show, 246 sqq.) much more numerous than can actually be admitted, we could only conclude, considering the late origin of the poems from which these fragments are taken (vide Vol. I. p. 104 sq.), that they were under the influence of Stoic-Heracleitean views, not that Heracleitus was influenced by the Orphics.

[2] Lassalle, ii. 455 sq., ingeniously refers to this the remark about Homer and Archilochus (quoted *supra*, p. 10, 3, and discussed by Schuster, 338 sq.). He supposes it to have been aimed at the two verses similar in meaning, *Odyssey* xviii. 135, and Archil. *Fr.* 72 (Bergk, *Lyr. Gr.* 551, 701), and connects it with the analogous contradiction of Hesiod, vide following note. It seems to me less probable that Heracleitus (vide Schleiermacher, 22 sq.; Lass. ii. 454) should have accused Homer of astrology, and consequently repudiated that art. The scholia on *Il.* xviii. 251 (p. 495 b, 5, Bekk.) says, indeed, that on account of this verse, and *Il.* vi. 488, Heracleitus named Homer ἀστρολόγος, which in this connection can only mean astrologer. But ἀστρολόγος in the older language was never used for astrologer in our sense of the word, but always for an *astronomer*. But neither of these verses gave any opening for describing Homer even ironically as such. Schuster (339, 1), indeed, thinks that as, according to Clemens (vide *inf.* note 2), Heracleitus was acquainted with the Magi, and μάγοι = ἀστρολόγοι, he may have also called Homer an astrologer. But even if Heracleitus really used the names νυκτιπόλοι, μάγοι, &c. (which is not quite certain), the later use of the words, which made magician and astrologer synonymous, cannot prove that Heracleitus might have spoken of astrologers in this sense. It seems to me more likely, either that Heracleitus called Homer ἀστρολόγος in the sense of astronomer and without any reference to the verses quoted above, or that some later writer of the same name (perhaps the author of the Homeric allegories) may have called him ἀστρόλογος in the sense of astrologer.

[1] According to Plut. *Cam.* 19, cf. Seneca, Ep. 12, 7, he censured Hesiod for distinguishing ἡμέραι ἀγαθαὶ and φαῦλαι ὡς ἀγνοοῦντι φύσιν ἁπάσης ἡμέρας μίαν οὖσαν.

of lucky and unlucky days, so widely spread in the old religions.[1] Heracleitus also expresses himself strongly about the shamelessness of the Dionysiac orgies;[2] he attacks, in the veneration paid to images, one of the very pillars of the Greek religion;[3] he also passes severe judgment on the existing system of sacrifices.[4] These criticisms are very searching, but it does not appear that Heracleitus wished to make any assault upon the popular religion as a whole, or in its general constitution.

[2] *Fr.* 132, ap. Clem. *Cohort.* 22, B. Plut. *Is. et Os.* 28, p. 362: εἰ μὴ γὰρ Διονύσῳ πομπὴν ἐποιοῦντο καὶ ὕμνεον ἄσμα αἰδοίοισιν ἀναιδέστατα εἰργασται· ὠὐτὸς (ὠὐτ.) δὲ Ἀΐδης καὶ Διόνυσος, ὅτεῳ μαίνονται καὶ ληναΐζουσιν. The last words, on which cf. p. 100, 6, are intended probably to remind men of their blindness in celebrating their wanton festival to the god of death. Cf. Clemens, *Coh.* 13 D: τίσι δὴ μαντεύεται Ἡράκλειτος ὁ Ἐφέσιος; νυκτιπόλοις, μάγοις, βάκχοις, λήναις, μύσταις. τούτοις ἀπειλεῖ τὰ μετὰ θάνατον, τούτοις μαντεύεται τὸ πῦρ· τὰ γὰρ νομιζόμενα κατ' ἀνθρώπους μυστήρια ἀνιερωστὶ μυεῦνται. The spaced words seem (as Schuster 337, 1, thinks, agreeing with Bernays, *Heracl. Br.* 134) to be taken from Heracleitus. But *Fr.* 69 (vide *supra*, p. 85, 1, cf. Schuster, p. 190) can scarcely have stood in the connection with this passage in which Clemens places it.

[3] *Fr.* 129, ap. Clem. *Coh.* 33 B; Orig. *c. Cels.* vii. 62, i. 5: καὶ ἀγάλμασι τουτέοισι εὔχονται ὁκοῖον εἴ τις δόμοισι λεσχηνεύοιτο, οὔτε γιγνώσκων θεοὺς οὔτε ἥρωας οἵτινές εἰσι.

[4] *Fr.* 131, ap. Elias Cret. *Ad*

4. *Historical position and importance of Heracleitus.*

The Heracleiteans.

HERACLEITUS was regarded even in ancient times as one of the most important of the Physicists.[1] Plato especially, who had received so many pregnant suggestions from his school, marks him out as the author of one of the chief possible theories respecting the world and knowledge—the theory which is most directly opposed to the Eleatic.[2] This is, in fact, the point in which we have principally to seek this philosopher's importance. In regard to the explanation of particular phenomena, he has done nothing which can be compared with the mathematical and astronomical discoveries of the Pythagoreans, or with the physical enquiries of Democritus and Diogenes; and his ethical doctrines, though they are logically connected with his whole theory of the universe, in themselves are merely vague general principles, such as we often find apart from any philosophical system. His peculiar merit does not lie in particular enquiries, but in the setting up of

Greg. Naz. or. xxiii. p. 836: *purgantur cum cruore polluuntur non secus ac si quis in lutum ingressus luto se abluat;* so ap. Apollon. Tyan. *Ep.* 27: μὴ πηλῷ πηλὸν καθαίρειν. That this censure is directed not merely against trust in the *opus operatum* of the offering is obvious. The offering itself is called πηλός, which harmonises completely with Heracleitus's saying about corpses (*supra*, p. 79, 1). If, therefore (Iambl. *De Myster.* i. 11, end), he also named them ἄκεα, this must be intended ironically.

[1] He is often called φυσικός; the absurd statement of Diodotus, the grammarian, ap. Diog. ix. 15, that his work was not really about nature, but about the state, and that the physical was only an example for the political, stands quite alone.

[2] Cf. the writings quoted *supra*, p. 11, 1; 18, 2; 26, 1; 33, 2.

universal points of view for the study of nature as a whole. Heracleitus is the first philosopher who emphatically proclaimed the absolute life of nature, the ceaseless change of matter, the variability and transitoriness of everything individual; and, on the other hand, the unchangeable equality of general relations, the thought of an unconditioned, rational law governing the whole course of nature. He cannot, therefore, as before observed, be considered simply as an adherent of the ancient Ionian physics, but as the author of a particular tendency, which we have reason to suppose was not in its origin independent of the Ionic school. He shares, indeed, with that school the hylozoistic theory of a primitive matter, which, transforming itself by its own power, produces derived things. He shares with Anaximander and Anaximenes the theory of a periodical destruction and construction of the world. In his whole conception of the world it is impossible to misdoubt the influence of Anaximander; for while Heracleitus makes every individual, as a fleeting phenomenon in the stream of natural life, emerge and again disappear, Anaximander regards all individual existence as a wrong which things must expiate by their destruction. But the most characteristic and important theories of Heracleitus are precisely those which he cannot have borrowed from the earlier Ionian philosophers. Not one of those philosophers asserted that nothing in the world has permanence, and that all substances and all individuals are involved in ceaseless, restless change; not one of them declared that the law of the world's course, the world-ruling reason, is the

only thing that remains in the mutation of things; not one has reduced this law to the sundering and coalescing of opposites, nor determined the three elementary bases; not one has derived the totality of phenomena from the opposite course of the two ways, the way upward and the way downward. But in proportion as in all this Heracleitus is removed from his Ionic predecessors, so does he approach the Pythagoreans and Xenophanes. The Pythagoreans maintain, as he does, that all things consist of opposites, and that, therefore, all is harmony. And as Heracleitus recognises no permanence in things except the relation of their ingredients, the Pythagoreans, though far from denying a permanent element in substances, regard mathematical form as their substantial essence. Xenophanes is the first philosophical representative of the Pantheism, which also underlies the system of Heracleitus; and in connection with this his propositions in regard to the thinking nature of Deity, which is at the same time uniform natural force, prepared the way for the Heracleitean doctrine of the reason of the world. We are further reminded of the Pythagoreans by Heracleitus's theories on the life of the soul apart from the body, and by his ethical and political principles; his opinion of the sun bears a striking resemblance to that of Xenophanes concerning the stars. If we compare him with the later Eleatics, as well as with Xenophanes, we find that Heracleitus and Parmenides, starting from opposite presuppositions, arrived at the same conclusion respecting the unconditional superiority of rational cognition over sensuous perception. Zeno overthrows

with his dialectic the ordinary opinions about things, in order to establish his doctrine of unity, and Heracleitus applies the same dialectic in an objective manner and more completely to the things themselves; for by the restless transmutation of substances the original unity re-establishes itself out of plurality as unceasingly, as it is constantly separating into plurality.[1] Considering that Pythagoras and Xenophanes were not unknown to Heracleitus,[2] whose doctrine, on the other hand, seems to have been mentioned by Epicharmus,[3] and that if the usually received chronology be correct, Parmenides may likewise have been acquainted with it, there is ground for the conjecture that Heracleitus may have been influenced in his philosophical theories by Pythagoras and Xenophanes, and may in his turn have influenced Parmenides and the later Eleatic school. The first of these suggestions is not indeed improbable, despite the severe judgments of Heracleitus on his predecessors; but his special principle, it is clear, cannot have been taken from them, and the propositions in which we find traces of their influence stand with Heracleitus either in quite a different connection, or else are not distinctive enough to prove any actual dependence of his philosophy on theirs. The unity of Being which, with the Eleatics, excludes all multiplicity and change, maintains itself, according to Heracleitus, precisely in the ceaseless change and constant formation of the many out of the one;[4] the divine reason coin-

[1] Cf. with the above the observations of Hegel, *Gesch. d. Phil.* i. 300 sq. and Braniss, *Gesch. d. Phil. s. Kant.* i. 184, on the relation of Heracleitus to the Eleatics.

[2] *Supra*, Vol. I. p. 336, 5; 510, 4.

[3] *Supra*, Vol. I. p. 531.

[4] Xenophanes did not deny the

cides with the ordering of the changing phenomena. The opposites, which, with the Pythagoreans, were something derived, are represented by Heracleitus as first arising from the transformation of primitive matter. Harmony, which unites what is opposed, has not with him a specifically musical signification, as with the Pythagoreans; nor, finally, do we find in him a trace of their theory of numbers. Whether he borrowed from them his theories as to the future state, it is difficult to decide, for the Pythagoreans themselves in these theories showed much affinity with the Orphic doctrines; and if he resembles them in the tendency of his ethics and politics, the resemblance is confined to general points which are to be found elsewhere among the friends of an aristocractic and conservative government, and are not distinctive traits of Pythagoreanism. His well-known doctrine of the daily extinction of the sun is too consistent with his other opinions to allow of our attaching decisive importance to its affinity with the

multiplicity and variability of things, but he decidedly excluded both conceptions from the primitive essence or Deity; whereas Heracleitus describes the Deity as fire which restlessly passes into the most various forms. Schuster (p. 229, 1) thinks it probable, and Teichmüller (*N. Stud.* i. 127 sq.) undeniable, that he said this expressly in opposition to Xenophanes. This appears to me possible, but by no means certain; for the proposition, 'God is day and night,' &c. (p. 38, 1) is not such a direct and self-evident contradiction to the "εἷς θεὸς" of Xenophanes; nor the statement that God changes Himself into all things, to the negation of the movement of the Deity in regard to place (Vol. I. 560, 3), that neither can be explained except in relation to the other. Still less, however, can I agree with Schuster (229, 1) that Xenophanes spoke of the harmony to be sought in the invisible, and that Heracleitus opposed him with the proposition about the visible harmony, first because we do not know whether Xenophanes said what Schuster supposes, and secondly, because we *do* know that Heracleitus did not say what is here ascribed to him.

notion of Xenophanes; though that affinity is certainly remarkable. While, therefore, the historical connection of Heracleitus with Pythagoras and Xenophanes seems probable enough, it is difficult to make this probability a certainty. Still more uncertain is the conjecture[1] that Parmenides, in his polemic against 'the fools who hold Being and non-Being to be same and at the same time not the same,'[2] was alluding to Heracleitus. In this case there are considerable difficulties as to the chronology;[3] besides, the Being of the non-existent was first expressly enunciated, so far as we know, not by Heracleitus, but by the Atomists; Parmenides must, therefore, have borrowed the identity of Being and

[1] Bernays, *Rhein. Mus.* vii. 114 sq. and Steinhart, *Hall. A. Literaturz.* 1848, Novbr. p. 892 sq.; *Platon's Werke*, iii. 394, 8; Kern, *Xenoph.* 14; Schuster, p. 34 sqq. 236.

[2] V. 46 sqq. *supra*, Vol. I. 589.

[3] It has been shown, p. 1, 2, that Heracleitus's work was in all probability not composed before 478 B.C. That of Parmenides can scarcely be later; indeed, it is most likely, rather earlier. Even according to Plato's reckoning, Zeno, who in 454–2 B.C. was forty years old, had in his youth (therefore probably about 470–465 B.C.) defended his master πρὸς τοὺς ἐπιχειροῦντας αὐτὸν κωμῳδεῖν; the work of Parmenides must consequently be placed some years earlier; and as Plato certainly does not represent Parmenides as older, and most likely much younger than he really was (cf. Vol. I. p. 581 sq.), we thus approach very nearly the date of Heracleitus's work. The same inference may be drawn from the verses of Epicharmus, ap. Diog. iii. 9 (*sup.* Vol. I. p. 530, 1), in which he makes the representative of the Eleatic philosophy say: ἀμάχανόν γ' ἀπ' οὔτινος εἶμεν ὅ τι πρᾶτον μόλοι. *This* argument against absolute Becoming is not mentioned by Xenophanes; on the other hand, it is expressly brought forward by Parmenides, v. 62 sq. (*sup.* Vol. I. p. 585, 3). If, then, Epicharmus borrowed it from Parmenides, and consequently was in possession of Parmenides' poem, it is not absolutely impossible, though not very probable, that this poem itself may have contained allusions to the work of Heracleitus, which Epicharmus was using at the same time. It is still more improbable, however, that Parmenides should have first formed his theory, the premises of which had been fully given him by Xenophanes, in his maturity, under the influence of Heracleitus's work.

non-Being from his opponents; his description of these opponents, however, applies rather to the mass of mankind with their uncritical reliance on sensible appearance, than to a philosopher who, in marked opposition to them, denied the truth of sensuous perceptions.[1] If it

[1] I have retained the above from the previous edition, essentially unaltered, because Schuster has not convinced me of the opposite theory by his defence, which has meanwhile appeared. For we find, it seems to me, neither in the opinions nor expressions of Parmenides such points of contact with Heracleitus as would warrant our supposing that he refers to this latter philosopher. Parmenides opposes those οἷς τὸ πέλειν τε καὶ οὐκ εἶναι ταὐτόν νενόμισται. But Heracleitus, as has been already shown, never said that Being and Non-Being were the same; even his εἶμέν τε καὶ οὐκ εἶμεν has not this sense (cf. p. 11, 2), nor is it contained in the Aristotelian assertion that he held good and evil to be the same (quoted by Schuster). Setting aside the question of the accuracy of this assertion (cf. p. 36 sq.), it is quite different whether we say good and evil (both of which belong to Being) are the same; and Being and Non-Being are so. This formula was first introduced by Parmenides in order to express the contradiction in which the mode of conception he was combating resulted. But if we enquire what this mode of conception was, he points himself (v. 37, 45 sqq., 75 sq., cf. *supra*, Vol. I. 584, 1; 585, 4) to those who held (1) a Non-Being, and (2) a genesis and decay. Parmenides might certainly have extended his censure to Heracleitus's doctrine, as, on the other hand, he was included by Heracleitus among those who do not understand what is before their eyes (*supra*, p. 7, 2), to whom the ever-living fire has become dead and rigid (p. 89, 1), but there is nothing to prove that Parmenides, in what he said, specially alluded to Heracleitus. He describes his adversaries (*l. c.*) as ἄκριτα φῦλα, as people who lived as if they were blind and deaf; and warns them against trusting more to their eyes and ears than to the λόγος; a description which indeed applies to the sensualists, among whom Schuster reckons Heracleitus, but not to a philosopher who so entirely agrees with Parmenides in his depreciation of sense compared with reason, and even expresses this conviction in the same way as Heracleitus actually did (*supra*, p. 87 sq. cf. Vol. I. 585, 591). That Parmenides in the second part of his poem represented 'fire and night on earth as the ultimate opposites exactly in the manner of Heracleitus,' I cannot discover. Parmenides has here two elements, the light and the dark, which he also named fire and earth: with Heracleitus these two are only the 'ultimate opposites' among his three, or, according to Schuster, four elemental forms: water, as the bond between them, is not less essential. When Parmenides therefore, in his exposition of the δόξαι βρότειοι (*supra*, Vol. I. 592, 3; 595, 2), speaks only of two μορφαί, from which all things are to be explained, without ever mentioning a third; and when, moreover, he designates these in the first series, not as fire and earth, but as light and dark, this does not warrant the supposition that he was thinking especially of Heracleitus's three elemental forms. If he alluded to any particular system, it is far more likely to have been that of the Pythagoreans, traces of which (Vol. I. p. 597, 2) so clearly appear in his cosmology, and to which, even before the table of the ten contradictions was framed, the obvious contrast of light and darkness was not unknown. From this system alone is derived the δαίμων ἣ πάντα κυβερνᾷ (cf. Vol. I. p. 595, 2; 600 sq.); Schuster reminds us instead of Heracleitus's γνώμη, ἥτε οἵη κυβερνῆσαι πάντα (*supra*, p. 42, 2); but the similarity here lies only in the words πάντα κυβερνᾶν, and proves very little, as we find the same expression in Anaximander (*supra*, Vol. I. 248, 1), and later in Diogenes (Vol. I. 287, 7), whereas the most characteristic trait of Parmenides's representation, that the δαίμων, like the Pythagorean ἑστία (*supra*, Vol. I. 450, 1), is enthroned in the centre of all the spheres, has no parallel in Heracleitus. The resemblance also between the παλίντροπος κέλευθος of Parm. (v. 51, Vol. I. 584), and the παλίντροπος ἁρμονία of Heracleitus (*supra*, p. 33, 3), even if the true reading of the latter be not παλίντονος, depends merely on the use in both cases of the word παλίντροπος, an expression that is not very uncommon. The meaning, however, of the expression is not in each case the same; with Heracleitus 'bent backwards' or 'turning again' describes that which returns out of Opposition into Unity; with Parmenides that which comes into opposition with itself in passing from its original direction into the contrary. Still less results from the fact that Heracleitus once (p. 32, 1) says: εἰδέναι χρὴ τὸν πόλεμον, &c.; and Parm. (v. 37, Vol. I. p. 584, 1) ὡς χρεών ἐστι μὴ εἶναι (and v. 114, Vol. I. 592, 3) τῶν μίαν οὐ χρεών ἐστι; for the assertion that there must be a non-Being is not identical with the assertion that there must be strife; what Heracleitus says is not alluded to in the turn given to the thought by Parmenides, and which is peculiar to himself; and the use of so inevitable a word as χρή, for which Parmenides substitutes χρεών ἐστι, cannot be said to prove anything.

be supposed, on the other hand, that in this denial of the knowledge derived from sense, Parmenides is following Heracleitus, we must remember that the polemic of these two philosophers had an entirely different significance. Parmenides mistrusts the senses because they show us multiplicity and change; Heracleitus mistrusts them because they show us permanence in individual things. It is not probable, therefore, that Parmenides was acquainted with the doctrine of Hera-

cleitus or took account of it in the establishment of his system.

But even if it be impossible to prove with certainty the immediate relation of Heracleitus to the Pythagorean and Eleatic schools, the historical position and importance of his doctrine remain unaltered, whether he was moved by his predecessors to oppose their theories, or whether, in his own study of things, he chose to adopt the point of view which they least regarded, and which in the later development of the Eleatic system was expressly denied. Whereas in the Eleatic doctrine of the One, the ancient enquiry directed chiefly to the primitive substantial ground of things reached its climax, in Heracleitus this tendency was opposed by the decided conviction of the absolute vitality of nature, and the continual change of material substance, which, as the world-forming power and the law of formation inherent in it, seems to constitute the only permanent element in the mutability of phenomena. But if everything is subject to Becoming, philosophy cannot escape the obligation to explain Becoming and change. Consequently, Heracleitus proposes a new problem to philosophy. Instead of the question concerning the substance of which things consist, prominence is given to the enquiry as to the causes from which arise generation, decay, and change, and in devoting supreme attention to this enquiry, the pre-Socratic physical philosophy changes its whole character.[1] Heracleitus himself answered this question very incompletely. He shows, indeed, that all things are involved in perpetual change; he defines this change more accurately as a development and union of opposites; he describes the elemental forms which it assumes; but if we ask why everything is subject to Becoming, and permanent Being is nowhere to be found, his only answer is: because all is fire. This, however, is in reality only another expression for the absolute mutability of things; it does not explain how it happens that fire changes into moisture, and moisture into earth; why the primitive matter exchanges its originally fiery nature for other forms. Even the later adherents of the Heracleitean doctrine seem to have done almost nothing in this direction, or for the scientific establishment and methodical development of their views. The school of Heracleitus appears, indeed, to have maintained its existence long after the death of its founder. Plato tells us that about the beginning of the fourth century it boasted considerable numbers in Ionia, and especially in Ephesus;[1] he himself had been instructed in Athens by Cratylus the Heracleitean,[2] and a generation before, Pythagoras had

[1] Strümpell, *Gesch. d. Theor. Phil. d. Gr.* p. 40, inverts this relation: he makes out that Heracleitus preceded the Eleatics, and that the transition was from him to them. The changefulness of nature (he remarks) which Heracleitus had taught, compelled thought to say of every individual thing that it was not; this changeful nature then was entirely abandoned by the Eleatics as an object of knowledge, and knowledge was exclusively directed to the existent. But since the founder of the Eleatic school is older than Heracleitus, and since the Eleatic doctrine in its whole tendency appears as the completion of the earlier physics, and the doctrine of Heracleitus as the commencement of the later physics, which was chiefly concerned with the explanation of Becoming, I consider this exposition as incorrect.

[1] *Theæt.* 179 D (with reference to the φερομένη οὐσία of Heracleitus): μάχη δ' οὖν περὶ αὐτῆς οὐ φαύλη οὐδ' ὀλίγοις γέγονεν. ΘΕΟΔ. πολλοῦ καὶ δεῖ φαύλη εἶναι, ἀλλὰ περὶ μὲν τὴν Ἰωνίαν καὶ ἐπιδίδωσι πάμπολυ. οἱ γὰρ τοῦ Ἡρακλείτου ἑταῖροι χορηγοῦσι τούτου τοῦ λόγου μάλα ἐῤῥωμένως. Cf. *inf.* p. 114, 3.

[2] Arist. *Metaph.* i. 6; cf. Part II. a, 344, 5. According to Plato,

supported his sceptical theories by propositions from Heracleitus.[1] To Cratylus we may perhaps refer those traces of Heracleitean influences which are evident in the writings erroneously ascribed to Hippocrates.[2] But the little that we know of these later Heracleiteans is not calculated to give us a very high idea of their scientific attainments. Plato, indeed, cannot find words to describe their fanatical unmethodical procedure, and the restless haste with which they hurried from one thing to another; their self-satisfaction with their oracular sayings, the vain confidence in their own teaching and contempt for all others, which were characteristic of this school.[3] He makes merry in the Cratylus over the groundless nature of the etymologies in which the disciples of Heracleitus exaggerated the practice of playing upon words; and Aristotle relates

Crat. 440 D, 429 D, Cratylus was much younger than Socrates; he is described (*ibid.* 429 E; cf. 440 E) as an Athenian, and his father's name is said to have been Smikrion. Another Heracleitean, called Antisthenes, is also mentioned (Diog. vi. 19); who, as it would seem, and not the Cynic, was the person who commentated on Heracleitus's work (Diog. ix. 15); but we know nothing further about him.

[1] *Inf.* chapter on the Sophistic theory of knowledge.

[2] Besides the treatise π. διαίτης spoken of, *sup.* p. 69 sq.; 15, 1, we should mention περὶ τροφῆς, cf. Bernays, *Heraclit. Br.* 145 sq.

[3] *Theaet.* 179 E: καὶ γὰρ . . . περὶ τούτων τῶν Ἡρακλειτείων . . . αὐτοῖς μὲν τοῖς περὶ τὴν Ἔφεσον ὅσοι προσποιοῦνται ἔμπειροι εἶναι οὐδὲν μᾶλλον οἷόν τε διαλεχθῆναι ἢ τοῖς οἰστρῶσιν. ἀτεχνῶς γὰρ κατὰ τὰ συγγράμματα φέρονται, τὸ δ' ἐπιμεῖναι ἐπὶ λόγῳ καὶ ἐρωτήματι καὶ ἡσυχίως ἐν μέρει ἀποκρίνασθαι καὶ ἐρέσθαι ἥττον αὐτοῖς ἔνι ἢ τὸ μηδέν· μᾶλλον δὲ ὑπερβάλλει τὸ οὐδ' οὐδὲν πρὸς τὸ μηδὲ σμικρὸν ἐνεῖναι τοῖς ἀνδράσιν ἡσυχίας· ἀλλ' ἄν τινά τι ἔρῃ, ὥσπερ ἐκ φαρέτρης ῥηματίσκια αἰνιγματώδη ἀνασπῶντες ἀποτοξεύουσι, κἂν τούτου ζητῇς λόγον λαβεῖν, τί εἴρηκεν, ἑτέρῳ πεπλήξει καινῶς μετωνομασμένῳ, περανεῖς δὲ οὐδέποτε οὐδὲν πρὸς οὐδένα αὐτῶν· οὐδέ γε ἐκεῖνοι αὐτοὶ πρὸς ἀλλήλους, ἀλλ' εὖ πάνυ φυλάττουσι τὸ μηδὲν βέβαιον ἐᾶν εἶναι μήτ' ἐν λόγῳ μήτ' ἐν ταῖς αὐτῶν ψυχαῖς. And again: οὐδὲ γίγνεται τῶν τοιούτων ἕτερος ἑτέρου μαθητὴς, ἀλλ' αὐτόματοι ἀναφύονται ὁπόθεν ἂν τύχῃ ἕκαστος αὐτῶν ἐνθουσιάσας καὶ τὸν ἕτερον ὁ ἕτερος οὐδὲν ἡγεῖται εἰδέναι. Cf. *Crat.* 384 A: τὴν Κρατύλου μαντείαν.

that Cratylus blamed Heracleitus for not having expressed with sufficient clearness the changeableness of things; at last indeed, he did not venture to express an opinion on any subject, because every proposition contains an assertion concerning a Being.[1] If, nevertheless, the school of Heracleitus in the beginning of the fourth century not only had adherents in its original home, but also in other places, this is certainly a sign of its historical importance; but the Heracleitean doctrine itself does not seem to have been further developed in the school. The philosophers who had also learned something from his contemporary, Parmenides, were the first to attempt a more accurate explanation of Becoming, which Heracleitus had made the ground idea of his system. Those who must next be mentioned in this connection are, as before observed, Empedocles and the Atomists.[2]

[1] Arist. *Metaph.* iv. 5, 1010 a, 10: ἐκ γὰρ ταύτης τῆς ὑπολήψεως ἐξηνθησεν ἡ ἀκροτάτη δόξα τῶν εἰρημένων, ἡ τῶν φασκόντων ἡρακλειτίζειν, καὶ οἵαν Κρατύλος εἶχεν, ὃς τὸ τελευταῖον οὐθὲν ᾤετο δεῖν λέγειν, ἀλλὰ τὸν δάκτυλον ἐκίνει μόνον, καὶ Ἡρακλείτῳ ἐπετίμα εἰπόντι ὅτι δὶς τῷ αὐτῷ ποταμῷ οὐκ ἔστιν ἐμβῆναι· αὐτὸς γὰρ ᾤετο οὐδ' ἅπαξ. The same is repeated without any addition in Alex. *in h. l.*; Philop. *Schol. in Ar.* 35, a, 33; Olympiodorus, *ibid.*

[2] We can only mention by way of appendix (for it is scarcely included in the subject matter of our history) the opinion recently expressed by Gladisch (*sup.* Vol. I. 34 sqq.), and previously by Creuzer (*Symbolik und Mythol.* ii. 196, 198 sq. 2 ed. p. 595 sqq., 601 sqq. ed. 1840), that Heracleitus was a disciple of the Zoroastrian doctrine. In my criticism I must confine myself to the principal points. Gladisch believes (*Heracl. u. Zor. Rel. u. Phil.* p. 139 sqq.; cf. 23 sqq.) that the systems of Heracleitus and Zoroaster are one and the same. But even in their fundamental conceptions they are very different. The one is pure dualism, the other hylozoistic Pantheism; the Persian doctrine has two original beings, one good and the other evil; and that this dualism arose at first through a metamorphosis of the primitive essence from its primitive Being into the Being of another ('*eine Umwandlung des Urwesens aus seinem Ursein in Anderssein*') is an assumption which contradicts the most authentic accounts,

and can only be supported, and that but imperfectly, by some later and untrustworthy indications. Heracleitus, on the contrary, maintains the unity of the world, and the power that moves the world, as strongly as any of the philosophers; the opposites with him are not original and permanent, but the original element is the uniform essence which, in its development, puts forth the most opposite forms of Being, and again receives them into itself. The Persian system remains fixed, even in the opposition of good and evil, of light and darkness, as a final and absolute opposition; Ahriman and his kingdom are simply that which ought not to be, and which (cf. Schuster, 225, 3) has only in the process of time intermeddled with the world: whereas with Heracleitus strife is the necessary condition of existence; even evil is a good for the Deity, and a world of light alone, without shadows, such as forms the beginning and end of the Zoroastrian cosmology, is entirely unthinkable; for this very reason, however, the opposition is continually resolving itself into the harmony of the universal whole. There is much more resemblance to the Persian dualism in that of Empedocles and the Pythagoreans than in the system of Heracleitus. Heracleitus's chief doctrine of the flux of all things is entirely absent from the Zoroastrian theology; and, therefore, the worship of fire common to both has in each case a different import. The Persian religion in regard to light and warmth dwells mostly on their happy and beneficent influence on man; with Heracleitus, fire is the cause and symbol of the universal life of nature—of the change to which all things are subject; it is the natural force which produces what is destructive, as well as what is beneficial to man. The Persian doctrine contains nothing of the transmutation of the elements, nor of the alternate formation and destruction of the world; for what Gladisch quotes (*Rel. u. Phil.* 27; *Her. u. Zor.* 38 sq.) from Dio Chrysost. *Or.* xxxvi. p. 92 sqq. R. is evidently a later interpretation, by which an insipid allegorical representation of the Stoic cosmology is made out of the ancient Persian chariot of Ormuzd (on which cf. Herod. vii. 40), and the steed of the sun. Neither is there any mention of Heracleitus's theory of the sun, which, though so characteristic of him, would be absolutely out of place; nor of the Heracleitean anthropology, for the belief in the Fravashis, to which Gladisch refers, has hardly even a distant analogy with it. It has already been said, p. 6, that there is no reason for bringing the Logos of Heracleitus into connection with the word Honover, as Lassalle does. That Heracleitus, 'as to his political opinions, was a Zoroastrian monarchist' is a more than hazardous assertion: his own utterances show him to have been aristocratic and conservative, but at the same time thoroughly Greek in his temperament, and he is expressly said to have declined an invitation to the Persian court. Under these circumstances, it is of no avail to prove that Heracleitus called strife the father of all things, when we know that strife with him had quite another meaning from the conflict of good and evil in the Zoroastrian religion; that he made fire the primitive essence, when by fire he did not

I. *EMPEDOCLES AND THE ATOMISTS.*

A. EMPEDOCLES.[1]

1. *The universal bases of the Physics of Empedocles—Generation and Decay—Primitive Substances and Moving Forces.*

Heracleitus had deprived substance of all permanence; Parmenides, on the contrary, had denied generation and

intend to express what the Persians did in ascribing the nature of light to pure spirits; that he had a horror of corpses (a feeling very natural to man); that he is said by a tradition to have been torn to pieces by dogs, which is something quite different from having a Persian funeral assigned to him, which could never have been carried out in a man's lifetime; that he blames the adoration of images, which is censured by Xenophanes and others, and was unknown to the ancient Romans and to the Germans; that he demanded knowledge of truth, and was an enemy of falsehood, which a philosopher certainly did not require to learn from foreign priests. Even supposing there existed many more of such similarities, we could not infer from them any real historical interdependence; and if Heracleitus was acquainted with the religious doctrine of the Persians (which in itself is quite credible), there are no signs of its having exercised any decisive influence on his system.

[1] On the life, writings, and doctrine of Empedocles, cf. besides the more comprehensive works:—Sturz, *Empedocles Agrig.* Lpz. 1805, where the materials are very carefully collected; Karsten, *Empedoclis Agr. Carm. Rel.* Amst. 1838; Stein, *Empedoclis Agr. Fragmenta*, Bonn, 1842; Steinhart, in *Ersch und Grübers Allg. Encykl.* sect. i. vol. 34, p. 83 sqq. Ritter, on the philosophy of Empedocles, in Wolfs *Literar. Analekten*, B. ii. (1820), H. 4, p. 411 sqq.; Krische, *Forsch.* i. 116 sqq.; Panzerbieter, *Beiträge z. Kritik u. Erläut. d. Emp.* Mein. 1844; *Zeitschr. f. Alterthumsw.* 1845, 883 sqq.; Bergk, *De Procem. Empedoclis*, Berl. 1839; Mullach, *De Emp. Proœmio*, Berl. 1850; *Quæst. Empedoclearum Spec. Secund. Ibid.* 1852; *Philosoph. Gr. Fragm.* i. xiv. sqq., 15 sqq.: Lommatzsch, *Die Weisheit d. Emp.* Berl. 1830. The last must be used with great caution: Raynaud, *De Empedocle*, Strassb. 1848, only gives what is well known; even the work of Gladisch mentioned Vol. I. p. 34, in regard to Empedocles, keeps almost entirely to Karsten. There are also some dissertations in Ueberweg, *Grundr.* i. § 23.

Agrigentum, according to the unanimous testimony of our authorities, was the native city of Empedocles. The period of his activity coincides almost exactly with the second year of the fifth century, but the more particular statements are uncertain and various. Diog. viii. 74, places his

decay, motion and change; Empedocles strikes out a middle course. He maintains, on the one hand with

prime (according to Apollodorus) in the 84th Olympiad (444–440 B.C.), Euseb. *Chron.* in Ol. 81, and also in Ol. 86, therefore, either 456–452 B.C. or 436–432 B.C. Syncellus, p. 254 C, adopts the earlier date; Gellius, xvii. 21, 13 sq., mentions the date of the Roman Decemviri (450 B.C.), but, at the same time, that of the battle of Cremera (476 B.C.). The statement of Diogenes is doubtless based (as Diels shows, *Rhein. Mus.* xxxi. 37 sq.) on that of Glaucus, which he quotes, viii. 52, from Apollodorus, viz., that Empedocles visited Thurii immediately after the founding of that city (Ol. 83–4), which, however, leaves a wide margin, as it is not stated how old he was at the time. According to Arist. *Metaph.* i. 3, 984 a, 11, he was younger than Anaxagoras; but on the other hand, Simplicius says in *Phys.* 6 b, he was οὐ πολὺ κατόπιν τοῦ Ἀναξαγόρου γεγονώς. The statement that he joined in the war of the Syracusans against Athens (415 B.C.) is contradicted by Apoll. *loc cit.* (Steinhart, p. 85, and Diels thinks it must be the war of 425 B.C., to which, however, according to Apollodorus's calculation, the objection that he must then have been dead, or ὑπεργεγηρακώς, is less applicable). His age at his death is given by Aristotle *ap. Diog.* viii. 52, 78 (and perhaps also by Heracleides, cf. p. 3, *n.*), as 60; Favorinus *ap. Diog.* viii. 73, who gives it as 77, is a much less trustworthy testimony. The statement (*ibid.* 74) that he lived to the age of 109, confuses him with Gorgias. His life would, therefore, fall between 484 and 424 B.C. if, with Diels, we follow Apollodorus. But it seems to me safer to place the beginning and end of his existence 8 or 10 years earlier, first because Empedocles, according to Alcidamas *ap. Diog.* viii. 56, attended the instructions of Parmenides contemporaneously with Zeno; next, because the οὐ πολὺ of Simplicius can hardly mean so long a period as 16 years; and lastly (cf. vol. i. 636 and *inf. Anax.*), because Empedocles seems to have been already referred to by Melissus and Anaxagoras. We have little more certain information concerning him. He came of a rich and noble family (cf. Diog. viii. 51–53; also Karsten, p. 5 sqq.). His grandfather of the same name in the 71st Olympiad had gained the prize at Olympia with a four-horse chariot (Diog. *l. c.* after Apollodorus, as Diels shows), which is attributed to the philosopher by Athen. i. 3 e, following Favorinus (ap. Diog. *l. c.*), and according to Diogenes, also by Satyrus and his epitomiser, Heracleides. His father Meton (so almost all the accounts call him—for other statements vide Karsten, p. 3 sq.) seems to have assisted in the ejection of the tyrant Thrasidæus and the introduction of a democratic government, in the year 470 B.C. (Diod. xi. 53), and to have been subsequently one of the most influential men in the city (vide Diog. viii. 72). After Meton's death, when the ancient aristocratic institutions had been restored, and there were attempts at a tyranny, Empedocles, not without severity,

Parmenides, that Becoming and Decay in the strict sense, and therefore qualitative change in the original

assisted the democracy to gain the victory, showing himself in word and deed a warm friend to the people. The throne was offered to him, but he refused it, as we are told in Diog. viii. 63–67, 72 sq.; Plut. *Adv. Col.* 32, 4, p. 1126. He was destined, however, to experience the fickleness of popular favour, and left Agrigentum probably against his will (Steinhart, 85, thinks it was because he had participated in the war between Syracuse and Athens, but that participation, as we have seen, is not to be considered historical) for the Peloponnesus. His enemies succeeded in preventing his return, and he consequently died there (Timæus ap. Diog. 71 sq., *ibid.* 67, where the true reading for οἰκιζομένου is οἰκτιζομένου, and not, as Steinhart thinks, p. 84, αἰκιζομένου). The statement that he died in Sicily from the effects of a fall from a chariot (Favorin. ap. Diog. 73) is not so well authenticated. The story of his disappearance after a sacrificial feast (Heracleides ap. Diog. 67 sq.) is no doubt; like the similar story about Romulus, a myth invented for the apotheosis of the philosopher without any definite foundation in history. A naturalistic interpretation of this myth for the opposite purpose of representing him as a boasting impostor is the well-known anecdote of his leap into Ætna (Hippobotus and Diodorus *ap. Diog.* 69 sq.; Horace, *Ep. ad. Pis.* 464 sq., and many others, cf. Sturz, p. 123 sq. and Karsten, p. 36), and also the assertion of Demetrius ap Diog. 74, that he hanged himself. Perhaps in order to contradict this evil report the so-called Telauges ap. Diog. 74, cf. 53, asserts that he fell into the sea from the weakness of old age, and was drowned. The personality of Empedocles plays an important part in all the traditions respecting him. His temperament was grave (Arist. *Probl.* xxxi. 953 a, 26, describes him as melancholic); his activity was noble and all-embracing. His political efficiency has already been mentioned. His power of language to which he owed these successes (Timon ap. Diog. viii. 67, calls him ἀγοραίων ληκητὴς ἐπέων; Satyrus, *ibid.* 58, ῥήτωρ ἄριστος), and which is still perceptible in the richness of imagery and the elevated expressions of his poems, he is said to have strengthened by technical study. Aristotle designates him as the person who first cultivated rhetoric (Sext. *Math.* vii. 6, Diog. viii. 57, cf. Quintilian iii. 1, 2), and Gorgias is said to have been his disciple in the art (Quintil. *l. c.*; Satyrus ap. Diog. 58). His own vocation, however, he seems to have sought, like Pythagoras, Epimenides, and others, in the functions of a priest and prophet. He himself, v. 24 sq. (422, 462 Mull.), declares that he possesses the power to heal old age and sickness, to raise and calm the winds, to summon rain and drought, and to recall the dead to life. In the introduction to the καθαρμοί, he boasts that he is honoured by all men as a god, and that when he enters a city adorned with fillets and flowers, he is immediately surrounded by those in need of help,

substance, are unthinkable; but, on the other hand, he does not absolutely abandon this point of view; he allows

some soliciting prophecies, and some healing of diseases. This element comes out strongly in his doctrines on anthropology and ethics. Ancient writers speak not only of the solemn state and dignity with which he surrounded himself (Diog. viii. 56, 70, 73; Ælian. *V. H.* xii. 32; Tertull. *De Pall.* C 4; Suid. Ἐμπεδοκλ.; Karsten, p. 30 sq.), and of the great reverence which was paid him (Diog. viii. 66, 70), but also of many wonders which, like another Pythagoras, he wrought. He forbade injurious winds to enter Agrigentum (Timæus ap. Diog. viii. 60; Plut. *Curios.* i. p. 515; *Adv. Col.* 32, 4, p. 1126; Clemens, *Strom.* vi. 630 C; Suid. Ἐμπεδ. δορά.; Hesych. κωλυσανέμας; cf. Karsten, p. 21; cf. Philostr. *V. Apollon.* viii. 7, 28), the circumstance is differently related by Timæus and Plutarch; the origin of it is no doubt the miraculous account of Timæus, according to which the winds are imprisoned by magic, in pipes like those of the Homeric Æolus. Plutarch gives a naturalistic interpretation of the miracle, which is even more absurd than the suggestion of Lommatzsch, p. 25, and Karsten, p. 21—that Empedocles stopped up the hollow through which the winds passed by stretching asses' skins across it. We hear further that he delivered the Selinuntians from pestilences by altering the course of their river (Diog. viii. 70, and Karsten, 21 sq.), brought an apparently dead man to life after he had long been stiff (Heracleid. ap. Diog. viii. 61, 67, and others; the statement of Hermippus, *ibid.* 69, sounds simpler. Further details ap. Karsten, p. 23 sqq.; on the work of Heracleid. vide Stein, p. 10); and restrained a madman from suicide by means of music (Iambl. *V. Pyth.* 113, and others, ap. Karsten, p. 26). How much historical foundation exists for these stories it is now, of course, impossible to discover. The first and third are suspicious, and seem only to have emanated from the verses of Empedocles; what is said in the second, of the improvement of the river, may possibly be an allusion to the coin described by Karsten, on which the river-god in that case would merely represent the city of Selinus. That Empedocles believed himself capable of magical powers is proved by his own writings; according to Satyrus, ap. Diog. viii. 59, Gorgias asserts that he had been present when Empedocles was practising them. That he also practised medicine, which was then commonly connected with magic and priest-craft, is clear from his own words, quoted by Plin. *H. N.* xxxvi. 27, 202; Galen. *Therap. Meth.* c. 1, B. x. 6, Kuhn and others. The traditions as to the teachers of Empedocles will be mentioned later on. The writings attributed to him are very various in content, but it is questionable in regard to many whether they really belonged to him. The statement ap. Diog. viii. 57 sq., that he wrote tragedies, and no fewer than 43, is doubtless founded on the evidence of Hieronymus and Neanthes, and not on that of Aristotle. Heracleides thinks the tragedies were the work of another person, who, according to Suid. Ἐμπεδ. was, perhaps, his grandfather of the same name; and this conjecture has great probability, vide Stein, p. 5 sq., against Karsten, 63 sqq. 519. He justly considers that the two epigrams, ap. Diog. viii. 61, 65, are spurious, and the same must be said of the verse or poem from which Diogenes quotes an address to Telauges, son of Pythagoras (*ibid.* p. 17). The πολιτικὰ, which Diog. 57 ascribes to him, together with the tragedies, probably refer, not to any independent work, although Diogenes seems to presuppose this, but to smaller portions of other writings; they cannot, therefore, be genuine, but must be placed in the same category as the so-called political part of Heracleitus's work. The statement (Diog. 77, Suid. Diog. 60, is not connected with this) that Empedocles wrote ἰατρικὰ, in prose, according to Suidas (καταλογάδην), may probably be accounted for either by the existence of some forged work, or by a misapprehension of a notice which originally referred to the medical portion of the Physics, vide Stein, p. 7 sqq. (For another opinion vide Mullach, *De Emped. Prœmio*, p. 21 sq. *Fragm.* i. xxv.) Two poems, one a hymn to Apollo, and the other on the army of Xerxes, are said by Diog. viii. 57, following Hieronymus or Aristotle, to have been destroyed soon after his death. That Empedocles wrote down speeches or rhetorical instructions, the ancient accounts of him give us no reason to suppose, vide Stein, 8, Karsten, 61 sq. There remain, therefore, but two undoubtedly genuine works which have come down to modern times, the φυσικὰ and the καθαρμοί; that these are separate works, as Karsten (p. 70) and others suppose, has been conclusively proved by Stein. The φυσικὰ were at a later period divided into three books (vide Karsten, p. 73), but the author seems to have contemplated no such division. On the testimonies and opinions of the ancients on the poems of Empedocles, vide Karsten, p. 74 sqq., 57 sq. Sturz, Karsten, Mullach and Stein have collected the fragments, and the three first have commented on them. (I quote from Stein, but add the numbers of the verses as given by Karsten and Mullach.)

not only that particular things as such arise, decay and change, but also that the conditions of the world are subject to perpetual change. Consequently he is obliged to reduce these phenomena to movement in space, to the combination and separation of underived, imperishable, and qualitatively unchangeable substances, of which there must, in that case, necessarily be several, variously constituted, in order to explain the multiplicity of things. These are the fundamental thoughts underlying the

doctrine of Empedocles on the primitive causes, as we gather partly from his own utterances and partly from the statements of ancient writers.

If we see a being enter upon life, we generally think it is something which did not previously exist; if we see it destroyed, we think that something which was, has ceased to be.[1] Empedocles, following Parmenides in this respect, considers this notion as contradictory. That a thing should come from nothing, and that it should become nothing, appear to him alike impossible. From whence, he asks with his predecessor, could anything be added to the totality of the Real, and what should become of that which is? There is nowhere any void in which it might be cancelled, and whatever it may become, *something* will always come out of it again.[2] What, therefore, appears to us as generation and decay cannot really be so; it is in truth only

[1] V. 40 (342, 108 M) sq.; cf. especially V. 45 sqq.:—

νήπιοι — οὐ γάρ σφιν δολιχόφροιές εἰσι μέριμναι (they have no far-reaching thoughts)
οἳ δὴ γίγνεσθαι πάρος οὐκ ἐὸν ἐλπίζουσιν,
ἢ τι καταθνήσκειν τε καὶ ἐξόλλυσθαι ἅπαντη.

[2] V. 48 (81, 102 M):—

ἐκ τοῦ γὰρ μὴ ἐόντος ἀμήχανόν ἐστι γενέσθαι
τό τ' ἐὸν ἐξόλλυσθαι ἀνήνυστον καὶ ἄπρηκτον (sc. ἐστι).
αἰεὶ γὰρ στήσονται (sc. ἐόντα) ὅπη κέ τις αἰὲν ἐρείδῃ.

V. 90 (117, 93 M):—

εἶτε γὰρ ἐρθείροντο διαμπερὲς, οὐκέτ' ἂν ἦσαν.

V. 91 (119 K; 166, 94 M):—

οὐδέ τι τοῦ παντὸς κενεὸν πέλει οὐδὲ περισσόν.
τοῦτο δ' ἐπαυξήσειε τὸ πᾶν τί κε καὶ πόθεν ἐλθόν;
πῇ δέ κε καὶ ἀπολοίατ'; ἐπεὶ τῶνδ' οὐδὲν ἔρημον·
ἀλλ' αὖτ' ἔστιν ταῦτα (they are themselves, remain what they are)· δι' ἀλλήλων δὲ θέοντα
γίγνεται ἄλλοθεν ἄλλα διηνεκές, αἰὲν ὁμοῖα.

V. 51 (350, 116 M):—

οὐκ ἂν ἀνὴρ τοιαῦτα σοφὸς φρεσὶ μαντεύσαιτο,
ὡς ὄφρα μέν τε βιοῦσι, τὸ δὴ βίοτον καλέουσι,
τόφρα μὲν οὖν εἰσίν καί σφιν πάρα δειλὰ καὶ ἐσθλά,
πρὶν δὲ πάγεν τε βροτοὶ καὶ ἐπεὶ λύθεν, οὐδὲν ἄρ' εἰσίν.

mingling and separation.[1] What we call generation is the combination of substances; what we call decay is the separation of substances,[2] though in ordinary

[1] V. 36 (77, 98 M):—

ἄλλο δέ τοι ἐρέω· φύσις οὐδενός ἐστιν ἁπάντων
θνητῶν, οὐδέ τις οὐλομένου θανάτοιο τελευτὴ,
ἀλλὰ μόνον μῖξίς τε διάλλαξίς τε μιγέντων
ἐστί, φύσις δ' ἐπὶ τοῖς ὀνομάζεται ἀνθρώποισιν. Cf. Arist. *Metaph.* i. 3, 984 a, 8: Ἐμπεδοκλῆς δὲ τὰ τέτταρα . . . ταῦτα γὰρ ἀεὶ διαμένειν καὶ οὐ γίγνεσθαι ἀλλ' ἢ πλήθει καὶ ὀλιγότητι συγκρινόμενα καὶ διακρινόμενα εἰς ἕν τε καὶ ἐξ ἑνός. *De Gen. et Corr.* ii. 6; *ibid.* c. 7, 334 a, 26: The mixture of the elements with Empedocles is a σύνθεσις καθάπερ ἐξ πλίνθων καὶ λίθων τοῖχος.

[2] That 'birth' is nothing else than the combination, and decease than the separation of the substances of which each thing consists, is often asserted, not only by Empedocles himself, but by many of our authorities. Cf. V. 69 (96, 70 M):—

οὕτως ἢ μὲν ἓν ἐκ πλεόνων μεμάθηκε φύεσθαι,
ἠδὲ πάλιν διαφύντος ἑνὸς πλέον' ἐκτελέθουσι,
τῇ μὲν γίγνονταί τε καὶ οὐ σφίσιν ἔμπεδος αἰών (= καὶ ἀπόλλυνται)·
δὲ τάδ' ἀλλάσσοντα διαμπερὲς οὐδαμὰ λήγει,
ταύτῃ αἰὲν ἔασιν ἀκινητὶ κατὰ κύκλον (ἀκινητὶ I retain, agreeing with Panzerbieter; others read ἀκίνητα, which is a greater departure from the MSS.; or ἀκίνητον, which for many reasons seems less probable; it is a question whether ἀκίνητοι, the reading which stands in all the MSS. of Aristotle and Simplicius, is not the true reading, and whether the masculine οἱ θνητοὶ is not to be supplied as subject of the proposition, and corresponding to βροτοὶ in V. 54). This is confirmed by the doctrine of Love and Hate (vide *infra*), for Empedocles derives birth or origination from Love, the essential operation of which consists in uniting matter; while from Hate he derives the destruction of all things: as Aristotle also says, *Metaph.* iii. 4, 1000, a, 24 sqq. It can scarcely be doubted, therefore, that Empedocles simply identified origination with μῖξις, and decease or passing away, with διάλλαξις. In one passage, however, he seems to derive both, γένεσις and ἀπόλειψις, from each of these causes—from separation as well as from combination. V. 61 (87, 62 M) sqq.:—

δίπλ' ἐρέω· τοτὲ μὲν γὰρ ἓν ηὐξήθη μόνον εἶναι
ἐκ πλεόνων, τοτὲ δ' αὖ διέφυ πλέον ἐξ ἑνὸς εἶναι. (The verses are repeated in V. 76 sq.)
δοιὴ δὲ θνητῶν γένεσις, δοιὴ δ' ἀπόλειψις.
τὴν μὲν γὰρ πάντων σύνοδος τίκτει τ' ὀλέκει τε,
65. ἡ δὲ πάλιν διαφυομένων θρεφθεῖσα διέπτη.
καὶ ταῦτ' ἀλλάσσοντα διαμπερὲς οὐδαμὰ λήγει,
ἄλλοτε μὲν φιλότητι συνερχόμεν' εἰς ἓν ἅπαντα,
ἄλλοτε δ' αὖ δίχ' ἕκαστα φορεύμενα νείκεος ἔχθει. Then follows V. 69 sqq. vide *supra*. I cannot agree

language it may bear the other name.[1] "Everything, therefore, is subject to Becoming and Decay, only so

with Karsten who, in V. 63, substitutes for δοιὴ δὲ, "τοιὴδε;" for ὀλέκει, "ἄξει;" and for θρεφθεῖσα, "θρυφθεῖσα," in accordance with our text of Simplicius, for the changes are then too great, and the pregnant meaning of the whole verse is weakened. But Panzerbieter, *Beitr.* 7 sq.; Steinhart, p. 94; and Stein, *ad h. l.*, are scarcely justified in explaining the words as they do: things arise, not merely from the union of matters, but also from their separation, for in consequence of separation, new combinations appear; and similarly things pass away, not merely through their separation, but also through their union; because every new combination of substances is the destruction of the preceding combination. This in itself would not be inconceivable, but it would contradict the opinion of Empedocles (so far as it has been hitherto ascertained), who explains birth only from the mixture of substances, and decay only from their separation. He would, in the other case, assert that every union is, at the same time, a division, and vice versâ; the διαφερόμενον αὐτῷ ξυμφέρεται, which, according to Plato, *Soph.* 242 D sq. (*supra*, p. 33, 2), constituted the peculiarity of Heracleitus's doctrine as distinguished from that of Empedocles, would belong just as much to Empedocles; and the contradiction with which Aristotle reproaches him (*inf.* 139, 1), that love while it unites, also separates, and that hate which separates also unites, would not exist; for this would be in accordance with the nature of love and hate. The context of the verse appears to demand some other view; for as verses 60–62 and 66–68 do not immediately refer to individuals, but to the universe and its conditions, the intermediate verses must have the same reference. The expression πάντων σύνοδος is likewise in favour of this rendering; for it corresponds too closely with συνερχόμεν' εἰς ἓν ἅπαντα, V. 67, συνερχόμεν' εἰς ἕνα κόσμον, V. 116 (142, 151 M), πάντα συνέρχεται ἓν μόνον εἶναι, V. 173 (169, 193 M), to allow of its being interpreted in any other way. The meaning of V. 63 sqq. is, therefore: 'The mortal is produced from immortal elements (vide *infra*, V. 182), partly in the issuing of things from the sphairos, partly in their return to it; in both cases, however, it is again destroyed, here by the succeeding union, and there by the succeeding separation.' Cf. Sturz, p. 260 sqq., and Karsten, 403 sqq., for the remarks of later writers on Empedocles's doctrine of mingling and separation, which, however, tell us nothing new.

[1] Vide p. 123, 1, and V. 40 (342, 108 M): οἱ δ' ὅτε μὲν κατὰ φῶτα μιγὲν φάος αἰθέρος ἵκῃ (I follow the emendation of the text in Plut. *Adv. Col.* ii. 7, p. 1113; Panzerbieter, *Beitr.* p. 16, and explain, if a mixture appears in the form of a man):—

ἠὲ κατ' ἀκροτέρων θηρῶν γένος ἠ κατὰ θάμνων
ἠὲ κατ' οἰωνῶν, τότε μὲν τόδε (Panz. τόγε) φασὶ γενέσθαι·
εὖτε δ' ἀποκριθῶσι, τὸ δ' αὖ δυσδαίμονα πότμον,
ἣν θέμις οὔ (so Wyttenb.: for other

far as it becomes many out of one, or one out of many; so far, on the contrary, as it maintains itself in this change of place, in its existence and its own particular nature, so far does it remain, even in the alternation, unchanged.[1]

There are four different substances of which all things are composed: earth, water, air, and fire.[2] Em-

emendations of the corrupt text, cf. the editions) καλέουσι, νόμῳ δ' ἐπίφημι καὶ αὐτός.

[1] V. 69 sqq. p. 123, 2. In V. 72 the words admit of a double interpretation. Either: 'how far this alternation never ceases,' or 'how far this never ceases to be in alternation.' The sense and context seem to me in favour of the first view. On account of this unchangeableness of the primitive matters, Aristotle, *De Cœlo*, iii. 7, init. associates Empedocles with Democritus in the censure: οἱ μὲν οὖν περὶ Ἐμπεδοκλέα καὶ Δημόκριτον λανθάνουσιν αὐτοὶ αὐτοὺς οὐ γένεσιν ἐξ ἀλλήλων ποιοῦντες (sc. τῶν στοιχείων). ἀλλὰ φαινομένην γένεσιν ἐνυπάρχον γὰρ ἕκαστον ἐκκρίνεσθαί φασιν, ὥσπερ ἐξ ἀγγείου τῆς γενέσεως οὔσης ἀλλ' οὐκ ἔκ τινος ὕλης, οὐδὲ γίγνεσθαι μεταβάλλοντος. Cf. also *De Mel.* c. 2, 975 a, 36 sqq., and the quotations, *sup.* p. 123, 1. When therefore, Simp. *De Cœlo*, 68 b, Ald. attributes to Empedocles the Heracleitean proposition: τὸν κόσμον τοῦτον οὔτε τις θεῶν οὔτε τις ἀνθρώπων ἐποίησεν, ἀλλ' ἦν ἀεί, the true text (first ap. Peyron, *Emp. et Parm. Fragm.*; now p. 132 b, 28 K.; *Schol. in Arist.* 487 b, 43) shows that in the re-translation from the Latin, which we get in the text of Aldus, the names have been confused.

[2] V. 33 (55, 159 M):—

τέσσαρα τῶν πάντων ῥιζώματα πρῶτον ἄκουε·
Ζεὺς ἀργὴς Ἥρη τε φερέσβιος ἠδ' Ἀϊδωνεὺς
Νῆστίς θ' ἡ δακρύοις τέγγει κρούνωμα βρότειον.

Many conjectures respecting the text and meaning of this verse are to be found in Karsten and Mullach *in h. l.*; Schneidewin, *Philologus*, vi. 155 sqq.; Van Ten Brink, *ibid.* 731 sqq. Fire is also called Ἥφαιστος; Nestis is said to have been a Sicilian water deity, believed by Van Ten Brink, according to Heyne, to be identical with Proserpine (cf. however Krische, *Forsch.* i. 128). It is clear that Here does not mean the earth, as (probably on account of φερέσβιος) is supposed by Diog. viii. 76; Heracl., Pont. *Alleg. Hom.* 24, p. 52; Probus in *Virg. Ecl.* vi. 3; Athenagoras, *Suppl.* c. 22; Hippol. *Refut.* vii. 29, p. 384 (Stob. i. 288, and Krische, i. 126, might have escaped this error by a slight change of the words). It means of course the air; and it is not even necessary, with Schneidewin to refer φερέσβιος to Ἀϊδωνεύς, as it is perfectly applicable to air. Besides the mythical designations we find the following, V. 78 (105, 60 M), 333 (321, 378 M) πῦρ, ὕδωρ, γῆ, αἰθήρ; V. 211 (151, 278 M)

pedocles is expressly designated as the first who admitted these four elements,[1] and all that we know of his predecessors tends to confirm the statement. The earlier philosophers, indeed, admitted primitive substances from which all things arose, but these primitive substances were wanting in the characteristic by which alone they could become elements in the Empedoclean sense of the term; viz., the qualitative unchangeableness, which leaves only the possibility of a division and combination in space. Similarly the earlier philosophers are acquainted with all the substances which Empedocles regards as elements, but they do not class them together as fundamental substances and apart from all others; the primitive substance is with most of them One. Parmenides alone in the second part of his poem has two primitive substances, but none of these philosophers has four; and in respect to the first derived substances, we find, besides the unmethodical enumera-

ὕδωρ, γῆ, αἰθήρ, ἥλιος; V. 215 (209, 282 M), 197 (270, 273 M), χθών, ὄμβρος, αἰθήρ, πῦρ; V. 96 (124, 120 M) sqq. probably ἥλιος, αἰθήρ, ὄμβρος, αἶα; V. 377 (16, 32 M) αἰθήρ, πόντος, χθών, ἥλιος; V. 187 (327, 263 M) ἠλέκτωρ, χθών, οὐρανός, θάλασσα; V. 198 (211, 211 M) χθών, Νῆστις, Ἥφαιστος; V. 203 (215, 206 M) χθών, Ἥφαιστος, ὄμβρος, αἰθήρ. I cannot agree with Steinhart's conjecture (*l. c.* 93) that Empedocles by the variety of names wished to mark the difference between the primitive elements and those perceptible to sense. V. 89 (116, 92 M), says that the four primitive elements contain in themselves all matter; and this matter neither increases nor diminishes, καὶ πρὸς τοῖς οὖτ' ἄλλο τι (so Mull., but the text is corrupt, and its restoration very uncertain) γίγνεται οὐδ' ἀπολήγει.

[1] Arist. *Metaph.* i. 4, 985 a, 31, cf. c. 7, 988 a, 20; *De Gen. et Corr.* ii. 1, 328 b, 33 sqq. Cf. Karsten, 334. The word στοιχεῖον is moreover not Empedoclean, as it is almost needless to observe. Plato is cited as the teacher who first introduced it into scientific language (Eudemus ap. Simpl. *Phys.* 2, a, Favorin. ap. Diog. iii. 24). Aristotle found it already in vogue, as we see from the expression τὰ καλούμενα στοιχεῖα (cf. Part. II. b, 336, 2nd ed.)

tion of Pherecydes and Anaximenes, only the triple division of Heracleitus, the five-fold division of Philolaus (probably already connected with Empedocles), and Anaximander's two opposite categories of warm and cold. Why Empedocles fixed the number of his elements at four, we cannot discover, either from his own fragments, or from the accounts of the ancients. At first sight it might seem that he arrived at his theories in the same manner as other philosophers arrived at theirs, viz., through observation and the belief that phenomena were most easily to be explained by this means. But in that case his doctrine was anticipated in the previous philosophy. The high estimation in which the number four was held by the Pythagoreans is well known. Yet we must not exaggerate the influence this may have had on Empedocles, for in his physics he adopted little from Pythagoreanism, and the Pythagorean school, even in its doctrine of elementary bodies, followed other points of view. Of the elements of Empedocles we find three in the primitive substances of Thales, Anaximenes, and Heracleitus, and the fourth in another connection, with Xenophanes and Parmenides. Heracleitus speaks of three elementary bodies; and the importance of this philosopher in regard to Empedocles will presently be shown. The three ground-forms of the corporeal admitted by Heracleitus might easily be developed into the elements of Empedocles; if the liquid fluid and the vaporous element, water and air, were distinguished from each other in the customary manner, and if the dry vapours, which Heracleitus had reckoned as part of the supreme

element, were considered as air.[1] The three elements of Heracleitus seem to have arisen from the doctrine propounded by Anaximander and afterwards maintained by Parmenides, viz., the fundamental opposition of the warm and the cold, by the introduction of an intermediate stage between them. On the other hand, the five elementary bodies of Philolaus represent a development, based on geometrical and cosmological conceptions, of the four elements of Empedocles. This doctrine, therefore, appears to have been in a state of constant progression, from Anaximander to Philolaus, and the number of the elements to have been always on the increase. But though Empedocles declared the four elements to be equally original, he, in fact, as Aristotle says, reduces them to two; for he sets fire on one side, and the three remaining elements together on the other; so that his four-fold division is seen to originate in the two-fold division of Parmenides.[2] When, however, later writers assert that his starting-point was the opposition of the

[1] Aristotle also mentions the theory of three elements, fire, air, and earth (*Gen. et Corr.* ii. 1, 329 a, 1). Philop. *in h. l.* p. 46 b, refers this statement to the poet Ion: and in fact Isocrates does say of him (π. ἀντιδόσ. 268) Ἴων δ' οὐ πλείω τριῶν [ἔφησεν εἶναι τὰ ὄντα]. Similarly Harpocrat. Ἴων. This statement may be true of Ion, even if (as Bonitz, *Ind. Arist.* 821 b, 40 and Prantl. *Arist. Werke*, ii. 505 remark) the passage in Aristotle may relate, not to Ion, but to the Platonic 'divisions' (Part II. a, 380, 4, 3rd edition), in which an intermediary is at first distinguished from fire and earth, and is then divided into water and air. Ion may have borrowed his three elements from Heracleitus; he can hardly have influenced Empedocles, as he seems to have been younger.

[2] *Metaph.* i. 4, 985 a, 31: ἔτι δὲ τὰ ὡς ἐν ὕλης εἴδει λεγόμενα στοιχεῖα τέτταρα πρῶτος εἶπεν· οὐ μὴν χρῆταί γε τέτταρσιν, ἀλλ' ὡς δυσὶν οὖσι μόνοις, πυρὶ μὲν καθ' αὑτὸ τοῖς δ' ἀντικειμένοις ὡς μιᾷ φύσει, γῇ τε καὶ ἀέρι καὶ ὕδατι. λάβοι δ' ἄν τις αὐτὸ θεωρῶν ἐκ τῶν ἐπῶν. *De Gen. et Corr.* ii. 3, 330 b, 19: ἔνιοι δ' εὐθὺς τέτταρα λέγουσιν, οἷον Ἐμπεδοκλῆς, συνάγει δὲ καὶ οὗτος εἰς τὰ δύο· τῷ γὰρ πυρὶ τἆλλα πάντα ἀντιτίθησιν.

warm and the cold, or that of the rare and the dense, or even of the dry and the moist,[1] this is doubtless an inference of their own, uncountenanced by Empedocles, either in these expressions or elsewhere with such distinctness in his writings; and the statement that in the formation of the universe the two lower elements are the matter, and the two higher the efficient instruments,[2] is still farther from his opinion.

The four fundamental substances then, being elements, are necessarily primitive; they are all underived and imperishable. Each consists of qualitatively homogeneous parts, and without changing their nature they pass through the various combinations into which they are brought by means of the variability of things.[3]

[1] Cf. the passages from Alexander, Themistius, Philoponus, Simplicius and Stobæus, ap. Karsten, 340 sqq.

[2] Hippol. *Refut.* vii. 29, p. 384. Empedocles assumed four elements δύο μὲν ὑλικά, γῆν καὶ ὕδωρ, δύο δὲ ὄργανα οἷς τὰ ὑλικὰ κοσμεῖται καὶ μεταβάλλεται, πῦρ καὶ ἀέρα, δύο δὲ τὰ ἐργαζόμενα . . . νεῖκος καὶ φιλίαν, which is repeated afterwards. The doctrine of this philosopher is still more decidedly misrepresented by the same author i. 4 (repeated ap. Cedren. *Synops.* i. 157 B), in the statement, probably taken from a Stoic or Neo-Pythagorean source): τὴν τοῦ παντὸς ἀρχὴν νεῖκος καὶ φιλίαν ἔφη· καὶ τὸ τῆς μονάδος νοερὸν πῦρ τὸν θεὸν καὶ συνεστάναι ἐκ πυρὸς τὰ πάντα καὶ εἰς πῦρ ἀναλυθήσεσθαι. On the other hand Karsten, p. 343, is incorrect in saying that Empedocles, according to Hippolytus, opposed fire and water one to the other, as the active and the passive principle.

[3] V. 87 (114, 88 M):—
ταῦτα γὰρ ἶσά τε πάντα καὶ ἡλίκα γένναν ἔασι,
τιμῆς δ' ἄλλης ἄλλο μέδει πάρα δ' ἦθος ἑκάστῳ.

V. 89, vide *supra*, p. 125, 2; V. 104 (132, 128):—
ἐκ τῶν πάνθ' ὅσα τ' ἦν ὅσα τ' ἔσθ', ὅσα τ' ἔσται ὀπίσσω. Text uncertain.
δένδρεά τ' ἐβλάστησε καὶ ἀνέρες ἠδὲ γυναῖκες,
θῆρές τ' οἰωνοί τε καὶ ὑδατοθρέμμονες ἰχθῦς,
καὶ τε θεοὶ δολιχαίωνες τιμῇσι φέριστοι.
αὐτὰ γὰρ ἔστιν ταῦτα δι' ἀλλήλων δὲ θέοντα
γίγνεται ἀλλοιωπά· διάπτυξις γὰρ ἀμείβει.

Cf. p. 122, 2. Also V. 90 sqq., 69 sqq. (*supra*, p. 122, 2; 123, 2); Arist. *Metaph.* i. 3 (*supra*, p. 123, 1),

They are also equal as to mass,[1] though they are mingled in particular things in the most various proportions, and are not all contained in each particular thing.[2] The peculiar traits, however, by which they are distinguished from one another, and their place in the structure of the universe, Empedocles does not seem to have precisely determined. He describes fire as warm and glittering; air as fluid and transparent; water as dark and cold; earth as heavy and hard.[3] He sometimes attributes to earth a natural motion downwards, and to fire a similar motion upwards;[4] but his utterances on the subject are not always consistent.[5] In this, however, there is nothing that transcends the simplest observation. Plato and Aristotle were the first to reduce the qualities of elements to fixed fundamental determinations, and to assign each element to its natural place.

Even without the testimony of Aristotle[1] it would

iii. 4, 1000 b, 17; *Gen. et Corr.* ii. 1; ii. 6, *ibid.* i. 1, 314 a, 24 (cf. *De Cœlo*, iii. 3, 302 a, 28, and Simpl. *De Cœlo*, 269 b, 38; *Schol.* 513 b); *De Cœlo*, iii. 7 (*supra*, p. 125, 1); *De Melisso*, c. 2, 975 a, and other passages ap. Sturz, 152 sqq., 176 sqq., 186 sqq., and Karsten, 336, 403, 406 sq.

[1] This at any rate seems to be asserted by the *ἴσα πάντα* in the verses just quoted, which grammatically may with *ἠλίκα* also relate to *γένναν* (of like origin). Arist. *Gen et Corr.* ii. 6 sub init. enquires whether this equality is an equality of magnitude or of power? Empedocles doubtless made no distinction between them. He connects the word as little with *γένναν* as Simplicius does, *Phys.* 34 a.

[2] Cf. (besides what will presently be said as to the proportions of the primitive elements in this admixture) V. 119 (154, 134 M) sqq., where the mixture of matter in various things is compared with the mixing of colours by which the painter reproduces these things in a picture: *ἁρμονίῃ μίξαντε τὰ μὲν πλέω ἄλλα δ' ἐλάσσω.* Brandis, p. 227, has been led, by an error in the punctuation in V. 129, corrected by later editors, to discover in these verses a meaning alien alike to the works and the standpoint of Empedocles, viz., that all the perishable has its cause in the Deity, as the work of art has in the mind of the artist.

[3] V. 96 (124, 120 M) sqq., which, however, are very corrupt in the traditional texts. V. 99, which has been restored, though not satisfactorily, perhaps began thus: *αἰθέρα θ' ὡς χεῖται.* From this passage the statement of Aristotle is taken, *Gen. et Corr.* i. 315 b, 20; Plut. *Prim. Frig.* 9, 1, p. 948; but, on the other hand, Aristotle seems to refer in another place, *De Respir.* c. 14, 477 b, 4 (*θερμὸν γὰρ εἶναι τὸ ὑγρὸν ἧττον τοῦ ἀέρος*), to some subsequent passage now lost from the poem.

[4] Cf. p. 144, 1.

[5] We shall find later examples of this. Cf. Plut. *Plac.* ii. 7. 6; and Ach. Tat. *in Arat.* c. 4, end;

these, following perhaps the same source, assert that Empedocles assigned no definite place to the elements, but supposed each element capable of occupying the place of the rest. Aristotle says, *De Cœlo*, iv. 2, 309 a, 19: Empedocles, like Anaxagoras, gave no explanation of the heaviness and lightness of bodies.

[1] *Gen. et Corr.* i. 8, 325 b, 19: *Ἐμπεδοκλεῖ δὲ τὰ μὲν ἄλλα φανερὸν ὅτι μέχρι τῶν στοιχείων ἔχει τὴν γένεσιν καὶ τὴν φθοράν, αὐτῶν δὲ τούτων πῶς γίνεται καὶ φθείρεται τὸ παρεμπίπτον μέγεθος οὔτε δῆλον οὔτε ἐνδέχεται λέγειν αὐτῷ μὴ λέγοντι καὶ τοῦ πυρὸς εἶναι στοιχεῖον, ὁμοίως δὲ καὶ τῶν ἄλλων ἁπάντων.* (In *De Cœlo*, iii. 6, 305 a, and Lucretius, i. 746 sqq., it is denied that Empedocles held the theory of atoms.) These distinct assertions would be in direct opposition to Aristotle himself, if he really said what Ritter (*Gesch. d. Phil.* i. 533 sq.) finds in him, namely that all four elements are properly derived from one nature, which underlies all differences, and is, more exactly, φιλία. This, however, is incorrect. Aristotle says (*Gen. et Corr.* i. 1, 315 a, 3), that Empedocles contradicted himself: *ἅμα μὲν γὰρ οὔ φησιν ἕτερον ἐξ ἑτέρου γίνεσθαι τῶν στοιχείων οὐδέν, ἀλλὰ τἆλλα πάντα ἐκ τούτων, ἅμα δ' ὅταν εἰς ἓν συναγάγῃ τὴν ἅπασαν φύσιν πλὴν τοῦ νείκους, ἐκ τοῦ ἑνὸς γίγνεσθαι πάλιν ἕκαστον.* But it is clear that this only means: Empedocles himself altogether denied that the four elements arose out of one another; nevertheless in his doctrine of the Sphairos, he indirectly admits, without perceiving it, that they *have* such an origin; for if the unity of all things in the Sphairos be taken in its strict acceptation, the qualitative differences of the elements must disappear; and the elements consequently, when they issue from the Sphairos, must form themselves anew out of a homogeneous substance. It is not that a statement is here attributed by Aristotle to Empedocles which contradicts the rest of his theory; Empedocles is refuted by an inference not derived from himself. Nor can it be proved from *Metaph.* iii. 1, 4, that Aristotle designated the uniform nature, from which the elements are said to proceed, as φιλία. In *Metaph.* iii. 1, 996 a, 4, he asks the question: *πότερον τὸ ἓν καὶ τὸ ὂν, καθάπερ οἱ Πυθαγόρειοι καὶ Πλάτων ἔλεγεν, οὐχ ἕτερόν τί ἐστιν ἀλλ' οὐσία τῶν ὄντων, ἢ οὔ, ἀλλ' ἕτερόν τι τὸ ὑποκείμενον, ὥσπερ Ἐμπεδοκλῆς φησι φιλίαν, ἄλλος δέ τις πῦρ, ὁ δὲ ὕδωρ, ὁ δὲ ἀέρα.* Here he does not speak of the primary matter of the four elements in reference to the φιλία, but the φιλία (which Aristotle, as the uniting principle, calls the One, in the same manner as, e.g., the principle of limitation is called

be obvious that the four elements of Empedocles could not be derived from any other more primitive element. It is plainly, therefore, the result of a misunderstanding[1] when later writers assert that he made atoms as constituent parts of the elements precede the elements themselves.[2] Yet on one side his doctrine might have given rise to this opinion. For as, according to him, the primitive substances are subject to no qualitative change, they can only be connected together mechanically; and even their chemical combinations must be reduced to such as are mechanical. The mixture of substances is only brought about by the entrance of the particles of one body into the interstices between the parts of another. The most perfect combination,

πέρας, and the formative principle εἶδος) serves merely as an example, to show that the concept of the One is employed, not only as subject, as by Plato and the Pythagoreans, but also as predicate; what the passage asserts of the φιλία is merely this: the φιλία is not Unity, conceived as a subject; but a subject to which Unity, as predicate, belongs. This likewise holds good of c. 4, where it is said in the same sense and connection: Plato and the Pythagoreans consider Unity as the essence of the One, and Being as the essence of the existent; so that the existent is not distinct from Being, nor the One from Unity: οἱ δὲ περὶ φύσεως οἷον Ἐμπεδοκλῆς ὡς εἰς γνωριμώτερον ἀνάγων λέγει ὅ τι τὸ ἓν ὂν ἐστὶν ἓν ὄν (so it must be written, if ἓν ὄν be considered as one conception—'that which is One;' or else it must be read as by Karsten *Emp.* p. 318; Brandis, Bonitz, Schweg-

ler, and Bonghi *in h. l.* adopt from *Cod. Ab.* ὅ τί ποτε τὸ ἓν ἐστιν) δόξειε γὰρ ἂν λέγειν τοῦτο τὴν φιλίαν εἶναι. The statements, therefore, of Aristotle on this point do not contradict each other; while, on the other hand, most of the censures which Ritter passes on his statements respecting Empedocles, on closer examination, appear to be groundless.

[1] Plut. *Plac.* i. 13: Ἐ. πρὸ τῶν τεσσάρων στοιχείων θραύσματα ἐλάχιστα, οἱονεὶ στοιχεῖα πρὸ στοιχείων, ὁμοιομερῆ, ὅπερ ἐστὶ στρογγύλα. The same, with the exception of the last words (on which cf. Sturz, 153 sq.) in Stob. *Ecl.* i. 341. Similarly *Plac.* i. 17 (Stob. 368; Galen. c. 10, p. 258 K).

[2] It is equally improper, according to what we have just been saying, to suppose with Petersen, *Philol.-Hist. Stud.* 26, that the Sphairos as Unity was first, and that the four elements arose from it.

therefore, of several substances is only an assemblage of atoms, the elementary nature of which is not altered in this process: it is not an actual fusing of the atoms into a new substance.[1] And when one body arises out of another, one is not changed into the other, but the matters which already existed as these definite substances merely cease to be intermingled with others.[2] But as all changes consist in mingling and unmingling, so when two bodies are apparently separated by the different nature of their substance, the operation of one upon the other can only be explained on the hypothesis that invisible particles segregate themselves from the one and penetrate into the apertures of the other. The more complete is the correspondence between the apertures in one body and the emanations and small particles of another, the more susceptible is the former to the influence of the latter, and the more capable of mixture with it.[3] According to the theory of Empedo-

[1] According to later use of words (vide Part III. a, 115, 2, 2nd ed.), all mixture is a παράθεσις; there is no σύγχυσις, any more than a κρᾶσις δι' ὅλων.

[2] Arist. *De Cœlo*, iii. 7 (*supra*, p. 125, 1), to which the commentators (ap. Karsten, 404 sq.) add nothing of importance.

[3] Arist. *Gen. et Corr.* i. 8: τοῖς μὲν οὖν δοκεῖ πάσχειν ἕκαστον διά τινων πόρων εἰσιόντος τοῦ ποιοῦντος ἑκάστου καὶ κυριωτάτου, καὶ τοῦτον τὸν τρόπον καὶ ὁρᾶν καὶ ἀκούειν ἡμᾶς φασὶ καὶ τὰς ἄλλας αἰσθήσεις αἰσθάνεσθαι πάσας. ἔτι δὲ ὁρᾶσθαι διά τε ἀέρος καὶ ὕδατος καὶ τῶν διαφανῶν διὰ τὸ πόρους ἔχειν ἀοράτους μὲν διὰ μικρότητα, πυκνοὺς δὲ καὶ κατὰ στοῖχον, καὶ μᾶλλον ἔχειν τὰ διαφανῆ μᾶλλον. οἱ μὲν οὖν ἐπί τινῶν οὕτω διώρισαν, ὥσπερ Ἐμπεδοκλῆς οὐ μόνον ἐπὶ τῶν ποιούντων καὶ πασχόντων ἀλλὰ καὶ μίγνυσθαί φησιν (in Cod. L, φησιν is substituted for φασὶν) ὅσων οἱ πόροι σύμμετροί εἰσιν· ὁδῷ δὲ μάλιστα καὶ περὶ πάντων ἐνὶ λόγῳ διωρίκασι Λεύκιππος καὶ Δημόκριτος (for they, as is afterwards said, explained not merely individual phenomena, but the formation and change of bodies by reference to empty interspaces). Philop. *in h. l.* sq. 35 b, and *Gen. Anim.* 59 a (both passages in Sturz, p. 344 sq.), gives nothing more, for the statement in *Gen. Anim.* that Empedocles called 'the full' νασταὶ, confuses this philosopher with De-

cles, this is pre-eminently the case when two bodies are alike; therefore, he says, the like in kind and easily mingled are friendly to each other; like desires like; whereas those which will not intermingle are hostile to each other.[1] This whole theory is closely allied to that

mocritus (vide *infra, the Atomists*). On the other hand, Aristotle's account is confirmed in a remarkable manner by Plato, *Meno*, 76 C: Οὐκοῦν λέγετε ἀπορροάς τινας τῶν ὄντων κατ' Ἐμπεδοκλέα; — Ξφόδρα γε. — Καὶ πόρους, εἰς οὓς καὶ δι' ὧν αἱ ἀπορροαὶ πορεύονται; — Πάνυ γε. — Καὶ τῶν ἀπορροῶν τὰς μὲν ἁρμόττειν ἐνίοις τῶν πόρων, τὰς δὲ ἐλάττους ἢ μείζους εἶναι; — Ἔστι ταῦτα. Colour is then defined in accordance with this: ἀπορροὴ σχημάτων ὄψει σύμμετρος καὶ αἰσθητός. Cf. Theophr. *De Sensu*, 12: ὅλως γὰρ ποιεῖ τὴν μίξιν τῇ συμμετρίᾳ τῶν πόρων· διόπερ ἔλαιον μὲν καὶ ὕδωρ οὐ μίγνυσθαι, τὰ δ' ἄλλα ὑγρὰ καὶ περὶ ὅσων δὴ καταριθμεῖται τὰς ἰδίας κράσεις. Of our fragments, v. 189 relates to this subject; also especially v. 281 (267, 337 M):—

γιγνώσκεις δ' ὅτι πάντων εἰσὶν ἀπορροαί, ὅσσ' ἐγένοντο.

V. 267 (253, 323 M):—

τοὺς μὲν πῦρ ἀνέπεμπ' ἐθέλον πρὸς ὁμοῖον ἱκέσθαι.

V. 282 (268, 338):—

ὡς γλυκὺ μὲν γλυκὺ μάρπτε, πικρὸν δ' ἐπὶ πικρὸν ὄρουσεν, ὀξὺ δ' ἐπ' ὀξὺ ἔβη, δαλερὸν, δαλερῷ δ' ἐπέχευεν.

V. 284 (272, 340 M):—

οἴνῳ ὕδωρ μὲν μᾶλλον ἐνάρθμιον, αὐτὰρ ἐλαίῳ οὐκ ἐθέλει.

V. 286 (274, 342 M):—

βύσσῳ δὲ γλαυκῇ κόκκυον καταμίσγεται ἄνθος.

[1] V. 186 (326, 262 M.):—

ἄρθμια μὲν γὰρ πάνθ' αὐτῶν ἐγένοντο μέρεσσιν, ἠλέκτωρ τε χθών τε καὶ οὐρανὸς ἠδὲ θάλασσα, ὅσσα νυν ἐν θνητοῖσιν ἀποπλαγχθέντα πέφυκεν. ὡς δ' αὕτως ὅσα κρᾶσιν ἐπαρτέα μᾶλλον ἔασιν, ἀλλήλοις ἔστερκται, ὁμοιωθέντ' Ἀφροδίτῃ. ἐχθρὰ δ' ἀπ' ἀλλήλων πλεῖστον διέχουσιν ἄμικτα, etc.

Arist. *Eth. N.* viii. 2, 1155 b, 7; cf. preceding note: τὸ γὰρ ὅμοιον τοῦ ὁμοίου ἐφίεσθαι (Ἐμπ. φησι). *Eth. Eud.* vii. 1, 1235 a, 9 (*M. Mor.* ii. 11, 1208 b, 11): οἱ δὲ φυσιολόγοι καὶ τὴν ὅλην φύσιν διακοσμοῦσιν ἀρχὴν λαβόντες τὸ ὅμοιον ἰέναι πρὸς τὸ ὅμοιον, διὸ Ἐμπεδοκλῆς καὶ τὴν κύν' ἔφη καθῆσθαι ἐπὶ τῆς κεραμίδος διὰ τὸ ἔχειν πλεῖστον ὅμοιον. Plato, *Lys.* 214 B: In the writings of the natural philosophers we read ὅτι τὸ ὅμοιον τῷ ὁμοίῳ ἀνάγκῃ ἀεὶ φίλον εἶναι. Empedocles found an example of this elective affinity in the attraction of iron to the magnet. He supposed that after the emanations of the magnet have penetrated into the pores of the iron, and the air which choked them had been expelled, powerful emanations from the iron pass into the symmetrical pores of the magnet, which draw the iron itself and hold it fast. Alex. Aphr. *Quæst. Nat.* ii. 23.

of the Atomists. The small invisible particles take the place of the atoms, and pores the place of the void. The Atomists see in bodies a mass of atoms separated by empty interspaces; Empedocles sees in them a mass of particles which have certain openings between them.[1] The Atomists reduce the chemical changes in bodies to the alternation of the atoms; Empedocles reduces them to the alternation of particles of matter which in their various combinations remain, as to quality, as unchanged as the atoms.[2] Empedocles himself, however, admitted neither an empty space[3]

[1] Whether these openings are themselves entirely empty, or are filled with certain substances, especially with air, Empedocles never seems to have enquired. Philoponus, *Gen. et Corr.* 40 a, b, who ascribes to him the second of these opinions, in contradistinction to the Atomists, is not a trustworthy authority. According to Arist. *Gen. et Corr.* i. 8, 326 b, 6, 15, we must conclude (in spite of what is quoted above as to the magnet) that Empedocles never arrived at any general definition on this point; for he refutes the hypothesis of the pores on both presuppositions.

[2] Arist. *Gen. et Corr.* ii. 7, 334 a, 26: ἐκείνοις γὰρ τοῖς λέγουσιν ὥσπερ Ἐμπεδοκλῆς τίς ἔσται τρόπος (τῆς γενέσεως τῶν σωμάτων); ἀνάγκη γὰρ σύνθεσιν εἶναι καθάπερ ἐξ πλίνθων καὶ λίθων τοῖχος· καὶ τὸ μίγμα δὲ τοῦτο ἐκ σωζομένων μὲν ἔσται τῶν στοιχείων, κατὰ μικρὰ δὲ παρ' ἄλληλα συγκειμένων. *De Cœlo*, iii. 7 (*supra*, p. 125, 1); Galen *in Hippocr. De Nat. Hom.* i. 2, end, T. xv. 32 K.: Ἐμπ. ἐξ ἀμεταβλήτων τῶν τεττάρων στοιχείων ἠγεῖτο γίγνεσθαι τὴν τῶν συνθέτων σωμάτων φύσιν, οὕτως ἀναμεμιγμένων ἀλλήλοις τῶν πρώτων, ὡς εἴ τις λειώσας ἀκριβῶς καὶ χνοώδη ποιήσας ἴον καὶ χαλκίτιν καὶ καδμείαν καὶ μισυ μίξειεν ὡς μηδὲν ἐξ αὐτῶν δύνασθαι μεταχειρίσασθαι χωρὶς ἑτέρου. *Ibid.* c. 12, sub init. 49: According to Empedocles, all things are formed from the four elements, οὐ μὴν κεκραμένων γε δι' ἀλλήλων, ἀλλὰ κατὰ μικρὰ μόρια παρακειμένων τε καὶ ψαυόντων. Hippocrates first taught the mixing of the elements. Aristotle, therefore, *Gen. et Corr.*, uses this expression for the several elemental bodies: αὐτῶν τούτων τὸ σωρευόμενον μέγεθος, and in Plut. *Plac.* i. 24 (Stob. i. 414), it is said of Empedocles, Anaxagoras, Democritus, and Epicurus together: συγκρίσεις μὲν καὶ διακρίσεις εἰσάγουσι, γενέσεις δὲ καὶ φθορὰς οὐ κυρίως. οὐ γὰρ κατὰ τὸ ποιὸν ἐξ ἀλλοιώσεως, κατὰ δὲ τὸ ποσὸν ἐκ συναθροισμοῦ ταύτας γίγνεσθαι.

[3] Cf. v. 91, *supra*, p. 122, 2; Arist. *De Cœlo*, iv. 2, 309 a, 19: ἔνιοι μὲν οὖν τῶν μὴ φασκόντων εἶναι κενὸν οὐδὲν διώρισαν περὶ

nor atoms,[1] though his doctrine must logically lead to both.[2] Nor can we certainly attribute to him the conception that the primitive substances are composed of very small particles, which in themselves are capable of farther subdivision, but are never really divided.[3] This definition seems, indeed, to be required by what is said of the symmetry of the pores; for if these substances are infinitely divisible, there can be no pores too small to allow a given substance to enter. All substances, therefore, must be able to mingle with all. But, as Empedocles was inconsistent in regard to the void, he may likewise have been so in regard to the smallest particles. Aristotle himself gives us to understand that he knew of no express utterance of this philosopher on this point. We may therefore conjecture that he never turned his attention to it, but was content with the indeterminate notion of the pores, and the entrance of substances into them, without any further investigation of the causes in which the elective affinity of bodies originates.

But it is only on one side that things can be explained by corporeal elements. These definite phenomena are produced when substances combine in this particular manner and in this particular proportion; but whence

κούφου καὶ βαρέος οἷον Ἀναξαγόρας καὶ Ἐμπεδοκλῆς. Theophr. *De Sensu*, § 13; Lucretius, i. 742, not to mention other later writers, such as Plut. *Plac.* i. 18, who repeat that verse.

[1] Cf. the passages quoted p. 133, 2.

[2] Cf. Arist. *Gen. et Corr.* i. 1, 325 b, 5: σχεδὸν δὲ καὶ Ἐμπεδοκλεῖ ἀναγκαῖον λέγειν, ὥσπερ καὶ Λεύκιππός φησιν. εἶναι γὰρ ἅττα στερεὰ, ἀδιαίρετα δὲ, εἰ μὴ πάντη πόροι συνεχεῖς εἰσιν. *Ibid.* 326 b, 6 sqq.

[3] Arist. *De Cœlo*, iii. 6, 305 a, 1: εἰ δὲ στήσεταί που ἡ διάλυσις [τῶν σωμάτων], ἤτοι ἄτομον ἔσται τὸ σῶμα ἐν ᾧ ἵσταται, ἢ διαίρετον μὲν οὐ μέντοι διαιρεθησόμενον οὐδέποτε, καθάπερ ἔοικεν Ἐμπεδοκλῆς βούλεσθαι λέγειν.

comes it that they combine and separate? What is, in other words, the moving cause? Empedocles cannot evade this question, for his chief object is to make Becoming and Change comprehensible. On the other hand, he cannot seek the cause of motion in matter; for having transferred the Parmenidean conception of Being to the primary elements, he can only regard these as unchangeable substances, which do not, like the primitive matter of Heracleitus and Anaximenes, change their form by their own inherent force. Though he must necessarily allow to them movement in space, in order not to make all change in things impossible, yet the impulse cannot lie in themselves to move and to enter into combinations by which they, in their being and nature, are untouched. Empedocles never taught that the elements have souls, though this doctrine has been ascribed to him.[1] There

[1] Arist. says, *De An.* i. 2, 404 b, 8: ὅσοι δ' ἐπὶ τὸ γινώσκειν καὶ τὸ αἰσθάνεσθαι τῶν ὄντων (ἀπέβλεψαν), οὗτοι δὲ λέγουσι τὴν ψυχὴν τὰς ἀρχὰς, οἱ μὲν πλείους ποιοῦντες οἱ δὲ μίαν ταύτην, ὥσπερ Ἐμπεδοκλῆς μὲν ἐκ τῶν στοιχείων πάντων, εἶναι δὲ καὶ ἕκαστον ψυχὴν τούτων. What he here says of Empedocles, however, is merely his own inference from the well-known verses; and this Aristotle gives us clearly to understand in the words which follow, λέγων οὕτω· "γαίῃ μὲν γὰρ γαῖαν ὀπώπαμεν." These verses, it is clear, do not assert that the various substances are themselves animate, but only that they become, in man, the cause of psychic activity. If even, on closer enquiry, the former opinion be deducible from the latter, we have no right to suppose that Empedocles himself drew the inference, or to credit him with a theory which would alter the whole character of his system, and make his two efficient causes superfluous. Still less can be gathered from *Gen. et Corr.* ii. 6, *end*, where Aristotle merely observes in opposition to Empedocles: ἄτοπον δὲ καὶ εἰ ἡ ψυχὴ ἐκ τῶν στοιχείων ἢ ἕν τι αὐτῶν, . . εἰ μὲν πῦρ ἢ ψυχὴ, τὰ πάθη ὑπάρξει αὐτῇ ὅσα πυρὶ ἢ πῦρ· εἰ δὲ μικτὸν, τὰ σωματικά. Nor can the quotation, *sup.* p. 135, 1, prove anything respecting the animate nature of the elements. The fact that they were also called gods (Arist. *Gen. et Corr.* ii. 6, 333 b, 21: Stob. *Ecl.* i. 60, *sup.* Vol. I. 612, *n.*; Cic. *N. D.* i. 12, sub init.) is unimportant; as the statement is no doubt founded

remains then nothing but to separate moving forces from matter, and Empedocles was the first among the philosophers to adopt this course.[1] A single moving force, however, does not suffice for him; he feels obliged to reduce the two moments of Becoming—combination and separation, birth and decay—to two different forces.[2] Here again, as in the doctrine of the primitive substances, he derives the various qualities and conditions of things from so many substances originally distinct, of which each one, according to the Parmenidean concept of Being, has one and the same invariable nature. In his representation, Empedocles personifies these two forces as Love and Hate; on the other hand, he treats them as corporeal substances which are mingled in things: they do not belong merely to the *form* of his exposition, but the *idea* of force is as yet not clear to him; he discriminates it neither from the personal beings of mythology, nor from the corporeal elements. Its specific import lies only in explaining the cause of the changes to which things are subject. Love is that which effects the mingling and combination of substances, Hate is that which causes their separation.[3] In reality, as Aristotle rightly objects, the

merely on their mythical designations (*sup.* p. 125, 2), and the same may be said of the δαίμων, v. 254 (239, 310 M).

[1] That is if we leave out of our account the mythical figures of the ancient cosmogonies and of the poem of Parmenides, and suppose Anaxagoras with his conception of νοῦς to have been later than Empedocles.

[2] That he was the first who taught the duality of the efficient causes is noticed by Aristotle, *Metaph.* i. 4, 985 a. 29.

[3] V. 78 (105, 79 M):—

πῦρ καὶ ὕδωρ καὶ γαῖα καὶ αἰθέρος ἦπιον ὕψος·
Νεῖκός τ' οὐλόμενον δίχα τῶν, ἀτάλαντον ἑκάστῳ,
καὶ Φιλότης μετὰ τοῖσιν, ἴση μῆκός τε πλάτος τε.

Of the last he goes on to say that

two forces cannot be divided,[1] since every new combination of substances is the dissolution of a previous combination; and every separation of substances is the introduction to a new combination. But it is certain that Empedocles did not remark this, and that he regarded Love exclusively as the cause of union, and Hate as the cause of division. So far, then, as the unity of the elements seemed to Empedocles the better

it is that which unites men in love, and it is called γηθοσύνη and Ἀφροδίτη. (Empedocles himself calls it indifferently φιλότης, στοργή, Ἀφροδίτη, Κύπρις, ἁρμονίη.) V. 66 sq. *sup.* p. 124. V. 102 (130, 126 M):—

ἐν δὲ κότῳ διάμορφα καὶ ἄνδιχα πάντα πέλονται
σὺν δ' ἔβη ἐν φιλότητι καὶ ἀλλήλοισι ποθεῖται.

V. 110 sqq. (*inf.* p. 145) 169 (165, 189 M) sq. (*infra*, p. 152) 333 (321, 378 M) sq. (*inf.* p. 165, 3). With this the accounts of our other authorities agree; here we shall only quote the two oldest and best. Plato, *Soph.* 242 D (after what is printed *sup.* p. 33, 2): αἱ δὲ μαλακώτεραι (Emp.) τὸ μὲν ἀεὶ ταὐτὸ οὕτως ἔχειν ἐχάλασαν, ἐν μέρει δὲ τοτὲ μὲν ἓν εἶναί φασι τὸ πᾶν καὶ φίλον ὑπ' Ἀφροδίτης, τοτὲ δὲ πολλὰ καὶ πολέμιον αὐτὸ αὑτῷ διὰ νεῖκός τι. Arist. *Gen. et Corr.* ii. 6, 333 b, 11: τί οὖν τούτων (the regularity of natural phenomena) αἴτιον; οὐ γὰρ δὴ πῦρ γε ἢ γῆ. ἀλλὰ μὴν οὐδ' ἡ φιλία καὶ τὸ νεῖκος· συγκρίσεως γὰρ μόνον, τὸ δὲ διακρίσεως αἴτιον (*infra*, note 1). On account of its uniting nature, Aristotle even calls the φιλία of Empedocles, the One, *Metaph.* iii. 1. 4; cf. *sup.* p. 131 (*Gen. et Corr.* i. 1, end, has nothing to do with this; for in that passage the ἓν means not the φιλία but the Sphairos. Karsten's objection to the identification of the ἓν and the οὐσία ἐνοποιός, *l. c.* p. 318, is founded on a misconception of Aristotle's views). *Metaph.* xii. 10, 1075 b, 1: ἀτόπως δὲ καὶ Ἐμπεδοκλῆς· τὴν γὰρ φιλίαν ποιεῖ τὸ ἀγαθόν· αὕτη δ' ἀρχὴ καὶ ὡς κινοῦσα (συνάγει γάρ) καὶ ὡς ὕλη· μόριον γὰρ τοῦ μίγματος . . . ἄτοπον δὲ καὶ τὸ ἄφθαρτον εἶναι τὸ νεῖκος. The utterances of later writers collected by Karsten, 346 sqq., and Sturz, 139 sqq., 214 sqq., are merely repetitions and explanations of Aristotle's words. The unanimity of all our witnesses and the clearness with which Empedocles expresses himself, make it impossible to suppose that Aristotle (as well as Plato and all subsequent authors) misunderstood his real doctrine, and that love and strife were not, in his opinion, the causes of mixing and separation, but were merely used in the passages we have quoted to describe poetically the conditions of mixture and separation (Thilo, *Gesch. d. Phil.* i. 45).

[1] *Metaph.* i. 4, 985 a, 21: καὶ Ἐμπεδοκλῆς ἐπὶ πλέον μὲν τούτου (Ἀναξαγόρου) χρῆται τοῖς αἰτίοις, οὐ μὴν οὔθ' ἱκανῶς οὔτ' ἐν τούτοις

and more perfect state,[1] Aristotle is justified in saying that he makes, in a certain way, the Good and the Evil into principles.[2] Aristotle, however, does not conceal that this is merely an inference, never explicitly drawn by Empedocles, whose original design extended no farther than to represent Love and Hate as the moving causes.[3] Later writers assert, in contradiction to the most authentic ancient testimony and the whole doctrine of Empedocles, that the opposition of Love and Hate

εὑρίσκει τὸ ὁμολογούμενον. πολλαχοῦ γοῦν αὐτῷ ἡ μὲν φιλία διακρίνει, τὸ δὲ νεῖκος συγκρίνει. ὅταν μὲν γὰρ εἰς τὰ στοιχεῖα διΐστηται τὸ πᾶν ὑπὸ τοῦ νείκους, τό τε πῦρ εἰς ἓν συγκρίνεται καὶ τῶν ἄλλων στοιχείων ἕκαστον. ὅταν δὲ πάλιν πάντα ὑπὸ τῆς φιλίας συνίωσιν εἰς τὸ ἕν, ἀναγκαῖον ἐξ ἑκάστου τὰ μόρια διακρίνεσθαι πάλιν. (Similarly the commentators, cf. Sturz, 219 ff.) *Ibid.* iii. 4, 1000 a, 24: καὶ γὰρ ὅπερ οἰηθείη λέγειν ἄν τις μαλίστα ὁμολογουμένως αὐτῷ, Ἐμπεδοκλῆς, καὶ οὗτος ταὐτὸν πέπονθεν· τίθησι μὲν γὰρ ἀρχήν τινα αἰτίαν τῆς φθορᾶς τὸ νεῖκος, δόξειε δ' ἂν οὐδὲν ἧττον καὶ τοῦτο γενῶν ἕξω τοῦ ἑνός· ἅπαντα γὰρ ἐκ τούτου πλὴν ὁ θεός. *ibid.* b, 10: συμβαίνει αὐτῷ τὸ νεῖκος μηθὲν μᾶλλον φθορᾶς ἢ τοῦ εἶναι αἴτιον, ὁμοίως δ' οὐδ' ἡ φιλότης τοῦ εἶναι· συνάγουσα γὰρ εἰς τὸ ἓν φθείρει τἆλλα. For the criticism of Empedocles's doctrine of Becoming, cf. *Gen. et Corr.* i. 1; ii. 6.

[1] This is evident from the predicates assigned to Love and Strife; ἠπιόφρων (V. 181) to Love; οὐλόμενον (V. 79); λυγρὸν (335); μαινόμενον (382) to Strife; and will appear still more clearly from what will be said later on of the Sphairos and the origin of the world.

[2] *Metaph.* i. 4, 984 b, 32: ἐπεὶ δὲ τἀναντία τοῖς ἀγαθοῖς ἐνόντα ἐνεφαίνετο ἐν τῇ φύσει, καὶ οὐ μόνον τάξις καὶ τὸ καλὸν ἀλλὰ καὶ ἀταξία καὶ τὸ αἰσχρὸν . . . οὕτως ἄλλος τις φιλίαν εἰσήνεγκε καὶ νεῖκος ἑκάτερον ἑκατέρων αἴτιον τούτων. εἰ γάρ τις ἀκολουθοίη καὶ λαμβάνοι πρὸς τὴν διάνοιαν καὶ μὴ πρὸς ἃ ψελλίζεται λέγων Ἐμπεδοκλῆς, εὑρήσει τὴν μὲν φιλίαν αἰτίαν οὖσαν τῶν ἀγαθῶν, τὸ δὲ νεῖκος τῶν κακῶν· ὥστ' εἴ τις φαίη τρόπον τινὰ καὶ λέγειν καὶ πρῶτον λέγειν τὸ κακὸν καὶ ἀγαθὸν ἀρχὰς Ἐμπεδοκλέα, τάχ' ἂν λέγοι καλῶς, etc., *ibid.* xii. 10; *sup.* p. 138, 3; cf. Plut. *De Is.* 48, p. 370.

[3] Vide previous note, and *Metaph.* i. 7, 988 b, 6: τὸ δ' οὗ ἕνεκα αἱ πράξεις καὶ αἱ μεταβολαὶ καὶ αἱ κινήσεις τρόπον μέν τινα λέγουσιν αἴτιον, οὕτω. (so expressly and decidedly) δὲ οὐ λέγουσιν, οὐδ' ὄντερ πέφυκεν. οἱ μὲν γὰρ νοῦν λέγοντες ἢ φιλίαν ὡς ἀγαθὸν μέν τι ταύτας τὰς αἰτίας τιθέασιν οὐ μὴν ὡς ἕνεκά γε τούτων ἢ ὂν ἢ γιγνόμενόν τι τῶν ὄντων, ἀλλ' ὡς ἀπὸ τούτων τὰς κινήσεις οὔσας λέγουσιν . . . ὥστε λέγειν τε καὶ μὴ λέγειν πως συμβαίνει αὐτοῖς τἀγαθὸν αἴτιον· οὐ γὰρ ἁπλῶς, ἀλλὰ κατὰ συμβεβηκὸς λέγουσιν. Similar utterances of later writers, ap. Sturz, 232 sqq.

coincides with the material distinction of the elements:[1] that by Hate we must understand the fiery, and by Love the moist element.[2] Modern writers,[3] with more probability, assign fire to Love, and the other elements for the most part to Hate, but do not identify Hate and Love with the elements. This again is scarcely admissible.[4] Still further departing from the real opinion of Empedocles, Karsten supposes the six first principles to have been merely phenomenal forms of one uniform primitive force, conceived pantheistically;[5] and other

[1] Simpl. *Phys.* 33 a: Ἐμπ. γοῦν, καίτοι δύο ἐν τοῖς στοιχείοις ἐναντιώσεις ὑποθέμενος, θερμοῦ καὶ ψυχροῦ καὶ ξηροῦ, εἰς μίαν τὰς δύο συνεκορύφωσε τὴν τοῦ νείκους καὶ τῆς φιλίας, ὥσπερ καὶ ταύτην εἰς μονάδα τὴν τῆς ἀνάγκης.

[2] Plut. *Prim. Frig.* c. 16, 8, p. 952, an utterance which Brandis (*Rhein. Mus.* iii. 129; *Gr. Röm. Phil.* i. 204) should not have treated as historical evidence.

[3] Tennemann, *Gesch. d. Phil.* i. 250; Ritter, in Wolfe's *Analekten*, ii. 429 sq; cf. *Gesch. d. Phil.* i. 550, with which also our first edition, p. 182, agreed. Wendt zu Tennemann, i. 286.

[4] Ritter's reasons for this theory are the following: First, because Empedocles, according to Aristotle (*sup.* p. 128, 2), opposed fire to the three other elements in common, and in so doing appears to have regarded it as superior to them; for he considers the male sex as the warmer, refers want of intelligence to coldness of blood, and represents death and sleep as caused by the wasting of the fire (vide *infra*). Secondly, because Empedocles, according to Hippolytus, *Refut.* i. 3, held fire to be the divine essence of things. Thirdly, because Empedocles himself, v. 215 (209, 282 M), says that Cypris gave fire the dominion. This last statement is based on an oversight; the words are χθόνα θοῷ πυρὶ δῶκε κρατῦναι, 'she gave over earth to fire to harden it.' The statement of Hippolytus we shall refute later on. In regard to Ritter's first and principal reason, Empedocles may very well have considered fire as more excellent than the other elements, and Love as preferable to Hate, without therefore making the former element the substratum of the latter. He places Love and Hate as two independent principles beside the four elements, and this is required by his whole point of view; every combination of matter, even if no fire contributes to it, is the work of Love, and every separation, even if it be effected by fire, is the work of Hate.

[5] P. 388: *Si vero his involucris Empedoclis rationem exuamus, sententia huc fere redit: unam esse vim eamque divinam mundum continentem; hanc per quatuor elementa quasi Dei membra, ut ipse*

modern writers represent Love as the sole basis of all things and the sole reality; and Hate as something which lies only in the imagination of mortal beings;[1] whereas the whole procedure of Empedocles shows that he never attempted to reduce the various primitive forces and primitive substances to one primitive essence.[2] The reasons for this phenomenon have been already indicated, and will appear more clearly later on.

ea appellat, sparsam esse, eamque cerni potissimum in duplici actione, distractione et contractione, quarum hanc conjunctionis, ordinis, omnis denique boni, illam pugnæ, perturbationis omnisque mali principium esse: harum mutua vi et ordinem mundi et mutationes effici, omnesque res tam divinas quam humanas perpetuo generari, ali, variari. Cf. Simpl. p. 700, 1.

[1] Ritter, *Gesch. d. Phil.* i. 544, 558. The statement just quoted hardly agrees with this. The refutation of his theory, as well as that of Karsten, is involved in the whole of this exposition. Ritter urges in defence of his view (1), the utterance of Aristotle, *Metaph.* iii. 1 and 2; and (2) that the power of Hate only extends over that part of existence which, through its own fault, violently separates itself from the whole, and only lasts as long as the fault continues. The first argument has already been refuted (p. 131, 1), and the second is based on an improper combination of two doctrines, which Empedocles himself did not combine. He refers the dividing of the Sphairos, through Hate, to a universal necessity, and not to the guilt of individuals (vide *infra*); and it is impossible he should refer it to individuals; for before Hate has separated the elements, which were mingled together in this primitive state, there were no individual existences that could be in fault. It is also quite incorrect to say that Hate in the end perishes, and is at last nothing more than the limit of the whole; for even if it is excluded from the Sphairos, it has not therefore ceased to exist; it still continues, but so long as the time of peace lasts, it cannot act, because its union with the other elements is interrupted. (Empedocles's conception of Hate during this period is similar to that of Christianity in regard to the devil after the last judgment, existing, but inactive.) Later indeed it again attains to power, and becomes strong enough to destroy the unity of the Sphairos as it did in the beginning of the world's development. This it could not have done, if in the opinion of Empedocles it were something unreal. Cf. also Brandis, *Rhein. Mus.* (edition of Niebuhr and Brandis), iii. 125 sqq.

[2] The duality of the forces acting in the universe is therefore specified by Aristotle as the distinguishing doctrine of Empedocles. *Metaph.* i. 4, *sup.* p. 140, 2; 138, 2.

Such statements then as the foregoing are certainly far from satisfactory. These determinate things, formed and changed with fixed regularity, could never result from the combination and separation of substances unless this alternation of matter proceeded according to fixed laws to that effect.[1] Empedocles did so little to supply this want that we can only suppose he was not conscious of it. He calls, indeed, the uniting force harmony;[2] but this does not imply[3] that the admixture of substances takes place according to a definite measure, but only that the substances are combined by Love. He gives, in regard to certain objects, the proportions in which the different substances of which they are composed are mingled in them.[4] Aristotle believes[5] that

[1] As Aristotle shows, *Gen. et Corr.* ii. 6 (*supra*, p. 139 *n.*).

[2] V. 202, 137, 394 (214 sq., 25, ap. Mull. 214, 175, 23).

[3] As Porphyry infers, doubtless from V. 202, ap. Simpl. *Categ. Schol. in Arist.* 59 b, 45: Ἐμπεδοκλεῖ . . . ἀπὸ τῆς ἐναρμονίου τῶν στοιχείων μίξεως τὰς ποιότητας ἀναφαίνοντι.

[4] V. 198 (211), on the formation of the bones:

ἡ δὲ χθὼν ἐπίηρος ἐν εὐστέρνοις χοάνοισι
δοιὼ τῶν ὀκτὼ μερέων λάχε Νήστιδος αἴγλης,
τέσσαρα δ' Ἡφαίστοιο· τὰ δ' ὀστέα λευκὰ γένοντο
ἁρμονίης κόλλησιν ἀρηρότα θεσπεσίηθεν.

V. 203 (215):

ἡ δὲ χθὼν τούτοισιν ἴση συνέκυρσε μιγεῖσα
Ἡφαίστῳ τ' ὄμβρῳ τε καὶ αἰθέρι παμφανόωντι,
Κύπριδος ὁρμισθεῖσα τελείοις ἐν λιμένεσσιν,
εἴτ' ὀλίγον μείζων εἴτε πλέον ἐστὶν ἑλάσσων.
ἐκ τῶν αἷμά τε γέντο καὶ ἄλλης εἴδεα σαρκός.

[5] *Part. Anim.* i. 1, 642 a, 17: ἐνιαχοῦ δέ που αὐτῇ [τῇ φύσει] καὶ Ἐμπεδοκλῆς περιπίπτει, ἀγόμενος ὑπ' αὐτῆς τῆς ἀληθείας, καὶ τὴν οὐσίαν καὶ τὴν φύσιν ἀναγκάζεται φάναι τὸν λόγον εἶναι, οἷον ὀστοῦν ἀπωδιδοὺς τί ἐστιν· οὔτε γὰρ ἓν τι τῶν στοιχείων λέγει αὐτὸ οὔτε δύο ἢ τρία οὔτε πάντα, ἀλλὰ λόγον τῆς μίξεως αὐτῶν. *De An.* i. 4, 408 a, 19: ἕκαστον γὰρ αὐτῶν [τῶν μελῶν] λόγῳ τινὶ φησιν εἶναι [ὁ Ἐμπ.]. *Metaph.* i. 10. The earlier philosophers had indeed derived all things from four kinds of causes, but only in an obscure and imperfect manner: ψελλιζομένῃ γὰρ ἔοικεν ἡ πρώτη φιλοσοφία περὶ πάντων, ἅτε νέα τε καὶ κατ' ἀρχὰς οὖσα τὸ πρῶτον, ἐπεὶ καὶ Ἐμπεδοκλῆς ὁστοῦν

this involves the thought that the essence of things lies in their form. If so, that thought, as even Aristotle admits, is not actually expressed by Empedocles: it seems rather like an involuntary confession. He appears never to have regarded it in the light of a universal principle, as is clear from the evidence adduced by Aristotle, for in the various passages in which the subject is mentioned, he refers solely to the verse on the formation of the bones. He can have found in Empedocles nothing approaching to any universal law such as Heracleitus enunciates in his propositions concerning the Reason of the world and the gradations of the elementary changes. Empedocles further derives much from a movement of the elements, which is not farther explained, and is so far fortuitous. He had not arrived at the doctrine that all natural phenomena are regulated by law.[1]

τῷ λόγῳ φησὶν εἶναι, τοῦτο δ' ἐστὶ τὸ τί ἦν εἶναι καὶ ἡ οὐσία τοῦ πράγματος.

[1] Arist. *Gen. et Corr.* 6, after the words quoted, p. 138, 3: τοῦτο δ' ἐστὶν ἡ οὐσία ἡ ἑκάστου, ἀλλ' οὐ μόνον, "μίξις τε διάλλαξίς τε μιγέντων," ὥσπερ ἐκεῖνός φησιν· τύχῃ δ' ἐπὶ τούτων ὀνομάζεται (cf. *Emp.* v. 39, *supra*), ἀλλ' οὐ λόγος· ἔστι γὰρ μιχθῆναι ὡς ἔτυχεν. *Ibid.* p. 334 a, 1, *sup.* p. 123, 1 (to which nothing new is added by Philop. *in h. l.* 59 b): διέκρινε μὲν γὰρ τὸ νεῖκος, ἠνέχθη δ' ἄνω ὁ αἰθὴρ οὐχ ὑπὸ τοῦ νείκους, ἀλλ' ὅτὲ μέν φησιν ὥσπερ ἀπὸ τύχης, "οὕτω γὰρ συνέκυρσε θέων τότε, ἄλλοθι δ' ἄλλως," ὅτὲ δέ φησι πεφυκέναι τὸ πῦρ ἄνω φέρεσθαι (cf. *De An.* ii. 4, 415 b, 28: Empedocles says plants grow κάτω μὲν . . . διὰ τὸ τὴν γῆν οὕτω φέρεσθαι κατὰ φύσιν, ἄνω δὲ διὰ τὸ πῦρ ὡσαύτως) ὁ δ' αἰθήρ, φησι, "μακρῇσι κατὰ χθόνα δύετο ῥίζαις." (The two verses are v. 166 sq., St. 203 sq. K, 259 sq. M.) *Phys.* ii. 4, 196 a. 19: Empedocles says: οὐκ ἀεὶ τὸν ἀέρα ἀνωτάτω ἀποκρίνεσθαι, ἀλλ' ὅπως ἂν τύχῃ—for which the words οὕτω συνέκυρσε, etc., are then quoted. *Phys.* viii. 1, 252 a, 5 (against Plato): καὶ γὰρ ἔοικε τὸ οὕτω λέγειν πλάσματι μᾶλλον. ὁμοίως δὲ καὶ τὸ λέγειν ὅτι πέφυκεν οὕτως καὶ ταύτην δεῖ νομίζειν εἶναι ἀρχήν, ὅπερ ἔοικεν Ἐμπεδοκλῆς ἂν εἰπεῖν, ὡς τὸ κρατεῖν καὶ κινεῖν ἐν μέρει τὴν φιλίαν καὶ τὸ νεῖκος ὑπάρχει τοῖς πράγμασιν ἐξ ἀνάγκης, ἠρεμεῖν δὲ τὸν μεταξὺ χρόνον. Similarly l. 19 sqq. Cf. Plato, *Laws*, x. 889. What Ritter says in Wolf's *Analekten*, ii. 4, 438 sq., in order to justify Empedocles against the censure of Aristotle, is not sufficient for this purpose. That Empedocles, V. 369 (1), describes Transmigration as an ordinance of necessity and as an ancient decree of the gods, is of little importance; as also that he represented, V. 139 (66, 177 M), the alternating periods of Love and Hate as determined by an irreversible oath or covenant (πλατὺς ὅρκος). That, no doubt, involves that every period must follow an unchanging order, but this order still appears as an incomprehensible positive ordinance, and as such is only maintained in regard to these individual cases, not in the form of a universal law of the world, as with Heracleitus. Cicero, *De fato*, c. 17, sub init., says that Empedocles and others taught: *Omnia ita fato fieri, ut id fatum vim necessitatis afferret.* Simplicius, *Phys.* 106 a, reckons ἀνάγκη with Love and Hate among his efficient causes. Stobæus, *Ecl.* i. 60 (*sup.* vol. i. 612 *n.*), says that according to the most probable reading and opinion, he held ἀνάγκη to be the uniform primitive base which, in regard to substance, divides itself into the four elements, and according to its form, into Love and Hate. Stobæus (i. 160; Plut. *Plac.* i. 26) accordingly defines the Empedoclean ἀνάγκη as the essence which makes use of the (material) elements and of the (moving) causes. Plutarch, *An. Procr.* 27, 2, p. 1026, sees in Love and Hate what is elsewhere called destiny; and Simplicius (*sup.* p. 141, 1) maintains more explicitly that Empedocles reduced the elemental opposites to Love and Hate, and Love and Hate to ἀνάγκη. Themist. *Phys.* 27 b, p. 191 sq. includes Empedocles among those philosophers who spoke of ἀνάγκη in the sense of matter. These are all later interpretations which can tell us nothing concerning what he really taught, and which, therefore, ought not to have found credence with Ritter, *Gesch. d. Phil.* i. 544. They no doubt proceed either from V. 369 (1) sqq., or from the analogy of Stoic, Platonic, and Pythagorean doctrines, or still more likely from a desire to find in Empedocles a uniform principle. Perhaps, indeed, Aristotle in the passage quoted above, *Phys.* viii. 1, may have given occasion to them. This passage, however, only refers, as is clear, to Emp. V. 139 sqq. (vide *infra*). Aristotle's cautious language shows that he cannot be alluding to any more definite explanation.

II.—*THE WORLD AND ITS PARTS.*

The four elements are underived and imperishable. The efficient forces are also eternal. Their relation, however, is constantly altering, and so the universe is subject to change, and our present world to generation and destruction. Love and Hate are equally original

and equally powerful; but they are not always equally balanced: each has dominion alternately.[1] At one time the elements are brought together by Love, and at another they are torn asunder[2] by Hate.[3] Now the world is combined into a unity, and again it is split up into plurality and oppositions. Each process, according to Empedocles, goes on until on the one hand complete union, or on the other complete separation, of the elements is effected; and equally long does the movement of natural life continue, and individual existences arise and pass away; but as soon as the goal is reached this

[1] V. 110 (138, 145 M):—

καὶ γὰρ καὶ πάρος ἦν τε καὶ ἔσσεται, οὐδέ ποτ', οἴω,
τούτων ἀμφοτέρων κενώσεται ἄσπετος αἰών.
ἐν δὲ μέρει κρατέουσι περιπλομένοιο κύκλοιο,
καὶ φθίνει εἰς ἄλληλα καὶ αὔξεται ἐν μέρει αἴσης.

The subject, as is clear from ἀμφοτέρων, is Love and Hate, cf. V. 89 sq.; *supra*, p. 125, 2 end.

[2] V. 61 sqq.; *sup.* p. 123, *n.*, where I give my reasons for disagreeing with Karsten, p. 196 sq., and for altering my own previous opinion in regard to this verse. I now refer it, not to individual things, but with Plato, *Soph.* 242 D sq.; Arist. *Phys.* viii. 1, 250 b, 26, and his commentators (vide Karsten, 197, 366 sq.) to the alternating conditions of the world. V. 69 sqq. (*sup.* p. 123; 125, 1). V. 114 (140, 149 M):—

αὐτὰ γὰρ ἔστιν ταῦτα (the elements),
δι' ἀλλήλων δὲ θέοντα
γίγνοντ' ἄνθρωποί τε καὶ ἄλλων ἔθνεα θηητῶν,
ἄλλοτε μὲν φιλότητι συνερχόμεν' εἰς ἕνα κόσμον,
ἄλλοτε δ' αὖ δίχ' ἕκαστα φορεύμενα νείκεος ἔχθει,
εἰσόκεν ἂν συμφύντα τὸ πᾶν ὑπάνερθε γένηται.

Text and interpretation are here equally uncertain; we might conjecture διαφύντα or διαφύντ' ἐπὶ πᾶν, but this would only partially mend the matter. Mullach translates the text as it stands: *Donec quæ concreta fuerunt penitus succubuerint*; but I cannot think that Empedocles could have expressed this in so far-fetched a manner.

[3] Plato, *l. c.*; *sup.* p. 138, 3; Arist. *l. c.*: Ἐμπεδοκλῆς ἐν μέρει κινεῖσθαι καὶ πάλιν ἠρεμεῖν (sc. τὰ ὄντα), κινεῖσθαι μέν, ὅταν ἡ φιλία ἐκ πολλῶν ποιῇ τὸ ἓν ἢ τὸ νεῖκος πολλὰ ἐξ ἑνός, ἠρεμεῖν δ' ἐν τοῖς μεταξὺ χρόνοις, λέγων οὕτως (V. 69–73); *ibid.* p. 252 a, 5 (*sup.* 144, 1); *ibid.* i. 4, 187 a, 24: ὥσπερ Ἐμπεδοκλῆς καὶ Ἀναξαγόρας· ἐκ τοῦ μίγματος γὰρ καὶ οὗτοι ἐκκρίνουσι τἄλλα. διαφέρουσι δ' ἀλλήλων τῷ τὸν μὲν περίοδον ποιεῖν τούτων τὸν δ' ἅπαξ. *De Cœlo*, i. 10; *sup.* p. 66, 1. Later testimony, ap. Sturz, p. 256 sqq.

movement stops, the elements cease to combine and to separate, because they are absolutely intermingled or separated; and they will remain in this condition until it is changed by a new impulse in an opposite direction. Thus the life of the world describes a circle: the absolute unity of substances, the transition from this to their separation, absolute separation, and return to unity, are the four stages through which it is constantly passing in endless reiteration. In the second and fourth stages, it manifests itself in the separate existence of composite beings: here alone is natural life possible; in the first stage, on the other hand, which admits of no separation of the elementary substances, and in the third, which does not admit of their combination, individual existence is excluded. The periods of movement and of natural life therefore alternate regularly with those of rest and the cessation of natural life.[1] But how long each of these periods is supposed to last, and whether

[1] So Aristotle says in the passages quoted from *Phys.* viii. 1; and the statement is confirmed by V. 60 sqq. of Empedocles, according to the sense given to this verse *supra*, p. 124; not to mention later writers dependent on Aristotle, as Themist. *Phys.* 18 a, 58 a (124, 409 Sp.), and Simpl. *Phys.* 258 b, 272 b. Logical consistency besides would seem to require that Empedocles should admit on the one side a complete separation, if he admitted on the other a complete intermixture, of substances. When, therefore, Eudemus, *Phys.* viii. 1, refers the time of rest only to the union of the elements in the Sphairos (Simpl. 27 b: Εὔδημος δὲ τὴν ἀκινησίαν ἐν τῇ τῆς φιλίας ἐπικρατείᾳ κατὰ τὸν σφαῖρον ἐκδέχεται, ἐπειδὰν ἅπαντα συγκριθῇ—Brandis's conjecture, i. 207, that we should read Ἐμπεδοκλῆς for Εὔδημος seems to me erroneous), this must be considered one-sided; though Empedocles may himself have given occasion to such a view by having described the Sphairos alone with any exactitude, and having passed over without mention, or with very cursory mention, the opposite condition of absolute separation. Ritter's doubt (i. 551) whether Empedocles was in earnest as to the doctrine of the changing cosmical periods is sanctioned as little by his own utterances as by the testimony of others.

their duration was ever precisely determined by Empedocles, there is no certain evidence to show.[1]

In the intermixture of all substances, with the description of which the cosmogony of our philosopher began,[2] none of the four elements appeared separately. This medley is afterwards described as spherical and unmoved;[3] and since perfect union excludes all influence of the dividing principle, Empedocles says that Hate was not present in it.[4] He calls the world

[1] The only hint we have on the subject is the statement, V. 369 (1) sqq., presently to be mentioned, that sinful dæmons are to wander about in the world for 30,000 ὧραι. But it is a question whether we should infer (with Panzerbieter, *Beitr.* p. 2) from this a similar duration of the cosmical periods; since the dæmons must have lived before the commencement of their wanderings, and were to live afterwards; and the connection of this doctrine with the Empedoclean physics is very slight. It is of little consequence whether by the τρὶς μυρίαι ὧραι we understand, with Mullach (*Emp. Proœm.* 13 sqq.) 30,000 years, or with Bakhuizen van den Brink, *Var. Lect.* 31 sqq., and Krische, *in Plat. Phæd.* p. 66, 30,000 seasons, i.e. 10,000 years. The latter opinion is supported partly by the language and partly by the analogy of the Platonic doctrine. Cf. Part II. a, 684, 694 sq., third edition.

[2] Cf. *inf.* p. 150 sq.

[3] V. 134 sqq. (64, 72 sq., 59 sq. K. 170 sqq. M): σφαῖρον ἔην. ἔιθ' οὔτ' ἠελίοιο δεδίσκεται (= δείκνυται) ἀγλαὸν εἶδος, οὐδὲ μὲν οὐδ' αἴης λάσιον μένος οὐδὲ θάλασσα. οὕτως ἁρμονίης πυκινῷ κίτει (Stein, K: κρύφῳ, Simpl. *Phys.* 272, b: κρύφα) ἐστήρικται, σφαῖρος κυκλοτερὴς μονίῃ περιηγέϊ (the repose which spread throughout the whole circle) γαίων.

The Sphairos is described as at rest by Aristotle and Eudemus, *l. c.* Philop. *Gen. et Corr.* 5 a, calls it ἄποιος, in reference to the verse quoted above.

[4] V. 175 (171, 162 M): τῶν δὲ συνερχομένων ἐξ ἔσχατον ἵστατο Νεῖκος. This verse relates immediately indeed, not to the state of unity as completed, but only as commencing; but it may easily be applied to the former; if the process of combination begins with the dispossession of Hate, when unity is completed Hate must be wholly cast out. Aristotle, therefore (*Metaph* iii. 4; vide *sup.* 139, 1), may have quoted this verse to prove that Hate has part in everything outside the Sphairos: ἅπαντα γὰρ ἐκ τούτου τἆλλά ἐστι πλὴν ὁ θεός· λέγει γοῦν (V. 104 sqq.; *sup.* 130, 1) . . . καὶ χωρὶς δὲ τούτων δῆλον· εἰ γὰρ μὴ ἦν τὸ νεῖκος ἐν τοῖς πράγμασιν, ἓν ἂν ἦν ἅπαντα, ὡς φησίν· ὅταν γὰρ συνέλθῃ, τότε δ', "ἔσχατον ἵστατο νεῖκος·" διὸ καὶ, continues Aristotle, συμβαίνει αὐτῷ τὸν εὐδαιμονέστατον θεὸν ἧττον φρόνιμον εἶναι τῶν ἄλλων· οὐ γὰρ γνωρίζει τὰ στοιχεῖα πάντα· τὸ γὰρ νεῖκος οὐκ ἔχει, ἡ δὲ γνῶσις τοῦ ὁμοίου τῷ ὁμοίῳ. Cf. xiv. 5, 1092 b, 6; *Gen. et Corr.* i. 1 (*sup.* p. 131, 1). The theory of Simpl. *De Cœlo*, 236 b, 22; *Schol. in Arist.* 507 a, 2; cf. *Phys.* 7 b, that Hate also has part in the Sphairos, is founded on a wrong interpretation. Cf. on this point and with Brandis, *Rhein. Mus.* iii. 131; Ritter, *Gesch. d. Phil.* i. 546.

in this state of intermixture, because of its spherical form, Sphairos, its usual designation among later writers. Aristotle uses instead the expressions μῖγμα[1] and ἕν.[2] It is also called Deity,[3] but not in a manner that justifies our considering it as a personal being. Empedocles gave this name to the elements also, and Plato to the visible world.[4] Later writers adopt various interpretations of the Sphairos: formless matter,[5] efficient cause,[6] the primeval fire of the Stoics,[7]

[1] *Metaph.* xii. 2, 1069 b, 21 c, 10, 1075 b, 4; xiv. 5, 1092 b, 6; *Phys.* i. 4, 187 a, 22.

[2] *Metaph.* i. 4, 985 a, 27; iii. 4, 1000 a, 28 b, 11; *Gen. et Corr.* i. 1, 315 a, 6, 20; *Phys.* i. 4, sub init.

[3] Vide *sup.* 148, 4, and Emp. v. 142 (70, 180 M): πάντα γὰρ ἐξείης πελεμίζετο γυῖα θεοῖο.

[4] It is, therefore, strange that Gladisch should say (*Emped. u. d. Aeg.* 33; cf. *Anaxag. u. d. Isr.* xxii.): 'Empedocles could not have called a mere mixture of the elements the Deity.' The whole world is, according to Empedocles, a mere mixture of the elements, and so also are human souls and the gods. Besides, Empedocles never characterised the Sphairos as 'the Deity,' but only as Deity. The well-known verses on the spirituality of God, as we shall presently see, do not refer to the Sphairos. Aristotle first called the Sphairos ὁ θεός, but it does not follow that Empedocles called it so.

[5] Philop. *Gen. et Corr.* p. 5 a; but this is only, strictly speaking, a development of the consequences by means of which Arist. *Gen. et Corr.* i. 1, 315 a, had already refuted Empedocles. In *Phys. H.* 13 (ap. Karsten, 323; Sturz, 374 sq.) he acknowledges that the substances are actually mingled in the Sphairos. A similar inference is deduced by Arist. *Metaph.* xii. 6, 1072 a, 4, and subsequently by Alex. *in h. l.* from the doctrine of the efficient forces, viz., that Empedocles supposed the Actual to have preceded the Possible.

[6] Themist. *Phys.* 18 a, 124 sq. probably a careless use of the interpretation mentioned by Simpl. *Phys.* 33 a.

[7] Hippol. *Refut.* vii. 29 (*sup.* 129, 2). This statement, to which Brandis attaches far too much importance (i. 295), and which betrays great ignorance of the Empedoclean

the intelligible world of Plato,[1] are all misapprehensions, which we may spare ourselves the trouble of refuting. The opinion that the Sphairos has only an ideal existence, and is merely a figurative expression for the unity and harmony underlying the changeful phenomenon,[2] is equally erroneous. This theory is contradicted by the explicit declarations of Plato and Aristotle, and by the explanations of Empedocles himself.[3] Moreover, such a discrimination between the ideal essence of things and their phenomenon transcends the general standpoint of the pre-Socratic physics.

A world[4] could only arise when the primitive substances separated, or, in the language of Empedocles, when the Sphairos became divided by Hate.[5] He tells

doctrine, cannot be considered as historical evidence. Its only foundation is probably the analogy between the doctrines of Empedocles and Heracleitus on the changing conditions of the cosmos, on the strength of which, Clemens, *Strom.* v. 599 B, attributes to Empedocles the opinion that the world will be destroyed by fire.

[1] The Neo-Platonists concerning whom Karsten, p. 369 sqq., cf. 326, gives us many particulars; cf. *inf. note* 4. We read in *Theol. Arithm.* p. 8 sq., that Empedocles, Parmenides, &c., taught like the Pythagoreans: *τὴν μοναδικὴν φύσιν Ἑστίας τρόπον ἐν μέσῳ ἱδρύσθαι καὶ διὰ τὸ ἰσόῤῥοπον φυλάσσειν τὴν αὐτὴν ἕδραν*; but this seems to refer, not to the Sphairos, but to Love, which is in the centre of the rotating cosmical matter (V. 172; vide *inf.* p. 152, 1.

[2] Steinhart, *l. c.* p. 91 sqq.; similarly Fries, i. 188.

[3] Cf. *inf.* 151, 1.

[4] A *κόσμος*, in contradistinction to the *σφαῖρος*—a distinction which, according to Simplicius, Empedocles himself had explicitly introduced. Cf. *De Cœlo*, 139 b, 16 (*Schol. in Ar.* 489 b, 22): *Ἐμπ. διάφορα τῶν παρ' αὐτῷ κόσμων τὰ εἴδη* (*supra, note* 1) *ἔλεγεν, ὡς καὶ ὀνόμασι χρῆσθαι διαφόροις, τὸν μὲν σφαῖρον τὸν δὲ κόσμον κυρίως καλῶν.*

[5] Plato (*sup.* p. 138, 3) therefore derives the multiplicity of things from Hate, and Aristotle still more decidedly characterises the present period of the world as the one in which Hate reigns. *Gen. et Corr.* ii. 6, 334 a, 5: *ἅμα δὲ καὶ τὸν κόσμον ὁμοίως ἔχειν φησὶν ἐπί τε τοῦ νείκους νῦν καὶ πρότερον ἐπὶ τῆς φιλίας. De Cœlo*, iii. 2, 301 a, 14: if we wish to expound the origin of

us, therefore, that in course of time Hate grew up in the Sphairos and sundered the elements;[1] when the separation was fully accomplished, Love came in among

the world, we must begin with that state which preceded the division and separation of matter—its present state: *ἐκ διεστώτων δὲ καὶ κινουμένων οὐκ εὔλογον εἶναι τὴν γένεσιν*; because in this case, as it is said on p. 300 b, 19, there would have been a world antecedent to the world: *διὸ καὶ Ἐμπεδοκλῆς παραλείπει τὴν ἐπὶ τῆς φιλότητος* (sc. *γένεσιν*)· *οὐ γὰρ ἂν ἐδύνατο συστῆσαι τὸν οὐρανόν, ἐκ κεχωρισμένων μὲν κατασκευάζων σύγκρισιν δὲ ποιῶν διὰ τὴν φιλότητα· ἐκ διακεκριμένων γὰρ συνέστηκεν ὁ κόσμος τῶν στοιχείων, ὥστ' ἀναγκαῖον γίνεσθαι ἐξ ἑνὸς καὶ συγκεκριμένου.* Following this precedent, Alexander regards Hate absolutely as the author of the world (Simpl. *De Cœlo*, 236 b, 9, 20; *Schol. in Arist.* 507 a, 1), or at any rate of the present world. In Philop. *Gen. et Corr.* 59 b, he observes on Arist. *Gen. et Corr.* ii. 6: if by the *κόσμος* we understand the condition in which the elements were separated by Hate, or were again brought together by Love, Hate and Love would be the only moving forces in the *κόσμος*; if, on the other hand, we understand by the *κόσμος* the corporeal mass which underlies the Sphairos as well as the present world, we must attribute to it a movement of its own: *ἢ ὁμοίως, φησὶ, κόσμος καὶ ταὐτόν ἐστι καὶ κινεῖται ἐπί τε τοῦ νείκους νῦν καὶ ἐπὶ τῆς φιλίας πρότερον· ἐν δὲ τοῖς μεταξὺ διαλείμμασι τῶν ὑπ' ἐκείνων γινομένων κινήσεων, πρότερόν τε ὅτε ἐκ τοῦ νείκους ἐπεκράτησεν ἡ φιλία, καὶ νῦν ὅτε ἐκ τῆς φιλίας τὸ νεῖκος, κόσμος ἐστὶν, ἄλλην τινὰ κινούμενος κίνησιν καὶ οὐχ ὡς ἡ φιλία καὶ τὸ νεῖκος κινοῦσιν.* This interpretation is found even earlier, for Hermias, who certainly must have taken it from others, represents (*Irris.* c. 4) Empedocles as saying: *τὸ νεῖκος ποιεῖ πάντα.* With the later Neo-Platonists, according to Simp. *Phys.* 7 b, the prevailing opinion was that the Sphairos was produced by Love alone, and this world by Hate alone. More precisely, Simpl. *De Cœlo*, *l. c.* (cf. *ibid.* 263 b, 7; *Schol.* 512 b, 14): *μήποτε δὲ, κἂν ἐπικρατῇ ἐν τούτῳ τὸ νεῖκος ὥσπερ ἐν τῷ σφαίρῳ ἡ φιλία, ἀλλ' ἄμφω ὑπ' ἀμφοῖν λέγονται γίνεσθαι*; this is only untrue in respect to the Sphairos. Theodor. Prodr. *De Amic.* v. 52, calls Hate the creator of the terrestrial world in contradistinction to the Sphairos, but this is unimportant.

[1] V. 139 (66, 177 M):—

αὐτὰρ ἐπεὶ μέγα Νεῖκος ἐνὶ μελέεσσιν ἐθρέφθη
ἐς τιμάς τ' ἀνόρουσε τελειομένοιο χρόνοιο,
ὅς σφιν ἀμοιβαῖος πλατέος πάρ' ἐλήλαται (al. *-το*) *ὅρκου*

πάρ' ἐλ. instead of *παρελήλαται* seems to me necessary in spite of Mullach's contradiction, *Emp. Pr.* p. 7; *Fragm.* i. 43; cf. Bonitz and Schwegler, *in Metaph.* iii. 4, who also defend this emendation. V. 142 (*sup.* p. 149, 3); Plut. *Fac. Lun.* 12, 5 sq., p. 926, where it is quite possible that the words *χωρὶς τὸ βαρὺ πᾶν καὶ χωρὶς τὸ κοῦφον* may contain Empedoclean expressions.

the divided masses, and produced at one point a whirling motion, by which part of the substances was mingled, and Hate (this is merely another expression for the same process) was excluded from the circle that was forming itself. As this motion extended more and more, and Hate was forced further and further away, the substances yet unmingled were drawn into the mass, and from their combination sprang the present world and mortal creatures.[1] But as the world had a beginning, so it will also have an end, when all things, through continued unity, shall have returned to the primitive condition of the Sphairos.[2] The assertion that this destruction of the world would be by

[1] Thus we must understand the following verses, 171 (167, 191 M):—

ἐπεὶ Νεῖκος μὲν ἐνέρατον ἵκετο βένθος
δίνης, ἐν δὲ μέσῃ Φιλότης στροφάλιγγι γένηται,
ἔνθ' ἤδη τάδε πάντα συνέρχεται ἐν μόνον εἶναι,
οὐκ ἄφαρ, ἀλλ' ἐθελημὰ συνιστάμεν' ἄλλοθεν ἄλλα.
175. τῶν δὲ συνερχομένων ἐξ ἔσχατον ἵστατο Νεῖκος.
πολλὰ δ' ἀμιχθ' ἔστηκε κεραιομένοισιν ἐναλλάξ,
ὅσσ' ἔτι Νεῖκος ἔρυκε μετάρσιον· οὐ γὰρ ἀμεμφέως
πάντως ἐξέστηκεν ἐπ' ἔσχατα τέρματα κύκλου,
ἀλλὰ τὰ μέν τ' ἐνέμιμνε μελέων, τὰ δέ τ' ἐξεβεβήκει.
180. ὅσσον δ' αἰὲν ὑπεκπροθέοι, τόσον αἰὲν ἐπῄει
ἠπιόφρων Φιλότης τε καὶ ἔμπεσεν ἄμβροτος ὁρμή·
αἶψα δὲ θνήτ' ἐφύοντο τὰ πρὶν μάθον ἀθάνατ' εἶναι,
ζωρά τε τὰ πρὶν ἄκρητα διαλλάξαντα κελεύθους·
τῶν δέ τε μισγομένων χεῖτ' ἔθνεα μυρία θνητῶν,
185. παντοίῃς ἰδέῃσιν ἀρηρότα, θαῦμα ἰδέσθαι.

The θνητὰ are not only living creatures, but, generally speaking, all that is subject to generation and decay.

[2] Authorities for this have already been given at the commencement of this section. Cf. also Arist. *Metaph.* iii. 4, 1000 b, 17: ἀλλ' ὅμως τοσοῦτόν γε λέγει ὁμολογουμένως (ὁ Ἐμπ.) οὐ γὰρ τὰ μὲν φθαρτὰ τὰ δὲ ἄφθαρτα ποιεῖ τῶν ὄντων, ἀλλὰ πάντα φθαρτὰ πλὴν τῶν στοιχείων. Empedocles, therefore, as Karsten, p. 378, rightly observes, never calls the gods αἰὲν ἐόντες, as Homer does, but only δολιχαίωνες, V. 107, 126, 373 (135, 161, 4 K; 131, 141, 5 M). The destruction of all things puts an end even to the existence of the gods.

fire[1] is doubtless founded on a confusion of the doctrine of Empedocles with that of Heracleitus.[2]

In this cosmogony there is a striking lacuna. If all individual existence depends upon a partial union of the elements, and ceases when they are wholly mingled or wholly separated, particular existences must come into being as much when the Sphairos dissolves into the elements as when the separated elements return to unity. In the one case a world is formed by the separation of the mingled, on the other by the union of the separated. Aristotle[3] actually ascribes this opinion to Empedocles, as has been shown, and that philosopher expresses himself, generally speaking, in the same sense. In the more precise development of the cosmogony, however, he seems to speak only of that formation of the world which follows the division of the elements through Hate. To this all the fragments and accounts which we possess relate;[4] and the verses quoted above (V. 171 sqq.) appear to leave no room for a more detailed exposition of what occurred and resulted when the elements

[1] Vide *supra*, 149, 7.

[2] Such evidence as we possess is very inadequate: the most trustworthy writers are entirely silent on this point. Besides, it seems inconceivable that the unity of all elements should be brought about by their conflagration, in which Empedocles could only have seen a transformation into one element, which, according to his principles, was impossible.

[3] Similarly Alexander, vide *supra*, p. 150, 5.

[4] Brandis, *l. c.* 201, remarks that Empedocles seems to have derived the formation of the greater masses, as the sky and the sea, primarily from the operation of Strife; and that of organic beings from the operation of Love. This view must be greatly modified by the evidence quoted above (cf. Arist. *De Cœlo*, iii. 2), and by the nature of the case. Love forms both; but in combining the elements which had been separated by strife, it necessarily first produced the great masses, compounded in a simpler manner, and organic beings only in the sequel.

were separated out of the midst of the Sphairos. It would seem that Empedocles did not himself notice this deficiency in his exposition.

The process of the world's formation he conceived as follows.[1] Out of the whirling mass in which all the elements had been shaken together by Love, the air first separated itself, and condensing on the outermost rim, surrounded the whole like a hollow sphere.[2] After this fire broke forth, and occupied the upper space, next to the outermost concave, while the air was forced under the earth.[1] Thus there arose two hemispheres, which together form the concave sphere of heaven: the one is bright, and consists entirely of fire; the other is dark, and consists of air with isolated masses of fire sprinkled in it. Through the pressure of the fire the sphere of the heavens acquires a rotatory motion; when its fiery half is over us we have day; when the dark half is over us, and the fiery half is hidden by the body of the earth, we have night.[2] The earth[3] was formed from the remaining elements and was at first moist and miry. The force of the rotation drove out the water from it; and the evaporations of the water

[1] Cf. Plut. ap. Eus. *Præp.* i. 8, 10: ἐκ πρώτης φησὶ τῆς τῶν στοιχείων κράσεως ἀποκριθέντα τὸν ἀέρα περιχυθῆναι κύκλῳ· μετὰ δὲ τὸν ἀέρα τὸ πῦρ ἐκδραμὸν καὶ οὐκ ἔχον ἑτέραν χώραν, ἄνω ἐκτρέχειν ὑπὸ τοῦ περὶ τὸν ἀέρα πάγου. *Plac.* ii. 6, 4: Ἐ. τὸν μὲν αἰθέρα πρῶτον διακριθῆναι, δεύτερον δὲ τὸ πῦρ, ἐφ' ᾧ τὴν γῆν, ἐξ ἧς ἄγαν περισφιγγομένης τῇ δύμῃ τῆς περιφορᾶς ἀναβλύσαι τὸ ὕδωρ, ἐξ οὗ θυμιαθῆναι τὸν ἀέρα· καὶ γενέσθαι τὸν μὲν οὐρανὸν ἐκ τοῦ αἰθέρος, τὸν δὲ ἥλιον ἐκ τοῦ πυρός, πιληθῆναι δ' ἐκ τῶν ἄλλων τὰ περίγεια. Arist. *Gen. et Corr.* ii. 6 (*sup.* p. 144, 1). Emp. V. 130 (182, 233 M):—

εἰ δ' ἄγε νῦν τοι ἐγὼ λέξω πρῶθ' ἡλίου ἀρχήν,
ἐξ ὧν δὴ ἐγένοντο τὰ νῦν ἐσορώμενα πάντα,
γαῖά τε καὶ πόντος πολυκύμων ἠδ' ὑγρὸς ἀὴρ
Τιτὰν ἠδ' αἰθὴρ σφίγγων περὶ (l. πέρι) κύκλον ἅπαντα.

τιτὰν, the outspread, is here most likely not a designation of the sun, but a name for the æther; and αἰθὴρ, elsewhere with Empedocles synonymous with ἀὴρ, means the upper air, without implying any elementary difference between the upper air and the lower. According to Eustath. *in Od.* i. 320, Empedocles called fire καρπαλίμως ἀνόπαιον, the swiftly aspiring, perhaps in the connection spoken of by Aristotle, *loc. cit.*

[2] According to Stob. *Ecl.* i. 566, egg-shaped, or rather lentil-shaped. His words are: Ἐμπ. τοῦ ὕψους τοῦ ἀπὸ τῆς γῆς ἕως οὐρανοῦ . . . πλείονα εἶναι τὴν κατὰ τὸ πλάτος διάστασιν, κατὰ τοῦτο τοῦ οὐρανοῦ μᾶλλον ἀναπεπταμένου, διὰ τὸ ὠῷ παραπλησίως τὸν κόσμον κεῖσθαι. This opinion might commend itself to sensible observation; and there would be no proof against it in the fact that it is unnoticed both by Aristotle, *De Cœlo*, ii. 4, and his commentators, for Aristotle is not alluding in that place to the views of his predecessors. But as Emp. (vide p. 155, 2) represents that at night the light hemisphere goes under the earth, and not that the sky moves sideways round the earth, there arises this difficulty: that the space taken up by the sky is not sufficient for the sky to turn round in, a point to which Aristotle afterwards attaches some importance.

[1] Arist. and Plut. *l. c.*

[2] Plut. ap. Eus. *l. c.* continues: εἶναι δὲ κύκλῳ περὶ τὴν γῆν φερόμενα δύο ἡμισφαίρια, τὸ μὲν καθόλου πυρὸς, τὸ δὲ μικτὸν ἐξ ἀέρος καὶ ὀλίγου πυρὸς, ὅπερ οἴεται τὴν νύκτα εἶναι. Empedocles himself, V. 160 (197, 251 M), explains night as the interposition of the earth, which may be connected with Plutarch's statement in the manner indicated above: τὴν δὲ ἀρχὴν τῆς κινήσεως συμβῆναι κατὰ τὸν ἀθροισμὸν ἐπιβρίσαντος τοῦ πυρός. The last sentence, the text of which, however, is somewhat uncertain, must not be referred (as by Karsten, p. 331, and Steinhart, p. 95, to the first separation of the elements from the Sphairos). Plac. ii. 11 (Stob. i. 500): Ἐμπ. στερέμνιον εἶναι τὸν οὐρανὸν ἐξ ἀέρος συμπαγέντος ὑπὸ πυρὸς κρυσταλλοειδῶς (this is confirmed by Diog. viii. 77; Ach. Tat. *in Arat.* c. 5, p. 128 Pet.; Lact. *Opif. Dei*, c. 17) τὸ πυρῶδες καὶ ἀερῶδες ἐν ἑκατέρῳ τῶν ἡμισφαιρίων περιέχοντα. In Plut. *Plac.* iii. 8, *paralll.*, the alternation of the seasons, as well as that of day and night, is explained in reference to the relation of the two hemispheres.

[3] Vide *sup.* p. 154, 1. According to this it is quite legitimate to reckon Empedocles among those who held one world only of limited extent (Simpl. *Phys.* 38 b; *De Cœlo*, 229 a, 12; *Schol. in Arist.* 505 a, 15; Stob. *Ecl.* i. 494, 496; Plut. *Plac* i. 5, 2); but it is not probable that he himself definitely expressed such an opinion. (V. 173, *supra*, 152, 1, has nothing to do with this.) The assertion (Plac. *l. c. paralll.*) that he regarded the world as only a small part of the whole (πᾶν), and the rest as formless matter, is doubtless merely a misunderstanding of verses 176 sq. (*sup. l. c.*) relating to an earlier stage of the world: At any rate it furnishes no ground for supposing (Ritter in Wolf's *Anal.* ii. 445 sqq.; *Gesch. d. Phil.* i. 556 sq.; cf. Brandis, *Rh. Mus.* iii. 130; *Gr. Röm. Phil.* i. 209) that the Sphairos, or a part of it, continues side by side with

immediately filled the lower aërial space.[1] The earth is able to maintain itself in supension upon the air, because of the rapid revolution of the heavens, which hinders it from falling;[2] and it is for the same reason, Empedocles tells us, that the whole universe remains in its place.[3] He agreed with the Pythagoreans[4] in supposing the sun to be a body of a vitreous nature, probably as large as the earth, which, like a burning glass, collects and reflects the rays of fire from the bright hemisphere surrounding it:[5] the moon, he thought, is made of hardened crystalline air;[6] its shape is that of a disc,[7] its light is derived from the sun,[8] and its

the present world; for the blessed Sphairos could not be described as ἀργὴ ὕλη. Nor does this follow, as we shall presently show, from his doctrine of the life after death, for the abode of the blessed cannot be identified with the Sphairos in which no individual life is possible. Ritter believes that beside the world of strife there must be another sphere in which Love rules alone: but this is incorrect: according to Empedocles they rule, not side by side, but after one another. Even in the present world, Love works together with Hate.

[1] Vide *supra*, p. 154, 1.

[2] Arist. *De Cœlo*, ii. 13, 295 a. 16; Simpl. *ad h. l.* 235 b, 40.

[3] Arist. *l. c.* ii. 1, 284 a, 24.

[4] Vide vol. i. 456. 1.

[5] Plut. ap. Eus. *l. c.* ὁ δὲ ἥλιος τὴν φύσιν οὐκ ἔστι πῦρ ἀλλὰ τοῦ πυρὸς ἀντανάκλασις, ὁμοία τῇ ἀφ' ὕδατος γινομένῃ. *Pyth. orac.* c. 12, p. 400: Ἐμπεδοκλέους . . . φάσκοντος τὸν ἥλιον περιαυγῆ ἀνακλάσει φωτὸς οὐρανίου γενόμενον, αὐθις "ἀνταυγεῖν πρὸς Ὄλυμπον ἀταρβήτοισι προσώποις" (V. 151 St. 188 K, 242 M). This may be connected with the statement of Diog. viii. 77. that the sun, according to Empedocles, was πυρὸς ἄθροισμα μέγα, supposing that Diogenes, or his authority, meant by this expression the assembling of rays into one focus. On the other hand it is manifestly a mistake (*Plac.* ii. 20, 8; Stob. i. 530 *parall.*) to attribute to Empedocles two suns—a primitive sun in the hemisphere beyond, and a visible one in our hemisphere. Vide Karsten, 428 sq. and *supra*, Vol. I. 450, 1. For the statement as to the size of the sun, cf. Stob. *l. c.*

[6] Plut. ap. Eus. *l. c.*, *De Fac. Lun.* 5, 6, p. 922; Stob. *Ecl.* i. 552. It seems strange that this condensation of the air should be effected by fire, while at the same time the moon is compared to hail or a frozen cloud.

[7] Stob. *l. c.*; Plut. *Qu. Rom.* 101, end, p. 288; *Plac.* ii. 27 *parall.*; Diog. *l. c.*

[8] V. 152–156 (189 sq., 243 sqq. M); Plut. *Fac. Lun.* 16, 13, p. 929; Ach. Tat. *in Arat.* c. 16, 21, p. 135; E, 141 A. When the latter says that Empedocles calls the moon an ἀπόσπασμα ἡλίου he merely means, as the quotation from Empedocles, V. 154, shows, that her light is an emanation of the solar light.

[1] Plut. *Plac.* ii. 31. According to this, the text ap. Stob. i. 566 should be corrected; but it seems unnecessary to introduce into the passage of the *Placita*, as Karsten proposes, διπλάσιον ἀπέχειν τὸν ἥλιον ἀπὸ τῆς γῆς ἤπερ τὴν σελήνην. According to *Plac.* ii. 1, *parall.* Empedocles supposed the sun's course to be the limit of the universe, which however must not be taken too literally. In our fragments it is only said, V. 150, 154 sq. (187, 159 K, 241, 245 M), that the sun traverses the sky and the moon revolves nearer the earth.

[2] Hippol. *Refut.* i. 4. He however, is probably alluding only to the complaints of Empedocles about the terrestrial life, which will be noticed later on; the notion that the terrestrial region extends to the moon, he seems to have adopted himself, merely from its similarity with kindred doctrines.

[3] *Plac.* ii. 13, 2, 5, *parall.*; Ach. Tat. *in Ar.* c. ii.; cf. *sup.* p. 155, 2.

[4] V. 157 (194, 248 M) sqq.; Stob. i. 530.

[5] Plut. *Plac.* ii. 8 *parall.* and Karsten 425, who places in connection with this the observation, *Plac.* ii. 10 *par.*, that Empedocles, in accordance with the common usage of antiquity, called the north side of the world the right. It is not clear, however, what was his theory in regard to this.

[6] *Plac.* ii. 23 *par.*: Ἐμπ. ὑπὸ τῆς περιεχούσης αὐτὸν [τὸν ἥλιον]

distance from the earth amounts to a third of its distance from the sun.[1] The space beneath the moon, in opposition to the upper region, Empedocles is said to have regarded, like the Pythagoreans, as the theatre of all evil.[2] The fixed stars, he thought, are fastened to the vault of the sky; the planets, on the contrary, move freely: in respect to their substance, he believed that they were fires which have separated themselves from the air.[3] Solar eclipses are caused by the interposition of the body of the moon;[4] the inclination of the earth's axis towards the path of the sun is the result of the pressure of the air, which is forced by the sun towards the north.[5] The course of the sun itself Empedocles seems to have conceived as confined within fixed limits.[6] The daily revolution of the sun was

much slower at first than it is now,—a day was originally nine months, and afterwards seven.[1] He explained the light of the heavenly bodies by his theory of emanations,[2] and accordingly maintained that light requires a certain time to traverse the space between the sun and the earth.[3] In the very scanty details known to us of his opinions respecting meteorological phenomena, traces can also be found of his peculiar doctrine,[4] and the same may be said of his ideas respecting the inorganic productions of the earth.[5]

σφαίρας κωλυόμενον ἄχρι παντὸς εὐθυπορεῖν καὶ ὑπὸ τῶν τροπικῶν κύκλων.

[1] *Plac.* v. 18, 1; cf. Sturz, p. 328.

[2] Philop. *De An.* K, 16: Ἐμπ. ὃς ἔλεγεν, ἀπορρέον τὸ φῶς σῶμα ὂν ἐκ τοῦ φωτίζοντος σώματος, &c.; cf. p. 133, 2.

[3] Arist. *De An.* ii. 6, 418 b, 20; *De Sensu*, c. 6, 446 a, 26, who combats this opinion; Philop. *l. c.* and other commentators of Arist.; vide Karsten, 431.

[4] How Empedocles explained the change of the seasons has already been shown, *supra*, p. 155, 2, from Eus. *Præp.* i. 8, 10. He thought hail was frozen air (frozen vapours), *sup.* p. 156, 6. He spoke of the origin of winds: their oblique direction from the north-east and south-west he ascribed, according to Olympiodorus in *Meteor.* 22 b, i. 245 Id.; cf. 21 b, i. 239 Id., to the circumstance that the ascending vapours are partly of a fiery, and partly of a terrestrial, nature, and that their opposite motion finds its adjustment in an oblique tendency. His theory of rain and lightning, according to Philop. *Phys.* c. 2 (ap. Karsten, 404), cf. Arist. *De Cœlo*, iii. 7 (*sup.* p. 125, 1), was that, in the condensation of the air, the water contained in it was pressed forth, and that in its rarefaction fire obtained room to get out. According to Arist. *Meteor.* ii. 9, 369 b, 11; Alex. *ad h. l.* p. 111 b; cf. Stob. *Ecl.* i. 592, fire entered by means of the sun's rays into the clouds, and was then struck out with a crash. This was probably based upon the observation that thunder clouds generally arise at times when the sun is very powerful.

[5] Especially the sea, which he supposed to be exuded from the earth by means of solar heat. (Arist. *Meteor.* ii. 3, 357 a, 24; Alex. *Meteor.* 91 b, i. 268 Id. 26 a; Plut. *Plac.* iii. 16, 3, where Eus. *Præp.* xv. 59, 2, has the right reading.) From this origin of the sea he derived its salt taste (Arist. *l. c.* c. i. 353 b, 11; Alex. *l. c.*); salt, he thinks, is everywhere formed by the sun's heat (Emp. v. 164, 206 K, 257 M); but sweet water must also have been mingled with it, by which the fish live (Ælian. *Hist. An.* ix. 64). Fire, the presence of which in the subterranean parts of the earth seems especially to have attracted his attention, he supposed not only to have heated the warm springs, but also to have hardened stones. (Emp. v. 162, 207 K, 255 M; Arist. *Probl.* xxiv. 11; Sen. *Quæst. Nat.* iii. 24.) The same fire, surging in the interior of the earth, keeps the rocks and mountains upright (Plut. *Prim. Frig.* 19, 4, p. 953). We have already spoken of the magnet, p. 134, 1.

Among organic beings, on which he seems to have bestowed special attention,[1] plants[2] appear to have first come forth from the earth, before it was enlightened by the sun,[3] and afterwards animals. Both are nearly allied in their nature; and we shall presently find that Empedocles not only considered that plants had souls, but souls of the same kind as animals and men.[4] He also observed that the fructification of plants corresponds with the generation of animals, though the sexes are not separated in them:[5] he compares the leaves of trees with the hair, feathers and scales of animals.[6] Their growth is explained by the warmth of the earth, which drives the branches upward, while their terrestrial ingredients impel the roots downward.[7] In accordance with his general theory of the combination of the elements,

[1] Cf. Hippocr. ἀρχ. ἰατρ. c. 20, i. 620 Littré: καθάπερ Ἐμπεδοκλῆς ἢ ἄλλοι οἳ περὶ φύσιος γεγράφασιν ἐξ ἀρχῆς δ τι ἐστὶν ἄνθρωπος καὶ ὅπως ἐγένετο πρῶτον καὶ ὅπως ξυνεπάγη.

[2] The Empedoclean doctrine of plants is discussed by Meyer, *Gesch. d. Botanik*, i. 46 sq.; but, as he says himself, only according to the references given by Sturz.

[3] Plut. *Plac.* v. 26, 4; cf. Pseudo-Arist. *De Plant.* i. 2, 817 b, 35; Lucret. *Nat. Rer.* v. 780 sqq.; Karsten, 441 sq.; *Plac.* v. 19, 5. There it is expressly said that plants, like animals, first came forth from the earth part by part.

[4] The *Placita*, therefore, rightly call them ζῷα, Ps.-Arist. *De Pl.* i. 1, 815 a, 15 b, 16, says that Anaxagoras, Democritus, and Empedocles attributed to them sensation, desire, perception, and intelligence; and Simpl. *De An.* 19 b, observes that he endowed even plants with rational souls.

[5] Arist. *Gen. Anim.* i. 23, in reference to Emp. v. 219 (245, 286 M): οὕτω δ' ὠοτοκεῖ μακρα δένδρεα πρῶτον ἐλαίας. *De Plant.* i. 2, 817 a, 1, 36, c. 1, 815 a, 20, where, however, the doctrine of Empedocles is not accurately represented. *Plac.* v. 26, 4.

[6] 236 (223, 216 M) sq.

[7] Arist. *De An.* ii. 4, 415 b, 28, and his commentators *in h. l.* According to Theophrastus, *Caus. Plant.* i. 12, 5, the roots of plants (probably only for the most part) consist of earth, and the leaves of æther (*Luft*).

he supposed that their nourishment was conditioned by the attraction of kindred substances, and effected by means of the pores.[1] He explained the fact of some plants remaining always green by reference to the symmetry of their pores, together with their material composition.[2] The elements which are superfluous for the nourishment of plants go to form the fruit; the taste of which is therefore regulated according to the sustenance of each plant.[3]

In the first beginning of animals and men, their different parts, Empedocles supposed, grew up separately from the ground,[4] and were then brought together by the action of Love. But since pure chance ruled in this process, there resulted at first all kinds of strange forms, which were soon again destroyed, until at last things were so ordered as to produce beings harmoniously shaped and capable of life.[5] Mankind also sprang

[1] V. 282 (268, 338) sqq.; cf. Plut. *Qu. Com.* iv. 1, 3, 12, where it is immaterial whether the words primarily refer to the nourishment of animals or not, since the same holds good of plants: cf. next note and Plut. *l.c.* vi. 2, 2, 6.

[2] Plut. *Qu. Com.* iii. 2, 2, 8, through which the statement in the *Plac.* v. 26, 5, receives its more precise determination.

[3] *Plac.* v. 26, 5 sq.; Galen c. 38, p. 341; Emp. v. 221 (247, 288 M).

[4] V. 244 (232, 307 M):—

ἦ πολλαὶ μὲν κόρσαι ἀναυχένες ἐβλάστησαν,
γυμνοὶ δ' ἐπλάζοντο βραχίονες εὐνίδες ὤμων,
ὄμματα δ' οἱ' ἐπλανᾶτο πενητεύοντα μετώπων.

Aristotle says, *De Cœlo*, iii. 2, 300 b, 29 (where he quotes this passage), that this happened *ἐπὶ τῆς φιλότητος*; but that does not mean in the kingdom of Love, in the Sphairos, but under the influence of Love. (Similarly *ibid.* 401 a, 15: *τὴν ἐπὶ τῆς φιλότητος γένεσιν.*) It is more clearly expressed in *Gen. Anim.* i. 18, 722 b, 19: *καθάπερ Ἐμπ. γεννᾷ, ἐπὶ τῆς φιλότητος λέγων.*

[5] Arist. *De An.* iii. 6. sub init.: *καθάπερ Ἐμπ. ἔφη "ᾗ πολλῶν"* etc., *ἔπειτα συντίθεσθαι τῇ φιλίᾳ.* *Phys.* ii. 8, 198 b, 29 (cf. Karsten, p. 244), is it not possible that that which seems to us to be formed according to design may have happened by chance? *ὅπου μὲν οὖν ἅπαντα συνέβη ὥσπερ κἂν εἰ ἕνεκά του ἐγίνετο, ταῦτα μὲν ἐσώθη ἀπὸ τοῦ αὐτομάτου συστάντα ἐπιτηδείως· ὅσα δὲ μὴ οὕτως, ἀπώλετο καὶ ἀπόλλυται, καθάπερ Ἐμπ. λέγει τὰ βουγενῆ ἀνδρόπρωρα.* *Ibid.* ii. 4, 296 a, 23.

Emp. V. 254 (235, 310 M):—

αὐτὰρ ἐπεὶ κατὰ μεῖζον ἐμίσγετο δαίμονι δαίμων (the elements),
ταὐτά τε συμπίπτεσκον, ὅπῃ συνέκυρσεν ἕκαστα,
ἄλλα τε πρὸς τοῖς πολλὰ διηνεκῆ (-ὲς) ἐξεγένοντο.

An example of the way in which Empedocles explained the origin of the present organic beings from these first productions, is given by Arist. *Part. Anim.* i. 1, 640 a, 19: *διόπερ Ἐμπεδοκλῆς οὐκ ὀρθῶς εἴρηκε λέγων ὑπάρχειν πολλὰ τοῖς ζῴοις διὰ τὸ συμβῆναι οὕτως ἐν τῇ γενέσει, οἷον καὶ τὴν ῥάχιν τοιαύτην ἔχειν, ὅτι στραφέντος καταχθῆναι συνέβη.* (The verses to which this refers, with some others on the formation of the stomach and the organs of respiration, have been identified by Stein. *Philol.* xv. 143 sq. ap. Cramer, *Anecd. Oxon.* iii. 184. V. 257 (238, 313 M):—

πολλὰ μὲν ἀμφιπρόσωπα καὶ ἀμφίστερν' ἐφύοντο,
βουγενῆ ἀνδρόπρωρα, τὰ δ' ἔμπαλιν ἐξανέτελλον
ἀνδροφυῆ βούκρανα, μεμιγμένα τῇ μὲν ἀπ' ἀνδρῶν.
τῇ δὲ γυναικοφυῆ, διεροῖς ἠσκημένα γυίοις.

In this manner no doubt Empedocles interpreted the myths of the Centaurs, Chimeras, Hermaphrodites, &c. Philop. *Phys. H.* 13, says that these deformities arose *ἐν τῇ πρώτῃ διακρίσει τοῦ σφαίρου καὶ τῇ ἀρχῇ τῆς κοσμοποιΐας, πρὶν τὸ νείκος τελείως ἀπ' ἀλλήλων διακρῖναι τὰ εἴδη.* From the verses quoted, however, it appears that Empedocles rather derived them from the union of the elements that had been separated by Hate; and this is confirmed by the texts quoted *supra*, p. 150, 5; 160, 4 from Aristotle.

[1] Cf. V. 267 (251, 321 M) on the origin of human beings:—

οὐλοφυεῖς μὲν πρῶτα τύποι (in regard to this expression cf. Sturz 370, Karsten and Mullach *in h. l.*) *χθονὸς ἐξανέτελλον,*
ἀμφοτέρων ὕδατός τε καὶ οὔδεος αἶσαν ἔχοντες.
τοὺς μὲν πῦρ ἀνέπεμπ' ἐθέλον πρὸς ὁμοῖον ἱκέσθαι,
οὔτε τί πω μελέων ἐρατὸν δέμας ἐμφαίνοντας
οὔτ' ἐνοπὴν οὔτ' αὖ ἐπιχώριον ἀνδράσι γυῖον.

Censorin. *Di Nat.* 4, 8, improperly connects this representation with the one previously referred to, and gives the doctrine of Empedocles thus: *primo membra singula ex terra quasi prægnante passim edita deinde coisse et effecisse solidi hominis materiam igni simul et umore permixtam.* The real opinion of the philosopher is also misrepresented in the *Plac.* v. 19, 5, through the wrong connection into which his various utterances on the origin of living beings are brought.

from the earth. First, shapeless lumps, formed of earth and water, were thrown up by the subterranean fire, and these afterwards shaped themselves into human members.[1] In this Empedocles only developes what

Parmenides,[1] in connection with the ancient myths of the Autochthones and giants,[2] had already taught concerning the origin of men. He likewise follows Parmenides in the theory that the sexes are distinguished from each other by their greater or less warmth; but whereas Parmenides ascribes the warmer nature to women, Empedocles ascribes it to men,[3] and accordingly supposes (herein again differing from Parmenides) that in the first creation of the human race men arose in the southern regions and women in the north;[4] and that in the ordinary process of generation, males are formed in the warmer part of the uterus, and females in the colder.[5] He further supposed, in regard to this matter, that certain parts of the body of the child are derived from the father and certain parts from the mother, and that the generative impulse arises from the striving towards each other of these divided elements.[6] His conjectures as to

[1] *Supra*, Vol. I. 601.

[2] Giants also seem to be alluded to in the *Plac.* v. 27, where it is said that the present races of men are, as compared with the earlier, as little children; but this may possibly refer only to the golden age (vide *infra*).

[3] Arist. *Part. Anim.* ii. 2, 648 a, 25 sqq.

[4] Plut. *Plac.* v. 7.

[5] Emp. V. 273–278 (259, 329 M) sqq.; Arist. *Gen. Anim.* iv. 1, 764 a, 1; cf. i. 18, 723 a, 23; Galen *in Hippocr. Epidem.* vi. 2, t. xvii. a, 1002, Kühn. The accounts are not quite consistent. Empedocles himself speaks of different localities in the uterus (Galen says still more distinctly that he agreed with Parmenides in assigning boys to the right side; but this verse is the only authority given for the statement). Aristotle gives quite another explanation of the difference of sexes. The assertion of Censorinus, *De Nat.* 6, 7, that male children proceed from the right side of the male organs and females from the left, contradicts what he afterwards says of the manner in which Empedocles explained sexual differences and the likeness of children to their parents. But we cannot rely much upon this; vide Karsten, 472.

[6] Arist. *l. c.* i. 18, 722 b, 8; iv. 1, 764 b, 15; Galen, *De Sem.* ii. 3, t. iv. 616, with reference to Emp. v. 270 (227, 326 M). His more definite notions on this subject, if he formed any, cannot be ascertained. What Philop. *De Gen. An.* 16 a, 81 b (ap. Sturz, 392 sq., Karsten, 466 sq.) says is contradictory, and evidently a mere conjecture, cf. p. 17 a. What is said ap. Plut. *Qu. Nat.* 21, 3, p. 917 (Emp. v. 272, 256, 328 M); *Plac.* v. 19, 5; 12, 2; 10, 1; Cens. 6, 10, we may here pass over. Vide Karsten, 464, 471 sq.; Sturz, 401 sq. In accordance with his general principle of the combination of matter, Empedocles supposed that for fruitful seminal combination there must be a certain symmetry of pores in the male and female. When, however, this is excessive, it may have an opposite result, as in the case of mules. Vide Arist. *Gen. An.* ii. 8; cf. Philop. in *h. l.* p. 59, a (ap. Karsten, p. 468, where the statement of the *Placita*, v. 14, on this subject is corrected).

[1] The fœtus is formed during the first seven weeks, or more accurately, in the sixth and seventh weeks (Plut. *Plac.* v. 21, 1; Theo. *Math.* p. 162); birth takes place between the seventh and tenth month (*Plac.* v. 18, 1; Censorin, 7, 5): first the heart is formed (Cens. 6, 1), and the nails last; they consist of hardened sinews (Arist. *De Spir.* c. 6, 484 a, 38; *Plac.* v. 22, and Karsten, 476). The comparison with the curdling of milk in the manufacture of cheese, v. 279 (265 K, 215 M) may relate to the first beginnings of the embryo, cf. Arist. *Gen. An.* iv. 4, 771 b, 18 sqq. Perhaps, however, it may also refer to the separation of tears from the blood, of which Empedocles, according to Plut. *Qu. Nat.* 20, 2, said: ὥσπερ γάλακτος ὀρὸν τοῦ αἵματος ταραχθέντος (fermented) ἐκκρούεσθαι τὸ δάκρυον. Empedocles also treated of abortions; vide *Plac.* v. 8, and Sturz, 378.

[2] In the bones two parts of water and four parts of fire are added to two parts of earth; in flesh and blood the four elements are mingled in equal or nearly equal parts, v. 198 sqq., vide *sup.* 143, 4; in the sinews, according to *Plac.* v. 22, there are two parts of water to one part of earth and one of fire. In the *Placita* the composition of the bones is different from that given by Empedocles himself; and in Philop. *De An.* E, 16, and Simpl. *De An.* p. 18 b, one part of water and one of air are substituted for the two parts of water; but these divergences are not worth considering. Karsten's attempt to reconcile them contradicts the tenor of the verses quoted.

[3] Thus he supposed (vide *Plac. l. c.* according to the more perfect text ap. Galen, *H. Phil.* c. 36, p. 338 Kühn; Plut. *Qu. Nat.* cf. note 1) that tears and perspiration arise from a dissolution (τήκεσθαι) of the blood, and according to v. 280 (266, 336 M) he seems to have similarly regarded the milk of females, the appearance of which, in his usual manner, he assigned to a given day. In v. 215 (209, 282 M) he describes more particularly the forming of a part

of the different animals were determined, he thought, by the substances of which the animals consist; for each substance, according to the universal law, seeks its like.[1] From the same cause he derived the position of the various parts in the body.[2] Animals, like plants, are nourished by the assimilation of kindred substances;[3] growth he deduces from warmth, sleep and the decay of old age from the decrease of warmth, death from its entire cessation.[4]

As to the opinions of Empedocles about the other bodily activities, the points on which tradition tells us most are the process of respiration and the sensuous perception. The expiration and inspiration of the air

of the body (we do not know exactly which part is meant), comparing it, as it seems, with the preparation of pottery.

[1] *Plac.* v. 19, 6 (where, however, the text is corrupt. Instead of *εἰς ἀέρα ἀναπνεῖν* should be read *εἰς ἀέρα ἄνω βλέπειν*, &c. The concluding words, however, *πᾶσι τοῖς θώραξι πεφωνηκέναι*, I know not how to emend. Karsten is perhaps right in his suggestion of *πεφυκέναι* for *πεφωνηκέναι*, but hardly in that of *περὶ* for *πᾶσι*; and he is wrong in referring the passage to particular members). Empedocles was not always true to this principle; for he says that aquatic animals seek the moist element because of their warm nature, Arist. *De Respir.* c. 14; Theophr. *Caus. Plant.* i. 21, 5. The previous quotations from v. 233–239 (220 sqq., 300 sqq. M) and v. 163 (205, 256 M) seem to show that he treated minutely of the different species of animals.

[2] Philop. *Gen. An.* 49 a. Karsten, 448 sq., conjectures that this is merely an arbitrary extension of what he says (vide *sup.* p. 159, 7) about plants. The verses, however, which are quoted by Plut. *Qu. Com.* i. 2, 5, 6 (233 sqq., 220 K, 300 M), prove nothing against it, and Arist. *Gen. An.* ii. 4, 740 b, 12, is in its favour.

[3] Plut. *Qu. Conv.* iv. 1, 3, 12, which appeals to v. 282 (268, 338 M) sqq.; *Plac.* v. 27.

[4] *Plac.* v. 27, 23, 2, 25, 5; Karsten, 500 sq. It has already been remarked, and Empedocles himself repeats it, in v. 247 (335, 182 M) sqq. respecting living creatures, that all destruction consists in the separation of the substances of which a thing is composed. This may be brought into connection with the statements in the *Placita* through the theory that Empedocles regarded the decay of the body as a consequence of the failure of vital heat.

takes place, on his theory, not merely through the windpipe, but through the whole body, in consequence of the movement of the blood. When the blood, in its backward and forward course, withdraws from the external parts, the air penetrates through the fine pores of the skin; when the blood again flows into those parts, the air is expelled.[1] He explained sensation also by reference to the pores and emanations. To produce sensation, it is necessary that the particles detaching themselves from the objects should be in contact with the homogeneous elements of the organs of sense, either by the entrance of the particles of the object through the pores, or (as in the case of sight) by the exit of the elements of the organ in the same manner.[2] For, according to the doctrine first enunciated as a principle by Empedocles, things are known to us only through the elements of like kind in us: earth through earth, water through water,[3] &c. This theory is most easily carried out in regard to the senses of taste and smell. Both, according to Empedocles, result from the taking up of minute particles of matter into the nose or mouth, in

[1] V. 287 (275, 343 M) sqq.; cf. Karsten, Arist. *Respir.* c. 7; Scholiasts *in h. l.* (on Simpl. *De Animâ*, p. 167 b, sq.); *Plac.* iv. 22, v. 15, 3.

[2] Vide *supra*, p. 132 sq.; Theophrast. *De Sensu*, § 7: Ἐμπ. φησὶ, τῷ ἐναρμόττειν [τὰς ἀπορροὰς] εἰς τοὺς πόρους τοὺς ἑκάστης [αἰσθήσεως] αἰσθάνεσθαι, the diversity of the pores occasions the specific differences of sensations: each sense perceives that which is so symmetrical with its pores that it penetrates into them, and so affects the organ; while everything else either does not enter it, or passes through without producing a sensation. Similarly *Plac.* iv. 9, 3; cf. Höper, *Zur Lehre von der Sinneswahrnehmung d. Lucrez.* Stendal, 1872, p. 5.

[3] V. 333 (321, 378 M.):—

γαίῃ μὲν γὰρ γαῖαν ὀπώπαμεν, ὕδατι δ' ὕδωρ,
αἰθέρι δ' αἰθέρα δῖον, ἀτὰρ πυρὶ πῦρ ἀΐδηλον,
στοργῇ δὲ στοργήν, νεῖκος δέ τε νείκεϊ λυγρῷ·
ἐκ τούτων γὰρ πάντα πεπήγασιν ἁρμοσθέντα
καὶ τούτοις φρονέουσι καὶ ἥδοντ' ἠδ' ἀνιῶνται.

the one case from the air, in the other from the moisture with which they are mingled.[1] In the sense of hearing he thought the sounds were formed by the entrance and agitation of the air in the passage of the ear as in a trumpet.[2] In the sense of sight, on the contrary, the seeing body was supposed to issue forth from the eye in order to come in contact with the emanations of the object. Empedocles thus conceived the eye as a kind of lantern: in the apple of the eye fire and water are enclosed in skins, the pores of which, arranged in alternate rows for each substance, allow passage to the emanations of each: fire causes the perception of that which is bright, and water of that which is dark. When, therefore, emanations of visible things reach the eye, the emanations of the internal fire and water pass out of the eye through the pores, and from the meeting of these two arises vision.[3]

[1] *Plac.* iv. 17; Arist. *De Sensu*, c. 4, 441 a, 4; Alex. *De Sensu*, 105 b; cf. Empedocles, v. 312 (300, 465) f.

[2] Theoph. *De Sensu*, 9; Plut. *Plac.* iv. 16, where, however, the κώδων with which Empedocles (also according to Theophrastus) had compared the interior of the ears is improperly taken to mean a bell instead of a trumpet.

[3] V. 316 (302, 220 M) sqq.; cf. 240 (227, 218 M) sq.; Theoph. *l. c.* § 8 sq.; Arist. *De Sensu*, c. 2, 437 b, 10 sqq., 23 sqq.; Alex. *in h. l.* p. 43, 48; Thurot. Philop. *Gen. Anim.* 105 b (ap. Sturz, 419; Karsten, 485); Plut. *Plac.* iv. 13, 2; Joh. Damasc. *Parall.* p. i. 17, 11 (*Stob. Floril.* ed. Mein. iv. 173). According to Theophr. and Philop. *l. c.*; Arist. *Probl.* xiv. 14; *Gen. Anim.* v. 1. 779 b, 15, Empedocles thought that light eyes were fiery and dark eyes moist; that light eyes see more clearly by night, and dark eyes by day (the reason of this is characteristically explained in Theophrastus); but the best eyes are those in which fire and water are mingled in equal parts. Höfer, *l. c.*, opposes the notion that Empedocles supposed the inner fire to issue forth from the eyes; but he has not considered Empedocles's own declarations concerning the φῶς ἔξω διαθρῴσκον, nor Aristotle's repeated expression, ἐξιόντος τοῦ φωτός, in reference to this; nor Alexander's comments on the verse of Empedocles, which are entirely on the same side. Plato gives the same explanation of sight. Cf. Part II. a, 727, 3 (English Translation, p. 428). In agreement with the above quotations, we have also the definition of colour as ἀπόῤῥοια (Arist. *De Sensu*, c. 3, 440 a, 15; Stob. *Ecl.* i. 364, where four principal colours are named, corresponding to the four elements; cf. *sup.* p. 133, 2; 158, 2); and the theory of Empedocles on transparent bodies (Arist. *sup.* p. 133, 2), and the images of the mirror. These last he explained on the theory that the effluences of objects cleaving to the surface of the mirror were sent back by the fire streaming out at its pores.

[1] V. 231 (313, 298 M): πάντα γὰρ ἴσθι φρόνησιν ἔχειν καὶ νώματος αἶσαν. Sext. *Math.* viii. 286; Stob. *Ecl.* i. 790; Simpl. *De An.* 19 b.

[2] V. 333 sqq. *sup.* p. 165, 3. Arist. *De An.* i. 2, 404 b, 8 sqq. concludes in his usual manner, from this verse, that according to Empedocles the soul is composed of all the four elements, an assertion which is then repeated by his commentators. Vide Sturz, 443 sqq., 205 sq.; Karsten, 494. It is, however, incorrect. Empedocles did not hold that the soul is composed of the elements; but what we call the activity of the soul he explained by the elementary composition of the body; a soul distinct from the body he did not assume. Theodoretus's assertion (*Cur. Gr. Aff.* v. 18, p. 72), that Empedocles regarded the soul as a μίγμα ἐξ αἰθερώδους καὶ ἀερώδους οὐσίας, is still more incorrect; and it is evident that the inference of Sextus, *Math.* vii. 115, 120, that Empedocles believed there were six criteria of truth belongs only to himself and his authorities.

[3] Theophr. *De Sensu*, § 10, after stating Empedocles's doctrine of the senses: ὡσαύτως δὲ λέγει καὶ περὶ φρονήσεως καὶ ἀγνοίας· τὸ μὲν γὰρ φρονεῖν εἶναι τοῖς ὁμοίοις, τὸ δ' ἀγνοεῖν τοῖς ἀνομοίοις, ὡς ἢ ταὐτὸν ἢ παραπλήσιον ὂν τῇ αἰσθήσει τὴν φρόνησιν. διαριθμησάμενος γὰρ ὡς ἕκαστον ἑκάστῳ γνωρίζομεν, ἐπὶ τέλει προσέθηκεν ὡς "ἐκ τούτων,"

Thought has a similar origin. Intelligence and the power of thought are ascribed by Empedocles to all things,[1] without distinction of corporeal and spiritual; thought therefore, like all other vital activities, arises and depends upon the admixture of substances in the body.[2] We form a conception of each element by means of the corresponding element in our body. It is in the blood especially, because there the elements are most completely mingled, that thought and consciousness have their chief seat (this was a common opinion among the ancients), and particularly the blood of the heart.[3] But Empedocles, in accordance with

his own theories, could not and did not exclude other parts of the body from participation in thought.[1] The more homogeneous is the mixture of the elements, the more acute are the senses and intelligence generally; when the elementary particles are combined with each other in a loose and slack manner,[2] the mental faculty moves more slowly; when they are small and tightly compressed, it moves more quickly; in the one case there is permanence, in the other instability.[3] If the right admixture of the elements is limited to certain parts of the body, it produces the corresponding special endowment.[4] Empedocles therefore supposes, like Parmenides,[1] that the quality of thought is regulated according to the constitution of the body, and changes with it.[2] Aristotle infers from this that he must have sought truth in the sensible-phenomenon;[3] but such a conclusion Empedocles would have repudiated, as much as his Eleatic predecessor,[4] whether rightly or wrongly it is not our purpose to enquire. For he is so far from placing absolute trust in perception, that he exhorts us to give no credence to it at all, but to acquaint ourselves instead with the nature of things by reflection;[5]

&c. (v. 336 sq. *sup.* p. 85, 1). διὸ καὶ τῷ αἵματι μάλιστα φρονεῖν· ἐν τούτῳ γὰρ μάλιστα κεκρᾶσθαί ἐστι τὰ στοιχεῖα τῶν μερῶν. Emp. v. 327 (315, 372 M):—

αἵματος ἐν πελάγεσσι τεθραμμένῃ ἀντιθορόντος.
τῇ τε νόημα μάλιστα κυκλίσκεται ἀνθρώποισιν·
αἷμα γὰρ ἀνθρώποις περικάρδιόν ἐστι νόημα.

This verse is to be received as Empedoclean: though it seems, according to Tert. *De An.* 15, to have been found in an Orphic poem, it doubtless came in the first instance from Empedocles. Philop. *De An.* C, a, ascribes it to Critias; but this is evidently a mistake. Later writers repeat or misinterpret this definition sometimes in the sense of subsequent enquiries concerning the seat of the ἡγεμονικόν: vide Cic. *Tusc.* i. 9, 19; 17, 41; Plut. ap. Eus. *Præp.* i. 8, 10; Galen, *De Hipp. et Plat.* ii. *extr.* T. V. 283 K; Sturz, 439 sqq.; Karsten, 495, 498. Cf. also p. 163, 1, and Plato, *Phædo*, 96 B.

[1] Notice the μάλιστα, v. 328, and the conclusion of the passage in Theophrastus to be quoted immediately.

[2] Or according to the Interpr. Cruqu. on Horace, *Ep. ad Pis.* 465 (ap. Sturz 447, Karsten 496), where the blood is cold: this, however, was probably regarded by Empedocles as a consequence of the loose combination of its parts.

[3] This is the first germ of the doctrine of temperaments.

[4] Theophr. *l. c.* § 11: ὅσοις μὲν οὖν ἴσα καὶ παραπλήσια μέμικται, καὶ μὴ διὰ πολλοῦ [here the text seems corrupt. I should conjecture μίαν πολλὰ] μηδ' αὖ μικρὰ μηδ' ὑπερβάλλοντα τῷ μεγέθει, τούτους φρονιμωτάτους εἶναι καὶ κατὰ τὰς αἰσθήσεις ἀκριβεστάτους· κατὰ λόγον δὲ καὶ τοὺς ἐγγυτάτω τούτων. ὅσοις δ' ἐναντίως, ἀφρονεστάτους. καὶ ὧν μὲν μανὰ καὶ ἀραιὰ κεῖται τὰ στοιχεῖα, ῥωθρούς καὶ ἐπιπόνους, ὧν δὲ πυκνὰ καὶ κατὰ μικρὰ τεθραυσμένα, τοὺς δὲ τοιούτους ὀξέως (so Wimmer reads for ὀξεῖς καὶ) φερομένους, καὶ πολλὰ ἐπιβαλλομένους ὀλίγα ἐπιτελεῖν διὰ τὴν ὀξύτητα τῆς τοῦ αἵματος φορᾶς. οἷς δὲ καθ' ἓν τι μόριον ἡ μέση κρᾶσίς ἐστι, ταύτῃ σοφοὺς ἑκάστους εἶναι, διὸ τοὺς μὲν ῥήτορας ἀγαθούς, τοὺς δὲ τεχνίτας· ὡς τοῖς μὲν ἐν ταῖς χερσὶ ταῖς δ' ἐν τῇ γλώττῃ τὴν κρᾶσιν οὖσαν. ὁμοίως δ' ἔχειν καὶ κατὰ τὰς ἄλλας δυνάμεις. This last is thus expressed in Plut. ap. Eus. *Præp.* i. 8, 10: τὸ δὲ ἡγεμονικὸν οὔτε ἐν κεφαλῇ οὔτ' ἐν θώρακι, ἀλλ' ἐν αἵματι· ὅθεν καθ' ὅ τι ἂν μέρος τοῦ σώματος πλεῖον ᾖ παρεσπαρμένον τὸ ἡγεμονικόν, οἴεται κατ' ἐκεῖνο πρωτερεῖν τοὺς ἀνθρώπους.

[1] *Supra*, vol. i. 602.

[2] V. 330 (318, 375 M): πρὸς παρὸν γὰρ μῆτις ἀέξεται ἀνθρώποισιν. In support of this proposition Empedocles also adduces the phenomenon of dreaming. According to Philop. *De An. P.* 3, and Simp. *De An.* 56 b, the words in v. 331 (319, 376 M) likewise relate to it: ὅσσον τ' ἀλλοῖοι μετέφυν, τόσσον ἄρ σφισιν αἰεὶ καὶ φρονέειν ἀλλοῖα παρίστατο. He also remarked that madness arises from corporeal causes, though he afterwards speaks of a madness produced by guilt, and, side by side with this diseased madness, of the higher madness of religious enthusiasm. Cœl. Aurel. *De Morb. Chron.* i. 5, 145.

[3] *Metaph.* iv. 5, 1009 b, 12, where it is said of Democritus and Empedocles (of the latter on the strength of the verse just quoted): ὅλως δὲ διὰ τὸ ὑπολαμβάνειν φρόνησιν μὲν τὴν αἴσθησιν, ταύτην δ' εἶναι ἀλλοίωσιν, τὸ φαινόμενον κατὰ τὴν αἴσθησιν ἐξ ἀνάγκης ἀληθὲς εἶναί φασιν. The words ἐξ ἀνάγκης are to be connected with φασιν: they are constrained to maintain.

[4] For Ritter's suggestion (cf. Wolf's *Anal.* ii. 458 sq.; cf. *Gesch. d. Phil.* i. 541) that, according to Empedocles, the Sphairos can only be known by reason, and the present world by the senses, has no warrant in his own utterances: the verses quoted below (19 sqq.) are of universal application: there is no trace of any restriction to the Sphairos, cf. note 4.

[5] V. 19 (49, 53 M):—

ἀλλ' ἄγ' ἄφρει πάσῃ παλάμῃ, πῇ δῆλον ἕκαστον,
μήτε τιν' ὄψιν ἔχων πίστει πλέον, ἢ κατ' ἀκουήν,
μήτ' ἀκοὴν ἐρίδουπον ὑπὲρ τραυώματα γλώσσης,

and though he keenly deplores, with Xenophanes, the limitations of human knowledge,[1] yet in regard to the knowledge granted to mortals, he expects far more from reason than from the senses. It need hardly be said, however, that he set up no theory of knowledge in the later sense of the term;[2] nor ought we on account of the common accusations from men of all parties to consider him an ally of the sceptics.[3] What made him mis-

μήτε τι τῶν ἄλλων, ὁπόσων πόρος ἐστὶ νοῆσαι.
γυίων πίστιν ἔρυκε, νόει δ' ᾗ δῆλον ἕκαστον.

V. 81 (108, 82 M) of the φιλότης: τὴν σὺ νόῳ δέρκευ μηδ' ὄμμασιν ἧσο τεθηπώς. Later writers, such as Lact. *Inst.* iii. 28; Tert. *De An.* 17, I pass over.

[1] V. 2 (32, 36 M) :—

στεινωποὶ μὲν γὰρ παλάμαι κατὰ γυῖα κέχυνται·
πολλὰ δὲ δείλ' ἔμπαια, τά τ' ἀμβλύνουσι μερίμνας.
παῦρον δὲ ζωῆς ἀβίου μέρος ἀθρήσαντες.
ὠκυμόροι καπνοῖο δίκην ἀρθέντες ἀπέπταν,
αὐτὸ μόνον πεισθέντες, ὅτῳ προσέκυρσεν ἕκαστος
παντόσ' ἐλαυνόμενος, τὸ δ' ὅλον μὰψ εὔχεται εὑρεῖν·
οὕτως οὔτ' ἐπιδερκτὰ τάδ' ἀνδράσιν οὔτ' ἐπακουστὰ
οὔτε νόῳ περιληπτά. σὺ δ' οὖν, ἐπεὶ ὧδ' ἐλιάσθης,
πεύσεαι οὐ πλέον ἢὲ βροτείη μῆτις ὄρωρεν.

This passage, the strongest which is found in Empedocles, in truth only asserts this: considering the limitations of human knowledge and the shortness of human life, we cannot suppose we have embraced the whole with a fortuitous and one-sided experience; it is impossible in this way to attain to a real knowledge of the truth (v. 8 sq.); we must therefore content ourselves with that which man is in a position to attain. Similarly, v. 11 (41, 45 M) sq., Empedocles entreats the gods to preserve him from the presumptuous spirit which would utter more than is permitted to mortals, and to reveal to him ὧν θέμις ἐστὶν ἐφημερίοισιν ἀκούειν. A third passage, v. 85 (112, 86 M) sq., does not belong to this connection; for when he there says of love,—τὴν οὔτις μεθ' ὅλοσιν (as Panzerbieter and Stein rightly read) ἐλισσομένην δεδαήκε θνητὸς ἀνήρ, this according to the context only means; in its appearance as sexual love, this force indeed is known to everyone; but its universal cosmical import has been as yet unknown, and is to be first revealed by him (σὺ δ' ἄκουε λόγων στόλον οὐκ ἀπατηλόν).

[2] The following is attributed to him by Sextus, *Math.* vii. 122, but evidently with no other foundation than the verse first quoted: not the senses, but the ὀρθὸς λόγος is the criterion of truth; this is partly divine and partly human; the human part only can be communicated in speech.

[3] The sceptics ap. Diog. ix. 73;

trustful of the senses our fragments do not expressly state; but a comparison of the analogous opinions of Parmenides, Democritus and other physicists leaves little doubt that the cause, in his case as in theirs, lay in the contradiction between the sensible phenomenon and his physical theory, and more especially in the difficulties with which the conceptions of Becoming, Decay and qualitative Change are beset; so that here also the propositions of the theory of knowledge appear not as the basis, but as the fruit of objective enquiry.

Feelings too, according to Empedocles, originate in the same manner and under the same conditions as opinions. That which is akin to the constituent parts of each human being begets in him, together with the knowledge of it, the sensation of pleasure; that which is opposed to those constituents begets the feeling of aversion.[1] Desire consists in the striving after kindred elements, of which each individual is in want; and it is ultimately the result of a mixture of substances adapted to the nature of the individual.[2]

III.—*THE RELIGIOUS DOCTRINES OF EMPEDOCLES.*

HITHERTO we have been occupied with the physical theories of Empedocles. All the doctrines connected with these start from the same presuppositions, and

Cic. *Acad.* i. 12, 44. In *Acad. pri.* ii., 5, 14, this statement is contradicted.

[1] Emp. v. 336 sq., 189 sqq. (*sup.* p. 165, 3; 134, 1). Theophr. *De Sensu*, 16, with reference to this verse: ἀλλὰ μὴν οὐδὲ τὴν ἡδονὴν καὶ λύπην ὁμολογουμένως ἀποδίδωσιν, ἥδεσθαι μὲν ποιῶν τοῖς ὁμοίοις λυπεῖσθαι δὲ τοῖς ἐναντίοις. Joh. Damasc. *Parall.* S. ii. 25, 30, 35 (Stob. *Floril.* ed. Mein. iv. 235 sq.); cf. Plut. *Plac.* v. 28 and Karsten, 461.

[2] Plut. *Plac. l. c.*; cf. *Quaest. Conv.* vi. 2, 6.

though, in regard to particular details, we may discover much that is arbitrary, yet on the whole there is evidently an attempt to explain all things in reference to the same principles and the same primitive causes. The physical conceptions of Empedocles appear, therefore, as parts of a system of natural philosophy which, though not complete on all sides, is yet carried out in accordance with one plan. It is otherwise with his religious doctrines and prescripts, which are taken partly from the the third book of the poem on physics, but especially from the *καθαρμοί*, and apparently have no connection with his scientific principles. In these propositions we see only articles of faith which were superadded to his philosophic system from quite another quarter. We cannot, however, entirely pass them over.

We will take first the conceptions of Transmigration and life after death. Empedocles tells us that it is the immutable decree of fate that the dæmons who have sinned by murder or perjury should be banished for 30,000 seasons from among the Blessed, and traverse the painful paths of life in the various forms of mortal existence.[1] He presupposes, therefore, a primeval state of bliss, the theatre of which must have been

[1] V. 369 (1):—
ἔστιν ἀνάγκης χρῆμα, θεῶν ψήφισμα παλαιὸν,
ἀΐδιον, πλατέεσσι κατεσφρηγισμένον ὅρκοις·
εὖτέ τις ἀμπλακίῃσι φόνου φίλα γυῖα μιήνῃ
αἵματος, ἢ ἐπίορκον ἁμαρτήσας ἐπομόσσῃ
δαίμων, οἵτε μακραίωνος λελάχασι βίοιο,
τρὶς μὶν μυρίας ὥρας ἀπὸ μακάρων ἀλάλησθαι,
φυόμενον παντοῖα διὰ χρόνου εἴδεα θνητῶν,
ἀργαλέας βιότοιο μεταλλάσσοντα κελεύθους.

The statements of later authorities I pass over here, and in what follows, as they only reiterate and distort what Empedocles himself says. They are to be found in Sturz, 448 sqq.

heaven; for he complains that he has been cast out from the abode of the gods upon the earth, into this cavern,[1] and a return to the gods is promised to the pious.[2] The poet describes in forcible verses, ostensibly from his own recollection,[3] the wretchedness of guilt-laden spirits who are tossed about in restless flight through all parts of the world;[4] the pain and sorrow of the soul which, having entered the place of oppositions and of strife, of sickness and of transitoriness,[5] finds itself clothed in the garment of the flesh,[6] and transferred from life into the kingdom of death.[7] The

[1] V. 381 (7, 9 M):—
τῶν καὶ ἐγὼ νῦν εἰμὶ, φυγὰς θεόθεν καὶ ἀλήτης,
νείκεϊ μαινομένῳ πίσυνος.

V. 390 (11, 15 M):—
ἐξ οἵης τιμῆς τε καὶ ὄσσου μήκεος ὄλβου
ὧδε πεσὼν κατὰ γαῖαν ἀναστρέφομαι μετὰ θνητοῖς. (Text of this verse is very uncertain.)

392 (31, 29 M):—
ἠλύθομεν τόδ' ὑπ' ἄντρον ὑπόστεγον.

[2] V. 449 sq.; vide *inf.* p. 174, 5.

[3] V. 383 (380, 11 M):—
ἤδη γάρ ποτ' ἐγὼ γενόμην κοῦρός τε κόρη τε
θάμνος τ' οἰωνός τε καὶ εἰν ἁλὶ ἔλλοπος ἰχθύς.

[4] V. 377 (16, 32 M):—
αἰθέριον μὲν γάρ σφε μένος πόντονδε διώκει,
πόντος δ' ἐς χθονὸς οὐδας ἀπέπτυσε, γαῖα δ' ἐς αὐγὰς
ἠελίου ἀκάμαντος, ὁ δ' αἰθέρος ἔμβαλε δίναις·
ἄλλος δ' ἐξ ἄλλου δέχεται στυγέουσι δὲ πάντες.

V. 400 (14, 30 M) seems to refer to the same condition.

[5] V. 385 (13, 17 M):—
κλαῦσά τε καὶ κώκυσα, ἰδὼν ἀσυνήθεα χῶρον,
386 (21, 19 M) ἔνθα Φόνος τε Κότος τε καὶ ἄλλων ἔθνεα κηρῶν,
αὐχμηραί τε νόσοι καὶ σήψιες ἔργα τε ῥευστά. Cf. v. 393 (24, 22 M) for the description of the opposites in the terrestrial world, of Χθονίη and Ἠλιόπη (earth and fire), of Δῆρις and Ἁρμονίη (hate and love), Φυσὼ and Φθιμένη (birth and decay), beauty and ugliness, greatness and littleness, sleep and waking, &c. (We need not, with Plut. *Tranqu. An.*, 15, p. 474, interpret this to mean that Empedocles assigned to everyone through life a good and an evil genius.) Cf. 157, 2.

[6] V. 402 (379, 414 M):—
σαρκῶν ἀλλογνώτι περιστέλλουσα χιτῶνι.

According to Stob. *Ecl.* i. 1048, the subject of the proposition is ἡ δαίμων.

[7] V. 404 (378, 416 M):—
ἐκ μὲν γὰρ ζώων ἐτίθει νεκροειδέ' ἀμείβων.

exiled dæmons in the course of their wanderings enter not only into human and animal bodies, but also into the forms of plants;[1] but in each of these classes the noblest dwellings are appropriated to the worthiest of the dæmons.[2] The intermediate state, after the departure of the soul from the body, seems to have been conceived by Empedocles in accordance with the prevailing notions of Hades.[3] Whether he supposed that the term of wandering was the same for all souls, and what duration he assigned to it, we cannot be certain.[4] The best rise at last to the dignity of soothsayers, poets, physicians, and princes, and from thence return as gods to the gods.[5]

This belief is connected by Empedocles with certain purifications of which we find traces in his writings,[6] and also with the prohibition of flesh[7] and the slaying

[1] Cf. p. 173, 2; 159, 3.

[2] V. 438 (382, 448 M):—
ἐν θήρεσσι λέοντες ὀρειλεχέες χαμαιεῦναι
γίγνονται δάφναι δ' ἐνὶ δένδρεσιν ἠθκόμοισιν.

[3] This is alluded to in v. 389 (23, 21 M); the immediate reference is unknown: ἄτης ἀν λειμῶνα κατὰ σκότος ἠλάσκουσιν.

[4] The τρισμύριοι ὧραι, v. 374, are of uncertain meaning (vide *sup.* p. 148, 1), and we find on the other hand, in v. 445 (420, 455 M) sq. a threat, which doubtless refers to transmigration:—
τοιγάρτοι χαλεπῆσιν ἀλύοντες κακότησιν
οὔποτε δειλαίων ἀχέων λωφήσετε θυμόν.

[5] V. 447 (387, 457 M):—
εἰς δὲ τέλος μάντεις τε καὶ ὑμνοπόλοι καὶ ἰητροὶ
καὶ πρόμοι ἀνθρώποισιν ἐπιχθονίοισι πέλονται,
ἔνθεν ἀναβλαστοῦσι θεοὶ τιμῇσι φέριστοι,
ἀθανάτοις ἄλλοισιν ὁμέστιοι, αὐτοτράπεζοι.

εὖνιες ἀνδρείων ἀχέων, ἀπόκποροι, ἀτειρεῖς. Cf. what is quoted from Pindar, Vol. I. p. 70, note 4. In the introduction to the καθαρμοί, v. 355 (392, 400 M), Empedocles says of his present life, ἐγὼ δ' ὔμμιν θεὸς ἄμβροτος, οὐκέτι θνητός.

[6] V. 442 (422, 452 M):—
ἀπορρύπτεσθε κρηνάων ἄπο πέντ' ἀνιμῶντες ἀτείρεϊ χαλκῷ.

[7] V. 430 (410, 442 M):—
μορφὴν δ' ἀλλάξαντα πατὴρ φίλον υἱὸν ἀείρας
σπάζει ἐπευχόμενος, μέγα νήπιος· ὃς δὲ πορεῦται,
λισσόμενος θύοντος· ὁ δ' ἀνηκούστησεν ὁμοκλέων

of animals. Both necessarily appear to him in the light of crimes, as flagrant as the murder of human beings and cannibalism. In the bodies of animals are human souls; why then should not the same general law apply to animals as to our fellow-creatures?[1] In order to be quite consistent, Empedocles should have extended these principles to the vegetable world;[2] but this was, of course, impossible: so he contented himself with prohibiting the use or abuse of a few plants,[3] on account of their religious significance.

However important this doctrine and these prescripts may have been to him personally,[4] they have only a partial connection with his system, and on one side, indeed, are unmistakeably opposed to it. When Empedocles looks back with longing from the world of strife and of oppositions towards the blessedness of a primeval state in which all was peace and harmony, we recognise in this the same temper and point of view as applied to human life, which asserts itself in regard to the universe in the doctrine of the vicissitude of its

σφάξας δ' ἐν μεγάροισι κακὴν ἀλεγύνατο δαῖτα.
ὡς δ' αὔτως πατέρ' υἱὸς ἑλὼν καὶ μητέρα παῖδες
θυμὸν ἀποβραίσαντε φίλας κατὰ σάρκας ἔδουσιν.

V. 436 (9, 13 M):—
οἴμοι, δτ' οὐ πρόσθεν με διώλεσε νηλεὲς ἦμαρ,
πρὶν σχέτλι' ἔργα βορᾶς περὶ χείλεσι μητίσασθαι. V. 428 (416, 440 M) f.

[1] Arist. *Rhet.* i. 13, 1373 b, 14:—
ὡς Ἐμπεδοκλῆς λέγει περὶ τοῦ μὴ κτείνειν τὸ ἔμψυχον· τοῦτο μὲν γὰρ οὐ τισὶ μὲν δίκαιον τισὶ δ' οὐ δίκαιον,
ἀλλὰ τὸ μὲν πάντων νόμιμον διά τ' εὐρυμέδοντος
αἰθέρος ἠνεκέως τέταται διά τ' ἀπλέτου αὐγῆς (V. 425, 403 K, 437 M).

[2] As Karsten well observes, p. 513.

[3] The laurel and the bean, v. 440 (418, 450 M) sq., if indeed the second of these verses (δειλοὶ πάνδειλοι κυάμων ἄπο χεῖρας ἔχεσθε) is really Empedoclean, and has this signification; for it may possibly refer to the voting in the popular assemblies.

[4] Vide p. 173.

conditions. In both cases the state of unity is considered the better and the earlier; division, opposition, and the strife of particular existences is looked on as a misfortune, as something which arose through a disturbance of the original order, through the abandonment of the blessed primitive state. But if his religious and his physical theories lie in the same direction, Empedocles never attempted to connect them scientifically, or even to prove their compatibility. For though mental life is only a consequence of the combination of corporeal substances, yet as individual life it is conditioned by this definite combination; the soul, therefore, can neither have existed before the formation of the body, nor can it outlast the body. This difficulty seems to have been so completely overlooked by Empedocles, that, as far as we know, he made not the slightest attempt to solve it, or to combine the doctrine of transmigration with his other theories. What he says of the movement of the primitive elements, which wander through all forms in changing combinations,[1] has only a distant analogy and no actual connection[2] with the wandering of dæmons through terrestrial bodies; and though the elements themselves are designated by the names of gods,[3] and called dæmons,[4] it

[1] Vide *supra*, p. 130, 1; 122, 3. Karsten, p. 511, and Gladisch, *Emp. u. d. Aeg.* 61, suppose that verses 51 sqq. (quoted *sup.* p. 122, 3) refer to the pre-existence and immortality of this soul. This is an error; the reference is to the imperishableness of the primitive elements of which the perishable beings (*βροτοὶ*) consist.

[2] All individual existences, even the gods and dæmons, according to Empedocles, first spring from the combination of elementary substances, and perish when this combination ceases. The permanence of the primitive substances is therefore quite different from the continuance of the individuals—of that which is compounded of those substances.

[3] Vide *supra*, p. 125, 2; 137, 1.

[4] V. 254, vide *supra*, 160, 5.

does not follow that Empedocles really identified two such distinct things as the transmigration of souls and the circulation of the elements; or intended what he said of the first to apply to the second.[1] Nor are we justified in thinking that Metempsychosis is with him a mere symbol for the vitality of nature, and the graduated development of natural life.[2] He himself advanced this doctrine in its literal sense with the greatest earnestness and precision, and founded on it prescripts which may perhaps appear to us trivial, but which possessed in his eyes undeniable importance. There remains, therefore, only the supposition that he adopted the doctrine of Metempsychosis and all depending on it, from the Orphico-Pythagorean tradition, without combining it scientifically with his philosophic convictions advanced in another place and in another connection.[3]

The same may be said of the mythus of the golden age, which Empedocles sets forth in a special manner,[4]

[1] As is maintained by Sturz, 471 sqq.; Ritter (Wolf's *Anal.* ii. 453 sq., *Gesch. d. Phil.* i. 563 sq.); Schleiermacher, *Gesch. d. Phil.* 41 sq.; Wendt on Tennemann, i. 312, &c., after the precedent of Irhov, *De Palingenesia Veterum* (Amsterd, 1733), p. 233 sqq. &c. (vide Sturz, *l. c.*).

[2] Steinhart, *l. c.* p. 105 sq. Sext. *Math.* ix. 127 sqq. cannot be quoted in support of this; for he, or rather the Stoic whom he transcribes, attributes to Empedocles and the Pythagoreans Metempsychosis in the literal sense, and founds it upon the Stoical doctrine of the world spirit.

[3] That it is quite possible to entertain ideas that are mutually incompatible is shown in numerous instances. How many theological doctrines, for example, have been believed by Christian philosophers whose philosophy would logically contradict them!

[4] In the verses which seem to be alluded to by Arist. *Gen. et Corr.* ii. 6, 334 a, 5, viz. V. 405 (368, 417 M) sqq.:—

οὐδέ τις ἦν κείροισιν Ἄρης θεὸς οὐδὲ Κυδοιμὸς
οὐδὲ Ζεὺς βασιλεὺς οὐδὲ Κρόνος οὐδὲ Ποσειδῶν
ἀλλὰ Κύπρις βασίλεια. Cf. V. 421

though we cannot find any point of connection in it with his other doctrines. It cannot have belonged to the imagery of the Sphairos,[1] for in the Sphairos were no individual existences; nor to the description of the heavenly primeval state, for those who lived in the golden age are expressly said to have been human beings, and all their surroundings appear to be terrestrial. Some would conclude from the passages just quoted from Aristotle, that the golden age must be assigned to the period in which the separation of the different elements from the Sphairos first began. But this view has little to urge in its behalf, for, as we have already seen, Empedocles gives no particulars about that form of the universe, which contrasted so entirely with the present.[2] It seems, then, that he employed the myths of the golden age to enforce his principles respecting the sacredness of animal life, without troubling himsef to consider whether there was room in his system for such a theory.

Side by side with these myths and doctrines the theological opinions of Empedocles now claim our

(364, 433 M) sqq. In the following verses we are then told how these gods were worshipped by the former race of men with unbloody sacrifices and gifts, for all animals lived in friendship with men, and the plants furnished fruits in abundance. (As to this interpretation of ἄγαλμα, cf. Bernays, *Theophr. v. d. Frömmigkeit*, 179. Bernays conjectures, in the preceding versos, στακτοῖς ζωροῖσι instead of γραπτοῖς ζῴοισι. This does not commend itself to me. Empedocles may very well have maintained that painted ζῷα were offered in the place of real animals: just as the offering of a bull of baked flour was ascribed to the philosopher himself by Favorinus ap. Diog. viii. 53, and to Pythagoras by Porph. *V. P.* 36.) Cf. *sup.* p. 162, 2. The notion of Stein and Mullach, that the verses (Vol. I. 511, 1) attributed in antiquity to Pythagoras or Parmenides really belonged to this section seems to me doubtful.

[1] To which they are referred by Ritter, *Gesch. d. Phil.* i. 543, 546, and Krische, *Forsch.* i. 123.

[2] *Supra*, p. 153.

attention. He speaks of the Gods in many different ways In the first place, he mentions among the beings who arose out of the combination of primitive substances, the gods, the long-living, the revered of all.[1] These gods are manifestly not distinct from the divinities of the polytheistic popular faith, except that, according to the cosmology of Empedocles, their existence is limited to a particular space of time.[2] The dæmons also, some of whom maintain themselves from the beginning in the abodes of the Blest, while others return thither after the wanderings of Metempsychosis,[3] belong to the popular faith. Secondly, Empedocles allies himself with the same popular faith when he calls the elements and the moving forces dæmons, and gives them the names of gods;[4] but the mythical veil is here so transparent that we may consider this use of the divine names as purely allegorical. According to his own opinion, the six primitive essences are indeed absolute and eternal existences, to whom, therefore, the predicate divine belongs in a more original sense than to the created gods, but the poet only occasionally ascribes a personality to these essences. Thirdly, the same may be said of the divinity of the Sphairos. This mixture of all substances is divine only in the sense in which antiquity regarded the world as the totality of divine forces and essences.[5]

[1] V. 104 sqq. (*sup.* 130, 1); cf. 119 (154, 134 M) sqq.

[2] Vide *sup.* p. 152, 2.

[3] Vide *sup.* p. 172, 1; 172 sq.

[4] *Sup.* 137, 1, end; 125, 2; 138, 3.

[5] The contrary is maintained by Wirth, *d. Idee Gottes*, 172 sqq. (cf. Gladisch, *Emp. u. d. Aeg.* 31 sq., 69 sqq.). He connects what is said of the divinity of the Sphairos (vide *sup.* p. 141, 4) with the doctrine of Love, and both with the Empedoclean verses immediately to be quoted, and so attains this conception: God is an intelligent subject, his essence is φιλία, his primitive existence the Sphairos, which is therefore itself de-

Lastly, we possess verses of Empedocles in which he describes the Deity in the manner and almost in the very

scribed in verse 138 (*sup.* 147, 1) as something personal. This combination, however, cannot be established on historical testimony, nor is it compatible with the most certain definitions of Empedocles's doctrine. Wirth's main argument is the observation of Aristotle (*sup.* p. 148, 4), that the εὐδαιμονέστατος θεὸς of Empedocles is more ignorant than any other creature; for it has no Hate in itself, and consequently cannot know it. But it shows little acquaintance with Aristotle's usual manner of literally interpreting his predecessors, to infer from this that Empedocles considered the Sphairos as an intelligent subject, exempt from the process of the Finite. His observation is perfectly explicable, supposing he was merely alluding to verses 138, 142 (*sup.* p. 147, 1; 149, 3), where the Sphairos is described as god and as a blessed Being. Aristotle seizes on these definitions, and combining them with the farther proposition that like is known by like, is able to convict Empedocles of an absurdity. But as it does not follow that Empedocles himself said the Sphairos does not know Hate, neither does it follow that he spoke of it as possessing any faculty of knowledge. It is quite possible that this assertion is only an inference drawn by Aristotle; even the superlative εὐδαιμονέστατος θεὸς need not necessarily have been found in Empedocles (who on metrical grounds could not have employed it as it stands). Aristotle himself may have originated it, either ironically, or because he concluded that Unity being the most desirable condition, and Strife the most baneful (Emp. v. 79 sqq., 405 sqq.; St. 106 sqq., 368 sqq., K. 80 sqq., 416 sqq.; M, &c.), the most blessed existence must be that in which there is no strife but only Unity and Love. All that can be proved is that the Sphairos of Empedocles is described as Divinity and a blessed essence. But (as Aristotle himself remarks, *Gen. et Corr.* ii. 6, 333 b, 20) he also calls the elements and the beings derived from the elements—men as well as dæmons—gods; and he had the same right to describe his Sphairos as blessed, that Plato had to apply the word to our visible world, even if he did not conceive it as a personal being. Supposing, however, he did conceive it as such, or in the dubious manner of the early philosophers, in spite of its impersonal nature, ascribed to it certain personal attributes, for example knowledge—this would by no means prove that it was god in the monotheistic sense, the highest existence, not subject to the process of the Finite. In the first place we do not know that Empedocles entertained the monotheistic idea of God; since the verse in which it is supposed to be found refers, Ammonius thinks, to Apollo; and in the second place, if he did entertain it, he could not possibly have identified this supreme God with the Sphairos. For according to Wirth, the supreme God is withdrawn from the process of the Finite; but the Sphairos is so completely involved in this process that it is itself in its whole integrity (vide *sup.* p. 149, 3) split up by Hate, and re-

words of Xenophanes, as invisible and unapproachable, and exalted above human form and limitation, as pure spirit ruling the whole world.[1] This utterance indeed immediately relates to one of the popular deities,[2] and

solved into the divided world; in these verses the Deity is described as pure spirit; the Sphairos, on the contrary, as the mixture of all corporeal substances. To prove the compatibility of these conceptions, it is not enough to observe that, from the realistic point of view of the ancients, God might be conceived as the unity of the elements; and that a conception of Deity similar to this was held by Diogenes and the Eleatics. The question is not whether the Deity might be conceived as the unity of the elements (this we find among the earlier Ionian hylozoistic philosophers and others), nor whether, *in that case*, reason and thought could be ascribed to a primitive essence materially conceived (this is done by many philosophers—Diogenes and Heracleitus for instance—and by all the Stoics); but whether one and the same philosopher has ever conceived the Divinity simultaneously as *pure* spirit (φρὴν ἱερὴ καὶ ἀθέσφατος ἔπλετο μοῦνον) and as a mixture of all corporeal elements. For this there is no analogy. Wirth's theories are altogether opposed to the fundamental conceptions of Empedocles's system. According to his representation, and also according to Gladisch, *l. c.*, the first to exist was the unity of all Being, the Divinity, which is at the same time all elementary matter; and from this uniform essence only, could particular substances have developed themselves. Thus we should arrive at a theory of the world resembling Heracleitean pantheism. But Empedocles himself declares the four elements, and the two moving forces, to be the First and uncreated. The mixture of these elements, on the other hand, the Sphairos, he repeatedly and explicitly describes as something derived, and arising out of the combination of the original principles. The Sphairos, therefore (notwithstanding the Aristotelian ὁ θεὸς), cannot possibly have been considered by him as the Divinity in the absolute sense, but only as *a* divinity; cf. p. 149, 4.

[1] V. 344 (356, 389 M):—

οὐκ ἔστιν πελάσασθ' οὔτ' ὀφθαλμοῖσιν ἐφικτὸν
ἠμετέροις ἢ χερσὶ λαβεῖν, ἥπερ τε μεγίστη
πειθοῦς ἀνθρώποισιν ἁμαξιτὸς εἰς φρένα πίπτει.
οὐ μὲν γὰρ βροτέῃ (al. οὔτε γὰρ ἀνδρομέῃ) κεφαλῇ κατὰ γυῖα κέκασται,
οὐ μὲν ἀπαὶ νώτοιο δύο κλάδοι ἀίσσονται,
οὐ πόδες, οὐ θοὰ γοῦνα, οὐ μήδεα λαχνήεντα,
ἀλλὰ φρὴν ἱερὴ καὶ ἀθέσφατος ἔπλετο μοῦνον,
φροντίσι κόσμον ἅπαντα καταΐσσουσα θοῇσιν.

[2] Ammon. *De Interpret.* 199, ap. *Schol. in Arist.* 135 a, 21: διὰ ταῦτα δὲ ὁ Ἀκραγαντῖνος σοφὸς ἐπιῤῥαπίζων τοὺς περὶ θεῶν ὡς ἀνθρωποειδῶν ὄντων παρὰ τοῖς ποιηταῖς λεγομένους μύθους ἐπήγαγε προη-

even were it otherwise, we could not imagine that Empedocles, who everywhere presupposes a plurality of gods, and whose whole character is that of priest and prophet, would have assumed so hostile an attitude towards the popular religion as his Eleatic predecessors. To consider these verses, therefore, as is often done, a confession of pure monotheism is a mistake; nor ought they to be interpreted in the sense of a philosophic pantheism; for of this there is no trace in Empedocles:[1] indeed, it would be wholly incompatible with one fundamental principle of his system, the original plurality of the elements and efficient forces. But the design of a purification of the popular faith is notwithstanding discernible in it, and he himself clearly avows this design when, in the introduction to the third book of his physical poem, he extols the value of the true knowledge of God, deplores the false notions concerning the gods,[2] and calls on the muse to help[3] him to make a good discourse about the blessed gods. Even this purer faith, however, stands in no scientific connection with his philosophic theories. An indirect connection there

γουμένως μὲν περὶ Ἀπόλλωνος, περὶ οὗ ἦν αὐτῷ προσεχὴς ὁ λόγος, κατὰ δὲ τὸν αὐτὸν τρόπον καὶ περὶ τοῦ θείου παντὸς ἁπλῶς ἀποφαινόμενος, "οὔτε γάρ," &c. According to Diog. viii. 57 (vide *sup.* 121, *n.*) Empedocles composed a προοίμιον εἰς Ἀπόλλωνα, which, however, was burned after his death. Is it likely that it survived in a transcript?

[1] We have already (Vol. I. 446 sq.) noticed the passage of Sextus which ascribes to him, as well as to the Pythagoreans, the Stoical doctrine of the world-spirit.

[2] V. 342 (354, 387 M):—

ὄλβιος ὃς θείων πραπίδων ἐκτήσατο πλοῦτον,
δειλὸς δ' ᾧ σποτέουσα θεῶν πέρι δόξα μέμηλεν.

[3] V. 338 (383 M):—

εἰ γὰρ ἐφημερίων ἕνεκέν τί σοι, ἄμβροτε Μοῦσα,
ἡμετέρης ἔμελεν μελέτας διὰ φροντίδος ἐλθεῖν,
εὐχομένῳ νῦν αὖτε παρίστασο, Καλλιόπεια,
ἀμφὶ θεῶν μακάρων ἀγαθὸν λόγον ἐμφαίνοντι.

certainly is: the anthropomorphism of the popular religion could not be altogether congenial to a philosopher in whom a taste for the knowledge of natural causes was so highly developed. But these theological conceptions themselves belong neither to the foundation, nor to the development, of Empedocles's system. The god who pervades the universe with his thought is neither its creator nor its former, for the cause of the world is to be found only in the four elements and the two motive forces. Nor, according to the presuppositions of the system, can the government of the universe belong to him; for the course of the world, as far as we can learn from the fragmentary utterances of Empedocles, is dependent equally upon the admixture of the elements and the alternate action of Hate and Love, which again follow an irreversible law of nature. No room is left in his doctrine for the personal activity of God: even Necessity, in which Ritter[1] recognises the one efficient cause, the Unity of Love and Hate, has not this meaning with Empedocles.[2] Nor can we suppose that the Deity to which the above description relates is conceived as Love; for Love is only one of the two efficient powers to which the other is diametrically opposed; and it is treated by Empedocles, not as a spirit ruling absolutely over the world, but as one of the six elements bound up in all things.[3] The more spiritual notion of God which we find in his writings is, therefore, as little in harmony with his philosophic theories as the popular religion, to which it is primarily

[1] *Gesch. d. Phil.* i. 544.

[2] Vide *supra*, p. 142, 1.

[3] Vide *supra*, p. 138, 3.

related; we cannot in consequence derive it immediately from those theories, but must trace it to some other antecedents, such as, on the one hand, the precedent of Xenophanes, whose influence is so clearly betrayed [1] in the language of the passage quoted from Empedocles; and on the other, the moral and religious interest, which we recognise in his reforming attitude in regard to the bloody sacrifices of the ruling faith. But though these traits are very important if our object is to attain a complete picture of the personality and influence of Empedocles, or to determine his actual position in regard to religion in its details, their connection with his philosophic convictions is too slight to allow of our attaching any great importance to them in the history of philosophy.

IV.—*THE SCIENTIFIC CHARACTER AND HISTORICAL POSITION OF THE DOCTRINE OF EMPEDOCLES.*

Even in antiquity philosophers were greatly divided in respect to the value of the doctrine of Empedocles and its relation to earlier and contemporaneous systems; and this dissimilarity of opinion has since rather increased than diminished. While, among his contemporaries, Empedocles enjoyed a high degree of veneration, which, however, seems to have been accorded to him less as a philosopher than as a prophet and man of the people; [2] and while later writers from the most opposite points of view mention him with the greatest

[1] Cf. with the verses quoted what is said of Xenophanes, Vol. I. 560 sq.

[2] Vide *supra*, p. 119.

respect,[1] Plato [2] and Aristotle [3] seem to rank his philosophic merit less highly; and in modern times the enthusiastic praise given to him by some writers [4] is counterbalanced by more than one depreciatory judgment.[5] Still greater is the difference of opinion respecting the relation of Empedocles to the earlier schools. Plato (*l. c.*) places him with Heracleitus, Aristotle usually

[1] On the one hand, as is well known, the neo-Platonists, whose distortion of Empedocles's doctrines has been already spoken of; and on the other, Lucretius, on account of his greatness as a poet, and his physical tendencies, which were Atomistic. Lucret. *N. R.* I, 716 sqq.:—

quorum Acragantinus cum primis Empedocles est,
insula quem triquetris terrarum gessit in oris, . . .
quæ cum magna modis multis miranda videtur, . . .
nil tamen hoc habuisse viro præclarius in se
nec sanctum magis et mirum carumque videtur.
carmina quin etiam divini pectoris ejus
vociferantur et exponunt præclara reperta,
ut vix humana videatur stirpe creatus.

[2] *Soph.* 242 E, where Empedocles, as compared with Heracleitus, is characterised as μαλακώτερος.

[3] Aristotle, indeed, never passes formal judgment on Empedocles; but the remarks he lets fall upon occasions would lead us to suppose that he does not consider him equal, as a naturalist, to Democritus, or as a philosopher to Parmenides and Anaxagoras. The manner in which he refutes many Empedoclean doctrines (e.g. *Metaph.* i. 4, 985 a, 21; iii. 4, 1000 a, 24 sqq.; xii. 10, 1075 b; the definitions of Love and Hate, *ibid.* i. 8, 989 b, 19; *Gen. et Corr.* i. 1, 314 b, 15 sqq.; ii. 6, the doctrine of the elements, *Phys.* viii. 1, 252; the theories on the cosmical periods, *Meteor.* ii. 9, 369 b, 11 sqq.; the explanation of lightning) is not more severe than is usual with Aristotle. In *Meteor.* ii. 3, 357 a, 24, the conception of the sea as exuded from the earth is spoken of as absurd: but that is not of much importance; and the censure as to the expression and poetry of Empedocles (*Rhet.* iii. 5, 1407 a, 34; *Poët.* i. 1447 b, 17), which, however, is counterbalanced by some praise (ap. Diog. viii. 57), does not affect his philosophy as such. But the comparison with Anaxagoras (*Metaph.* i. 3, 984 a, 11) is decidedly unfavourable to Empedocles, and the word ψελλίζεσθαι, *ibid.* 4, 985 a, 4, if even it be extended (*ibid.* i. 10) to the whole of the earlier philosophy, gives us the impression that Empedocles was especially wanting in clear conceptions.

[4] Lommatzsch in the treatise mentioned, p. 117, 1.

[5] Cf. Hegel. *Gesch. d. Phil.* i. 337; Marbach, *Gesch. d. Phil.* i. 75; Fries, *Gesch. d. Phil.* i. 188.

with Anaxagoras, Leucippus and Democritus, and even with the earlier Ionians;[1] since the epoch of the Alexandrians, however, he has generally been classed with the Pythagoreans. Modern writers have almost without exception departed from this tradition,[2] without arriving in other respects at any unanimous theory. Some reckon him among the Ionians, and admit, side by side with the Ionic nucleus of his doctrine, only a small admixture of Pythagorean and Eleatic elements.[3] Others, on the contrary, consider him an Eleatic,[4] and a third party[5] places him as a dualist beside Anaxagoras. The majority, however, seem more and more inclined to agree that in the doctrine of Empedocles there is a mixture of various elements—Pythagorean, Eleatic, and Ionic, but especially Eleatic and Ionic:[6] in what relation, and according to what points of view they are combined, or whether they are ranged side by side in a merely eclectic fashion, is still a matter of controversy.

In order to arrive at a decision, it would seem the

[1] *Metaph.* i. 3, 984 a, 8, c. 4, c. 6 end, c. 7, 988 a, 32; *Phys.* i. 4; viii. 1; *Gen. et Corr.* i. 1, 8; *De Cœlo*, iii. 7 et pass.

[2] Lommatzsch alone follows it unconditionally. Wirth (*Idee der Gotth.* 175) says that the whole system of Empedocles was penetrated with the spirit of Pythagoreanism. Ast, *Gesch. d. Phil.* 1 A, p. 86, restricts the Pythagorean element to the speculative philosophy of Empedocles, while his natural philosophy is referred to the Ionians.

[3] Tennemann, *Gesch. d. Phil.* i. 241 sq.; Schleiermacher, *Gesch. d. Phil.* 37 sq.; Brandis, *Gr.-röm. Phil.* i. 188; *Rhein. Mus.* iii. 123 sq.; Marbach, *l. c.*

[4] Ritter, *l. c.*; Braniss, *sup.* Vol. I. p. 166 sq.; Petersen, *sup.* p. 194 sq.; Gladisch, in *Noack's Jahrb. f. spek. Phil.* 1847, 697 sq.

[5] Strümpell, *Gesch. d. theoret. Phil. d. Griechen*, 55 sq.

[6] Hegel, *l. c.* 321; Wendt zu Tenneman, i. 277 sq.; K. F. Hermann, *Gesch. u. Syst. d. Plat.* i. 150; Karsten, p. 54, 517; Krische, *Forschungen*, i. 116; Steinhart, *l. c.* p. 105; cf. 92; Schwegler, *Gesch. d. Phil.* p. 15; Haym, *Allg. Enc. 3te. Sect.* xxiv. 36 sq.; Sigwart, *Gesch. d. Phil.* i. 75; Ueberweg, *Grund.* i. § 22.

most obvious course to consult the statements of the ancients as to the teachers of Empedocles. But they afford us no certain foothold. Alcidamas is said to have described him as a disciple of Parmenides, who afterwards separated himself from his master to follow Anaxagoras and Pythagoras.[1] The last assertion sounds so strange that we can hardly believe it was ever made by the celebrated disciple of Gorgias. Either some later namesake of his must have said so, or his real words must have been misunderstood by the superficial compiler from whom we have received them.[2] Supposing, however, that Alcidamas did make the assertion, it would only prove that he inferred a personal relation between these philosophers from the similarity of their doctrines, without himself having any knowledge of the matter. Timæus likewise says that Empedocles was a disciple of Pythagoras.[3] He adds that this philosopher was excluded from the Pythagorean school for stealing speeches (λογοκλοπεία); and the same is said by Neanthes,[4] whose testimony does not strengthen the credibility of the story. On the other hand, we must

[1] Diog. viii. 56: Ἀλκιδάμας δ' ἐν τῷ φυσικῷ φησι κατὰ τοὺς αὐτοὺς χρόνους Ζήνωνα καὶ Ἐμπεδοκλέα ἀκοῦσαι Παρμενίδου, εἶθ' ὕστερον ἀποχωρῆσαι καὶ τὸν μὲν Ζήνωνα κατ' ἰδίαν φιλοσοφῆσαι, τὸν δ' Ἀναξαγόρου διακοῦσαι καὶ Πυθαγόρου· καὶ τοῦ μὲν τὴν σεμνότητα ζηλῶσαι τοῦ τε βίου καὶ τοῦ σχήματος, τοῦ δὲ τὴν φυσιολογίαν.

[2] So Karsten suggests (p. 49), and to me also it seems the most probable. Whether Alcidamus, as Karsten conjectures, may have spoken only of certain Pythagoreans, whose disciple Empedocles became; or merely of an affinity with the doctrine of Pythagoras and Anaxagoras, without any personal discipleship. In the one case, the expression of ἀμφὶ Πυθαγόραν, in the other ἀκολουθεῖν, or some similar word, may have given rise to the misunderstanding.

[3] Diog. viii. 54. Later writers, such as Tzetzes and Hippolytus, I pass over. Cf. Sturz, p. 14, and Karsten, p. 50.

[4] Ap. Diog. viii. 55. Vide Vol. I. 315, *n.*

remember that these statements are based on unhistorical presuppositions as to the esoteric school of the Pythagoreans. Others prefer to consider Empedocles as an indirect follower of Pythagoras;[1] their assertions, however, are so contradictory, many of them so manifestly false, and all so meagrely attested, that we cannot rely upon them. Lastly, Empedocles is by many writers generally described as a Pythagorean,[2] without any further particulars about his doctrines or his relation to the Pythagorean school; but whether this description is founded on some definite historical tradition, or only on conjecture, we cannot tell. He is also said to have been personally connected with the Eleatic school, and this would seem more probable; for though it may have been impossible for him to have known Xenophanes, whose disciple Hermippus calls him,[3] yet there is no historical probability against the theory that he may have had personal intercourse with Parmenides.[4] Dio-

[1] In a letter to Pythagoras's son Telauges, the authenticity of which is suspected by Neanthes, and on which Diog. viii. 53, 74, also seems to throw doubt, Empedocles was described as a disciple of Hippasus and Brontinus (Diog. viii. 55). From this letter, no doubt, comes the verse with the address to Telauges, which is quoted in Diog. viii. 43, after Hippobotus; and it may also have given occasion to the idea (τινὲς ap. Diog. *l. c.*; Eus. *Præp.* x. 14, 9, and, after him, Theodoretus, *Cur. Gr. Aff.* ii. 23, p. 24; Suid. Ἐμπεδοκλῆς) that Telauges himself (or, as Tzetz. *Chil.* iii. 902, says, Pythagoras and Telauges) had instructed him. Suidas (Ἀρχύτας) even mentions Archytas as the teacher of Empedocles.

[2] Examples are given by Sturz, 13 sq.; Karsten, p. 53. Cf. also the following note, and Philop. *De An.* C. i. (where Ἐμπεδοκλῆς is to be substituted for Τίμαιος), *ibid.* D, 16.

[3] Diog. viii. 56: Ἕρμιππος δ' οὐ Πορμενίδου, Ξενοφάνους δὲ γεγονέναι ζηλωτὴν, ᾧ καὶ συνδιατρῖψαι τὴν ἐποποιΐαν· ὕστερον δὲ τοῖς Πυθαγορικοῖς ἐντυχεῖν. Cf. in Diog. ix. 20, the supposed reply of Xenophanes to Empedocles.

[4] Simpl. *Phys.* 6 b: Παρμενίδου πλησιαστὴς καὶ ζηλωτὴς καὶ ἔτι μᾶλλον Πυθαγορείων. Olympiodorus, *in Gorg. Proœm.* end (Jahn's *Jahrb. Supplementb.* xiv. 112); Suidas, Ἐμπεδοκλῆς. and Porphr. *ibid.* Porphyry no doubt, however, confuses him with Zeno when he says he was beloved by Parmenides. Alcidamas, vide *sup.* p. 188, 3.

genes does not distinctly say[1] whether Theophrastus represents him as a personal disciple of Parmenides, or only asserts that he was acquainted with Parmenides's work. We must, therefore, consider it as an unsettled point whether Empedocles was actually instructed by Parmenides, or merely used his poems. He has also been called a disciple of Anaxagoras,[2] but this is highly improbable on historical and chronological grounds;[3] Karsten's attempt to prove the external possibility of their relation by conjectures, which in themselves are most hazardous, must therefore be considered a failure.[4] It is still more unwarrantable to ascribe to him journeys in the East,[5] which were unknown even to Diogenes: the sole foundation for this statement lies doubtless in Empedocles's reputation for magic, as clearly appears from our authorities themselves.[6] Thus, while part of

[1] Diog. 55: ὁ δὲ Θεόφραστος Παρμενίδου φησὶ ζηλωτὴν αὐτὸν γενέσθαι καὶ μιμητὴν ἐν τοῖς ποιήμασι καὶ γὰρ ἐκεῖνον ἐν ἔπεσι τὸν περὶ φύσεως λόγον ἐξενεγκεῖν.

[2] Vide *sup.* p. 188, 3.

[3] This will be shown in the section on Anaxagoras.

[4] Karsten (p. 49) supposes that Empedocles may have come to Athens contemporaneously with Parmenides, about Ol. 81, and may here have heard Anaxagoras. But all that we are told of his first journey to Greece points to a time when Empedocles was already at the highest point of his fame, and had doubtless long ago attained his philosophic standpoint. Cf. Diog. viii. 66, 53, 63. Athen. I. 3, e. xiv. 620 d. Suidas, Ἄκρων.

[5] Pliny, *H. Nat.* xxx. 1, 9, speaks indeed of distant journeys which had been undertaken by Empedocles, as by Pythagoras, Democritus and Plato, to learn magic. He can only, however, be thinking of travels in the East (which seem to be ascribed to him also by Philostr. *V. Apoll.* i. 2, p. 3) when he classes him among those who had had intercourse with the Magi.

[6] This alone would make it very improbable that the system of Empedocles should have stood in such a relation to the Egyptian theology as Gladisch (*Empedocl. u. d. Aeg.* and other works of his mentioned, Vol. I. p. 35, 1) supposes. For such accurate knowledge and complete appropriation

what we know respecting the teachers of Empedocles is manifestly legendary, we have no security that the more probable statement really comes from historical tradition. We therefore get from this source no information respecting his relations to his predecessors, which the study of his doctrine could not more satisfactorily and certainly afford.

We can distinguish in this doctrine constituent elements of three kinds, connected respectively with the Pythagorean, Eleatic, and Heracleitean points of view. These different elements, however, have not an equal importance in regard to the philosophic system of Empedocles. The influence of Pythagoreanism appears decidedly only in the mythical part of his doctrine, in the statements concerning Transmigration and the daemons, and in the practical prescripts connected therewith; in his physics it is either not felt at all, or only in reference to particular and secondary points. In regard to these doctrines there can scarcely be a doubt that Empedocles primarily derived them from the Pythagoreans; though the Pythagoreans may have originally adopted them from the Orphic mysteries, and Empedocles, in his ordinances respecting the slaying of animals and the eating of flesh, may have given them a more strict application than the early Pythagoreans.

of Egyptian ideas would be inconceivable, unless Empedocles had long resided in Egypt. That no tradition of such a residence should have been preserved, either by Diogenes, who relates so much concerning him from Alexandrian sources, and who has carefully collected all information respecting his teachers, nor by any other writer, seems the more incredible if we consider how zealously the Greeks, after the time of Herodotus, sought out and propagated everything, even the most fabulous statements, tending to connect their wise men with the East, and especially with Egypt. The internal affinity, therefore, between the system of Empedocles and the Egyptian doctrines must be very clearly manifested to justify the conjecture of any historical connection. Of this Gladisch, in spite of all the labour and acuteness he has devoted to the subject, has failed to convince me. If we put aside the doctrine of Metempsychosis and the asceticism bound up in it, which were naturalised in Greece long before the time of Empedocles, and which he brings forward in an essentially different form from the Egyptian; if we further put aside all that is ascribed to the Egyptians solely on the authority of the Hermetic writings and other untrustworthy sources, or that is in itself too little characteristic to allow of our deducing any inference from it, there still remain, among the parallels drawn by Gladisch, three important points of comparison, viz., the Empedoclean doctrines of the Sphairos, the Elements, and Love and Hate. As to the Sphairos, it has already been shown (p. 179 sq.) that it is not the primitive essence out of which all things are developed, but something derived and compounded of the original essences; if, therefore, it is true (in regard to the ancient Egyptian and pre-Alexandrian philosophy, this must be greatly qualified) that the Egyptians regarded the Supreme Deity as one with the world, and the world as the body of the Deity; even if it can be proved that they held the development of the world from the Deity, the affinity of their system with that of Empedocles would not be established, because these theories are absent in the latter. As to the four elements not only is it evident that Empedocles's conception of the elements is derived from the physics of Parmenides; but the doctrine of these four primitive substances (which would not of itself be decisive) Gladisch has only been able to find in Manetho and later accounts for the most part taken from him; in the Egyptian expositions, as Lepsius has proved (*Ueber die Götter d. vier Elemente bei d. Aegyptern, Abh. d. Berl. Akademie*, 1856. *Hist. Phil. Kl.* p. 181 sqq.), and Brugsch (ap. Gladisch, *Emp. u. d. Aeg.* 144) has confirmed, the four pairs of elemental gods are not found prior to the Ptolemies, and for the first time in the reign of Ptolemy IV. (222–204 B.C.). The four elements consequently must have come, not from the Egyptians to the Greeks, but from the Greeks to the Egyptians. Manetho himself has unmistakeably borrowed them from the Greeks; as he everywhere, with the same freedom as the later writers, introduces Greek conceptions into the Egyptian philosophy. Even in what is quoted, Eus. *Pr. Ev.* III. 2, 8, and Diog. *Proœm.* 10, from him and his contemporary Hecataeus concerning the elements, the Stoical doctrine is clearly evident. If, lastly, Isis and Typhon are the prototypes of φιλία and νεῖκος, the parallel is so far-fetched, and the import of these Egyptian divinities is so different from that of the two natural forces of Empedocles, that we might as reasonably derive them from many other mythological forms, and from some (e.g. Ormuzd and Ahriman) far more reasonably.

It is likewise probable that, in his personal bearing, he may have kept in view the example of Pythagoras. He may also have adopted here and there certain religious notions from the Pythagoreans, but we have now no means of proving this, for it is very uncertain whether or not the prohibition of beans emanated from the early Pythagoreans.[1] Whatever he may have borrowed from them on this side of his doctrine, it would be rash to infer that he was in all respects a Pythagorean, or belonged to the Pythagorean Society. His political character would of itself refute such an inference. As a Pythagorean, he must have been an adherent of the ancient Doric aristocracy, whereas he occupies a position diametrically opposite, at the head of the Agrigentine democracy. Thus, in spite of the Pythagorean tendency of his theology, in his politics he differs entirely from the Pythagoreans, and so it may have been in regard to his philosophy. The religious doctrines and prescripts which he took from the Pythagoreans are not only, as we have already seen, devoid of any internal connection with his physical theories, but are actually opposed to them. To place him, on the strength of those doctrines, among the Pythagorean philosophers, would be as great a mistake as to place Descartes, because of his Catholicism, among the Scholastics. In his philosophy itself, in his physics, Pythagoreanism is little apparent. There is no trace of the fundamental conception of the system—viz., that numbers are the essence of things; the arithmetical construction of figures and of bodies,

[1] Cf. Vol. I. 345, 5. It has already been observed, p. 175, 3, that this is also uncertain in regard to Empedocles.

and the geometrical derivation of the elements lie quite out of his path; the Pythagorean number-symbolism is wholly unknown to him, in spite of his usual predilection for figurative and symbolical expression. In particular cases he does indeed attempt to determine according to numbers the proportion in which the elements are mixed; but this is something quite different from the procedure of the Pythagoreans, who directly declared things to be numbers. In regard to his doctrine of the elements also, we have already seen[1] that it is improbable that it should have been influenced to any considerable extent by Pythagoreanism. Moreover, the more precise conception of an element, according to which it is a particular substance, unchangeable in its qualitative determinateness, was entirely unknown to the Pythagoreans, and was first introduced by Empedocles. Before him it could not have existed, because it is wholly based upon the enquiries of Parmenides concerning Becoming. The influence of the Pythagorean number-theory upon the Empedoclean system, if there were any such influence at all, cannot be considered very important. Similarly we are superficially reminded of the Pythagorean musical theory which was so closely connected with their theory of numbers, by the name of Harmony, which Empedocles ascribes, among other names, to Love; but in no place where he speaks of the operation of this Harmony do we find it compared with the concord of tones: nowhere is there a trace of any knowledge of the harmonical system, or a mention of the harmonic fundamental proportions, so familiar to

[1] Vide *supra*, p. 125; cf. Vol. I. p. 436 sq.

the Pythagoreans: and since Empedocles expressly maintains that none of his predecessors were acquainted with Love as a universal force of nature,[1] it seems very doubtful whether he calls Love Harmony in the sense in which the Pythagoreans said all is Harmony, and whether like them he used the expression in a musical, and not rather in an ethical sense. Again, the Pythagoreans brought their astronomical system into connection with their arithmetical and musical theory, and this is also alien to Empedocles. He knows nothing of the central fire and of the movement of the earth, of the harmony of the spheres, of the distinction of Uranus, Kosmos, and Olympus,[2] of the Unlimited outside the universe, and of empty space within it. The only thing that he has here borrowed from the Pythagoreans is the opinion that the sun and moon are bodies like glass, and that even the sun reflects fire not his own. He is said to have considered the north as the right side; but that is of no importance, since the theory did not exclusively belong to the Pythagoreans. These few analogies are all that can be traced between the Empedoclean and Pythagorean physics; and they do not prove that the former were influenced by the latter to any considerable extent. Although Empedocles may have borrowed the dogma of Transmigration and the propositions connected

[1] Vide *supra*, p. 170, 1.

[2] The only statement which might contain a reminiscence of this, viz., that the sphere beneath the moon was considered by Empedocles as the theatre of evil, is uncertain (vide *supra*, p. 157, 2), and would, even if proved, show a very distant similarity; for the opposition of the earthly and heavenly, the boundary of which is the moon—the lowest heavenly body—is patent to ordinary observation; the definite discrimination of the three regions is wanting in Empedocles, v. 150 (187, 241 M) sq.; he uses οὐρανὸς and ὄλυμπος synonymously.

with it mainly from the Pythagoreans, his scientific theory of the world was formed, in all its chief points, independently of them: a few statements of minor importance constituted his whole debt to Pythagoreanism.

The philosophy of Empedocles owes far more to the Eleatics, and particularly to Parmenides. From Parmenides it derives its first principle, which determined its whole subsequent development: viz., the denial of Becoming and Decay. Empedocles removes all doubts as to the origin of this principle by proving it with the same arguments, and in part even with the same words, as his predecessor.[1] Parmenides disputes the truth of the sensuous perception on the ground that it shows us a non-Being in origination and decay; Empedocles does the same, and the expressions he uses are the same as those of Parmenides.[2] Parmenides concludes that because all is Being, therefore all is One, and the plurality of things is merely a delusion of the senses. Empedocles cannot admit this in reference to the present state of the world, yet he cannot altogether avoid the conclusion of Parmenides. He therefore adopts another expedient: he regards the two worlds of the Parmenidean poem, the world of truth and that of opinion, as two different states of the world, attributes full reality to both, but limits their duration to definite periods. In the description of the two worlds also he follows the precedent of Parmenides. The Sphairos is

[1] Cf. with v. 46 sqq. 90, 92 sq. of Empedocles (*supra*, p. 122, 1, 2); Parm. v. 47, 62–64, 67, 69 sq. 76 (Vol. I. p. 585); and with the νόμῳ of Empedocles, v. 44 (p. 124, 1), the ἔθος πολύπειρον of Parm. v. 54 (Vol. I. p. 585).

[2] Cf. Emp. v. 45 sqq. 19 sqq. 81 (p. 122, 1); Parm. v. 46 sqq., 53 sqq. (Vol. I. p. 585).

spherical, homogeneous and unmoved, like the Being of Parmenides;[1] the present world, like Parmenides' world of delusive opinion, is compounded of opposite elements. The fourfold number of these elements Empedocles ultimately derived from the duality of Parmenides;[2] and things arise from them because Love (corresponding with Eros and the world-ruling goddess[3] of Parmenides) combines what is different in kind. In his cosmology Empedocles approximates to his predecessor, both in his conception of the shape of the universe, and in the statement that there is no empty space.[4] For the rest, it is rather in his organic physics that he adopts the opinions of Parmenides. What Empedocles says of the genesis of man from terrestrial slime, of the origin of the sexes, of the influence of heat and cold on determining sex, in spite of many additions and divergences, is most closely related to him.[5] The most striking point of similarity, however, between the two philosophers is

[1] To convince ourselves of the similarity of the two descriptions, even in expression, we have only to compare Emp. v. 134 sqq., especially v. 138 (*supra*, p. 148, 3), with Parm. v. 102 sqq. (Vol. I. p. 587, 2). We need not attach much weight to the fact that Aristotle called the Sphairos the One (*supra*, p. 149, 2), for this designation certainly does not originate with Empedocles; nor to the divinity (p. 707, 1, 4) ascribed to it; for the Sphairos of Empedocles was not in any case named God in the absolute sense in which the One universe was thus named by Xenophanes.

[2] *Supra*, p. 128, 2.

[3] Who like the φιλία in the formation of the world has her seat in the centre of the whole, and is also called—at any rate by Plutarch—Aphrodite (*supra*, Vol. I. p. 596, 1; 600).

[4] Vide *supra*, p. 135, 3, Vol. I. 586, 1. Concerning the moon, cf. Parm. v. 144, with Emped. v. 154 (190 K, 245 M). Apelt, *Parm. et Emp. Doctrina de Mundi Structura* (*Jena*, 1857), p. 10 sqq., finds much harmony between the astronomical systems of Parmenides and Empedocles. To me this is not so apparent.

[5] Vide p. 160 sqq.; cf. Vol. I. p. 601 sq.

their theory of the intellectual faculty, which they both derive from the mixture of corporeal constituents: each element, according to this theory, perceives which is akin to it.[1] Here Empedocles, irrespectively of his different definition of the elements, is only to be distinguished from the Eleatic philosopher by his more precise development of their common presuppositions.

There is a reminiscence of Xenophanes in his complaints of the limitations of human knowledge,[2] and especially in the verses in which Empedocles attempts a purification of the anthropomorphic notion of God.[3] But even this purer idea of God stands in no scientific connection with his philosophic theories.

But, however undeniable and important the influence of the Eleatics upon Empedocles may have been, I cannot agree with Ritter in classing him altogether among the Eleatics. Ritter thinks that Empedocles places physics in the same relation to true knowledge as Parmenides did, and that he too is inclined to consider much of our supposed knowledge as delusion of the senses, nay, even to treat the whole doctrine of nature in that light. If, notwithstanding he applied himself chiefly to this subject, and spoke of the One Being in a merely mythical manner in his description of the Sphairos—the reason of this may lie partly in the negative character of the Eleatic metaphysics, and partly in his conviction, that divine truth is unspeakable and unattainable for human intelligence.[4] Empedocles himself,

[1] Vide Vol. I. 602; *sup.* p. 164.

[2] *Supra*, p. 170, 1; cf. Vol. I. p. 575, 2.

[3] *Supra*, p. 181, 1.

[4] In Wolf's *Analekten*, ii. 423 sqq.; 458 sqq.; *Gesch. d. Phil.* i.; 514 sqq.; 551 sqq.

however, so far from betraying by a single word that his purpose in his physics is to report uncertain opinions, expressly repudiates such a view. He distinguishes indeed the sensible from the rational perception; but other physicists do this, for example, Heracleitus, Democritus and Anaxagoras; he contrasts the perfect divine wisdom with imperfect human wisdom, but herein Xenophanes and Heracleitus preceded him, although they did not therefore deny the truth of divided and changing Being, nor did they, on the other hand, limit their investigations to the illusive phenomenon.[1] The physics of Empedocles could only be regarded from the same point of view as those of Parmenides if he had explicitly declared that in them he intended to set forth only the erroneous opinions of mankind. Far from doing so, he assures us (with an unmistakeable reference to this interpretation of Parmenides) that his representation is *not* to contain deceiving words.[2] We have no right then to doubt that his physical doctrines are seriously meant, and we can only regard what he says of the original plurality of matter and of moving forces, of the alternation of cosmical periods, of the Becoming and passing away of individuals—as his own conviction.[3] It would be against all internal probability and all historical analogy that a

[1] Vide *supra*, Vol. I. 575; Vol. II. 91.

[2] V. 86 (113, 87 M): σὺ δ' ἄκουε λόγων στόλον οὐκ ἀπατηλόν, cf. Parm. v. 111: δόξας δ' ἀπὸ τοῦδε βροτείας μάνθανε, κόσμον ἐμῶν ἐπέων ἀπατηλὸν ἀκούων. Vide *supra*, Vol. I. 605, 3. Empedocles asserts this in immediate reference to the doctrine of Love, but as that doctrine is intimately connected with his other physical theories, and especially with the doctrine of Hate and of the elements, the words must apply to his Physics generally.

[3] Cf. p. 147, 1.

philosopher should have applied his whole activity not only to expound opinions that he held to be false from their foundation, side by side with the true view, and in contrast with it; but actually to develope these opinions in complete detail, in his own name and without an allusion to the right standpoint. The physical doctrines of Empedocles are, however, far removed from the Eleatic doctrine of Being. Parmenides recognises only One Being, without movement, change or division: Empedocles has six original essences which do not indeed change qualitatively, but are divided and moved in space, enter into the most various proportions of admixture, combine and separate in endless alternation, become united in individuals, and again issue from them; form a moved and divided world, and again cancel it. To reduce this Empedoclean theory of the universe to the Parmenidean theory, by asserting that the principle of separation and movement in the former is something unreal and existing only in imagination, is an unwarrantable attempt, as we have previously seen.[1] The truth probably is that Empedocles really borrowed a good deal from the Eleatics, and that in his principles as well in the development of his system he was especially influenced by Parmenides; but that the main tendency of his thought nevertheless pursues another direction. Whatever else he may concede to Parmenides, he disagrees with him on the chief point: the reality of motion and of divided Being is as decidedly presupposed by him as it is denied by Parmenides. Parmenides cancels the whole multiplicity

[1] P. 142, 1.

of phenomena in the thought of the One substance; Empedocles seeks to show how this multiplicity was developed from the original unity: all his efforts are directed to the explanation of that which Parmenides had declared to be unthinkable, viz., multiplicity and change. These two, in the theories of all the early philosophers, are connected in the closest manner; and as the Eleatics were compelled by their doctrine of the unity of all Being to deny Becoming and motion, so, on the opposite side, both were simultaneously maintained; whether, as in the case of Heracleitus, the multiplicity of things was supposed to be developed by the eternal movement of the primitive essence, or, on the other hand, Becoming and change were supposed to be conditioned by the multiplicity of the original substances and forces. The system of Empedocles is only comprehensible as a design to save the reality of phenomena which Parmenides had called in question. He knows not how to contradict the assertion that no absolute Becoming and Decay are possible; at the same time he cannot resolve to renounce the plurality of things, the genesis, mutation, and destruction of individuals. He, therefore, adopts the expedient of reducing all these phenomena to the combination and separation of qualitatively unchangeable substances, of which, however, several must be of an opposite nature if the multiplicity of things is in this way to be explained. But if the primitive elements were in themselves unchangeable, they would not strive to quit the condition in which they are originally found; the cause of their movement cannot therefore lie in themselves,

but in the motive forces which must, as particular substances, be discriminated from them: and as all change and motion, according to Empedocles, consists in the combination and separation of matter, and as, on the other hand, according to the general principles respecting the impossibility of Becoming, it might seem inadmissible to suppose that the combining force was also at another time the separating force, and *vice versa*,[1] it is necessary to admit, so Empedocles believes, two motive forces of contrary nature and influence, Love and Hate. In the operation of the primitive forces and primitive substances, Unity and Multiplicity, Rest and Motion are apportioned to different conditions of the universe: the complete union and complete separation of substances are the two poles between which the life of the world circulates; at these poles its motion ceases, under the exclusive dominion of Love or Hate; between them lie conditions of partial union and partial separation, of individual existence and of change, of origination and decay. Although the unity of things is here recognised as the higher and happier state, it is at the same time acknowledged that opposition and division are equally original with unity, and that in the world as it is, Hate and Love, Plurality and Unity, Motion and Rest, counterbalance one another; indeed, the present universe in comparison with the Sphairos is considered as pre-eminently the world of oppositions and of change, the earth as the theatre of conflict and of suffering, and terrestrial life as the period of a restless motion, of a miserable wandering for fallen spirits. The Unity

[1] *Supra*, p. 138.

of all Being, which the Eleatics maintained as present and actual, lies for Empedocles in the past; and, however much he may long for that Unity, our world in his opinion is wholly subject to the change and division which Parmenides had declared to be a mere delusion of the senses.

In all these traits we recognise a mode of thought which, in proportion as it diverges from that of Parmenides, approximates to that of Heracleitus; and the affinity is really so great that we are compelled to suppose that the doctrine of Heracleitus had a decided influence on Empedocles and his system. The whole tendency of the Empedoclean physics reminds us of the Ephesian philosopher. As he sees in the universe everywhere opposition and change, so Empedocles, however earnestly he deplores it, finds on all sides in the present world strife and alternation, and his whole system aims at the explanation of this phenomenon. The unmoved Unity of all Being is indeed the presupposition from which he starts, and the ideal which is before him in the distance, but the essential interest of his enquiry is bestowed upon the moved and divided world, and its leading thought lies in the attempt to gain a view of existence which shall render comprehensible the multiplicity and change of phenomena. In resorting for this purpose to his four elements, and the two motive forces, he is guided on the one hand indeed by the enquiries of Parmenides, but on two points the influence of Heracleitus is clearly to be traced: the four elements are an extension of the Heracleitean three;[1]

[1] Cf. p. 126 sq. Empedocles resembles Heracleitus in his very words; for he calls the ἄθρυος Ζεὺς of Heracleitus Ζεὺς ἀργῆς. *Supra*, p. 125, 2; 46, 1.

and the two moving forces correspond still more exactly with the two principles in which Heracleitus recognises the essential moments of Becoming, and which, as Empedocles did subsequently, he designated as Strife and Harmony. Both philosophers see in the separation of the combined, and the combination of the separated, the two poles of natural life; both suppose opposition and separation to be the primal conditions. Empedocles, indeed, detests strife which Heracleitus had extolled as the father of all things; but the genesis of individual existences he can only derive from the entrance of Strife into the Sphairos, and he does so, for the same reason essentially, as Heracleitus. It would be impossible that specific and separate phenomena should emanate from Heracleitus's one primitive matter, if this did not change into opposite elements; and it would be equally impossible that they should emanate from the four elements of Empedocles, if these elements remained in a condition of complete admixture. Empedocles differs from his predecessor, as Plato correctly observes,[1] only herein that he separates the moments, which Heracleitus had conceived as contemporaneous, into two distinct transactions; and, in connection with this, derives from two motive forces what Heracleitus had regarded merely as the two sides of one and the same influence, inherent in the living primitive matter. The theories of Heracleitus on the alternate formation and destruction of the world, are also modified by Empedocles, for he supposes the flux of Becoming which, according to Heracleitus,

[1] Vide *supra*, p. 33, 2; p. 138, 3.

never stands still, to be interrupted by periods of rest;[1] but this doctrine he probably owes, notwithstanding, to the Ephesian philosopher. The relative ages of the two men favour the supposition that Empedocles was acquainted with Heracleitus's work; even before the date of Empedocles, his compatriot Epicharmus had alluded to the Heracleitean doctrines;[2] we have, therefore, the less reason to doubt that there existed between the views of the two philosophers, not only an internal affinity, but an external connection: that he reached all those important doctrines in which he agrees with Heracleitus,[3] not through Parmenides merely, but probably borrowed that side of his system actually from his Ephesian predecessor. Whether he was acquainted with the earlier Ionians, and if so, to what extent, cannot be ascertained.

The result, then, of our discussion is as follows: the philosophic system of Empedocles, in its general tendency, is an attempt to explain the plurality and mutability of things from the original constitution of Being; all the fundamental ideas of this system arose from a combination of Parmenidean and Heracleitean theories, but in this combination the Eleatic element is subordinate to the Heracleitean, and the essential interest of the system is concerned, not with the metaphysical enquiry into the concept of Being, but with the physical investigation of natural phenomena and their causes. The leading point of view is to be found in the proposition that the fundamental constituents of things are as little capable of qualitative change as of

[1] Vide *supra*, 145 sqq.
[2] Vide *supra*, Vol. I. 530, 532, 3.
[3] As Gladisch thinks, *Emped. und die Aeg.* 19 sq.

generation and decay; but that, on the contrary, they may be combined and separated in the most various ways, and that, in consequence of this, that which is compounded from the primitive elements arises and decays, and changes its form and its constituents. From this point of view, Empedocles has attempted a logical explanation of natural phenomena as a whole, having defined his primitive substances and set beside them the moving cause in the double form of a combining and a separating force; all else is derived from the working of these forces upon the primitive substances—from the mixture and separation of the elements; and Empedocles, like Diogenes and Democritus after him, aimed at reaching the particular of phenomena, without losing sight of his universal principles. If, therefore, we understand by Eclecticism a method by which heterogeneous elements are combined without fixed scientific points of view, according to subjective temper and inclination, Empedocles in regard to the essential content of his physical doctrine cannot be considered as an Eclectic, and we must be careful not to underrate his scientific merit. While he used the definitions of Parmenides concerning Being for the explanation of Becoming, he struck out a path on which physics has ever since followed him; he not only fixed the number of the elements at four, which for so long almost passed for an axiom, but introduced the very conception of the elements into natural science, and thus became with Leucippus the founder of the mechanical explanation of nature. Lastly, from the standpoint of his own presuppositions, he made an

attempt which, considering the then state of knowledge, was most praiseworthy, to explain the actual in the individual; for us it is specially interesting to observe the manner in which he, the earliest precursor of Darwin, tries to make comprehensible the origin of organisms framed teleologically, and capable of life.[1] His system, however, even irrespectively of such failings as it shares with its whole epoch, is not without lacunæ. The theory of unchangeable primitive elements is indeed established scientifically, but their fourfold number is not further accounted for. The moving forces approach the substances from without, and no sufficient reason is given why they are not inherent in them, and why one and the same force should not be at work, combining and separating; for the qualitative unchangeableness of substances did not exclude a natural striving after change of place, to which even Empedocles represents them as subject; and he himself cannot stringently carry out the distinction between the combining and dividing force.[2] Accordingly, the operation of these forces, as Aristotle remarked,[3] appears to be more or less fortuitous; and it is not explained why their simultaneous operation in the present world should be preceded and followed by conditions in which they separately produce, in the one case a complete mixture, in the other a complete division of the elements.[4] Lastly, in his doctrine of transmigration and pre-existence, and the prohibition of animal food founded upon

[1] Cf. p. 160.
[2] Vide p. 138.
[3] Vide p. 144, 1.
[4] Cf. the judgment of Plato quoted p. 33, 2.

the latter, Empedocles has combined with his physical system elements which not only have no scientific connection with that system, but absolutely contradict it. However great, therefore, may be his importance in the history of Greek physics, in regard to science his philosophy has unmistakeable defects, and even in the ground-work of his system, the mechanical explanation of nature, which is its purpose, is confused by mythical forms and the unaccountable workings of Love and Hate. This mechanical explanation of nature, based upon the same general presuppositions, is carried out more strictly and logically in the Atomistic philosophy.

B. THE ATOMISTS.

1. *Physical bases of their system. Atoms and the void.*

The founder of the Atomistic philosophy is Leucippus.[1]

[1] The personal history of Leucippus is almost unknown to us. As to his date, we can only say that he must have been older than his disciple Democritus, and younger than Parmenides, whom he himself follows; he must therefore have been a contemporary of Anaxagoras and Empedocles: other conjectures will be considered later on. His home is sometimes stated to have been sometimes in Abdera, sometimes in Miletus, sometimes in Elea (Diog. ix. 30, where for Μήλιος read Μιλήσιος, Simpl. *Phys.* 7 a, Clem. *Protr.* 43 D; Galen. *H. Ph.* c. 2, p. 229; Epiph. *Exp. Fid.* 1087 D); but it is a question whether any one of these statements is founded upon historical tradition. Simpl. *l. c.*, doubtless after Theophrastus, names Parmenides as the teacher of Leucippus, but most writers, that they may retain the accustomed order of succession, name Zeno (Diog. *Proœm.* 15, ix. 30; Galen. and Suid. *l. c.* Clem: *Strom.* i. 301 D; Hippol: *Refut.* i. 12), or Melissus (Tzetz. *Chil.* ii. 980; also Epiph. *l. c.* places him after Zeno and Melissus, but describes him generally as an Eristic, *i. e.* an Eleatic). Iambl. *V. Pyth.* 104, has Pythagoras. Nor are we certainly informed whether Leucippus committed his doctrines to writing, nor of what kind these writings were. In Aristotle, *De Melisso*, c. 6, 980 a,

His opinions, however, in their details, have been so imperfectly transmitted to us, that it is impossible in our exposition to separate them from those of his celebrated disciple Democritus.[1] Yet we shall find, as we proceed, that the main features of the system belong to its founder.

7, we find the expression, ἐν τοῖς Λευκίππου καλουμένοις λόγοις, which seems to point to some writing of uncertain origin, or some exposition of the doctrine of Leucippus by a third person. It is questionable, however, what may be inferred from this: the author of the book, *De Melisso*, may have used a secondary source, even if an original source existed. Stob. *Ecl.* i. 160, quotes some words from a treatise περὶ νοῦ; but there may be some confusion here (as Mullach, *Democr* 357, after Heeren *in h. l.* supposes) with Democritus. Theophrastus, following Diog. ix. 46, attributes the work μέγας διάκοσμος, which is found among Democritus's writings, to Leucippus; his statement, however, could only have related originally to the opinions contained in this work. But if these statements are not absolutely certain, the language of Aristotle and of others concerning Leucippus proves that some work of this philosopher was known to later writers. The passage quoted (*infra*, p. 215, 1) from Aristotle, *Gen. et Corr.* i. 8, shows, by the word φησίν, that it was taken from a work of Leucippus. It will hereafter be shown by many references that Aristotle, Theophrastus, Diogenes and Hippolytus also employ the present tense in their quotations. Cf. likewise what is said (Vol. I. p. 293, 4) on the use made of Leucippus by Diogenes of Apollonia. But the work, and even the name of Leucippus, seems to have been pretty early forgotten by most writers in comparison with the riper and more exhaustive achievements of his disciple. The persistence with which he is ignored by Epicurus, the reviver of the Atomistic philosophy, and by most of the Epicureans, may have contributed to this (see chap. iv. of this section).

[1] For the life, writings, and doctrine of Democritus cf. Mullach, *Democriti Abderitæ Operum Fragmenta*, &c., Berl., 1843 (*Fragm. Philos. Gr.* i. 330 sqq.). In addition to other more general works, vide also Ritter, in *Ersch. und Gruber's Encykl. Art. Democ.*; Geffers, *Quæstiones Democriteæ*, Gött. 1829; Papencordt, *De Atomicorum Doctrina Spec. i.*, Berl. 1832; Burchard in his valuable treatises, *Democriti Philosophiæ de Sensibus Fragmenta*, Mind., 1830; *Fragmente d. Moral. d. Democritus, ibid.* 1834; Heimsöth, *Democriti de anima Doctrina*, Bonn, 1835; B. Ten. Brinck. *Anecdota Epicharmi, Democrati Rel.* in Schneidewin's *Philologus*, vi. 577 sqq.; *Democriti de se ipso Testimonia, ibid.* 589 sqq.; vii. 354 sqq.; Democriti liber, π. ἀνθρώπου φύσιος, *ibid.* viii. 414 sqq.; Johnson, *Der Sensualismus d. Demokr.*, &c., Plauen, 1868; Lortzing, *Ueb. die Ethischen Fragmente Demokrit's*, Berlin, 1873; Lange, *Geschichte d. Materialismus*, i. 9 sqq.

According to the almost unanimous testimony of antiquity (vide Mullach p. 1 sq.), Democritus's native city was Abdera, a colony of Thrace, at that time remarkable for its prosperity and culture, but which afterwards (vide Mullach, 82 sqq.) acquired a reputation for stupidity. According to Diog. ix. 34, Miletus is substituted by some writers; and the scholiast of Juvenal on *Sat.* x. 50 substitutes Megara; but neither suggestion merits any attention. His father is sometimes called Hegesistratus, sometimes Damasippus, sometimes Athenocritus (Diog. *l. c.*). For further details, cf. Mullach, *l. c.* The year of his birth can only be ascertained with approximate certainty. He himself, according to Diog. ix. 41, says he was forty years younger than Anaxagoras, and as Anaxagoras was born about 500 B.C., those who place his birth in the 80th Olympiad (460 sqq. Apoll. ap. Diog. *loc. cit.*) cannot be far wrong. This agrees with the assertion that Democritus (ap. Diog. *l. c.*) counted 730 years from the conquest of Troy to the composition of his μικρὸς διάκοσμος, if his Trojan era (as B. Ten Brinck, *Phil.* vi. 589 sq., and Diels, *Rh. Mus.* xxxi. 30, suppose) dates from 1150 (*Müller, Fr. Hist.* ii. 24; 1154–1144), but this is not quite certain. When Thrasyllus, ap. Diog. 41, places his birth in Ol. 77, 3 and says that he was a year older than Socrates, and Eusebius accordingly in his chronicle assigns Ol. 86 as the period of his flourishing, they were perhaps influenced, as Diels conjectures, by this Trojan era, which is clearly inapplicable here, and differs by ten years from the usual one given by Eratosthenes. Eusebius, it is true, places the acme of Democritus in Ol. 69 and again in Ol. 69, 3, and, in seeming agreement with this, asserts that the philosopher died in Ol. 94, 4 (or 94, 2), in his 100th year; Diodorus xiv. 11 says that he died at the age of 90, in Ol. 94, 1 (401–3 B.C.); Cyril *c. Julian.* i. 13 A, states in one breath that he was born in the 70th and in the 86th Olympiad; the *Passah Chronicle* (p. 274, Dind.) places his acme in Ol. 67, while the same chronicle (p. 317) afterwards, following Apollodorus, says that he died, being 100 years old, in Ol. 104, 4 (ap. Dind. 105, 2); but these are only so many proofs of the uncertainty and carelessness of later writers in their computations. Further details in the next section (on Anaxagoras). Statements like that of Gellius, *N. A.* xvii. 21, 18 and Pliny, *H. N.* xxx. 1, 10, that Democritus flourished during the first part of the Peloponnesian war, give no definite information, nor can we gather any from the fact that he never mentions Anaxagoras, Archelaus, Œnopides, Parmenides, Zeno, or Protagoras in his writings (Diog. ix. 41, &c.). When Gellius says that Socrates was considerably younger than Democritus, he is referring to the calculation which Diodorus follows and which will presently be discussed: on the other hand, we must not conclude from Arist., *Part. Anim.* i. 1 (*sup.* Vol. I. p. 185, 3), that Democritus was older than Socrates, but only that he came forward as an author before Socrates had commenced his career

The origin and general standpoint of the Atomistic doctrine is described by Aristotle as follows. The

as a philosopher. Socrates, no doubt, however, was chiefly known to Aristotle, as he is to us, in connection with the last decade of his life, as the teacher of Plato and Xenophon and of the philosophers who propagated his philosophy in the Socratic schools. The birth of Democritus must therefore be placed about 460 B.C. or perhaps even earlier; we cannot fix it with certainty. Still more uncertainty is there with respect to his age and the year of his death. That he had reached a great age (*matura vetustas*, Lucret. iii. 1037) we are constantly assured, but the more detailed statements vary considerably. Diodorus *l. c.* has 90 years, Eusebius and the *Passah Chronicle l. c.* 100, Antisthenes (who, however, is erroneously considered by Mullach, p. 20, 40, 47, to be older than Aristotle, cf. the list of authors and their works) ap. Diog. ix. 39, more than 100; Lucian, *Macrob.* 18, and Philegon, *Longævi*, c. 2, 104; Hipparchus ap. Diog. ix. 43, 109; Censorin. *Di. Nat.* 15, 10 says he was nearly as old as Gorgias, whose life extended to 108 years. (The statements of the pseudo-Soranus in the life of Hippocrates, *Hippocr. Opp.*, ed. Kühn, iii. 850, that Hippocrates was born in Ol. 80, 1, and according to some was 90 years old, according to others, 95, 104, and 109 years old, are very similar; and B. Ten Brinck *Philol.* vi. 591 is probably right in conjecturing that they were transferred to him from Democritus.) As to the year of Democritus' death, vide *supra*.

That our philosopher displayed remarkable zeal for knowledge will readily be believed even irrespectively of the anecdote in Diog. ix. 36. But what we are told about the instructions which even as a boy he had received from the Magi, not to mention the fable in Valer. Max. viii. 7, ext. 4, that the father of Democritus entertained as a host the army of Xerxes, has little evidence in its favour (Diog. ix. 34, appealing to Herodotus, who neither in vii. 109, nor viii. 120, nor anywhere else, ever mentions such a thing), and is chronologically impossible. Lange, however, *Gesch. d. Mater.* i. 128, endeavours to save the incredible tradition by reducing the regular instruction in the course of which Democritus, according to Diogenes, had learned *τά τε περὶ θεολογίας καὶ ἀστρολογίας* to an exciting influence upon the mind of an intelligent boy; and Lewes (*Hist. of Phil.* i. 95 sq.) relates in one breath that Democritus was born in 460 B.C., and that Xerxes (twenty years before) had left some Magi in Abdera as his instructors. This whole combination probably dates from the epoch in which Democritus was regarded by the Greeks as a sorcerer and father of magic. Philostr. *v. Soph.* x. p. 494, relates the same of Protagoras. The acquaintance of Democritus with Greek philosophers is far better attested. Plut. *adv. Col.* 29, 3, p. 1124, says in a general manner, that he contradicted his predecessors; among those whom he mentioned sometimes to praise, and sometimes to

Eleatics, he says, denied the multiplicity of things and motion, because these are inconceivable without the

oppose them, we find the names of Parmenides and Zeno (Diog. ix. 42), whose influence notwithstanding upon the Atomistic philosophy is unmistakeable; Pythagoras (*ibid.* 38, 46), Anaxagoras (*ibid.* 34 sq.; Sext. *Math.* vii. 140), and Protagoras (Diog. ix. 42; Sext. *Math.* vii. 389; Plut. *Col.* 4, 2, p. 1109). In all probability his only teacher was Leucippus: but even this is not quite certain, for the evidence of writers like Diog. ix. 34; Clem. *Strom.* i. 301 D; Hippol. *Refut.* 12, taken alone, is not conclusive; and though Aristotle (*Metaph.* i. 4, 985 b, 4, and after him, Simpl. *Phys.* 7 a) calls Democritus the comrade (*ἑταῖρος*) of Leucippus, it is not clear whether a personal relation between the two men (*ἑταῖρος* often stands for a disciple, vide Mullach, p. 9, etc.), or only a similarity of their doctrines is intended. The former, however, is the most likely interpretation. On the other hand, the assertion (ap. Diog. *l. c.*, and after him Suid.) that Democritus had personal intercourse with Anaxagoras is quite untrustworthy, even if the statement of Favorinus that Democritus was hostile to Anaxagoras because he would not admit him among his disciples be considered too self-evident an invention to be worth quoting as an argument against it. (Cf. also Sext. *Math.* vii. 140.) Moreover, Diog. ii. 14, says that it was Anaxagoras who was hostile to Democritus; but this we must set down to the thoughtless carelessness of this author. We are also frequently told that he was

connected with the Pythagoreans; not only does Thrasyllus ap. Diog. ix. 38, call him *ζηλωτὴς τῶν Πυθαγορικῶν*, but, according to the same text, Glaucus the contemporary of Democritus had already maintained: *πάντως τῶν Πυθαγορικῶν τινος ἀκοῦσαι αὐτόν*; and according to Porph. *V. P.* 3, Duris had named Arimnestus, son of Pythagoras, as the teacher of Democritus. He himself, according to Thrasyllus ap. Diog. *l. c.* had entitled one of his writings 'Pythagoras,' and had spoken in it with admiration of the Samian philosopher; according to Apollodorus ap. Diog. *l. c.*, he also came in contact with Philolaus. But the authenticity of the Democritean *Πυθαγόρης* is (as Lortzing, p. 4, rightly observes) very questionable, and he could have adopted nothing from the Pythagorean science, excepting in regard to mathematics; his own philosophy having no affinity with that of the Pythagoreans. In order to accumulate wisdom, Democritus visited the countries of the east and south. He himself in the fragment ap. Clemens, *Strom.* i. 304 A (on which cf. Geffers, p. 23; Mullach, p. 3 sqq., 18 sqq.; B. Ten Brinck, *Philol.* vii. 355 sqq.), cf. Theophrast. ap. Ælian, *V. H.* iv. 20, boasts of having taken more distant journeys than any of his contemporaries; he particularly mentions Egypt as a country where he had remained some time. As to the duration of these journeys, we can only form conjectures, as the eighty years spoken of by Clemens must clearly be based on some gross misapprehen-

Void, and the Void is nothing. Leucippus conceded to them that without the Void no motion is possible, and

sion or clerical error. (Papencordt, *Atom. Doctr.* 10, and Mullach, *Democr.* 19, *Fr. Phil.* i. 330, suppose that π, which signifies πέντε, may have been mistaken for π′, the cipher for 80; and Diod. i. 98, does in fact say that Democritus remained five years in Egypt.) Later writers relate more particularly that he spent the whole of his large inheritance in travelling, that he visited the Egyptian priests, the Chaldeans, the Persians, some say even the Indians and Ethiopians (Diog. ix. 35; after him Suidas Δημόκρ. Hesych. Δημόκρ. from the same source, Ælian, *l. c.*; Clemens, *l. c.* speaks only of Babylon, Persia and Egypt; Diodorus, i. 98, of five years' sojourn in Egypt; Strabo, xv. 1, 38, p. 703, of journeys through a great part of Asia; Cic. *Fin.* v. 19, 50, more generally, of distant journeys for the acquisition of knowledge). How much of all this is true, we can only partially discover. Democritus certainly went to Egypt, Hither Asia and Persia; but not to India, as asserted by Strabo and Clemens, *l. c.*; cf. Geffers, 22 sqq. The aim and result of these journeys, however, must be sought, not so much in the scientific instruction he received from the Orientals, as in his own observation of men and of nature. The assertion of Democritus ap. Clem., that no one, not even the Egyptian mathematicians, excelled him in geometry (concerning his mathematical knowledge, cf. also Cic. *Fin.* i. 6, 20; Plut. *c. not.* 39, 3, p. 1079), implies scientific intercourse, but at the same time favours the conjecture that Democritus could not have learned much in this respect from foreigners. What Pliny says (*H. N.* xxv. 2, 13; xxx. 1, 9 sq.; x. 49, 137; xxix. 4, 72; xxviii. 8, 112 sqq.; cf. Philostr. *V. Apoll.* i. 1) of the magic arts which Democritus learned on his travels is based upon forged writings, acknowledged as such even by Gellius, *N. A. X.* 12; cf. Burchard, *Fragm. d. Mor. d. Dem.* 17; Mullach, 72 sqq., 156 sqq. What is said of his connection with Darius (Julian, *Epist.* 37, p. 413, Spanh.; cf. Plin. *H. N.* vii. 55, 189; further details, *infra*, chap. iii., and ap. Mullach, 45, 49), though it sounds more natural, is quite as legendary. The same may be said of the statement (Posidonius ap. Strabo xvi. 2, 25, p. 757, and Sext. *Math.* xi. 363), that Democritus derived his doctrine of the atoms from Mochus, a very ancient Phœnician philosopher. That there existed a work under the name of this Mochus is proved by Joseph. *Antiquit.* i. 3, 9; Athen. iii. 126 a; Damasc. *De Princ.* p. 385, Kopp.; cf. Iambl. *V. Pyth.* 14; Diog. *Prœm.* 1; but if it contained an atomistic theory similar to that of Democritus, this would only prove that the author had copied the philosopher of Abdera, not that the philosopher of Abdera had copied him; and not only Democritus, but Leucippus also must in that case have done so. The germs of the Atomistic theory are too apparent in the earlier Greek philosophy to leave room for supposing it to have had a

that the Void must be regarded as non-existent; but he thought he could nevertheless retain the reality of phe-

foreign origin. That the work of Mochus was not in existence in the time of Eudemus seems probable from the passage in Damascius. After his return, Democritus appears to have remained in his native city; but a visit to Athens (Diog. ix. 36 sq.; Cic. *Tusc.* v. 36, 104; Valer. Max. viii. 7, ext. 4) may perhaps be assigned to this later epoch, in regard to which we possess hardly any trustworthy information. Having impoverished himself by his journeys, he is said to have avoided the fate of the improvident by giving readings of some of his own works (Philo, *Provid.* ii. 13, p. 52, Auch.; Diog. ix. 39 sq.; Dio Chrys. *Or.* 54, 2, p. 280 R; Athen. iv. 168 b; Interpr. Horat. on *Epist.* i. 12, 12); others relate that he neglected his property (a story which is also told of Anaxagoras and Thales); but silenced those who censured him by his speculations with oil presses (Cic. *Fin.* v. 29, 87; Horat. *Ep.* i. 12, 12, and the scholia on these texts, Plin. *H. N.* xviii. 28, 273; Philo. *Vit. Contempl.* 891 C, Hösch. and after him Lactant, *Inst.* iii. 23). Valer. *l. c.* says he gave the greater part of his countless riches to the state, that he might live more undisturbedly for wisdom. It is questionable, however, whether there is any foundation even for the first of these assertions; or for the statement (Antisth. ap. Diog. ix. 38, where the suggestion of Mullach, p. 64, to substitute τάρφεσι for τάφοις seems to me a mistake; Lucian, *Philopseud.* c. 32) that he lived among tombs and desert places; not to mention the story of his voluntary blindness (Gell. *N. A. X.* 17; Cic. *Fin. l. c. Tusc.* v. 39, 114; Tertull. *Apologet.* c. 46. Cf. on the other hand Plut. *Curiosit.* c. 12, p. 521 sq.), which was perhaps occasioned by his observations on the untrustworthiness of the senses (cf. Cic. *Acad.* ii. 23, 74, where the expression *excæcare, sensibus orbare* is employed for this view). The assertion of Petronius, *Sat.* c. 88, p. 424, Burm., that he spent his life in enquiries into natural science, sounds more credible; with this is connected the anecdote ap. Plut. *Qu. Conv.* i. 10, 2, 2. It may also be true that he was regarded with great veneration by his countrymen, and received from them the surname of σοφία (Clem. *Strom.* vi. 631 D; Ælian, *V. H.* iv. 20); that the dominion over his native city was given to him is, on the contrary, most improbable (Suid. Δημόκρ.). Whether he was married we do not know; one anecdote, which seems to imply that he was so, has little evidence in its favour (Antonius, *Mel.* 609; Mullach, *Fr. Mor.* 180); but the contrary is certainly not deducible from his utterances about marriage (vide *infra*). The widespread statement that he laughed at everything (Sotion ap. Stob. *Floril.* 20, 53; Hor. *Ep.* ii. 1, 194 sqq.; Juvenal, *Sat.* x. 33 sqq.; Sen. *De Ira*, ii. 10; Lucian, *Vit. Auct.* c. 13; Hippol. *Refut.* i. 12; Ælian, *V. H.* iv. 20, 29; Suid. Δημόκρ.; see, on the contrary, *Democr. Fr. Mor.* 167) proclaims itself at once as an idle fabrication; what we are told of the magic and prognos-

nomena, of birth and decay, of motion and multiplicity, by admitting that side by side with Being, or the Plenum,

tications of this philosopher, is equally absurd (vide *supra*, and Plin. *H. N.* xviii. 28, 273, 35, 341; Clem. *Strom.* vi. 631 D; Diog. ix. 42; Philostr. *Apoll.* viii. 7, 28). His supposed connection with Hippocrates has likewise given rise to many inventions; according to Cels. *De Medic. Præf.* Ps.-Soran.; *v. Hippocr.* (*Opp. ed. Kühn*, iii. 850), Hippocrates was represented by many as his disciple. Already even in Diog. ix. 42; Ælian, *V. H.* iv. 20; Athenag. *Suppl.* c. 27—we can trace the beginning of the legend which subsequently, in the supposed letters of the two men, was carried out into the wildest extravagances: vide Mullach, 74 sqq. Lastly, the various statements as to the end of Democritus—ap. Diog. ix. 43; Athen. ii. 46 e; Lucian, *Macrob.* c. 18; M. Aurel. iii. 3, &c. (vide Mullach, 89 sqq.)—are also untrustworthy. Even the more general assertion of Lucretius, iii. 1037 sqq., that feeling the weakness of old age, he voluntarily put an end to his life, is far from certain.

Surpassing all his predecessors and contemporaries in wealth of knowledge, and most of them in acuteness and consecutiveness of thought, Democritus, by the combination of these excellences, became the direct precursor of Aristotle, who frequently quotes and makes use of him, and speaks of him with unmistakeable approval. (Authorities will be given later on. Theophrastus and Eudemus likewise paid much attention to Democritus, as Papencordt shows, *l. c.* p. 21.) His multifarious writings, judging from the titles and fragments that have come down to us, must have embraced mathematical, physical, ethical, grammatical and technical subjects. Diogenes, i. 16, mentions him as one of the most prolific of philosophic authors; and we have no right to substitute for his name, in this text, the name of Demetrius (Phalereus), as Nietzsche, *Rh. Mus.* xxv. 220 sq., does; for the same Diogenes, ix. 45 sqq., after Thrasyllus, specifies no fewer than fifteen Tetralogies of Democritus's writings, among which physical subjects occupy the largest space. Besides these, a number of spurious writings are mentioned; and most likely there are many such, even among those reputed genuine (Suid. Δημόκρ. only allows the authenticity of two). At any rate, the name of Thrasyllus is no more a guarantee for the contrary, in the case of Democritus, than in that of Plato. Cf. Burchard, *Fragm. d. Mor. d. Dem.* 16 sq. Rose, *De Arist. lib. ord.* 6 sq., believes that forgeries of writings under the name of Democritus began at a very early date, and declares the whole of the ethical writings to be spurious. Lortzing, *l. c.*, more cautiously, decides that two ethical treatises, π. εὐθυμίης and ὑποθῆκαι, are genuine, and the source of most of our moral fragments; the rest he either rejects or mistrusts. The statements of the ancients as to particular works will be found in Heimsöth, p. 41 sq.; Mullach, 93 sqq.; concerning the catalogue of Diogenes, cf. also Schleiermacher's *Abhandlung v. J.* 1815; *Werke*, 3te. Abth. iii. 193 sqq. The fragments of these works (of which the greater number, many of them doubtful or spurious, belong to the ethical writings) are to be found ap. Mullach. Cf. Burchard and Lortzing in the works quoted; B. Ten Brinck in the *Philol.* vi. 577 sqq.; viii. 414 sqq. On account of his elevated and often poetical language, Democritus is compared by Cicero, *Orat.* 20, 67; *De Orat.* i. 11, 49, with Plato. He also, *Divin.* ii. 64, 133, praises the clearness of his exposition; while Plut. *Qu. Conv.* v. 7, 6, 2, admires its lofty flight. Even Timon, ap. Diog. ix. 40, speaks of him with respect; and Dionys. *De Compos. Verb.* c. 24, places him beside Plato and Aristotle as a pattern philosophical writer (cf. also Papencordt, p. 19 sq.; Burchard, *Fragm. d. Moral. d. Dem.* 5 sqq.). His writings, which Sextus still possessed, were no longer in existence when Simplicius wrote (vide Papencordt, p. 22). The extracts of Stobæus are certainly taken from older collections.

[1] *De Gen. et Corr.* i. 8 (*supra*, p. 133, 3), ὁδῷ δὲ μάλιστα καὶ περὶ πάντων ἑνὶ λόγῳ διωρίκασι Λεύκιππος καὶ Δημόκριτος (this, however, does not mean that Leucippus and Democritus agree in every respect with each other, but that they explained all phenomena in a strictly scientific manner from the same principles) ἀρχὴν ποιησάμενοι κατὰ φύσιν ἥπερ ἐστίν. ἐνίοις γὰρ τῶν ἀρχαίων ἔδοξε τὸ ὂν ἐξ ἀνάγκης ἓν εἶναι καὶ ἀκίνητον etc. (Vol. I. 632, 2) . . . Λεύκιππος δ' ἔχειν φήθη λόγους οἵ τινες πρὸς τὴν αἴσθησιν ὁμολογούμενα λέγοντες οὐκ ἀναιρήσουσιν οὔτε γένεσιν οὔτε φθορὰν οὔτε κίνησιν καὶ τὸ πλῆθος τῶν ὄντων. ὁμολογήσας δὲ ταῦτα μὲν τοῖς φαινομένοις, τοῖς δὲ τὸ ἓν κατασκευάζουσιν, ὡς οὔτε ἂν κίνησιν οὖσαν ἄνευ κενοῦ τό τε κενὸν μὴ ὄν, καὶ τοῦ ὄντος οὐθὲν μὴ ὂν φησιν εἶναι· τὸ γὰρ κυρίως ὂν παμπληθὲς ὂν ἀλλ' εἶναι τὸ τοιοῦτον οὐχ ἕν, ἀλλ' ἄπειρα τὸ πλῆθος καὶ ἀόρατα διὰ σμικρότητα τῶν ὄγκων. ταῦτα δ' ἐν τῷ κενῷ φέρεσθαι (κενὸν γὰρ εἶναι), καὶ συνιστάμενα μὲν γένεσιν ποιεῖν, διαλυόμενα δὲ φθοράν. ποιεῖν δὲ καὶ πάσχειν ᾗ τυγχάνουσιν ἁπτόμενα· ταύτῃ γὰρ οὐχ ἓν εἶναι. καὶ συντιθέμενα δὲ καὶ περιπλεκόμενα γεννᾶν· ἐκ δὲ τοῦ κατ' ἀλήθειαν ἑνὸς οὐκ ἂν γενέσθαι πλῆθος, οὐδ' ἐκ τῶν ἀληθῶς πολλῶν ἕν, ἀλλ' εἶναι τοῦτ' ἀδύνατον, ἀλλ' ὥσπερ Ἐμπεδοκλῆς καὶ τῶν ἄλλων τινές φασι πάσχειν διὰ πόρων, οὕτω πᾶσαν ἀλλοίωσιν καὶ πᾶν τὸ πάσχειν τοῦτον γίνεσθαι τὸν τρόπον, διὰ τοῦ κενοῦ γινομένης τῆς διαλύσεως καὶ τῆς φθορᾶς, ὁμοίως δὲ καὶ τῆς αὐξήσεως ὑπεισδυομένων στερεῶν. Instead of the words in spaced type, I formerly conjectured καὶ τοῦ ὄντος ἧσσον τὸ μὴ ὂν φησιν εἶναι. Although we might appeal in support of this reading to the probable sense, and to the passages

there was also the non-Being or the Void. Being in fact on this theory is not merely one, but consists of an infinite number of small invisible bodies which move in the Void. On the combination and separation of these bodies, are founded Becoming and Decay, change, and the reciprocal action of things.[1] Leucippus and

Democritus therefore agree with Parmenides and Empedocles, that neither Becoming nor Decay, in the strict sense of the words, is possible;[1] they also allow (what indeed is the direct consequence of this),[2] that many cannot arise from One, nor One from many;[3] and that things can only be many if Being is divided by means of the non-existent or the Void:[4] finally, they assert that motion would be inconceivable[5] without the supposition of an empty space. But instead of inferring from thence, like the Eleatics, that multiplicity and change are merely appearance, they draw this opposite conclusion: as there are in truth many things which arise and decay, change and move, and as all this would be impossible without the supposition of the non-existent, a Being must likewise belong to the non-existent. They oppose the main principle of Parmenides that 'Non-Being is not,' with the bold statement that 'Being is in no respect more real than Non-Being,'[1] that something (τὸ δέν), as Democritus says, is in no wise more real than nothing.[2] Being is conceived by them as by the Eleatics,[3] as the Plenum, Non-Being as the Void.[4] This proposition therefore asserts that

quoted *infra*, p. 217, 1, from Aristotle and Simplicius, yet the traditional reading appears to me equally admissible if we interpret the words καὶ—εἶναι, 'he allows that nothing existent can be non-existent.' It is still simpler to read (with Codex E), in the immediately preceding context, ὡς οὐκ ἂν κίν. οὖς, &c., then the apodosis begins with τό τε κενὸν, and the explanation presents no difficulty. Prantl, in his edition, introduces ποιεῖ κενὸν μὴ ὂν after "τό τε κενὸν μὴ ὄν," which seems to me too great a departure from the MS., and also to have little resemblance with the style of Aristotle. Cf. Simpl. *l. c.*, who in his account probably follows Theophrastus. Philop. *in h. l.* p. 35 b sq., gives us nothing new.

[1] Arist. *Phys.* iii. 4, 203 a, 33: Δημόκριτος δ' οὐδὲν ἕτερον ἐξ ἑτέρου γίγνεσθαι τῶν πρώτων φησίν. Alex. in *Metaph.* iv. 5, 1009 a, 26, p. 260, 24, Bon. of Democritus: ἡγούμενος δὲ μηδὲν γίνεσθαι ἐκ τοῦ μὴ ὄντος. Diog. ix. 44: μηδέν τ' ἐκ τοῦ μὴ ὄντος γίνεσθαι καὶ εἰς τὸ μὴ ὂν φθείρεσθαι. Stob. *Ecl.* i. 414: Δημόκριτος, &c., συγκρίσεις μὲν καὶ διακρίσεις εἰσάγουσι, γενέσεις δὲ καὶ φθορὰς οὐ κυρίως. οὐ γὰρ κατὰ τὸ ποιὸν ἐξ ἀλλοιώσεως, κατὰ δὲ τὸ ποσὸν ἐκ συναθροισμοῦ ταύτας γίγνεσθαι.

[2] Cf. Vol. I. p. 586, 2; 587, 2.

[3] Vide p. 215, 1, and Arist. *De Cœlo*, iii. 4, 303 a, 5: φασὶ γὰρ (Λεύκ. καὶ Δημόκρ.) εἶναι τὰ πρῶτα μεγέθει πλήθει μὲν ἄπειρα μεγέθει δὲ ἀδιαίρετα, καὶ οὔτ' ἐξ ἑνὸς πολλὰ γίγνεσθαι οὔτε ἐκ πολλῶν ἕν, ἀλλὰ τῇ τούτων συμπλοκῇ καὶ περιπλέξει πάντα γεννᾶσθαι. *Metaph.* vii. 13, 1039 a, 9: ἀδύνατον γὰρ εἶναί φησιν (Democritus) ἐκ δύο ἓν ἢ ἐξ ἑνὸς δύο γενέσθαι· τὰ γὰρ μεγέθη τὰ ἄτομα τὰς οὐσίας ποιεῖ. Pseudo-Alex. *in h. l.* 495, 4 Bon.: ὁ Δημόκριτος ἔλεγεν ὅτι ἀδύνατον ἐκ δύο ἀτόμων μίαν γενέσθαι (ἀπαθεῖς γὰρ αὐτὰς ὑπετίθετο) ἢ ἐκ μιᾶς δύο (ἀτμήτους γὰρ αὐτὰς ἔλεγεν). Similarly, Simpl. *De Cœlo*, 271 a, 33 f, 133 a, 18 f (*Schol.* 514 a, 4, 488 a, 26).

[4] Arist. *Gen. et Corr. l. c.*; *Phys.* i. 3, vide *sup.* Vol. I. p. 618, 1; *Phys.* iv. 6, 213 a, 31 (against the attempts made by Anaxagoras to confute the theory of empty space): οὔκουν τοῦτο δεῖ δεικνύναι, ὅτι ἔστι τι ὁ ἀὴρ, ἀλλ' ὅτι οὐκ ἔστι διάστημα ἕτερον τῶν σωμάτων, οὔτε χωριστὸν οὔτε ἐνεργείᾳ ὄν, ὃ διαλαμβάνει τὸ πᾶν σῶμα ὥστ' εἶναι μὴ συνεχὲς, καθάπερ λέγουσι Δημόκριτος καὶ Λεύκιππος καὶ ἕτεροι πολλοὶ τῶν φυσιολόγων. Compare what is quoted from Parmenides, Vol. I. p. 586, 1; 587, 2.

[5] Arist. *Gen. et Corr. l. c.*; *Phys. l. c.* 213 b, 4: λέγουσι δ' ἔν μὲν (in the first place) ὅτι κίνησις ἡ κατὰ τόπον οὐκ ἂν εἴη (αὕτη δ' ἐστὶ φορὰ καὶ αὔξησις)· οὐ γὰρ ἂν δοκεῖν εἶναι κίνησιν, εἰ μὴ εἴη κενόν. ('It appears that no motion would be possible;' not as Grote, *Plato* i. 70, understands it: 'motion could not seem to be present.') Democritus's argument for this proposition will immediately be examined; and the relation of the Atomistic theories of the Void to those of Melissus later on.

[1] Arist. *Metaph.* i. 4, 985 b, 4: Λεύκιππος δὲ καὶ ὁ ἑταῖρος αὐτοῦ Δημόκριτος στοιχεῖα μὲν τὸ πλῆρες καὶ τὸ κενὸν εἶναί φασι, λέγοντες τὸ μὲν ὂν, τὸ δὲ μὴ ὂν, τούτων δὲ τὸ μὲν πλῆρες καὶ στερεὸν τὸ ὄν, τὸ δὲ κενὸν γε καὶ μανὸν τὸ μὴ ὄν (διὸ καὶ οὐθὲν μᾶλλον τὸ ὂν τοῦ μὴ ὄντος εἶναί φασιν ὅτι οὐδὲ τὸ κενὸν τοῦ σώματος), [Schwegler *in h. l.* suggests τοῦ κενοῦ τὸ σῶμα, or τὰ σώματα, which perhaps is better] αἴτια δὲ τῶν ὄντων ταῦτα ὡς ὕλην. Simpl. *Phys.* 7 a (no doubt after Theophrast.): τὴν γὰρ τῶν ἀτόμων οὐσίαν ναστὴν καὶ πλήρη ὑποτιθέμενος ὃν ἔλεγεν εἶναι καὶ ἐν τῷ κενῷ φέρεσθαι, ὅπερ μὴ ὂν ἐκάλει καὶ οὐκ ἔλαττον τοῦ ὄντος εἶναι φησί. Leucippus is the subject of the sentence.

[2] Plut. *Adv. Col.* 4, 2, p. 1109: (Δημόκριτος) διορίζεται μὴ μᾶλλον τὸ δὲν ἢ τὸ μηδὲν εἶναι· δὲν μὲν ὀνομάζων τὸ σῶμα μηδὲν δὲ τὸ κενὸν, ὡς καὶ τούτου φύσιν τιὰ καὶ ὑπόστασιν ἰδίαν ἔχοντες. The word δέν, which subsequently became obsolete (as the German Ichts is now), is also found in Alcæus, *Fr.* 76, Bergk. In Galen's account, *De Elem. Sec.* Hipp. i. 2, t. i. 418 Kühn, it is supposed, with some probability, that ἓν should be replaced by δέν.

[3] *Supra*, Vol. I. 588 sq.

[4] *Sup.* notes 1 and 2 and p. 215, 1; Arist. *Phys.* i. 5 init.: πάντες δὲ τἀναντία ἀρχὰς ποιοῦσιν . . . καὶ Δημόκριτος τὸ στερεὸν καὶ κενὸν, ὧν

all things consist of the matter which fills space, and empty space itself.[1] These two cannot, however, be merely side by side, if phenomena are to be explained by reference to them; they are necessarily in one another, so that the Plenum is divided by the Vacuum, and Being by non-Being, and through the changing relation of their parts, the multiplicity and change of things is made possible.[2] That this division cannot go on to infinity, and that consequently indivisible atoms must be supposed to be the ultimate constituents of all things, Democritus proved with the observation

τὸ μὲν ὡς ὄν, τὸ δ' ὡς οὐκ ὂν εἶναί φησιν. *Metaph.* iv. 5, 1009 a, 23: καὶ Ἀναξαγόρας μεμῖχθαι πᾶν ἐν παντί φησι καὶ Δημόκριτος· καὶ γὰρ οὗτος τὸ κενὸν καὶ τὸ πλῆρες ὁμοίως καθ' ὁτιοῦν ὑπάρχειν μέρος, καίτοι τὸ μὲν ὂν τούτων εἶναι τὸ δὲ μὴ ὄν, not to mention later writers. According to Theophrastus (*sup.* p. 217, 1), Leucippus used the word ναστὸν (= στερεὸν) for the Void. Simpl. *De Cœlo*, 133 a, 8, *Schol.* 488 a, 18, asserts this still more distinctly of Democritus: Δημόκρ. ἡγεῖται τὴν τῶν ἀϊδίων φύσιν εἶναι μικρὰς οὐσίας, πλῆθος ἀπείρους, ταύταις δὲ τόπον ἄλλον ὑποτίθησιν ἄπειρον τῷ μεγέθει, προσαγορεύει δὲ τὸν μὲν τόπον τοῖσδε τοῖς ὀνόμασι, τῷ τε κενῷ καὶ τῷ οὐδενὶ καὶ τῷ ἀπείρῳ, τῶν δὲ οὐσιῶν ἑκάστην τῷ τῷδε καὶ τῷ ναστῷ καὶ τῷ ὄντι. *Ibid.* 271 a, 33; *Schol.* 514 a, 4, and *inf.* p. 220, 3; Alex. *ad Metaph.* 985 b, 4, p. 27, 3 Bon.: πλῆρες δὲ ἔλεγον τὸ σῶμα τὸ τῶν ἀτόμων διὰ ναστότητά τε καὶ ἀμιξίαν τοῦ κενοῦ. According to Theod. *Cur. Gr. Aff.* iv. 9, p. 57, Democritus used ναστὰ to express the atoms, Metrodorus ἀδιαίρετα. Epicurus ἄτομα; we shall find, however, *infra*, p. 219, 3, that ἄτομα is used likewise by Democritus. Stobæus, *Ecl.* i. 306: Δημόκρ. τὰ ναστὰ καὶ κενά; similarly i. 348. Cf. Mullach, p. 142.

[1] According to Arist. *Phys.* iv. 6, 213 b, the arguments of Democritus in favour of empty space were as follows: (1) Movement can take place only in the Void; for the Full cannot admit anything else into itself (this is further supported by the observation that if two bodies could be in the same space, innumerable bodies would necessarily be there, and the smallest body would be able to include the greatest); (2) Rarefaction and condensation can only be explained by empty space (cf. c. 9 init.); (3) The only explanation of growth is that nourishment penetrates into the empty spaces of the body; (4) Lastly, Democritus thought he had observed that a vessel filled with ashes holds as much water as when it is empty, so that the ashes must disappear into the empty interspaces of the water.

[2] Cf. Arist. *Metaph.* iv. 5 (*sup.* 217, 4); *Phys.* iv. 6; Themist. *Phys.* 40 b, p. 284 Sp.

already supplied to him by Zeno,[1] that an absolute division would leave no magnitude remaining, and therefore nothing at all.[2] Irrespectively of this, however, the hypothesis was required by the concept of Being which the Atomists had borrowed from the Eleatics; for, according to this concept, Being can only be defined as indivisible unity. Leucippus and Democritus accordingly suppose the corporeal to be composed of parts incapable of further division; all consists, they say, of Atoms and the Void.[3]

All the properties which the Eleatics ascribed to Being are then transferred to the Atoms. They are

[1] *Supra*, Vol. I. p. 614 sq.

[2] Arist. *Phys.* i. 3 (cf. Vol. I. 618, 1); *Gen. et Corr.* i. 2, 316 a, 13 sqq.; where the fundamental thought of the argument given in the text undoubtedly belongs to Democritus, even if the dialectical development of it may partly originate with Aristotle. In the previous context Aristotle says, and this deserves to be quoted in proof of his respect for Democritus, that the Atomistic doctrine of Democritus and Leucippus has much more in its favour than that of the *Timæus* of Plato: αἴτιον δὲ τοῦ ἐπ' ἔλαττον δύνασθαι τὰ ὁμολογούμενα συνορᾶν (sc. τὸν Πλάτωνα) ἡ ἀπειρία. διὸ ὅσοι ἐνῳκήκασι μᾶλλον ἐν τοῖς φυσικοῖς μᾶλλον δύνανται ὑποτίθεσθαι τοιαύτας ἀρχὰς αἳ ἐπὶ πολὺ δύνανται συνείρειν· οἱ δ' ἐκ τῶν πολλῶν λόγων ἀθεώρητοι τῶν ὑπαρχόντων ὄντες, πρὸς ὀλίγα βλέψαντες ἀποφαίνονται ῥᾳον. ὅσοι δ' ἂν τις καὶ ἐκ τούτων, ὅσον διαφέρουσιν οἱ φυσικῶς καὶ λογικῶς σκοποῦντες· περὶ γὰρ τοῦ ἄτομα εἶναι μεγέθη οἱ μέν φασιν ὅτι τὸ αὐτοτρίγωνον πολλὰ ἔσται, Δημόκριτος δ' ἂν φανείη οἰκείοις καὶ φυσικοῖς λόγοις πεπεῖσθαι. Philop. *Gen. et Corr.* 7 a, 8 b, seems to have no other authority than Aristotle.

[3] Democr. *Fr. Phys.* 1 (ap. Sext. *Math.* vii. 135; *Pyrrh.* i. 213 sq.; Plut. *Adv. Col.* 8, 2; Galen, *De Elem. Sec. Hipp.* i. 2; i. 417 K): νόμῳ γλυκὺ καὶ (καὶ should no doubt be omitted) νόμῳ πικρόν, νόμῳ θερμόν, νόμῳ ψυχρόν, νόμῳ χροιή· ἐτεῇ δὲ ἄτομα καὶ κενόν, ἅπερ νομίζεται μὲν εἶναι καὶ δοξάζεται τὰ αἰσθητὰ, οὐκ ἔστι δὲ κατὰ ἀλήθειαν ταῦτα, ἀλλὰ τὰ ἄτομα μόνον καὶ κενόν. Further references are unnecessary. That the term ἄτομα or ἄτομοι (οὐσίαι) was used by Democritus, and even by Leucippus, is clear from this fragment, and also from Simpl. *Phys.* 7 a, 8 a; Cic. *Fin.* i. 6, 17; Plut. *Adv. Col.* 8, 4 sq. (vide p. 220, 4). Elsewhere they are also called ἰδέαι or σχήματα (vide *inf.* 220, 4), in opposition to the Void, ναστὰ (p. 223, 3), and as the primitive substances, according to Simp. *Phys.* 310 a, apparently also φύσις; the latter, however, seems to be a misconception.

underived and imperishable, for the primitive constituents of all things cannot have arisen from anything else, and nothing can resolve itself into nothing.[1] They are completely filled, and contain no empty space;[2] and are consequently indivisible; for division and plurality are only possible where Being or the Plenum is divided by Non-Being or the Vacuum; in a body which has absolutely no empty space, nothing can penetrate by which its parts can be divided.[3] For the same reason in their internal constitution and nature they are subject to no change, for Being as such is unchangeable; that which contains no kind of Non-Being must therefore remain always the same. Where there are no parts, and no empty interspaces, no displacement of parts can occur; that which allows nothing to penetrate into it can be effected by no external influence and experience no change of substance.[4] The Atoms are

[1] Vide p. 216, 1; Plut. *Plac.* i. 3, 28. To prove that all things are not derived, Democritus appeals to the fact that time is without beginning, Arist. *Phys.* viii. 1, 251 b, 15.

[2] Arist. *Gen. et Corr.* i. 8 (*sup.* p. 215, 1): τὸ γὰρ κυρίως ὂν παμπλῆθὲς ὄν. Philop. *in h. l.* 36 a: the indivisibility of the atoms was thus proved by Leucippus: ἕκαστον τῶν ὄντων ἔστι κυρίως ὄν· ἐν δὲ τῷ ὄντι οὐδέν ἐστιν οὐκ ὄν, ὥστε οὐδὲ κενόν. εἰ δὲ οὐδὲν κενὸν ἐν αὐτοῖς, τὴν δὲ διαίρεσιν ἄνευ κενοῦ ἀδύνατον γενέσθαι, ἀδύνατον ἄρα αὐτὰ διαιρεθῆναι.

[3] Arist. *Metaph.* vii. 13; *De Cœlo*, iii. 4; *sup.* p. 216, 3; *Gen. et Corr.* i. 8, 325 b, 5: σχεδὸν δὲ καὶ Ἐμπεδοκλεῖ ἀναγκαῖον λέγειν ὥσπερ καὶ Λεύκιππός φησιν· εἶναι γὰρ ἅπτα στερεὰ, ἀδιαίρετα δὲ, εἰ μὴ πάντη πόροι συνεχεῖς εἰσιν. Philop.; vide previous note. His statement, however, is not to be regarded as independent historical evidence, but merely as his own emendation of that of Aristotle (vide Vol. I. p. 632, 2). Simpl. *De Cœlo*, 109 b, 43; *Schol. in Arist.* 484 a, 24: ἔλεγον γὰρ οὗτοι (Leucipp. and Democrit.) ἀπείρους εἶναι τῷ πλήθει τὰς ἀρχὰς, ἃς καὶ ἀτόμους καὶ ἀδιαιρέτους ἐνόμιζον καὶ ἀπαθεῖς διὰ τὸ παντὰς εἶναι καὶ ἀμοίρους τοῦ κενοῦ. Cic. *Fin.* i. 6, 17: *corpora individua propter soliditatem*, cf. p. 216, 4; 217, 1. As indivisible magnitude unbroken by no interspace, every atom is ἓν ξυνεχές, as the Being of the Eleatics, the indivisibility of which Parmenides had also proved from its absolute homogeneousness, vide Vol. I. 586, 1; 585, 2.

[4] Vide *sup.* p. 215, 1; 216, 3; lastly, according to their substance, absolutely simple and homogeneous;[1] for, in the first place, on this condition only, as Democritus believes, could they work upon each other;[2] and secondly, as Parmenides had

Arist. *De Cœlo*, iii. 7 (*sup.* p. 125, 1); *Gen. et Corr.* i. 8, 325 a, 36: ἀναγκαῖον ἀπαθές τε ἕκαστον λέγειν τῶν ἀδιαιρέτων, οὐ γὰρ οἷόν τε πάσχειν ἀλλ' ἢ διὰ τοῦ κενοῦ. Plut. *Adv. Col.* 8, 4: τί γὰρ λέγει Δημόκριτος; οὐσίας ἀπείρους τὸ πλῆθος ἀτόμους τε καὶ ἀδιαφόρους ἔτι δ' ἀποίους καὶ ἀπαθεῖς ἐν τῷ κενῷ φέρεσθαι διεσπαρμένας· ὅταν δὲ πελάσωσιν ἀλλήλαις, ἢ συμπέσωσιν ἢ περιπλακῶσι, φαίνεσθαι τῶν ἀθροιζομένων τὸ μὲν ὕδωρ, τὸ δὲ πῦρ, τὸ δὲ φυτὸν, τὸ δ' ἄνθρωπον· εἶναι δὲ πάντα τὰς ἀτόμους ἰδέας (al. ἰδίως) ὑπ' αὐτοῦ καλουμένας, ἕτερον δὲ μηδέν· ἐκ μὲν γὰρ τοῦ μὴ ὄντος οὐκ εἶναι γένεσιν, ἐκ δὲ τῶν ὄντων μηδὲν ἂν γενέσθαι τῷ μήτε πάσχειν μήτε μεταβάλλειν τὰς ἀτόμους ὑπὸ στερρότητος, ὅθεν οὔτε χρόαν ἐξ ἀχρώστων, οὔτε φύσιν ἢ ψυχὴν ἐξ ἀποίων καὶ [ἀψύχων] ὑπάρχειν (and, therefore, since they are colourless, no colour can arise from them, and since they are without properties and without life, no φύσις or soul: so far, that is, as we have respect to the essence of things, and not merely to the phenomenon). Galen. *De Elem. Sec. Hipp.* i. 2, t. i. 418 sq. K: ἀπαθῆ δ' ὑποτίθενται τὰ σώματα εἶναι τὰ πρῶτα . . . οὐδ' ἀλλοιοῦσθαι κατά τι δυνάμενα ταύτας δὴ τὰς ἀλλοιώσεις, ἃς ἅπαντες ἄνθρωποι πεπιστεύκασιν εἶναι . . . οἷον οὔτε θερμαίνεσθαί τί φασιν ἐκείνων οὔτε ψύχεσθαι, κ.τ.λ. (*sup.* p. 220, 1) μήτ' ἄλλην τινὰ ὅλως ἐπιδέχεσθαι ποιότητα κατὰ μηδεμίαν μεταβολήν. Diog. ix. 44: ἐξ ἀτόμων . . . ἅπερ εἶναι ἀπαθῆ καὶ ἀναλλοίωτα διὰ τὴν στερρότητα. Simpl.; vide previous note.

[1] Arist. *Phys.* iii. 4; Philop. u. Simpl. *in h. l.* cf. *infra*, p. 224, 2; Arist. *De Cœlo*, i. 7, 275 b, 29: εἰ δὲ μὴ συνεχὲς τὸ πᾶν, ἀλλ' ὥσπερ λέγει Δημόκριτος καὶ Λεύκιππος διωρισμένα τῷ κενῷ, μίαν ἀναγκαῖον εἶναι πάντων τὴν κίνησιν. διώρισται μὲν γὰρ τοῖς σχήμασιν· τὴν δὲ φύσιν εἶναί φασιν αὐτῶν μίαν, ὥσπερ ἂν εἰ χρυσὸς ἕκαστον εἴη κεχωρισμένον. Aristotle consequently calls the Atoms (*Phys.* i. 2, 184 b, 21): τὸ γένος ἕν, σχήματι δὲ ἢ εἴδει διαφερούσας ἢ καὶ ἐναντίας. Simpl. *in h. l.* 10 a, 1: ὁμογενεῖς καὶ ἐκ τῆς αὐτῆς οὐσίας. Id. *ibid.* 35 b, m: τὸ εἶδος αὐτῶν καὶ τὴν οὐσίαν ἓν καὶ ὡρισμένον. Id. *De Cœlo*, 111 a, 5; *Schol. in Arist.* 484 a, 34: ἀτόμους ὁμοίας τὴν φύσιν (ὁμοιοφυεῖς Karst.).

[2] Arist. *Gen. et Corr.* i. 7, 323 b, 10: Δημόκριτος δὲ παρὰ τοὺς ἄλλους ἰδίως ἔλεξε μόνος (on the ποιεῖν and πάσχειν). φησὶ γὰρ τὸ αὐτὸ καὶ ὑμοιον εἶναι τό τε ποιοῦν καὶ πάσχον· οὐ γὰρ ἐγχωρεῖν τὰ ἕτερα καὶ διαφέροντα πάσχειν ὑπ' ἀλλήλων, ἀλλὰ κἂν ἕτερα ὄντα ποιῇ τι εἰς ἄλληλα, οὐχ ᾗ ἕτερα, ἀλλ' ᾗ ταὐτόν τι ὑπάρχει, ταύτῃ τοῦτο συμβαίνειν αὐτοῖς. Theophr. *De Sensu*, 49: ἀδύνατον δέ φησι [Δημόκρ.] τὸ [l. τὰ] μὴ ταὐτὰ πάσχειν, ἀλλὰ καὶ ἕτερα ὄντα ποιεῖν οὐχ ἕτερα [l. οὐχ ᾗ ἕτ.], ἀλλ' ἢ [l. ᾗ] ταὐτόν τι πάσχει τοῖς ὁμοίοις. That Democritus applied this principle in the manner mentioned above is not stated expressly, but is in itself probable. We found the same with

already shown,[1] this dissimilarity of one from another is a consequence of Non-Being; where pure Being without Non-Being is, there only one and the same constitution of this Being is possible. Our senses alone show us things qualitatively defined and distinct; to the primitive bodies themselves, the atoms, we must not ascribe any of these particular qualities, but merely that without which an existence, or a body, would not be thinkable.[2] In other words, Being is only the substance that fills space, matter as such, not matter defined in any particular manner; for all definition is exclusion, each determinate substance is not that which others are: it is, therefore, not merely a Being but a Non-Being. The Atomistic doctrine of Being in all these respects differs only from the Eleatic in transferring to the many particular substances that which Parmenides had said of the one universal substance or the universe.

But the homogeneousness and unchangeableness of the atoms must not be carried so far as to render the multiplicity and change of derived things impossible. If, therefore, our philosophers can admit no qualitative differences among the atoms, they must all the more insist that *quantitatively*, in regard to their form, their magnitude, and their reciprocal relations

Diogenes (Vol. I. 286, 2); and as Diogenes (according to Vol. I. 309, 2) borrowed from Leucippus, it is certainly possible that this weighty observation may have originally belonged to Leucippus.

[1] Vide Vol. I. p. 586, 1; cf. *supra*, 216, 4.

[2] Cf. p. 219, 3; Sext. *Math.* viii. 6. Democritus regards the immaterial alone as a real διὰ τὸ μηδὲν ὑποκεῖσθαι φύσει αἰσθητόν, τῶν τὰ πάντα συγκρινουσῶν ἀτόμων πάσης αἰσθητῆς ποιότητος ἔρημον ἐχουσῶν φύσιν. Plutarch and Galen, *l. c.*, with less exactitude, calls the atoms ἄποια. Further details will presently be given as to the qualities predicated or denied in regard to them.

in space, these atoms must be conceived as infinitely various. Democritus therefore declared that the atoms are distinguished from each other in regard to their shape, their order and their position:[1] differences of size and weight are likewise mentioned. The main distinction is that of shape, which, on that account, is often brought forward alone[2] and from which the atoms themselves are named forms.[3] The Atomistic philosophy goes on to maintain that not only the atoms but the differences of shape among the atoms must be infinite in number, partly because there is no reason why one shape should belong to them more than another; and partly because only on this supposition

[1] Arist. *Metaph.* i. 4, after the words quoted, p. 217, 1: καθάπερ οἱ ἓν ποιοῦντες τὴν ὑποκειμένην οὐσίαν τἄλλα τοῖς πάθεσιν αὐτῆς γεννῶσι . . . τὸν αὐτὸν τρόπον καὶ οὗτοι τὰς διαφορὰς αἰτίας τῶν ἄλλων εἶναί φασιν. ταύτας μέντοι τρεῖς εἶναι λέγουσι, σχῆμά τε καὶ τάξιν καὶ θέσιν. διαφέρειν γάρ φασι τὸ ὂν ῥυσμῷ καὶ διαθιγῇ καὶ τροπῇ μόνον· τούτων δὲ ὁ μὲν ῥυσμὸς σχῆμά ἐστιν, ἡ δὲ διαθιγὴ τάξις, ἡ δὲ τροπὴ θέσις· διαφέρει γὰρ τὸ μὲν A τοῦ N σχήματι, τὸ δὲ AN τοῦ NA τάξει, τὸ δὲ Z τοῦ N θέσει. The same is stated more briefly, *ibid.* viii. 2, init. The same differences among the atoms are mentioned by Arist. *Phys.* i. 5, init.; *Gen. et Corr.* i. 1, 314 a, 21 c, 2, 315 b, 33 c, 9, 327 a, 18. These statements are then repeated by his commentators: Alex. *Metaph.* 538 b, 15 Bekk. 27, 7 Bon.; Simpl. *Phys.* 7 a, 8 a, 68 b (*Schol.* 488 a, 18; Philop. *De An.* B, 14; *Phys.* C, 14; *Gen. et Corr.* 3 b, 7 a. Ῥυσμὸς, characterised by Philop. and Suid. as an expression peculiar to Abdera, is only another pronunciation of ῥυθμός. Diog. ix. 47 speaks of writings π. τῶν διαφερόντων ῥυσμῶν and π. ἀμειψιῤῥυσμιῶν.

[2] For example, by Aristotle, *Phys.* i. 2; *De Cœlo*, i. 7 (vide p. 221, 1); *Gen. et Corr.* i. 8, 325 b, 17: τοῖς μὲν γάρ ἐστιν ἀδιαίρετα τὰ πρῶτα τῶν σωμάτων, σχήματι διαφέροντα μόνον, and afterwards, 326 a, 14: ἀλλὰ μὴν ἄτοπον καὶ εἰ μηθὲν ὑπάρχει ἀλλ' ἢ μόνον σχῆμα.

[3] Plut. *Adv. Col. l. c.*; Arist. *Phys.* iii. 4, 203 a, 21: (Δημόκριτος) ἐκ τῆς πανσπερμίας τῶν σχημάτων (ἄπειρα ποιεῖ τὰ στοιχεῖα); *Gen. et Corr.* i. 2, see following note, and *inf.* p. 229, 4; *De An.* i. 2; cf. p. 226, *n.*; *De Respir.* c. 4, 472 a, 4, 15; Simpl. *Phys.* 7 a, vide p. 224, 1. Democritus had himself composed a work περὶ ἰδεῶν (Sext. *Math.* vii. 137), which, no doubt, treated of the form of the atom, or of the atoms generally. Hesychius says ἰδέα, no doubt after Democritus, and that it meant also τὸ ἐλάχιστον σῶμα, cf. Mullach, 135.

can it be explained that things are so infinitely diverse, are subject to so many changes and appear so differently to different people.[1] Further, the atoms are distinguished from each other as to size,[2] but it is not clear

[1] Arist. *Gen. et Corr.* i. 2, 315 b, 9: ἐπεὶ δ' ᾠοντο τἀληθὲς ἐν τῷ φαίνεσθαι, ἐναντία δὲ καὶ ἄπειρα τὰ φαινόμενα, τὰ σχήματα ἄπειρα ἐποίησαν, ὥστε ταῖς μεταβολαῖς τοῦ συγκειμένου τὸ αὐτὸ ἐναντίον δοκεῖν ἄλλῳ καὶ ἄλλῳ καὶ μετακινεῖσθαι μικροῦ ἐμμιγνυμένου καὶ ὅλως ἕτερον φαίνεσθαι ἑνὸς μετακινηθέντος· ἐκ τῶν αὐτῶν γὰρ τραγῳδία καὶ κωμῳδία γίνεται γραμμάτων. *Ibid.* c, 1, 314 a, 21: Δημόκριτος δὲ καὶ Λεύκιππος ἐκ σωμάτων ἀδιαιρέτων τἆλλα συγκεῖσθαί φασι, ταῦτα δ' ἄπειρα καὶ τὸ πλῆθος εἶναι καὶ τὰς μορφάς, αὐτὰ δὲ πρὸς αὐτὰ διαφέρειν (here τἆλλα is again the subject) τούτοις ἐξ ὧν εἰσι (the atoms of which they consist) καὶ θέσει καὶ τάξει τούτων. *Ibid.* c, 8, 325 b, 27: (Λεύκιππος) ἀπείροις ὡρίσθαι σχήμασι τῶν ἀδιαιρέτων στερεῶν ἕκαστον. *De Cœlo*, iii. 4, 303 a. 5, p. 216, 3; *ibid.* line 10: καὶ πρὸς τούτοις ἐπεὶ διαφέρει τὰ σώματα σχήμασιν (this is repeated at line 30), ἄπειρα δὲ τὰ σχήματα, ἄπειρα καὶ τὰ ἁπλᾶ σώματά φασιν εἶναι. *De An.* i. 2, 404 a, 1. The infinite number of the atoms is very often mentioned, *e.g.* Arist. *Phys.* iii. 4, 203 a, 19; *Gen. et Corr.* i. 8, 325 a, 30; Simpl. *Phys.* 7 a; Plut. *Adv. Col.* 8, 4; Diog. ix. 44 (who, however, clumsily adds that the atoms are also unlimited in size). Concerning their innumerable and manifold forms, σκαληνά, ἀγκιστρώδη, κοῖλα, κυρτά, &c., cf. Theophr. *De Sensu*, 65 sq.; Id. *Metaph.* (*Fr.* 34) 12, where he censures Democritus for the irregularity of the forms of his atoms; Cic. *N. D.* i. 24, 66; Alexander, ap. Philop. *Gen. et Corr.* 3 b; Plut. *Plac.* i. 3, 30 (the two last also remark the divergence of Epicurus on this point); cf. Part III. a, 375, second edition; Themist. *Phys.* 32 a (222 sp.); Philop. *De An.* B. 14; Simpl. *Phys.* 7 a, who gives as a reason for this definition, appealing to the utterances of the Atomists themselves: τῶν ἐν ταῖς ἀτόμοις σχημάτων ἄπειρον τὸ πλῆθός φασι διὰ τὸ μηδὲν μᾶλλον τοιοῦτον ἢ τοιοῦτον εἶναι (cf. Plut. *Col.* 4, 1: according to Colotes, Democritus maintained: τῶν πραγμάτων ἕκαστον οὐ μᾶλλον τοῖον ἢ τοῖον εἶναι), and previously, with Aristotle: τῶν σχημάτων ἕκαστον εἰς ἑτέραν ἐκκοσμούμενον σύγκρισιν ἄλλην ποιεῖν διάθεσιν· ὥστε εὐλόγως ἀπείρων οὐσῶν τῶν ἀρχῶν πάντα τὰ πάθη καὶ τὰς οὐσίας ἀποδώσειν ἐπηγγέλλοντο ὑφ' οὗ τε γίνεται καὶ πῶς. διὸ καί φασι μόνοις τοῖς ἄπειρα ποιοῦσι τὰ στοιχεῖα πάντα συμβαίνειν κατὰ λόγον. Id. *De Cœlo*, 133 a, 24, 271 a, 43 (*Schol.* 488 a, 32, 514 a, 4); cf. *infra*, p. 232 sq.; 245, 1.

[2] Arist. *Phys.* iii. 4. 203 a, 33: Δημόκριτος δ' οὐδὲν ἕτερον ἐξ ἑτέρου γίγνεσθαι τῶν πρώτων φησίν· ἀλλ' ὅμως γε αὐτὸ τὸ κοινὸν σῶμα πάντων ἐστὶν ἀρχή, μεγέθει κατὰ μόρια καὶ σχήματι διαφέρον, which is repeated by Philoponus, Simplicius, *in h. l.*, and others (*Schol. in Arist.* 362 b, 22 sq.); Simpl. *De Cœlo*, 110 a, 1; 133 a, 13 (*ibid.* 484 a, 27; 488 a, 22); *Gen. et Corr.* i. 8 (*inf.* p. 227, 1). Theophr. *De Sensu*, 60: Δημόκριτος . . . τὰ μὲν τοῖς μεγέθεσι, τὰ δὲ τοῖς σχήμασιν, ἔνια δὲ τάξει καὶ θέσει διορίζει. *Ibid.* 61, vide *infra* 226, 1. Plut. *Plac.* i. 3, 29; 4, 1.

how this distinction is related to the distinction of form.[1] For as the atoms are indivisible only because there is no vacuum in them, they are not mathematical points, but bodies of a certain magnitude,[2] and in this respect they may be as different as they are in form. Democritus, however, supposed that all atoms are too small to be perceived by our senses;[3] this he was compelled to

[1] On the one hand, as has just been shown, the form only is usually mentioned as that by which the atoms are distinguished from one another, and so we might suppose that a certain size was connected with each form (thus Philop. *De An.* c. 6, conjectures that Democritus regarded the spherical atoms as the smallest; because, among bodies of equal mass, those that are spherical have the smallest extent). On the other hand, among the atoms of like form, greater and smaller are distinguished, as we shall presently find, in respect to the round atoms; and conversely atoms of various forms are, on account of their agreement in size, included in one element. Arist. *De Cœlo*, iii. 4, 303 a, 12 (after the quotation on p. 224, 1): ποῖον δὲ καὶ τί ἑκάστου τὸ σχῆμα τῶν στοιχείων οὐθὲν ἐπιδιώρισαν, ἀλλὰ μόνον τῷ πυρὶ τὴν σφαῖραν ἀπέδωκαν· ἀέρα δὲ καὶ ὕδωρ καὶ τἆλλα μεγέθει καὶ μικρότητι διείλον, ὡς οὖσαν αὐτῶν τὴν φύσιν οἷον πανσπερμίαν πάντων τῶν στοιχείων; for they suppose that in them atoms of the most various forms are mingled.

[2] Galen (*De Elem. sec. Hipp.* i. 2 T. I. 418 K) says that Epicurus regarded the atoms as ἄθραυστα ὑπὸ σκληρότητος, Leucippus as ἀδιαίρετα ὑπὸ σμικρότητος. Simplicius, *Phys.* 216 a, says that Leucippus and Democritus considered that the indivisibility of primitive bodies arose not merely from their ἀπάθεια, but also from the σμικρὸν καὶ ἀμερές; Epicurus, on the contrary, did not hold them to be ἀμερῆ, but ἄτομα διὰ τὴν ἀπάθειαν. Similarly, in *De Cœlo*, 271 b, 1, *Schol.* 514 a, 14, they are spoken of as διὰ σμικρότητα καὶ ναστότητα ἄτομοι. This is a mistake (perhaps of the Epicureans); Aristotle's polemic against the atoms is directed against the mathematical atom as well (*De Cœlo*, iii. 4, 303 a, 20), but Democritus and Leucippus, as Simpl. *Phys.* 18 a, acknowledges, supposed, not that the atoms were mathematically indivisible, but, like Epicurus, that they were physically indivisible.

[3] Sext. *Math.* vii. 139: λέγει δὲ κατὰ λέξιν· "γνώμης δὲ δύο εἰσὶν ἰδέαι, ἡ μὲν γνησίη ἡ δὲ σκοτίη· καὶ σκοτίης μὲν τάδε ξύμπαντα, ὄψις, ἀκοή, ὀδμή, γεῦσις, ψαῦσις· ἡ δὲ γνησίη ἀποκεκρυμμένη [ἀποκεκριμένη] δὲ (?) ταύτης." εἶτα προκρίνων τῆς σκοτίης τὴν γνησίην ἐπιφέρει λέγων· "ὅταν ἡ σκοτίη μηκέτι δύνηται μήτε ὁρῆν ἐπ' ἔλαττον (see what is still smaller), μήτε ἀκούειν, μήτε ὀδμᾶσθαι, μήτε γεύεσθαι, μήτε ἐν τῇ ψαύσει αἰσθάνεσθαι, ἀλλ' ἐπὶ

assume because every substance perceptible to sense is divisible, changeable, and of determinate quality. But magnitude directly involves weight, for weight belongs to every body as such, and as all matter is homogeneous, it must equally belong to all bodies; so that all bodies of the same mass are of the same weight: the proportion of weight of particular bodies is therefore exclusively conditioned by the proportion of their masses, and corresponds entirely with this, and when a larger body appears to be lighter than a smaller one, this is only because it contains in it more empty space, and therefore its mass is really less than that of the other.[1]

λεπτότερον," there (the meaning must be) true knowledge enters: Arist. *Gen. et Corr.* i. 8 (*sup.* p. 215, 1); Simpl. *De Cœlo*, 133 a, 13 (*Schol.* 488 a, 22), &c. The atoms there are rightly called, in Plut. *Plac.* i. 3, 28, Stob. *Ecl.* i. 796, λόγῳ θεωρητά, though the expression may originally belong to Epicurus; and Aristotle, *Gen. et Corr.* i. 8, 326 a, 24, censures the Atomistic doctrine thus: ἄτοπον καὶ τὸ μικρὰ μὲν διαίρετα εἶναι μεγάλα δὲ μή. When Dionysius ap. Eus. *Pr. Ev.* xiv. 23, 3, says that Epicurus believed all atoms to be absolutely small and imperceptible to sense; whereas Democritus supposed some to be large; and Stob. *Ecl.* i. 348, asserts that Democritus thought it possible that an atom may be as large as a world—this is certainly erroneous. It would be more reasonable to infer from Arist. *De An.* i. 2, 404 a, 1, that the atoms were under certain circumstances visible. Aristotle here says of Democritus: ἀπείρων γὰρ ὄντων σχημάτων καὶ ἀτόμων τὰ σφαιροειδῆ πῦρ καὶ ψυχὴν λέγει, οἷον ἐν τῷ ἀέρι τὰ καλούμενα ξύσματα, ἃ φαίνεται ἐν ταῖς διὰ τῶν θυρίδων ἀκτῖσιν, and these words are too explicit to justify Philoponus (*De An.* B 14 *Gen. et Corr.* 9 b) in citing the motes of the sunbeam as an example of bodies which usually escape our senses. But if Democritus, in connection with a Pythagorean theory (*sup.* Vol. I. p. 476, 2), supposed that these motes consisted of similar atoms to the soul, he might still consider them as aggregations of those atoms, the particular constituents of which we cannot distinguish.

[1] These propositions, so important in regard to the subsequent theory of Nature, are an immediate consequence of the qualitative homogeneousness of all matter. The Atomists were aware of these consequences, as Aristotle shows (*De Cœlo*, iv. 2, 308 b, 35): τὰ δὲ πρῶτα καὶ ἄτομα τοῖς μὲν ἐπίπεδα λέγουσιν ἐξ ὧν συνέστηκε τὰ βάρος ἔχοντα τῶν σωμάτων (Plato) ἄτοπον τὸ φάναι, τοῖς δὲ στερεα μᾶλλον ἐνδέχεται λέγειν τὸ μεῖζον εἶναι βαρύτερον αὐτῶν· (Democritus does not say this, vide following note): τῶν δὲ συνθέτων, ἐπειδήπερ οὐ φαίνεται τοῦτον ἔχειν ἕκαστον τὸν τρόπον, ἀλλὰ πολλὰ βαρύτερα ὁρῶμεν ἐλάττω τὸν ὄγκον ὄντα, καθάπερ ὁρίου χαλκοῦ, ἕτερον τὸ αἴτιον οἴονταί τε καὶ λέγουσιν ἔνιοι (Atomists, no doubt Democritus) τὸ γὰρ κενὸν ἐμπεριλαμβανόμενον κουφίζειν τὰ σώματά φασι καὶ ποιεῖν ἔστιν ὅτε τὰ μείζω κουφότερα, πλεῖον γὰρ ἔχειν κενόν. διὰ τοῦτο γὰρ καὶ τὸν ὄγκον εἶναι μείζω συγκείμενα πολλάκις ἐξ ἴσων στερεῶν ἢ καὶ ἐλαττόνων. ὅλως δὲ καὶ παντὸς αἴτιον εἶναι τοῦ κουφοτέρου τὸ πλεῖον ἐνυπάρχειν κενόν . . . διὰ γὰρ τοῦτο καὶ τὸ πῦρ εἶναί φασι κουφότατον, ὅτι πλεῖστον ἔχει κενόν. Theophr. *De Sensu*, 61: βαρὺ μὲν οὖν καὶ κοῦφον τῷ μεγέθει διαιρεῖ Δημόκριτος, εἰ γὰρ διακριθείη ἓν ἕκαστον (the individual atoms), εἰ καὶ κατὰ σχῆμα διαφέροι (so that they cannot therefore be measured by one another), σταθμὸν ἂν ἐπὶ μεγέθει τὴν κρίσιν [so I read with Preller, *H. Phil. Gr.-rom.* § 84 for φύσιν] ἔχειν. οὐ μὴν ἀλλ' ἔν γε τοῖς μικτοῖς κουφότερον ἂν εἶναι τὸ πλέον ἔχον κενὸν, βαρύτερον δὲ τὸ ἔλαττον. ἐν ἐνίοις μὲν οὕτως εἴρηκεν· ἐν ἄλλοις δὲ κοῦφον εἶναί φησιν ἁπλῶς τὸ λεπτόν. The words εἰ γὰρ διακριθ.—σταθμὸν are partly based on my own conjecture, and partly on Mullach, p. 214, 346 sq. Various conjectural readings have been suggested to complete the text, by Schneider and Wimmer in their editions; Burchard, *Democr. Phil. de Sens.* 15; Philippson, Ὕλη ἀνθρωπίνη, 135; Papencordt, *Atom. Doctr.* 53; and Preller, *l. c.* The text itself stands thus: εἰ γὰρ διακριθῇ ἔνθεν ἕκαστον, εἰ καὶ κατὰ σχῆμα διαφέροι, διαφέρει σταθμὸν, etc. Cf. also Simpl. *De Cœlo*, 302 b, 35 (*Schol.* 516 b, 1); Alex. ap. Simpl. *ibid.* 306 b, 28 sq. (*Schol.* 517 a, 3).

[1] Vide previous note and Arist. *Gen. et Corr.* i. 8, 526 a, 9: καίτοι βαρύτερόν γε κατὰ τὴν ὑπεροχὴν φησιν εἶναι Δημόκριτος ἕκαστον τῶν ἀδιαιρέτων. Simpl. *De Cœlo*, 254 b, 27; *Schol. in Arist.* 510 b, 30; vide *infra*. Further details, p. 241.

[2] So Plut. *Plac.* i. 3, 29. Epicurus ascribed form, magnitude, and weight to the atoms: Δημόκριτος μὲν γὰρ ἔλεγε δύο, μέγεθός τε καὶ σχῆμα· ὁ δ' Ἐπίκουρος τούτοις καὶ τρίτον, τὸ βάρος, ἐτέθηκεν. Stob. i. 348 (cf. p. 225, 3): Δημόκρ. τὰ πρῶτά φησι σώματα, ταῦτα δ' ἦν τὰ ναστὰ, βάρος μὲν οὐκ ἔχειν, κινεῖσθαι δὲ κατ' ἀλληλοστυπίαν ἐν τῷ ἀπείρῳ. Cic. *De Fato*, 20, 46. Epicurus represented the atoms as moved by their weight, Democritus by impact. Alex. on *Metaph.* i. 4, 985 b, 4: οὐδὲ γὰρ πόθεν ἡ βαρύτης ἐν ταῖς ἀ-όμοις λέγουσι· τὰ γὰρ ἀμερῆ τὰ ἐπινοούμενα ταῖς ἀτόμοις καὶ μέρη ὄντα αὐτῶν ἀβαρῆ φασιν εἶναι. Alexander here appeals to the third book of Aristotle. π. οὐρανοῦ; but seems to refer what is said in the first

Thus the Atoms must have weight, and the same specific weight; but at the same time they must differ in weight quite as much as in magnitude.[1] This doctrine is of great importance for the Atomistic system: texts which maintain the contrary[2] are to be considered

erroneous. Concerning the differences of the atoms as to place and order, Democritus seems to have given no farther or more general definitions; at any rate, tradition has preserved nothing beyond what we have already quoted.[1]

The Void was conceived by the Atomists as unlimited; this was required, not only by the infinite number of the atoms, but also by the idea of empty space.[2] The atoms are comprehended by the Void,[3] and by it are separated from each other;[4] wherever therefore there is a combination of atoms, there necessarily is the Void; it is, like the Plenum, in all things.[5] This definition, however, was not so rigorously carried out by the founders of the Atomistic philosophy that they admitted no direct contact of the atoms with

chapter against the Platonic construction of the elements, wrongly, to Leucippus and Democritus, who admitted no parts in the atoms.

[1] The differences of place and form, which Aristotle enumerates (*Phys.* i. 5), he gives not in the name of Democritus, but in his own.

[2] Arist. *De Cœlo*, iii. 2, 300 b, 8: Λευκίππῳ καὶ Δημοκρίτῳ τοῖς λέγουσιν ἀεὶ κινεῖσθαι τὰ πρῶτα σώματα ἐν τῷ κενῷ καὶ τῷ ἀπείρῳ, λεκτέον τίνα κίνησιν καὶ τίς ἡ κατὰ φύσιν αὐτῶν κίνησις. Cic. *Fin.* i. 6 (*inf.*); Simpl. *Phys.* 144 b; *De Cœlo*, 91 b, 36, 300 b, 1 (*Schol.* 480 a, 38, 516 a, 37); Stob. *Ecl.* i. 380; Plut. *Plac.* i. 3, 28. According to Simpl. *Phys.* 133 a, Democritus distinguished from the Void, Space (τόπος), by which, like Epicurus after him (Part III. a, 373, second edition), he understood the distance between the ends of what surrounds a body (τὸ διάστημα τὸ μεταξὺ τῶν ἐσχάτων τοῦ περιέχοντος), a distance which is sometimes filled with a body and sometimes empty. But it is quite possible that Democritus, whose definitions are coupled by Simplicius with those of Epicurus, did not formulate his theory so exactly, *Phys.* 124 a. Simplicius says: τὸ γὰρ κενὸν τόπον εἶπεν ὁ Δημόκριτος. Similarly 89 b.

[3] Vide previous note, and p. 215, 1.

[4] Arist. *De Cœlo*, i. 7, 275 b, 29: εἰ δὲ μὴ συνεχὲς τὸ πᾶν, ἀλλ' ὥσπερ λέγει Δημόκριτος καὶ Λεύκιππος, διωρισμένα τῷ κενῷ. *Phys.* iv. 6 (cf. p. 216, 4) where there is also an allusion to the similar doctrine of the Pythagoreans.

[5] Arist. *Metaph.* iv. 5; *sup.* p. 217, 4, &c.

each other;[1] it was only the actual uniting of the atoms which they denied.[2]

According to these presuppositions, all qualities of things must be reduced to the amount, magnitude, form and relations in space, of the atoms of which they consist, and all change in things must be reduced to an altered combination of atoms.[3] A thing arises when a complex of atoms is formed; it passes away, when such a complex is dissolved; it changes when the place and position of the atoms is changed, or a portion of them is displaced by others; it augments when new atoms are added to the complex; it decreases when some atoms are separated from it.[4] Similarly all in-

[1] Cf. Arist. *Phys.* iii. 4, 203 a, 19: ὅσοι δ' ἄπειρα ποιοῦσι τὰ στοιχεῖα, καθάπερ Ἀναξαγόρας καὶ Δημόκριτος . . . τῇ ἁφῇ συνεχὲς τὸ ἄπειρον εἶναί φασιν. *Gen. et Corr.* i. 8 (*sup.* p. 215, 1): ποιεῖν δὲ καὶ πάσχειν ἢ τυγχάνουσιν ἁπτόμενα, *ibid.* 325 b, 29. Plato, as well as Leucippus, supposed the atoms to have a definite form: ἐκ δὴ τούτων αἱ γενέσεις καὶ αἱ διακρίσεις. Λευκίππῳ μὲν δύο τρόποι ἂν εἶεν [sc. τῆς γενέσεως καὶ διακρίσεως], διά τε τοῦ κενοῦ καὶ διὰ τῆς ἁφῆς (ταύτῃ γὰρ διαιρετὸν ἕκαστον), Πλάτωνι δὲ κατὰ τὴν ἁφὴν μόνον. *Ibid.* 326 a, 31, is directed against the Atomists: εἰ μὲν γὰρ μία φύσις ἐστὶν ἁπάντων τί τὸ χωρίσαν; ἢ διὰ τί οὐ γίγνεται ἀψάμενα ἓν, ὥσπερ ὕδωρ ὕδατος ὅταν θίγῃ; Simpl. *De Cœlo*, 133 a, 18; *Schol.* 488 a, 26. There is no contradiction here with the passage quoted above, note 2, which asserts that the world is not συνεχές; for that which merely touches can form indeed a connected mass in space, and so far may be called συνεχὲς τῇ ἁφῇ; but it is still without internal connection, and, therefore, not in the strict sense συνεχές. Vide *Phys.* viii. 4, 255 a, 13; Simpl. *Phys.* 195 b, where this expression is thus amended: τῇ ἁφῇ συνεχιζόμενα ἀλλ' οὐχὶ τῇ ἑνώσει, cf. *inf.* p. 245, 1. We have, therefore, no right to understand contact in the Aristotelian passages as referring merely to close proximity, as is done by Philop. *Gen. et Corr.* 36 a.

[2] Cf. previous note, and p. 216, 3.

[3] Cf. Simpl. *De Cœlo*, 252 b, 40 (*Schol.* 510 a, 41): Δημόκριτος δὲ, ὡς Θεόφραστος ἐν τοῖς Φυσικοῖς ἱστορεῖ, ὡς ἰδιωτικῶς ἀποδιδόντων τῶν κατὰ τὸ θερμὸν καὶ τὸ ψυχρὸν καὶ τὰ τοιαῦτα αἰτιολογούντων, ἐπὶ τὰς ἀτόμους ἀνέβη.

[4] Arist. *Gen. et Corr.* i. 2, 315 b, 6: Δημόκριτος δὲ καὶ Λεύκιππος ποιήσαντες τὰ σχήματα τὴν ἀλλοίωσιν καὶ τὴν γένεσιν ἐκ τούτων ποιοῦσι διακρίσει μὲν καὶ συγκρίσει γένεσιν καὶ φθορὰν, τάξει δὲ καὶ θέσει ἀλλοίωσιν, &c.; *ibid.* c. 8 (p. 215, 1). *Ibid.* c. 9, 327, 16: ὁρῶμεν δὲ τὸ

fluence of one thing upon another is of a mechanical kind, and consists in pressure and percussion; if, therefore, a merely dynamical influence seems to be produced from a distance, we must suppose that it is in reality mechanical, and as such brought about by contact. The Atomists, therefore, seek to explain all such phenomena, as Empedocles did, by the doctrine of emanations.[1] If, lastly, many and various physical properties appear to belong to things, these also must be explained mechanically by the quantitative relations of the atoms. According to their substance, all things are alike; only the form, size, and combination of their original constituents are different. But among these derived qualities themselves there is an essential difference.

αὐτὸ σῶμα συνεχὲς ὂν ὁτὲ μὲν ὑγρὸν ὁτὲ δὲ πεπηγός, οὐ διαιρέσει καὶ συνθέσει τοῦτο παθὸν, οὐδὲ τροπῇ καὶ διαθιγῇ, καθάπερ λέγει Δημόκριτος, *Metaph.* i. 4, p. 223, 1. *Phys.* viii. 9, 265 b, 24: the Atomists ascribe movement in space only to the primitive bodies, and all other movements to derived bodies: αὐξάνεσθαι γὰρ καὶ φθίνειν καὶ ἀλλοιοῦσθαι συγκρινομένων καὶ διακρινομένων τῶν ἀτόμων σωμάτων φασίν, which Simpl. *in h. l.* 310 a, constantly repeats; *De Cœlo*, iii. 4, 7 (*sup.* p. 216, 3; 125, 7); Simpl. *Categ. Schol. in Ar.* 91 a, 36; Galen, *De Elem. sec. Hipp.* i. 9, T. I. 483 K, &c.

[1] Cf. Arist. *Gen. et Corr.* i. 8 (*sup.* p. 215, 1). Leucippus and Democritus derive all action and suffering from contact. One thing suffers from another, if parts of the latter penetrate the empty interspaces of the former. Alex. *Aphr.* (*Qu. Nat.* ii. 23, p. 137 Sp.) mentions the emanations more distinctly; he tells us that Democritus, like Empedocles (*sup.* p. 134, 1), sought to explain the attractive power of the magnet (on which, according to Diog. ix. 47, he wrote a treatise) on this theory. He thought that the magnet and the iron consist of atoms of similar nature, but which are less closely packed together in the magnet. As on the one hand, like draws to like, and on the other, all moves in the Void, the emanations of the magnet penetrate the iron, and press out a part of its atoms, which, on their side, strain towards the magnet, and penetrate its empty interspaces. The iron itself follows this movement, while the magnet does not move towards the iron, because the iron has fewer spaces for receiving its effluences. Another and a more important application of this doctrine, in which Democritus also agreed with Empedocles, will be found in the section on sense-perceptions.

Some of them follow immediately from the relative proportion of the atoms in combination, irrespectively of the manner in which we perceive them; they therefore belong to the things themselves. Others, on the contrary, result indirectly from our perception of those proportions and combinations; they, therefore, primarily belong not to the nature of things, but to the sensations caused by things.[1] These consist in weight, density, and hardness, to which Democritus adds heat and cold, taste and colour.[2] That these qualities do not present the objective constitution of the thing purely, he showed from the different impression produced by the same objects, in the above-mentioned respects, upon different persons and in different circumstances.[3] But they are

[1] Here we first meet with the distinction of primary and secondary qualities, afterwards introduced by Locke, and of such great importance for the theory of knowledge.

[2] Democrit. *sup.* p. 219, 3; Theophr. *De Sensu*, 63 (cf. 68 sq.) on Democrit.: περὶ μὲν οὖν βαρέος καὶ κούφου καὶ σκληροῦ καὶ μαλακοῦ ἐν τούτοις ἀφορίζει· τῶν δ' ἄλλων αἰσθητῶν οὐδενὸς εἶναι φύσιν, ἀλλὰ πάντα πάθη τῆς αἰσθήσεως ἀλλοιουμένης, ἐξ ἧς γίνεσθαι τὴν φαντασίαν. οὐδὲ γὰρ τοῦ ψυχροῦ καὶ τοῦ θερμοῦ φύσιν ὑπάρχειν, ἀλλὰ τὸ σχῆμα [sc. τῶν ἀτόμων] μεταπίπτον ἐργάζεσθαι καὶ τὴν ἡμετέραν ἀλλοίωσιν· ὅ τι γὰρ ἂν ἄθρουν ᾖ τοῦτ' ἐνισχύειν ἑκάστῳ, τὸ δ' εἰς μικρὰ διανεμημένον ἀναίσθητον εἶναι. Cf. Arist. *De An.* iii. 2, 426 a, 20; Simpl. *Phys.* 119 b; *De An.* 54 a; Sext. *Math.* viii. 6, etc. The words of Diogenes, ix. 45, belong no doubt to this connection; in our text they make nonsense: ποιητὰ δὲ νόμιμα εἶναι, φύσει δ' ἀτόμους καὶ κενόν. According to Democrit. *l. c.*, it should stand thus: ποιότητας δὲ νόμῳ εἶναι, etc.

[3] Theophrastus continues: σημεῖον δέ, ὡς οὐκ εἰσὶ φύσει, τὸ μὴ ταὐτὰ πᾶσι φαίνεσθαι τοῖς ζῴοις, ἀλλ' ὃ ἡμῖν γλυκὺ τοῦτ' ἄλλοις πικρὸν, καὶ ἑτέροις ὀξὺ καὶ ἄλλοις δριμὺ, τοῖς δὲ στρυφνόν· καὶ τὰ ἄλλα δὲ ὡσαύτως, ἔτι δ' αὐτοὺς (the perceiving subject) μεταβάλλειν τῇ κράσει (the mixture of their corporeal ingredient changes; others, however, read κρίσει) καὶ [l. κατὰ] τὰ πάθη καὶ τὰς ἡλικίας· ᾗ καὶ φανερὸν ὡς ἡ διάθεσις αἰτία τῆς φαντασίας, *ibid.* § 67. The same reasons for the uncertainty of the sense-perceptions are mentioned by Aristotle, *Metaph.* iv. 5, 1009 b, 1, as belonging, it would seem, to Democritus. Cf. Democrit. ap. Sext. *Math.* vii. 136: ἡμέες δὲ τῷ μὲν ἐόντι οὐδὲν ἀτρεκὲς ξυνίεμεν, μετα-

of course based upon something objective, and the philosopher's task is to point out what this is, by defining the form and relations of the atoms by which the sensations of heat, colour, &c., are brought about.

Of the primary qualities of things, their weight is reduced by Democritus simply to their mass: the greater the mass of a body, after subtracting the void interspaces, the heavier it is; if the extent be equal, the weight must therefore correspond with the density.[1] Similarly hardness must be conditioned by the proportion of the empty and the full in bodies; yet it depends not merely on the number and size of the empty interspaces, but also on the manner of their distribution: a body which is intersected equally at many points by the Void, may possibly be less hard than another body which has larger interspaces, but also larger unbroken portions; even though the former, taken as a whole, contains in an equal space less of the Void. Lead is denser and heavier, but softer than iron.[2]

The secondary qualities were generally derived by Democritus from the form, the size and the order of the atoms; for he supposed that a body produces different sensations according as it touches our senses with atoms of such or such form or magnitude arranged in closer or looser, equal or unequal, order;[3] and that,

πίπτον δὲ κατά τε σώματος διαθιγὴν [= τάξιν, cf. p. 223, 1] καὶ τῶν ἐπεισιόντων καὶ τῶν ἀντιστηριζόντων.

[1] Vide *sup.* p. 226 on the density of the atoms as a consequence of their close juxtaposition. Simpl. *Categ.* (Basil. 1551) 68 γ; Philop. *Gen. et Corr.* 39 b; cf. Arist. *Gen. et Corr.* i. 8, 326 a, 23.

[2] Theophrastus, *l. c.* 62.

[3] This results also from what is said of particular colours and tastes, Arist. *Gen. et Corr.* i. 2, 316 a, 1: χροιὰν οὔ φησιν εἶναι [Δημόκρ.], τροπῇ γὰρ χρωματίζεσθαι. Theophr. *l. c.* 63 (*sup.* p. 231, 2); and *ibid.* 64: οὐ μὴν ἀλλὰ ὥσπερ καὶ τὰ ἄλλα καὶ ταῦτα (Heat, Taste, Colour) ἀνατίθησι τοῖς σχήμασι, *ibid.* 67, 72. *Caus. Plant.* vi. 2, 3: ἄτοπον δὲ κἀκεῖνο τοῖς τὰ σχήματα λέγουσιν [sc. αἴτια τῶν χυμῶν] ἡ τῶν ὁμοίων διαφορὰ κατὰ μικρότητα καὶ μέγεθος εἰς τὸ μὴ τὴν αὐτὴν ἔχειν δύναμιν.

[1] Vide the concluding words of the passage, quoted p. 231, 2, and Theophrastus, *De Sensu*, 67: ὡσαύτως δὲ καὶ τὰς ἄλλας ἑκάστου δυνάμεις ἀποδίδωσιν, ἀνάγων εἰς τὰ σχήματα· ἁπάντων δὲ τῶν σχημάτων οὐδὲν ἀκέραιον εἶναι καὶ ἀμιγὲς τοῖς ἄλλοις, ἀλλ' ἐν ἑκάστῳ (sc. χυλῷ) πολλὰ εἶναι καὶ τὸν αὐτὸν ἔχειν λεῖου καὶ τραχέος καὶ περιφεροῦς καὶ ὀξέος καὶ τῶν λοιπῶν· ὃ δ' ἂν ἐνῇ πλεῖστον, τοῦτο μάλιστα ἐνισχύειν πρός τε τὴν αἴσθησιν καὶ τὴν δύναμιν. (Similarly Anaxagoras, vide *infra.*) Cf. also Arist. *Metaph.* iv. 5; *sup.* p. 217, 4; *De Gen. et Corr.* i. 2, 315 b, 9; Philop. *ad h. l.* 6 a, and the section on the senses.

[2] *De Sensu*, 64; *Fr.* 4 (*De Odor.*), 64. Theophr. also remarks on the want of exact definitions respecting colours, and the form of the atoms corresponding to each colour.

[3] On tastes, which must be regulated by the form of the atoms touching the tongue, *l. c.* 65–72; *De Caus. Plant.* vi. 1, 2, 6, c. 6, 1, 7, 2; *Fr.* 4, *De Odor.* 64; cf. Alex. *De Sensu*, 105 b (which Arist. *De Sensu*, c. 4, 441 a, 6, refers to Democritus), 109 a. On colours, among which Democritus regards white, black, red and green as the four primitive colours. *De Sensu*, 73–82, cf. Stob. *Ecl.* i. 364; Arist. *De Sensu*, c. 4, 442 b, 11: τὸ γὰρ λευκὸν καὶ τὸ μέλαν τὸ μὲν τραχὺ φησιν εἶναι (Δημόκρ.) τὸ δὲ λεῖον, εἰς δὲ τὰ σχήματα ἀνάγει τοὺς χυμούς. *Ibid.* c. 3, 440 a, 15 sq.; Alex. *l. c.* 103 a, 109 a. The emanations to which light and colours are reduced have been partly considered, *supra*, p. 230, 1. Further details hereafter. Cf. also Burchard, *Democr. Phil. de Sens.* 16; Prantl, *Arist. üb. d. Farben*, 48 sqq.

therefore, one and the same object appears to us differently (*e.g.* warmer or colder), according as the atoms of one or other kind of which it is composed, impinge upon our organs of sense in sufficient mass to produce a perceptible impression.[1] His more precise definitions relate chiefly, as Theophrastus says,[2] to colours and to the qualities perceptible to taste. What Theophrastus tells us on both subjects[3] is a further proof of the care with which Democritus sought to explain natural phenomena by means of his general presuppositions; but this is not the place to follow up such details.

We have still to notice the opinion of Democritus

on the four elements. He could not of course regard these substances as elements in the proper sense, for the atoms are in his system the first of all things. Nor could he, as Plato afterwards did, regard them, in spite of their being composed of atoms, as the primitive substances of all other visible bodies; for more than four visible elements must then have resulted from the innumerable forms of the atoms.[1] As soon, however, as the four elements had been established by another philosopher, he may, nevertheless, have bestowed upon them special attention, and may have sought to explain their qualities by reference to their atomistic constituents. But fire alone had for him any very great importance; he considered it, as we shall see, to be the moving and living principle throughout nature, the spiritual element proper. On account of its mobility he supposed it to consist of round and small atoms, whereas, in the other elements, there is a mixture of heterogeneous atoms, and they are distinguished from one another only by the magnitude of their parts.[2]

[1] It is consequently a mistake to include (vide Simpl. *Phys.* 8) Leucippus and Democritus with the pseudo-Timæus, in the assertion that they all recognised the four elements as the primitive substances of composite bodies, but tried to reduce these elements themselves to more original and more simple causes. The statement of Diog. ix. 44, that Democritus believed the four elements to be combinations of atoms is more plausible; on the other hand, the assertion ap. Galen, *H. Philos.* c. 5, p. 243, that he made earth, air, fire and water principles sounds entirely apocryphal. Even supposing (and this is not probable) that air originally stood in the text, it would still be false. Democritus may certainly have spoken of earth, fire and water in the work to which the author appeals in support of this statement (the Σοφιστικά, which is wanting in Mullach's list); but if the work were genuine, not in such a manner as to designate them the elements of all bodies.

[2] Arist. *De Cœlo*. iii. 4; *supra*, p. 225, 1. As observed, *ibid.* 303 a, 28, water, air, and earth arise by separation out of one another; concerning this process, cf. also c. 7 (*supra*, p. 125, 1). In regard to the warm or fire, *ibid.* and *De An.* i. 2, 405 a, 8 sqq. c. 3, 406 b, 20; *De Cœlo*, iii. 8, 306 b, 32; *Gen. et Corr.* i. 8, 326 a, 3; cf. *Metaph.* xiii. 4, 1078 b, 19. As a reason for the above theory, in many of these passages motion, *De Cœlo*, iii. 8, perhaps only as an arbitrary conjecture, and also the burning and penetrating force of fire, is assumed. Theophr. *De Sensu*, 75: red consists of similar atoms to the warm, only that they are larger; the more, and the finer the fire contained in a thing, the greater its brilliancy (*e.g.* in red-hot iron): θερμὸν γὰρ τὸ λεπτόν. Cf. § 68: καὶ τοῦτο πολλάκις λέγοντα διότι τοῦ χυμοῦ [l. θερμοῦ] τὸ σχῆμα σφαιροειδές. Simpl. *l. c.*: οἱ δὲ περὶ Λεύκιππον καὶ Δημόκριτον . . . τὰ μὲν θερμὰ γίνεσθαι καὶ πύρεια τῶν σωμάτων ὅσα ἐξ ὀξυτέρων καὶ λεπτομερεστέρων καὶ κατὰ ὁμοίαν θέσιν κειμένων σύγκειται τῶν πρώτων σωμάτων, τὰ δὲ ψυχρὰ καὶ ὑδατώδη ὅσα ἐκ τῶν ἐναντίων, καὶ τὰ μὲν λαμπρὰ καὶ φωτεινά, τὰ δὲ ἀμυδρὰ καὶ σκοτεινά. The pyramidal form of flames, Democritus, according to Theophr. *Fr.* 3, *De Igne*, 52, explains by the increasing coolness of their internal parts. Further details will be found in the section on the soul, *infra*.

[1] Aristotle compares this primeval state with the ὁμοῦ πάντα of Anaxagoras, *Metaph.* xii. 2, 1069 b, 22: καὶ ὡς Δημόκριτός φησιν ἦν ὁμοῦ πάντα δυνάμει, ἐνεργείᾳ δ' οὔ. But we cannot of course consider the words ἦν—οὔ (with Ps.-Alex. *ad h. l.* p. 646, 21; Bon. Philop. ap. Bonitz, *ad h. l.*; Trendelenburg on Arist. *De An.* 318; Heimsöth. p. 43; Mullach, p. 209, 337; *Fragm.* i. 358, and Lange, *Gesch. d. Mater.* i. 131, 25) as a verbal quotation from Democritus, and on the strength of them ascribe to him the distinction of δυνάμει and ἐνεργείᾳ, and therewith the fundamental conceptions of the Aristotelian system. The passage must be construed thus: 'Also according to the exposition of Democritus all things were together not actually, but potentially:' because in the original mixture of atoms, all things were contained according to their substance, but were not as yet formed and defined. Cf. Bonitz and Schwegler, *ad h. l.* The Atomists themselves, moreover, could only have believed in this primeval state to a very limited

How it comes to pass that the atoms in general enter into these definite combinations, and how the origin of composite things and the formation of a world is to be explained, we must consider in the following section.

2. *The movement of the Atoms; the formation and system of the Universe; Inorganic Nature.*

The atoms, as they circulate in infinite space,[1] are in

ceaseless movement.[1] This movement appeared to our philosopher so directly necessitated by the nature of things,[2] that he expressly declared it to be without beginning,[3] and on this ground he refused to assign to it any cause, since that which is infinite and has no beginning cannot be derived from another.[4] But if

extent, since combinations of atoms, worlds, had always existed.

[1] Vide p. 236, 3; 228, 2; 215, 1. Arist. *Metaph.* xii. 6, 1071 b, 31: διὸ ἔνιοι ποιοῦσιν ἀεὶ ἐνέργειαν, οἷον Λεύκιππος καὶ Πλάτων· ἀεὶ γὰρ εἶναί φασι κίνησιν. ἀλλὰ διὰ τί καὶ τίνα οὐ λέγουσιν, οὐδὲ ὡδί, οὐδὲ τὴν αἰτίαν. *Ibid.* 1072 a, 6: οἱ ἀεὶ λέγοντες κίνησιν εἶναι ὥσπερ Λεύκιππος. Galen, *De Elem. sec. Hipp.* i. 2, T. I. 418 K: τὸ δὲ κενὸν χώρα τις ἐν ᾗ φερόμενα ταυτὶ τὰ σώματα ἄνω τε καὶ κάτω σύμπαντα διὰ παντὸς τοῦ αἰῶνος ἢ περιπλέκεταί πως ἀλλήλοις, ἢ προσκρούει, καὶ ἀποπάλλεται, καὶ διακρίνει [-εται] δὲ καὶ συγκρίνει [-εται] πάλιν εἰς ἄλληλα κατὰ τὰς τοιαύτας ὁμιλίας, κἀκ τούτου τά τε ἄλλα συγκρίματα πάντα ποιεῖ καὶ τὰ ἡμέτερα σώματα καὶ τὰ παθήματα αὐτῶν καὶ τὰς αἰσθήσεις.

[2] Arist. *Phys.* ii. 4, 196 a, 24: εἰσὶ δέ τινες οἳ καὶ τοὐρανοῦ τοῦδε καὶ τῶν κοσμικῶν πάντων αἰτιῶνται τὸ αὐτόματον· ἀπὸ ταὐτομάτου γὰρ γίγνεσθαι τὴν δίνην καὶ τὴν κίνησιν τὴν διακρίνασαν καὶ καταστήσασαν εἰς ταύτην τὴν τάξιν τὸ πᾶν. Simplicius rightly refers this passage to the Atomists, as they, and they alone, believed the universe to have been formed by a rapid whirling motion without deriving this motion from a special motive force. *Phys.* 74 a, b: οἱ περὶ Δημόκριτον . . . τῶν κόσμων ἁπάντων . . . αἰτιώμενοι τὸ αὐτόματον (ἀπὸ ταὐτομάτου γάρ φασι τὴν δίνην καὶ τὴν κίνησιν, etc.) ὅμως οὐ λέγουσι τί ποτέ ἐστι τὸ αὐτόματον.

[3] Cf. previous note, Cic. *Fin.* i. 6, 17: *ille* (*Democritus*) *atomos quas appellat, i.e. corpora individua propter soliditatem, censet in infinito inani, in quo nihil nec summum nec infimum nec medium nec ultimum nec extremum sit, ita ferri, ut concursionibus inter se cohaerescant; ex quo efficiantur ea quae sint quaeque cernantur omnia; eumque motum atomorum nullo a principio sed ex aeterno tempore intelligi convenire.* Cf. p. 228, 2; Hippol. *Refut.* i. 13: ἔλεγε δὲ [Δημόκρ.] ὡς ἀεὶ κινουμένων τῶν ὄντων ἐν τῷ κενῷ.

[4] Arist. *Phys.* viii. 1, end; ὅλως δὲ τὸ νομίζειν ἀρχὴν εἶναι ταύτην ἱκανὴν, ὅτι ἀεὶ ἡ ἔστιν οὕτως ἢ γίγνεται, οὐκ ὀρθῶς ἔχει ὑπολαβεῖν, ἐφ' ὃ Δημόκριτος ἀνάγει τὰς περὶ φύσεως αἰτίας, ὡς οὕτω καὶ τὸ πρότερον ἐγίνετο· τοῦ δὲ ἀεὶ οὐκ ἀξιοῖ ἀρχὴν ζητεῖν. *Gen. Anim.* ii. 6, 742 b 17: οὐ καλῶς δὲ λέγουσιν οὐδὲ τοῦ διὰ τί τὴν ἀνάγκην, ὅσοι λέγουσιν, ὅτι οὕτως ἀεὶ γίνεται, καὶ ταύτην εἶναι νομίζουσιν ἀρχὴν ἐν αὐτοῖς, ὥσπερ Δημόκριτος ὁ Ἀβδηρίτης, ὅτι τοῦ μὲν ἀεὶ καὶ ἀπείρου οὐκ ἔστιν ἀρχὴ, τὸ δὲ διὰ τί ἀρχὴ, τὸ δ' ἀεὶ ἄπειρον, ὥστε τὸ ἐρωτᾶν τὸ διὰ τί περὶ τῶν τοιούτων τινὸς τὸ ζητεῖν εἶναί φησι τοῦ ἀπείρου ἀρχήν. Cf. note 1.

Aristotle may justly censure the Atomists for not having duly sought the cause of motion,[1] it is untrue to say that they derived motion from chance.[2] Motion can only be called fortuitous, if by fortuitous we understand all that does not proceed from design;[3] but if this expression be taken to mean that which happens without natural causes, the Atomists are far from making such a statement. On the contrary, they expressly declare that nothing in the world happens by chance, but all follows of necessity from definite causes;[4] that

[1] Arist. *De Cœlo*, iii. 2, cf. p. 228, 2; *Metaph.* i. 4, end: περὶ δὲ κινήσεως, ὅθεν ἡ πῶς ὑπάρχει τοῖς οὖσι, καὶ οὗτοι παραπλησίως τοῖς ἄλλοις ῥᾳθύμως ἀφεῖσαν. Cf. Diog. ix. 33, who says of Leucippus: εἶναί θ' ὥσπερ γενέσεις κόσμου οὕτω καὶ αὐξήσεις καὶ φθίσεις καὶ φθορὰς κατά τινα ἀνάγκην, ἣν ὁποία ἐστὶν οὐ διασαφεῖ. Similarly Hippol. i. 12, which is taken from the same source.

[2] Aristotle gave occasion to this misunderstanding when in *Phys.* ii. 4, he made use of the expression αὐτόματον, which in this place, and always with him, is synonymous with τύχη; whereas Democritus must have used the word in quite a different sense, if indeed he used it at all. It is Cicero, however, especially who put this opinion in circulation. Cf. *N. D.* i. 24, 66: *ista enim flagitia Democriti, sive etiam ante Leucippi, esse corpuscula quædam laevia, alia aspera, rotunda alia, partim autem angulata, curvata quædam et quasi adunca; ex his effectum esse coelum atque terram, nulla cogente natura sed concursu quodam fortuito.* We find the same *concursus fortuitus* also in c. 37, 93; *Tusc.* i. 11, 22, 18, 42: *Acad.* i. 2, 6; Cicero speaks more truly (*Fin.* i. 6, 20) of a *concursio turbulenta*. The same conception is to be met with in the *Placita* ascribed to Plutarch, i. 4, 1; Philop. *Gen. et Corr.* 29 b; *Phys.* G. 9; Simpl. *Phys.* 73 b, 74 a; Eus. *Pr. Ev.* xiv. 23, 2; Lactant. *Inst.* i. 2; and perhaps also in Eudemus, vide *supra*, p. 236, 2.

[3] As Aristotle does, *Phys.* ii. 5, 196 b, 17 sqq., who, so far, can truly maintain from his own standpoint, that the Atomists supposed the world to have come into being by chance.

[4] Stob. *Ecl.* i. 160 (*Democr. Fr. Phys.* 41): Λεύκιππος πάντα κατ' ἀνάγκην, τὴν δ' αὐτὴν ὑπάρχειν εἱμαρμένην· λέγει γὰρ ἐν τῷ περὶ νοῦ· "οὐδὲν χρῆμα μάτην γίγνεται, ἀλλὰ πάντα ἐκ λόγου τε καὶ ὑπ' ἀνάγκης." That Leucippus has not, without show of probability, been denied to be the author of the treatise περὶ νοῦ, and that this fragment has been ascribed to Democritus, we have already seen, p. 207, 1; but this is of no importance in regard to the present question.

fortune has little power over men, and chance is merely a name used as an excuse for our own faults.[1] Aristotle and the later writers admit that the Atomistic philosophy strongly maintained the unconditional necessity of all that happens,[2] reduced even what is apparently fortuitous to its natural causes,[3] and started more

[1] *Democrit. Fr. Mor.* 14 ap. Stob. *Ecl.* ii. 344; Eus. *Pr. Ev.* xiv. 27, 4: ἄνθρωποι τύχης εἴδωλον ἐπλάσαντο πρόφασιν ἰδίης ἀβουλίης (or ἀνοίης). βαιὰ γὰρ φρονήσιι τύχη μάχεται, τὰ δὲ πλεῖστα ἐν βίῳ ψυχὴ εὐξύνετος ὀξυδερκέειν κατιθύνει.

[2] Arist. *Gen. Anim.* v. 8, 789 b. 2: Δημόκριτος δὲ τὸ οὗ ἕνεκα ἀφεὶς λέγειν (Aristotle again censures him for this, *De Resp.* c. 4 *init.*) πάντα ἀνάγει εἰς ἀνάγκην οἷς χρῆται ἡ φύσις. Cic. *De Fato*, 10, 23: *Democritus . . . accipere maluit, necessitate omnia fieri, quam a corporibus individuis naturales motus avellere.* Similarly, *ibid.* 17, 39; Plut. ap. Eus. *Pr. Ev.* i. 8, 7: ἐξ ἀπείρου χρόνου προκατέχεσθαι τῇ ἀνάγκῃ πάνθ' ἁπλῶς τὰ γεγονότα καὶ ὄντα καὶ ἐσόμενα. Sext. *Math.* ix. 113: κατ' ἀνάγκην μὲν καὶ ὑπὸ δίνης, ὡς ἔλεγον οἱ περὶ τὸν Δημόκριτον, οὐκ ἂν κινοῖτο ὁ κόσμος. Diog. ix. 45: πάντα τε κατ' ἀνάγκην γίνεσθαι, τῆς δίνης αἰτίας οὔσης τῆς γενέσεως πάντων, ἣν ἀνάγκην λέγει. Oenomaus ap. Theod. *Cur. Gr. Aff.* vi 15, Nr. 8, 11, p. 86 and Theodoretus himself says: Democritus denied freewill, and gave over the whole course of the world to the necessity of fate. Plut. *Plac.* i. 25, 26: Παρμενίδης καὶ Δημόκριτος πάντα κατ' ἀνάγκην· τὴν αὐτὴν δ' εἶναι καὶ εἱμαρμένην καὶ δίκην καὶ πρόνοιαν καὶ κοσμοποιόν (this is only partially true in respect to Democritus); Democritus placed the essence of ἀνάγκη in the ἀντιτυπία καί φορὰ καὶ πληγὴ τῆς ὕλης. Cf. also p. 237, 1, 4.

[3] Arist, *Phys.* iv. 2, 195 b, 36: ἔνιοι γὰρ καὶ εἰ ἔστιν [ἡ τύχη τὸ αὐτόματον] ἢ μὴ ἀποροῦσιν· οὐδὲν γὰρ γίνεσθαι ἀπὸ τύχης φασὶν, ἀλλὰ πάντων εἶναί τι αἴτιον ὡρισμένον, ὅσα λέγομεν ἀπ' αὐτομάτου γίγνεσθαι ἢ τύχης, οἷον τοῦ ἐλθεῖν ἀπὸ τύχης εἰς τὴν ἀγορὰν καὶ καταλαβεῖν ὃν ἐβούλετο μὲν οὐκ ἥρετο δὲ, αἴτιον τὸ βούλεσθαι ἀγοράσαι ἐλθόντα· ὁμοίως δὲ καὶ ἐπὶ τῶν ἄλλων τῶν ἀπὸ τύχης λεγομένων ἀεί τι εἶναι λαβεῖν τὸ αἴτιον, ἀλλ' οὐ τύχην. Simpl. *Phys.* 74 a (on the words which refer to what has just been quoted. καθάπερ ὁ παλαιὸς λόγος εἶπεν ὁ ἀναιρῶν τὴν τύχην): πρὸς Δημόκριτον ἔοικεν εἰρῆσθαι. ἐκεῖνος γὰρ, κἂν ἐν τῇ κοσμοποιᾷ ᾠδύκει τῇ τύχῃ χρῆσθαι, ἀλλ' ἐν τοῖς μερικωτέροις οὐδενός φησιν εἶναι τὴν τύχην αἰτίαν, ἀναφέρων εἰς ἄλλας αἰτίας, οἷον τοῦ θησαυρὸν εὑρεῖν τὸ σκάπτειν ἢ τὴν φυτείαν τῆς ἐλαίας, τοῦ δὲ κατεαγῆναι τοῦ φαλακροῦ τὸ κρανίον τὸν ἀετὸν ῥίψαντα τὴν χελώνην ὅπως τὸ χελώνιον ῥαγῇ. οὕτω γὰρ ὁ Εὔδημος ἱστορεῖ. Similarly 76 a, 73 b. The same is asserted, only in Stoical language, in the statement of Theodoretus *l. c.* p. 87, that Democritus declared the τύχη to be an ἄδηλος αἰτία ἀνθρωπίνῳ λόγῳ. Cf. Part. III. a, 151, 3, 2nd ed. But if Democritus did not admit chance in regard to the

logically than either of the earlier systems, from a strictly physical explanation of nature.[1] The Atomists could not of course explain natural phenomena by reference to design:[2] natural necessity was to them a blindly working force; their system knew nothing of any spirit that had formed the world, or of a Providence in the later meaning of the word;[3] the reason of this, however, was not that they believed the world to be ordered by chance, but, on the contrary, that they would in no respect relinquish the idea of its necessity. The original movement of the atoms, also, they must have regarded as the necessary effect of a natural cause, and this cause can only be sought in gravitation. Nothing else can be thought of, when we are told that the smallest bodies must necessarily be set in motion (*vide supra*) in empty space, that the Void is the cause of motion;[4] sometimes the Atomists conceived weight as an essential property of all bodies, and consequently, as corresponding to the corporeal mass of the atoms.[5] It

particular, we may be sure that so logical a thinker would never have supposed the whole universe to be the work of chance.

[1] Cf. what is said by Aristotle on this point (besides the quotation p. 219, 2; 215, 1), *Gen. et Corr.* i. 2, 315 a, 34 (he is speaking of the explanation of becoming, decay, &c.): ὅλως δὲ παρὰ τὰ ἐπιπολῆς περὶ οὐδενὸς οὐδεὶς ἐπέστησεν ἔξω Δημοκρίτου. οὗτος δ' ἔοικε μὲν περὶ ἁπάντων φροντίσαι, ἤδη δὲ ἐν τῷ πῶς διαφέρει. *De An.* i. 2, 405 a, 8: Δημόκρ. δὲ καὶ γλαφυρωτέρως εἴρηκεν, ἀποφηνάμενος διὰ τί τούτων ἑκάτερον.

[2] P. 237, 3.

[3] Democritus is commonly reproached with this, vide Cic. *Acad.* ii. 40, 125; Plut. ap. Eus. *l. c. Plac.* ii. 3 (Stob. i. 442); Nemes. *Nat. Hom.* c. 44, p. 168; Lactantius *l. c.* According to Favonius ap. Diog. ix. 34 sq., Democritus expressly opposed the Anaxagorean doctrine of the forming of the world by νοῦς. How far, however, he was able to speak of a universal reason we shall enquire later on.

[4] As Aristotle says (*Phys.* viii. 9, 265 b, 23) when he describes the Atomists as those who admit no particular moving cause, διὰ δὲ τὸ κενὸν κινεῖσθαί φασιν. Similarly, Endemus ap. Simpl. *Phys.* 124 a.

[5] P. 226, 1, and also Theophr. *De sensu*, 71: καίτοι τό γε βαρὺ καὶ

is also clear that the velocity of this motion corresponds to the mass of each atom; the large and heavier must fall more quickly than the smaller and lighter;[1] moreover, it is expressly stated that Democritus, like Empedocles, represented all the atoms as having been originally moved by their weight; and that he explained the upward motion of many bodies by the pressure which drives up the lighter atoms when the heavier sink down.[2] Accordingly the famous theory of Epicurus on the deflection of the atoms is characterised as a contradiction of Democritus, whose fatalism Epicurus thus sought to evade;[3] in reality, however, his polemic and that of his followers against the absolutely vertical fall of the atoms[4] only applies to the older Atomistic philosophy: not to mention that Epicurus was certainly not the discoverer of the purely physical derivation of

κοῦφον ὅταν διορίζῃ τοῖς μεγέθεσιν, ἀνάγκη τὰ ἁπλᾶ πάντα τὴν αὐτὴν ἔχειν ὁρμὴν τῆς φορᾶς.

[1] Cf. *inf.* p. 241.

[2] Simpl. *De Cœlo*, 254 b, 27, *Schol. in Arist.* 510 b, 30: οἱ γὰρ περὶ Δημόκριτον καὶ ὕστερον Ἐπίκουρος τὰς ἀτόμους πάσας ὁμοφυεῖς οὔσας βάρος ἔχειν φασὶ, τῷ δὲ εἶναί τινα βαρύτερα ἐξωθούμενα τὰ κουφότερα ὑπ' αὐτῶν ὑφιζανόντων ἐπὶ τὸ ἄνω φέρεσθαι· καὶ οὕτω λέγουσιν οὗτοι δοκεῖν τὰ μὲν κοῦφα εἶναι τὰ δὲ βαρέα. (What follows is not concerned with the exposition of the theories of Democritus.) Similarly, *ibid.* 314 b, 37; 121 b, 42; *Schol.* 517 b, 21; 486 a, 21; *Ibid. Phys.* 310 a: οἱ περὶ Δημόκριτον . . . ἔλεγον, κατὰ τὴν ἐν αὐτοῖς βαρύτητα, κινούμενα ταῦτα [τὰ ἄτομα] διὰ τοῦ κενοῦ εἴκοντος καὶ μὴ ἀντιτυποῦντος κατὰ τόπον κινεῖσθαι . . . καὶ οὐ μόνον πρώτην ἀλλὰ καὶ μόνην ταύτην οὗτοι κίνησιν τοῖς στοιχείοις ἀπεδίδοσαι. Cic. vide following note.

[3] Cic. *N. D.* i. 25, 69: *Epicurus cum videret, si atomi ferrentur in locum inferiorem suopte pondere, nihil fore in nostra potestate, quod esset earum motus certus et necessarius, invenit quomodo necessitatem effugeret, quod videlicet Democritum fugerat: ait atomum, cum pondere et gravitate directa deorsum feratur, declinare paululum.* It is evident the presupposition here is, that Democritus came to his conclusions through admitting that the atoms exclusively followed the law of gravitation.

[4] Epicurus ap. Diog. x. 43, 61; Luer. ii. 225 sqq.

motion and of the universe which he himself violates by his arbitrary theories on the deviation of the atoms. We must, therefore, consider the movement of the atoms, according to the doctrine of Leucippus and Democritus, simply as a result of their weight, and consequently the earliest kind of motion must have been downward and perpendicular.[1] The difficulty that in infinite space there is no above and below[2] does not seem to have forced itself upon the Atomists.[3]

[1] The opposite theory of Lewes (*Hist. of Phil.* i. 101) that Democritus ascribed no weight, but only force, to the atoms, and supposed weight to arise from the shock given by means of a greater force, cannot be supported even by the statements quoted, p. 227, 2, and contradicts the most trustworthy evidence.

[2] Cic. *Fin.* i. 6, vide *sup.* p. 236, 3; Simpl. *De Cœlo*, 300 a, 45 (*Schol.* 516 a, 37): ἀντιλέγει μεταξὺ πρὸς τοὺς μὴ νομίζοντας εἶναι μὲν ἄνω τὸ δὲ κάτω. ταύτης δὲ γεγόνασι τῆς δόξης Ἀναξίμανδρος μὲν καὶ Δημόκριτος διὰ τὸ ἄπειρον ὑποτίθεσθαι τὸ πᾶν. Aristotle does not seem to have the Atomists in view in the passage *De Cœlo*, iv. 1, 308 a, 17; but on the other hand in *Phys.* iv. 8, 214 b, 28 sqq.; *De Cœlo*, i. 7. *et pass.*, he applies the above censure to them. Cf. Part ii. b, 210 sq. 312, 2nd ed.

[3] Epicurus, indeed, ap. Diog. x. 60, defends the theory that even in infinite space there may be a movement upward and downward in the following observation. If, he says, no absolute Above and Below (no ἀνωτάτω and κατωτάτω) be possible in infinite space, still a motion in the direction of our feet from our head is always contrary to a motion from our feet towards our head, even should both lines be produced to infinity. Lange, *Gesch. d. Mat.* i. 130, approves of this argument, and thinks it may be referred to Democritus. But Democritus not only said that the atoms *actually* moved in the direction which we are accustomed to designate as downwards, he maintained that they *must* follow this direction; he placed the cause of their motion in their weight, and it was *solely* on this ground that he could determine anything as to its direction, for we cannot perceive the movement in the least. But if the atoms are led downwards by their weight, this below is not merely the place which, from our position on the earth, *appears* as lower, but the place which for each atom, wherever it may be in infinite space, is the lower, the goal of its natural motion. But there cannot be a below in this sense in infinite space. If Epicurus overlooked this fact and sought to defend the doctrine handed down to him of the fall of the atoms against the censures of Aristotle, by an expedient so little in harmony with the presuppositions of that doctrine, we need

In and for themselves, the atoms in their movement would all follow the same direction. But as they are unequal in size and weight, they fall (so the Atomists think) with unequal velocity; they therefore impinge upon one another, the lighter are forced upwards by the heavier,[1] and from the collision of these two motions, and the concussion and recoil of the atoms, there arises a circular or whirling movement[2] in which

not be much surprised. But it is incredible that a natural philosopher like Democritus should not have remarked the contradiction; it is far more likely that both he and Leucippus regarded the fall of bodies in the void as self-evident; and never proceeded to reflect that the case was that of a natural motion downward, and that such a motion in unlimited space was impossible.

[1] According to Arist. *De Cœlo*, iv. 6, 313 b, 4, Democritus called this upward motion σοῦς.

[2] This conception of the origin of the circular motion from which the Atomists derived the universe (vide *infra*), is not only necessitated by the interconnection of their doctrine, which cannot be satisfactorily established in any other way, but is fully confirmed by all historical testimony. That the original motion of the atoms was in a downward direction, and that only in consequence of this motion a portion of the atoms was driven upward, is expressly stated by Simplicius, vide p. 240, 2. Lucretius contradicts this opinion in a passage which, according to our previous remarks, can only refer to Democritus, ii. 225: *Graviora potesse corpora, quo citius rectum per inane feruntur, incidere ex supero levioribus atque ita plagas* (πληγὰς, vide *inf.*) *gignere, quæ possint genitalis reddere motus*: like Epicurus (vide Part III. a, 378, second edition) he opposes to it Aristotle's proposition (*ibid.* ii. b, 211, 1; 312, 3), that all bodies fall with equal velocity in empty space. Further, although the *Placita*, i. 4 (Galen. c. 7), primarily reproduce the Epicurean theory merely (cf. Part III. a, 380, second edition), yet this theory itself indicates the doctrine of Democritus as its source; and Diogenes and Hippolytus, moreover, make precisely similar statements as to Leucippus. Diog. ix. 31: γίνεσθαι δὲ τοὺς κόσμους οὕτω· φέρεσθαι κατ' ἀποτομὴν ἐκ τῆς ἀπείρου πολλὰ σώματα παντοῖα τοῖς σχήμασιν εἰς μέγα κενόν, ἅπερ ἀθροισθέντα δίνην ἀπεργάζεσθαι μίαν, καθ' ἣν προσκρούοντα καὶ παντοδαπῶς κυκλούμενα διακρίνεσθαι χωρὶς τὰ ὅμοια πρὸς τὰ ὅμοια. ἰσορρόπων δὲ διὰ τὸ πλῆθος μηκέτι δυσμένων περιφέρεσθαι, τὰ μὲν λεπτὰ χωρεῖν εἰς τὸ ἔξω κενόν, ὥσπερ διαττόμενα, τὰ δὲ λοιπὰ συμμένειν καὶ περιπλεκόμενα συγκατατρέχειν ἀλλήλοις καὶ ποιεῖν πρῶτόν τι σύστημα σφαιροειδές. Hippol. *Refut.* i. 12: κόσμους δὲ [οὕτω] γενέσθαι λέγει· ὅταν εἰς μετάκοινον [μέγα κενὸν] ἐκ τοῦ περιέχοντος ἀθροισθῇ πολλὰ σώματα καὶ συρρυῇ, προσκρούοντα ἀλλήλοις συμπλέκεσθαι τὰ ὁμοιοσχήμονα καὶ παραπλήσια τὰς μορφὰς, καὶ περιπλεχθέντων εἰς ἕτερα (instead of εἰς ἕτερα we should probably read ἓν σύστημα) γίνεσθαι. Aristotle doubtless is referring to the Atomistic philosophy in *De Cœlo*, i. 8, 277 b. 1: Fire, he says, takes the upward direction by virtue of its own nature, not in consequence of force employed by another, ὥσπερ τινές φασι τῇ ἐκθλίψει; and perhaps Plato also refers to it, *Tim.* 62 C. How the Atomists supposed the circular motion originated from the two rectilinear motions upward and downward, we are not told. Epicurus, ap. Diog. x. 61, 43 sq. speaks (without reference to the Atomists) of a lateral motion caused by collision and a rebound of the atoms; the latter is also ascribed to Democritus in the *Plac.* i. 26 (*sup.* p. 238, 2), as well as by Galen (*sup.* p. 236, 1), and Simplicius, *De Cœlo*, 110 a, 1 (*Schol.* 484 a, 27): τὰς ἀτόμους . . . φέρεσθαι ἐν τῷ κενῷ καὶ ἐπικαταλαμβανούσας ἀλλήλας συγκρούεσθαι, καὶ τὰς μὲν ἀποπάλλεσθαι, ὅπῃ ἂν τύχωσι, τὰς δὲ περιπλέκεσθαι ἀλλήλαις κατὰ τὴν τῶν σχημάτων καὶ μεγεθῶν καὶ θέσεων καὶ τάξεων συμμετρίαν, καὶ συμβαίνειν καὶ οὕτω τὴν τῶν συνθέτων γένεσιν ἀποτελεῖσθαι. Epicurus's remark, ap. Diog. x. 90, that this exposition requires to be completed, refers to the doctrine of Democritus of the formation of the world by means of the circular motion: οὐ γὰρ ἀθροισμὸν δεῖ μόνον γενέσθαι οὐδὲ δίνον ἐν ᾧ ἐνδέχεται κόσμον γίνεσθαι κενῷ κατὰ τὸ δοξαζόμενον ἐξ ἀνάγκης, αὔξεσθαί θ' ἕως ἂν ἑτέρῳ προσκρούσῃ, καθάπερ τῶν καλουμένων φυσικῶν φησί τις. Further details in the next note. Augustine's assertion, *Epist.* 118, 28: *inesse concursioni atomorum vim quandam animalem et spirabilem*, is rightly referred by Krische, *Forsch.* i. 161, to a misapprehension of Cicero, *Tusc.* i. 18, 42. Lange's conjecture (*Gesch. d. Mat.* i. 130, 22) that Democritus supposed the circular motion to take place *after* the formation of the complex of atoms, out of which the world originated, finds no support in the tradition; on the other hand, Diog. ix. 31, represents the σύστημα σφαιροειδὲς as arising first from the δίνη. Similarly Epicurus, *l. c.*, speaks of a δῖνος in the Void, ἐν ᾧ ἐδέχεται κόσμον γίνεσθαι.

[1] This idea, in connection with what has been remarked, p. 236, 4, explains why the doctrine of Democritus is sometimes represented as if the mutual concussion and rotation of the atoms were maintained to be their only motion, of which he sought no further derivation, cf. Diog. ix. 44: φέρεσθαι δ' ἐν τῷ ὅλῳ δινουμένας (τὰς ἀτόμους). *Id.* § 45, p. 238, 2; Sext. *Math.* ix. 113; ap Stob. *Ecl.* i. 394 (*Plac.* i. 23, 3): Δημόκρ. ἓν γένος κινήσεως τὸ κατὰ παλμὸν [if the πλάγιον of the text ought not to be replaced by πληγὴν] ἀπεφαίνετο. (*Ibid.* 348, where the concussion of the atoms is even stated to be their only motion, and their weight is denied, *sup.* p. 227, 2.) Alexander, *ad Metaph.* i. 4, p. 27, 20 Bon. οὗτοι γὰρ (Leucippus and Democritus) λέγουσιν ἀλληλοτυπούσας καὶ κρουομένας πρὸς ἀλλήλους κινεῖσθαι τὰς ἀτόμους, πόθεν μέντοι ἡ ἀρχὴ τῆς κινήσεως τοῖς [τῆς] κατὰ φύσιν, οὐ

all parts of the congeries of atoms are thenceforward involved.[1]

Through this movement of the atoms, in the first place the homogeneous particles are brought together; for that which is alike in weight and form must for this very reason sink or be driven to the same place.[1] It follows, however, from the nature of things that not loose concatenations merely, but firm combinations of atoms must be produced; for as the variously shaped particles are shaken together, many must necessarily adhere and become entangled one with another, must

λέγουσιν· ἡ γὰρ κατὰ τὴν ἀλληλοτυπίαν βίαιός ἐστι κίνησις καὶ οὐ κατὰ φύσιν, ὑστέρα δὲ ἡ βίαιος τῆς κατὰ φύσιν. οὐδὲ γὰρ, etc., *sup.* p. 227, 2. Cic. *De Fato*, 20, 46: *aliam enim quandam vim motus habeant* [*atomi*] *a Democrito impulsionis, quam plagam* (vide previous note) *ille appellat, a te, Epicure, gravitatis et ponderis.* Simpl. *De Cœlo*, 260 b, 17 (*Schol.* 511 b, 15): ἔλεγον ἀεὶ κινεῖσθαι τὰ πρῶτα . . . ἐν τῷ ἀπείρῳ κενῷ βίᾳ. (Mullach, p. 384, quotes from *Phys.* 96: Δημόκριτος φύσει ἀκίνητα λέγων τὰ ἄτομα πληγῇ κινεῖσθαί φησιν; but the words are not in our present passage.) For the same reason Aristotle, *De Cœlo*, iii. 2, 300 b, 8 sqq.; ii. 13, 294 b, 30 sqq., asks the Atomists what was the original and natural motion of the atoms, since this forcible motion presupposes a natural one? It is quite conceivable that the downward motion in empty space, which seemed possible to the Atomists, though not to Aristotle, may have been left without notice, because Democritus presupposed, without explicitly stating, that this was the natural motion of the atoms.

[1] Cf. the passages quoted, p. 242, 2. Democritus himself remarks in the fragment ap. Sext. *Math.* vii. 116 sqq. (cf. Plut. *Plac.* iv. 19, 3, and Arist. *Eth. N.* viii. 2), that it is a universal law that like consorts with like: καὶ γὰρ ζῷά, φησιν, ὁμογενέσι ζῴοισι ξυναγελάζεται, ὡς περιστεραὶ περιστερῇσι καὶ γέρανοι γεράνοισι καὶ ἐπὶ τῶν ἄλλων ἀλόγων. But he considered the cause of this lay not in a tendency inherent in the primitive substances, but in the mechanical motion, the size and form of the atoms, as we see from what follows: ὡσαύτως δὲ καὶ περὶ τῶν ἀψύχων, κατάπερ δρῆν πάρεστι ἐπί τε τῶν κοσκινευομένων σπερμάτων καὶ ἐπὶ τῶν παρὰ τῆσι κυματωγῆσι ψιφίδων· ὅκου μὲν γὰρ κατὰ τὸν τοῦ κοσκίνου δῖνον διακριτικῶς φακοὶ μετὰ φακῶν τάσσονται καὶ κριθαὶ μετὰ κριθέων καὶ πυροὶ μετὰ πυρῶν, ὅκου δὲ κατὰ τὴν τοῦ κύματος κίνησιν αἱ μὲν ἐπιμήκεες ψηφῖδες εἰς τὸν αὐτὸν τόπον τῇσι ἐπιμήκεσι ὠθέονται, αἱ δὲ περιφερέες τῇσι περιφερέσι. (The rest appears to be added by Sextus himself.) Cf. Alex. *Qu. Nat.* ii. 23, p. 137 Sp.: ὁ Δημόκριτός τε καὶ αὐτὸς ἀπορροίας τε γίνεσθαι τίθεται καὶ τὰ ὅμοια φέρεσθαι πρὸς τὰ ὅμοια· ἀλλὰ καὶ εἰς τὸ κοινὸν [l. κενὸν] πάντα φέρεσθαι. Simpl. *Phys.* 7 a: πεφυκέναι γὰρ τὸ ὅμοιον ὑπὸ τοῦ ὁμοίου κινεῖσθαι καὶ φέρεσθαι τὰ συγγενῆ πρὸς ἄλληλα.

embrace and impede one another in their course,[1] so that some will even be retained in a place which is not suited to their nature;[2] and thus from the combination of atoms compound bodies are formed. Each of these complexes separating itself from the mass of primitive bodies is the germ of a world. These worlds, according to the Atomists, are innumerable; for the number of atoms being infinite, and empty space being unlimited, atoms will be found in the most various places. As moreover the atoms are infinitely various in size and

[1] Arist. *De Cœlo*, iii. 4 (*sup.* p. 216, 2); *Gen. et Corr.* (*sup.* p. 215, 1) καὶ συντιθέμενα δὲ καὶ περιπλεκόμενα γεννᾶν. Philop. *ad. h. l.* 36 a, seems to be only inventing; Hippol. *Refut.* i. 12, vide p. 242, 2; Galen vide p. 243, *n*; Strabo in Cic. *Acad.* ii. 38, 121: Simpl. *De Cœlo*, 133 a, 18; *Schol.* 488 a, 26: στασιάζειν δὲ [τὰς ἀτόμους] καὶ φέρεσθαι ἐν τῷ κενῷ διά τε τὴν ἀνομοιότητα καὶ τὰς ἄλλας τὰς εἰρημένας διαφορὰς, φερομένας δὲ ἐμπίπτειν καὶ περιπλέκεσθαι περιπλοκὴν τοιαύτην ἢ συμφαύειν μὲν αὐτὰ καὶ πλησίον εἶναι ποιεῖ, φύσιν μέντοι μίαν ἐξ ἐκείνων οὐδ' ἡντιναοῦν γεννᾷ . . . τοῦ δὲ συμμένειν τὰς οὐσίας μετ' ἀλλήλων μέχρι τινὸς αἰτιᾶται τὰς ἐπαλλαγὰς καὶ τὰς ἀντιλήψεις τῶν σωμάτων. τὰ μὲν γὰρ αὐτῶν εἶναι σκαληνὰ, τὰ δὲ ἀγκιστρώδη (cf. with this p. 224, 1) τὰ δὲ ἄλλας ἀναρίθμους ἔχοντα διαφοράς. ἐπὶ τοσοῦτον οὖν χρόνον σφῶν αὐτῶν ἀντέχεσθαι νομίζει καὶ συμμένειν, ἕως ἰσχυροτέρα τις ἐκ τοῦ περιέχοντος ἀνάγκη παραγενομένη καὶ διασείσῃ καὶ χωρὶς αὐτὰς διασπείρῃ. *Ibid.* 271 b, 2 (*Schol.* 514 a, 6) on the passage quoted from Aristotle: ταύτας δὲ [τὰς ἀτόμους] μόνας ἔλεγον (Leucippus and Democritus) συνεχεῖς· τὰ γὰρ ἄλλα τὰ δοκοῦντα συνεχῆ ἀφῇ προσεγγίζειν ἀλλήλοις. διὰ καὶ τὴν τομὴν ἀνήρουν, ἀπόλυσιν τῶν ἁπτομένων λέγοντες τὴν δοκοῦσαν τομήν· καὶ διὰ τοῦτο οὐδ' ἐξ ἑνὸς πολλὰ γίνεσθαι ἔλεγον . . . οὔτε ἐκ πολλῶν ἓν κατ' ἀλήθειαν συνεχές, ἀλλὰ τῇ συμπλοκῇ τῶν ἀτόμων ἕκαστον ἓν δοκεῖν γίνεσθαι. τὴν δὲ συμπλοκὴν Ἀβδηρῖται ἐπάλλαξιν ἐκάλουν ὥσπερ Δημόκριτος. (Also some of the MSS. have περιπλέξει instead of ἐπαλλάξει in the passage from Aristotle.)

[2] According to Aristotle (*De Cœlo*, iv. 6, 313 a, 21; cf. Simpl. *ad. h. l.* 322 b, 21; *Schol.* 518 a, 1), Democritus explained the phenomenon that flat bodies of a substance specifically heavier than water can yet float upon water in this way. The warm substances, he said, arising out of the water would not allow them to sink; and in the same manner he conceived the earth as a flat disc borne up by the air. He therefore supposed that, by rotation, that which is lighter might easily come into a lower place, and the heavier into a higher place.

shape, the worlds formed from them will display the greatest diversity; yet it may also happen that some of them are absolutely alike. Lastly, since these worlds had a beginning, so are they subject to increase and diminution, and finally to destruction; they increase as long as other substances from without unite with them; they diminish when the contrary is the case; they are annihilated if two come into collision, and the smaller is crushed by the greater;[1] and in their internal construction likewise they are subject to perpetual change.[2]

[1] Aristotle doubtless has the Atomistic philosophy in view when (*Phys.* viii. 1, 250 b, 18) he says: *ὅσοι μὲν ἀπείρους τε κόσμους εἶναί φασι καὶ τοὺς μὲν γίγνεσθαι τοὺς δὲ φθείρεσθαι τῶν κόσμων, ἀεὶ φασιν εἶναι γένεσιν*; for the words *τοὺς μὲν γιν.* can only be understood of co-existent worlds like those of the Atomists, and not of successive worlds, as held by Anaximander and Heracleitus. The refutation of the opinion that there may be several worlds (*De Cœlo*, i. 8) must also refer to co-existent worlds. Later writers are more explicit: *οἱ μὲν γὰρ ἀπείρους τῷ πλήθει τοὺς κόσμους ὑποθέμενοι, ὡς οἱ περὶ Ἀναξίμανδρον* (that this is a misunderstanding has already been shown, Vol. I. 257 sq.) *καὶ Λεύκιππον καὶ Δημόκριτον, . . . γινομένους αὐτοὺς καὶ φθειρομένους ὑπέθεντο ἐπ' ἄπειρον, ἄλλων μὲν ἀεὶ γινομένων, ἄλλων δὲ φθειρομένων. Id. De Cœlo*, 91 b, 36, 139 b, 5; *Schol.* in *Arist.* 480 a, 38, 489 b, 13; Cic. *Acad.* ii. 17, 55: *ais Democritum dicere, innumerabiles esse mundos, et quidem sic quosdam inter se non solum similes, sed undique perfecte et absolute ita pares, ut inter eos nihil prorsus intersit, et eos quidem innumerabiles: itemque homines.* Diog. ix. 31 of Leucippus: *καὶ στοιχεῖά φησι, κόσμους τ' ἐκ τούτων ἀπείρους εἶναι καὶ διαλύεσθαι εἰς ταῦτα. Ibid.* 44 of Democritus: *ἀπείρους τ' εἶναι κόσμους καὶ γεννητοὺς καὶ φθαρτούς. Ibid.* 33, *supra* 236, 3; Hippol. *Refut.* i. 13: *ἀπείρους δὲ εἶναι κόσμους (ἔλεγεν ὁ Δημόκρ.) καὶ μεγέθει διαφέροντας, ἔν τισι δὲ μὴ εἶναι ἥλιον μηδὲ σελήνην, ἔν τισι δὲ μείζω [-ους] τῶν παρ' ἡμῖν καὶ ἔν τισι πλείω [-ους]. εἶναι δὲ τῶν κόσμων ἄνισα τὰ διαστήματα, καὶ τῇ μὲν πλείους τῇ δὲ ἐλάττους, καὶ τοὺς μὲν αὔξεσθαι τοὺς δὲ ἀκμάζειν τοὺς δὲ φθίνειν, καὶ τῇ μὲν γίνεσθαι τῇ δὲ λείπειν, φθείρεσθαι δὲ αὐτοὺς ἐπ' ἀλλήλων προσπίπτοντας. εἶναι δὲ ἐνίους κόσμους ἐρήμους ζῴων καὶ φυτῶν καὶ παντὸς ὑγροῦ . . . ἀκμάζειν δὲ κόσμον ἕως ἂν μηκέτι δύνηται ἔξωθέν τι προσλαμβάνειν.* Stob. *Ecl.* i. 418: *Δημόκριτος φθείρεσθαι τὸν κόσμον τοῦ μείζονος νικῶντος.*

[2] Cf. p. 248, 3.

The way in which our world originated is thus more particularly described.[1] When by the concussion of many atoms of different kinds, one mass of atoms had been separated in which the lighter portion had been driven upwards, and the whole had been set in rotation by the encounter of the opposite movements,[2] the bodies pressed outwards placed themselves in a circle outside of the whole, and so formed around it a kind of husk.[3] This covering grew thinner and thinner, as parts of it were gradually carried by the motion into the centre, while, on the other hand, the mass of the incipient world was gradually increasing by the atoms continually added to it. The earth was formed from the substances which had sunk down into the centre; and the sky, fire, and air from[4] those which went upwards. A portion of these shaped themselves into balls of denser mass, which at first were in a damp and miry state; but as the air which carried them round with it was

[1] Diog. ix. 32, after the quotation on p. 242, 2: *τοῦτο δ' οἷον ὑμένα ὑφίστασθαι, περιέχοντ' ἐν ἑαυτῷ παντοῖα σώματα· ὧν κατὰ τὴν τοῦ μέσου ἀντέρεισιν περιδινουμένων, λεπτὸν γίνεσθαι τὸν πέριξ ὑμένα, συῤῥεόντων ἀεὶ τῶν συνεχῶν κατ' ἐπίψαυσιν τῆς δίνης· καὶ οὕτω μὲν γενέσθαι τὴν γῆν, συμμενόντων τῶν ἐνεχθέντων ἐπὶ τὸ μέσον. αὐτόν τε πάλιν τὸν περιέχοντα οἷον ὑμένα αὔξεσθαι κατὰ τὴν ἐπέκρυσιν τῶν ἐξωθεν σωμάτων· δίνῃ τε φερόμενον αὐτὸν ὧν ἂν ἐπιψαύσῃ ταῦτα ἐπικτᾶσθαι. τούτων δὲ τινα συμπλεκόμενα ποιεῖν σύστημα τὸ μὲν πρῶτον κάθυγρον καὶ πηλῶδες, ξηρανθέντα [δὲ] καὶ περιφερόμενα σὺν τῇ τοῦ ὅλου δίνῃ εἶτ' ἐκπυρωθέντα τὴν τῶν ἀστέρων ἀποτελέσαι φύσιν.* In agreement with this, vide the exposition ap. Plut. *Plac.* 1, 4, concerning which see p. 242, 2.

[2] Cf. p. 248, 2.

[3] This is also to be found in Stob. *Ecl.* i. 490. Stobæus adds that the crust is formed (chiefly) of hook-shaped atoms. Cf. Galen, c. 11, p. 267 K.

[4] In reference to this, Metrodorus the Democritean is censured ap. Plut. *Fac. Lun.* 15, 3, p. 928, for representing the earth as sinking into its place by its own weight; the sun, on the contrary, as pressed upward like a sheath by its own lightness, and the stars as moving like the scales of a balance.

forced through the ascending masses, and set in stormy whirling motion, they gradually dried, and the swift motion kindled them, and so the stars arose.[1] In a similar manner by the pressure of the winds and the influence of the stars the smaller particles were forced out of the earth; these ran together as water into the hollows, and so the earth condensed into a firm mass,[2] a process which, according to the theory of Democritus, is still continually going on.[3] In consequence of the earth's increasing mass and density, it attained its fixed place in the centre of the world, whereas in the beginning, when it was still small and light, it had moved hither and thither.[4]

The notions of the Atomists respecting the universe are therefore tolerably in harmony with the ordinary

[1] Cf. on this point, besides the quotations just given, and *inf.* note 4, Hippol. i. 13: τοῦ δὲ παρ' ἡμῖν κόσμου πρότερον τὴν γῆν τῶν ἄστρων γενέσθαι. Diog. ix. 30: τούς τε κόσμους γίνεσθαι σωμάτων εἰς τὸ κενὸν ἐμπιπτόντων καὶ ἀλλήλοις περιπλεκομένων· ἔκ τε τῆς κινήσεως κατὰ τὴν αὔξησιν αὐτῶν γίνεσθαι τὴν τῶν ἀστέρων φύσιν. *Ibid.* 33: καὶ πάντα μὲν τὰ ἄστρα διὰ τὸ τάχος τῆς φορᾶς, τὸν δ' ἥλιον ὑπὸ τῶν ἀστέρων ἐκπυροῦσθαι, τὴν δὲ σελήνην τοῦ πυρὸς ὀλίγον μεταλαμβάνειν. Theod. *Cur. Gr. Aff.* iv. 17, p. 59. Democritus, like Anaxagoras, regarded the stars as masses of stone, which have been kindled by the revolution of the heavens.

[2] *Plac.* i. 4: πολλῆς δὲ ὕλης ἔτι περιειλημμένης ἐν τῇ γῇ, πυκνουμένης τε ταύτης κατὰ τὰς ἀπὸ τῶν πνευμάτων πληγὰς καὶ τὰς ἀπὸ τῶν ἀστέρων αὔρας (solar heat and the like), προσεθλίβετο πᾶς ὁ μικρομερὴς σχηματισμὸς ταύτης καὶ τὴν ὑγρὰν φύσιν ἐγέννα· ῥευστικῶς δὲ αὕτη διακειμένη κατεφέρετο πρὸς τοὺς κοίλους τόπους καὶ δυναμένους χωρῆσαί τε καὶ στέξαι ἢ καθ' αὐτὸ τὸ ὕδωρ ὑποστὰν ἐκοίλανε τοὺς ὑποκειμένους τόπους. This exposition, though primarily Epicurean, may, perhaps, in the last resort be referred to Democritus. This is probable, both on internal evidence and from a comparison with the theories about to be quoted.

[3] According to Arist. *Meteor.* ii. 3, 365 b, 9; Alex. *in h. l.* 95 a, b; Olympiod. *in h. l.* i. 278 sq. Id., he supposed that the sea would in time dry up through evaporation.

[4] *Plac.* iii. 13, 4: κατ' ἀρχὰς μὲν πλάζεσθαι τὴν γῆν φησιν ὁ Δημόκριτος διά τε μικρότητα καὶ κουφότητα, πυκνωθεῖσαν δὲ τῷ χρόνῳ καὶ βαρυνθεῖσαν καταστῆναι.

opinion. Surrounded by a circular layer of tightly compressed atoms, it swims in the infinite Void;[1] its centre is the earth; the space between the centre and the fixed external envelope is filled with air in which the stars move.[2] The earth, they agreed with the ancient physicists in supposing to be an exceedingly flat cylinder, which supports itself on the air by means of its breadth. The stars are, as already stated, bodies of a terrestrial nature, which have become heated by the revolution of the sky: like Anaxagoras, Democritus asserted this particularly of the sun and moon: he also agreed with his predecessor in representing them both as of a considerable size; and the moon as a kind of earth, for he recognised in its face the shadow of mountains.[3] The statement that these two heavenly bodies had originally been, like the earth, the nucleus of other

[1] At any rate we are told nothing of a movement of the entire universe; the Atomists seem to have been of opinion that, through its circular motion, the tendency of weight in a downward direction would be overcome.

[2] *Plac.* iii. 10: Λεύκιππος τυμπανοειδῆ [τὴν γῆν], Δημόκριτος δὲ δισκοειδῆ μὲν τῷ πλάτει, κοίλην δὲ τὸ μέσον. The last clause does not mean, as I formerly supposed, that the earth is hollow, but that it is depressed in the centre, and elevated towards the edge, cf. Schaefer, *Astron. Geogr. d. Gr.*, Flensb. 1873, p. 14; Arist. *De Cœlo*, ii. 12, 294 b, 13: Ἀναξιμένης δὲ καὶ Ἀναξαγόρας καὶ Δημόκριτος τὸ πλάτος αἴτιον εἶναί φασι τοῦ μένειν αὐτήν. οὐ γὰρ τέμνειν ἀλλ' ἐπιπωματίζειν τὸν ἀέρα τὸν κάτωθεν . . . τὸν δ' οὐκ ἔχοντα μεταστῆναι τόπον ἱκανὸν ἀθρόον τῷ κάτωθεν ἠρεμεῖν, ὥσπερ τὸ ἐν ταῖς κλεψύδραις ὕδωρ, cf. p. 245, 2.

[3] Cic. *Fin.* i. 6, 20: *sol Democrito magnus videtur.* Stob. *Ecl.* i. 532: [τὸν ἥλιον] Δημόκριτος μύδρον ἢ πέτρον διάπυρον, τροπὴν δὲ γίνεσθαι ἐκ τῆς περιφερούσης αὐτὸν δινήσεως. *Ibid.* 550: [τὴν σελήνην] Ἀναξαγόρας καὶ Δημόκριτος στερέωμα διάπυρον, ἔχον ἐν ἑαυτῷ πεδία καὶ ὄρη καὶ φάραγγας (and in the same words, Theodor. *Cur. Gr. Aff.* iv. 21, 23). *Ibid.* 564, concerning the face of the moon. Cf. following note; and as to the light of the moon, pp. 250, 3, and 248, 1. When it is said in Diog. ix. 44, that the sun and moon consist, like souls, of smooth and round atoms, *i.e.* of fire, this can only refer to the fire which was afterwards added to their earthly nucleus.

universes, and that the sun only subsequently became filled with fire,[1] when its circle grew larger, may be brought into connection with the rest of the Atomistic cosmology through the theory that the sun and moon, at an earlier stage of their formation, had been taken hold of by the masses circulating about the earth's nucleus, and so had become part of our universe.[2] The opinion of Leucippus and Democritus concerning the order of the stars is variously given.[3] Their orbits,

[1] Plut. ap. Eus. *Pr. Ev.* i. 8, 7: ἡλίου δὲ καὶ σελήνης γένεσίν φησι, κατ' ἰδίαν φέρεσθαι ταῦτα (namely at the time of their genesis) μηδέπω τοπαράπαν ἔχοντα θερμὴν φύσιν, μηδὲ μὴν καθόλου λαμπροτάτην, τοὐναντίον δὲ ἐξωμοιωμένην τῇ περὶ τὴν γῆν φύσει· γεγονέναι γὰρ ἑκάτερον τούτων πρότερον ἔτι καὶ ἰδίαν ὑποβολήν τινα κόσμου, ὕστερον δὲ μεγεθυνομένου τοῦ περὶ τὸν ἥλιον κύκλου ἐναπολειφθῆναι ἐν αὐτῷ τὸ πῦρ.

[2] That the sun and moon should have originated in a different manner from the other heavenly bodies, might appear necessary on account of their size. The statement of Diogenes, that the sun, according to Leucippus, was kindled by the stars, quoted p. 248, 1, and no doubt connected with what has just been cited from Plutarch, seems also to show that the case of the sun and moon was peculiar.

[3] According to Diog. ix. 33 (concerning Leucippus), the moon was nearest, and the sun farthest from the earth, the other stars being intermediate between them; this reminds us of the statements quoted, Vol. I. p. 599, 2, concerning Parmenides. According to Plutarch, *Plac.* ii. 15, 3, reckoning from the earth, the moon came first, then Venus, the Sun, the other planets, the fixed stars. According to Galen, *H. Ph.* 11, p. 272 (also less fully, ap. Stob. *Ecl.* i. 508), they came in the following order: moon, sun, planets, fixed stars; according to Hippol. *Refut.* i. 13, thus: moon, sun, fixed stars; the planets, the distance of which, as before noticed, was differently given by Democritus, seem to have been omitted through the negligence of the transcriber. According to Lucretius, v. 619 sqq. Democritus explained the deviation of the sun's course at the solstices by saying that each heavenly body followed the movement of the sky with less and less velocity, the nearer it approached the earth: *ideoque relinqui paulatim solem cum posterioribus signis inferior multo quod sit, quam fervida signa* (the signs of the Zodiac in which the sun is in summer, cf. v. 640) *et magis hoc lunam.* So that the sun is passed by the fixed stars, and the moon by all the heavenly bodies, and again overtaken; which gives the *appearance* of the sun and moon going in an opposite direction from the rest. The words ap. Plut.

those philosophers thought, were originally (before the inclination of the earth's axis) parallel to the earth's surface; their motion consequently was a lateral revolution,[1] the direction being in all cases from east to west;[2] their velocity increased with the distance of the stars from the circumference of the universe, and therefore the fixed stars outstrip the sun and the planets, and these again are swifter than the moon.[3] The fire of the stars, other writers say, they believed to be nourished by the vapours of the earth.[4] The theories of the Atomists on the inclination of the earth's axis,[5]

Fac. Lun. 16, 10, p. 929: "κατὰ στάθμην, φησὶ Δημόκριτος, ἱσταμένη τοῦ φωτίζοντος [ἢ σελήνη] ὑπολαμβάνει καὶ δέχεται τὸν ἥλιον," do not affect the present question; for κατὰ στάθμην does not mean 'close by,' but 'directly opposite;' properly, 'lying in a straight line,' as we find ap. Simpl. *De Cœlo*, 226 a, 20 (*Schol.* 502 b, 29); Seneca, *Qu. Nat.* vii. 3, says: *Democritus quoque . . . suspicari se ait plures esse stellas, quæ currant, sed nec numerum illarum posuit nec nomina, nondum comprehensis quinque siderum cursibus*; but it does not follow from this that Democritus did not allow the number of the planets to have been five. Seneca's meaning appears to have been this: 'At that time the five planets had not only been long universally known in the eastern lands visited by our philosopher, but they had also been admitted into the astronomical system of the Pythagoreans.' Moreover the title of a treatise: περὶ τῶν πλανητῶν (Diog. ix. 46) is against the supposition. What Democritus really said was probably this, that besides the five known planets, there might be others; which Seneca heard at third hand, and misunderstood.

[1] This seems probable, from their theory, shortly to be mentioned, of the inclination of the earth, and from the corresponding statements of Anaximenes, Anaxagoras and Diogenes, with whom the Atomists in their ideas about the form and position of the earth are entirely agreed.

[2] Plut. *Plac.* ii. 16, 1.

[3] Lucr. *l. c.* p. 250, 3.

[4] According to Eustath. in *Od.* xii. p. 1713, 14 Rom. Democritus explained Ambrosia the food of the Gods, in reference to the nourishment of the sun by vapours.

[5] According to Plutarch, *Plac.* iii. 12, they supposed that the earth inclined towards the south, which Leucippus explained by the lesser density of the warmer regions, and Democritus by the weakness of the southern part of the περιέχον: the opinion of both philosophers is no doubt the same: the warmer part of the universe filled with lighter and more movable atoms offers less resistance to the

on solar and lunar eclipses,[1] on the light of the stars and the milky way,[2] on comets,[3] and on the great cosmical year,[4] can be only briefly mentioned in this place. Democritus in regard to most of these points agrees with Anaxagoras. Some other astronomical observations which are ascribed to this philosopher[5] we may be allowed to pass over in silence, and in respect to the few further theories he is said to have held

pressure of the earth's disc, and therefore it inclines to that side. In that case it is difficult to see why the water does not all run towards the south, and overflow the southern countries. Cf. the theories of Anaxagoras and Diogenes on the same subject (Vol. I. p. 293, 4); also the following note.

[1] According to Diog. ix. 33, Leucippus had taught ἐκλείπειν ἥλιον καὶ σελήνην τῷ κεκλίσθαι τὴν γῆν πρὸς μεσημβρίαν, which is meaningless. The words, τῷ κεκλίσθαι, &c., as is shown by what follows, must originally have stood in the same connection as the passage just quoted from the *Placita*; and other reasons must have been assigned for the solar and lunar eclipses. But it is possible that Diogenes may himself be responsible for the confusion.

[2] Democritus thought the milky way was composed of many small stars in close proximity; in regard to its peculiar light, he supposed with Anaxagoras that the other stars were enlightened by the sun, and that we see in them, not their own, but the sun's light reflected; whereas the stars of the milky way lie in the shadow of the earth, and consequently shine by their own light. Arist. *Meteor.* i. 8, 345 a, 25, and his expressions are repeated by Alex. *in h. l.* 81 b; Olympiodorus, *in h. l.* p. 15 a; i. 200 Id.; Stob. *Ecl.* i. 576: Plut. *Plac.* iii. 1, 8; Macrob. *Somn. Scip.* i. 15; see also Ideler, *ad Meteorol.* i. 410, 414.

[3] Democritus, like Anaxagoras, supposed the comets to be a collection of several planets, so near to one another, that their light was united. Arist. *Meteor.* i. 6, 342 b, 27, 343 b, 25; Alex. *in h. l.* p. 78 a, 79 b; Olympiodorus, *in h. l.* i. 177 Id.; Plut. *Plac.* iii. 2, 3; cf. Sen. *Qu. Nat.* vii. 11; *Schol. in Arat. Diosem.* 1091 (359).

[4] Democritus assigned to this great year, 82 ordinary years and 28 intercalary months (Cens. *Di. Nat.* 18, 8); that is, he supposed that in this time the difference between the solar and lunar year was equalised; 82 solar years being equal to 1012 (= 12 × 82 ÷ 28), which gives nearly 29½ days for each lunar month, if the solar year be reckoned at 365 days.

[5] Cf. Mullach, 231–235; *ibid.* 142 sqq. on Democritus's astronomical, mathematical, and geographical writings, of which, however, we know little except the titles.

relating to the sphere of inorganic nature, a bare enumeration must suffice.[1]

III. Organic Nature. Man: his knowledge and his actions.

The enquiries of Democritus in regard to organic beings included not only animals, but plants; he was, however, chiefly occupied with mankind.[2] From a philosophic point of view, his anthropology alone is worthy

[1] He supposed that earthquakes were caused by the action of subterranean water and currents of air (Arist. *Meteor.* ii. 7, 365 b, 1; this is repeated by Alex. *in h. l.* Sen. *Nat. Qu.* vi 20); thunder, lightning, and hot blasts (πρηστῆρ) he tries, ingeniously enough (ap. Stob. i. 594), to explain by means of the nature of the clouds which engender them; and the various effects of lightning, ap. Plut. *Qu. Conv.* iv. 2, 4, 3 (Democr. *Fr. Phys.* 11), he accounts for by saying that some bodies offer resistance to it, while others allow it to pass through. Wind arises when many atoms are pressed together in the air into a small space: when they have room to spread, there is a calm. The overflowings of the Nile he explains thus: When the snow melts in the northern mountains, the evaporations are carried by the north wind of the latter part of the summer towards the south, and fall in the Ethiopian mountains (Diod. i. 39; Athen. ii. 86 d; Plut. *Plac.* iv. 1, 4; *Schol. Apollon. Rhod. in Argon.* iv. 269). Sea-water, he supposed, like Empedocles, to contain sweet water as well as salt, and that the fishes were nourished by it (Ælian. *H. Anim.* ix. 64). Of the magnet we have already spoken, p. 230, 1. The rules about the weather must also be referred to Democritus, ap. Mullach, 231 sqq. 238 (*Fragm. Philos.* i. 368 sq.), so far as they may be considered at all genuine; on the other hand, what is ascribed to him, *ibid.* 238, 239 sq. (*Fragm.* i. 372 sq.), concerning the finding of springs, out of the Geoponica, cannot belong to him; as the Democritean Geoponica (on which, cf. Meyer. *Gesch. d. Botanik.* i. 16 sq.) are wholly spurious.

[2] The list of his writings, ap. Diog. ix. 46 sq., mentions: αἰτίαι περὶ σπερμάτων καὶ φυτῶν καὶ καρπῶν, αἰτίαι περὶ ζῴων γ'. περὶ ἀνθρώπου φύσιος ἢ περὶ σαρκὸς β', περὶ νοῦ, π. αἰσθήσιων; also the books περὶ χυμῶν and περὶ χροῶν partly belong to the same category. Backhuisen T. Brinck, in Philologus, viii. 414 sqq., has collected from the spurious letter of Democritus to Hippocrates περὶ φύσιος ἀνθρώπου, and other sources, the probable fragments of the treatise περὶ ἀνθρώπου φύσιος. In this treatise perhaps the words may have stood which are censured by Sext. *Math.* vii. 265; *Pyrrh.* ii. 23, but which cannot of course have been intended as an actual definition: ἄνθρωπός ἐστιν ὃ πάντες ἴδμεν.

of attention; such of his observations on plants[1] and animals[2] as have been handed down to us consist merely of isolated remarks and conjectures. Even his theories on generation and the development of the fœtus,[3] on

[1] Plants, the empty channels of which run straight, grow more quickly, but last a shorter time, because the nutritive substances, though circulating more swiftly through all their parts, are also carried off more swiftly, Theophr. *Caus. Plant.* i. 8. 2; ii. 11, 17. What is quoted by Mullach, p. 248 sqq. (*Fragm.* i. 375 sq.), from the *Geoponica* concerning various agricultural growths, cannot be certainly traced to Democritus. Cf. previous note. Concerning the soul of plants, vide *infra*.

[2] The passages collected by Mullach, 226 sqq. (*Fragm.* i. 366 sq.) from Ælian's *History of Animals* relate to the following subjects: that the lion does not come into the world blind, like other animals; that fishes feed upon the sweet portions of the seawater; concerning the productiveness of dogs and swine, the unfruitfulness of mules (cf. also Arist. *Gen. Anim.* ii. 8, 747 a, 25, paraphrased in his usual manner by Philop. *ad h. l.* 58 b), and the origin of these hybrids; on the formation of stags' horns; on the differences of bodily structure between oxen and bulls; on the absence of horns in bulls. To Democritus may likewise be referred the observations, ap. Arist. *Part. Anim.* iii. 4, 665 a, 31 on the entrails of bloodless animals; *Gen. Anim.* v. 788 b, 9 (Philop. *ad h. l.* 119 a), on the structure of teeth; *Hist. Anim.* ix. 39, 623 a, 30, on the webs of spiders. The statement about hares in Mullach, 254, 103 (*Fragm. Philos.* i. 377, 13 from *Geopon.* xix. 4) is clearly not his.

[3] According to Plutarch's *Placita*, he supposed that the seed is secreted from all parts of the body (v. 3, 6, cf. Arist. *Gen. Anim.* iv. i. 764 a, 6; i. 17, 721 b, 11; Philop. *Gen. Anim.* 81 b; Censor. *Di. Nat.* c. 5, 2), and that it is found in women, and also an organ connected with it: he seems to have distinguished its visible constituents from the atoms of fire or soul concealed in them. (*Plac.* v. 4. 1, 3: further particulars result from his doctrine of the soul.) The continuance of the fœtus in the maternal body causes its body to resemble that of the mother (Arist. *Gen. Anim.* ii. 4, 740 a, 35, whose statement is amplified by Philoponus, *ad h. l.* 48 b, obviously on his own authority and not on that of Democritus). The process of formation begins with the navel, which retains the fœtus in the uterus (Fr. *Phys.* 10, vide *infra*); at the same time, however, the coldness of the air assists in closing the maternal body more firmly, and in keeping the fœtus in repose (Ælian, *H. Anim.* xii. 17). The external parts of the body, especially (according to Cens. *Di. Nat.* 6, 1) the head and the stomach, are formed previously to the internal (Arist. *l. c.* 740 a, 13. Philoponus asserts, no doubt quite arbitrarily, and on no other evidence than this passage, that, according to Democritus, *μὴ ἐν τῇ καρδίᾳ*

which the ancient physicists were so prone to speculate, are not of a kind to demand our particular attention. We may mention, however, that in agreement with several of his predecessors he represented men and animals as arising from terrestrial slime.[1]

Man, on account of his bodily structure and form, is to Democritus an object of the highest admiration.[2] In his description of the human body[3] he not merely attempts to describe its parts according to their position and nature with as much exactitude as the then state of these enquiries allowed, but he praises their utility and importance for the life of man with such fervour that, in spite of his general tendency to a purely mechanical explanation of nature, he approaches the teleology which has always been chiefly connected with the study of organic life, and which even then, in the person of Socrates, had begun a successful conflict with the

εἶναι τὴν θρεπτικὴν καὶ ποιητικὴν δύναμιν, ἀλλ' ἐκτός). The sex of the child depends on the relative proportions of the paternal and maternal seed, emanating from the sexual organs (Arist. *l. c.* 764 a, 6, whose observations are enlarged upon by Philoponus, 81 b, doubtless more accurately than by Censorinus, *Di. Nat.* 6, 5; similarly Parmenides, vide Vol. I. p. 601, 4). Abortions are caused by superfœtation (Arist. *l. c.* iv. 4, 769 b, and following him, Philop. 90 b). The child gets its nourishment through the mouth, even in the womb, by sucking a part of the uterus corresponding with the teats (*Plac.* v. 16, 1; cf. Arist. *Gen. An.* ii. 7, 746 a, 19). The last-mentioned theory, which Censorinus (*l. c.* 6, 3) also attributes to Hippo and Diogenes, indicates enquiries about animals; for it refers to the cotyledons which are absent in the human body.

[1] This is primarily asserted of men by Censorinus, *Di. Nat.* 4, 9; and his statement is placed beyond question by the analogy of the Epicurean doctrine. The same appears to be intended in the mutilated and imperfect notice in Galen, *Hist. Phil.* c. 35, p. 335.

[2] According to Fulgentius, *Myth.* iii. 7, he praised the ancients, referring to Homer, *Il.* ii. 478, for assigning the various parts of the human body to different gods—the head to Zeus, the eyes to Pallas, &c. According to David, *Schol. in Arist.* 14 b, 12, he called man a *μικρὸς κόσμος*.

[3] Cf. B. Ten Brinck, *l. c.*

naturalism of the ancient physics. The fortress of the body is given in charge to the brain, which is the lord of the whole, to whom the power of thought is entrusted; the heart is called the queen, the nurse of anger, and is armed with a coat of mail against attacks;[1] in regard to the organs of the senses and of speech, it is shown how suitable they are for their functions, &c.[2] Democritus, indeed, never says that they are so fashioned for definite ends with design and set purpose;[3] he does not actually proceed teleologically, but as he traces the result not to a fortuitous concurrence of circumstances but to nature as Unity,[4] which does nothing without reason and necessity,[5] he approaches as nearly to the teleology which he despises as is possible from his own point of view.[6]

The soul on the hypotheses of the Atomistic doctrine can only be conceived as corporeal, but its material substance must be of a kind to explain its peculiar nature. This, according to Democritus, lies in animating

[1] Cf. p. 258, 2.

[2] Cf. in respect to the organs of sense the words which are quoted by Heracleides (ap. Porph. in *Ptol. Harm.* (in *Wallisii Opp. Math. T.*) ii. p. 215): (ἡ ἀκοὴ) ἐκδοχεῖον μύθων οὖσα μένει τὴν φωνὴν ἀγγείου δίκην· ἥδε γὰρ εἰσκρίνεται καὶ ἐνρεῖ.

[3] Cf. Arist. *De Respir.* 4 (*infra*, p. 259, 2). In the words π. φύσ. ἀνθρ. *l. c.* No. 28: ἡ δὲ ἀσώματος ἐν μιχοῖσι φύσις ἐξέτευξε παντόμορφα σπλάγχνων γένεα, it is possible that ἀσώματος may belong to the supreme worker; if indeed we ought not to substitute ἀόρατος.

[4] Vide previous note, and No. 26: εὔνητον ἀπὸ φλεβέων τε καὶ νεύρων πλέγμα . . . φύσιος ὕπο δεδημιούργηται.

[5] Vide *supra*, p. 237 sq.

[6] This is not, however, carried to such an extent that we need doubt his being the author of the above description. We find the same theory in Plutarch's quotation, *De Am. Prol.* c. 3, p. 495; cf. *Fort. Rom.* c. 2, p. 317: ὁ γὰρ ὀμφαλὸς πρῶτον ἐν μήτρῃσι (ὥς φησι Δημόκριτος) ἀγκυρηβόλιον σάλου καὶ πλάνης ἐμφύεται, πεῖσμα καὶ κλῆμα τῷ γινομένῳ καρπῷ καὶ μέλλοντι. We shall see in the course of this chapter that Democritus had no difficulty in combining with his materialism the recognition of the spiritual in nature and in man.

and motive force: the soul is that which effects the movement of living beings. But this it can only do if it is itself in constant motion, for the mechanical motion, which alone is recognised by the Atomists, can only be produced by what is moved. The soul must therefore consist of the most movable substance—of fine, smooth, and round atoms—in other words, of fire.[1] And the same results from the second chief quality of the soul, which appears side by side with its vivifying force—the power of thought, for thought likewise is a motion.[2] These fiery particles were consistently supposed by Democritus to be diffused throughout the whole body; the body is animated in all its parts because

[1] P. 234.

[2] Arist. *De An.* i. 2, 403 b, 29: φασὶ γὰρ ἔνιοι καὶ πρώτως ψυχὴν εἶναι τὸ κινοῦν, οἰηθέντες δὲ τὸ μὴ κινούμενον αὐτὸ μὴ ἐνδέχεσθαι κινεῖν ἕτερον, τῶν κινουμένων τι τὴν ψυχὴν ὑπέλαβον εἶναι. ὅθεν Δημόκριτος μὲν πῦρ τι καὶ θερμὸν φησιν αὐτὴν εἶναι· ἀπείρων γὰρ ὄντων σχημάτων καὶ ἀτόμων τὰ σφαιροειδῆ πῦρ καὶ ψυχὴν λέγει, οἷον ἐν τῷ ἀέρι τὰ καλούμενα ξύσματα, etc. (vide p. 225) ὁμοίως δὲ καὶ Λεύκιππος. τούτων δὲ τὰ σφαιροειδῆ ψυχήν, διὰ τὸ μάλιστα διὰ παντὸς δύνασθαι διαδύνειν τοὺς τοιούτους ῥυσμούς (this expression, with which cf. p. 223, 1, seems to show that Aristotle is not merely advancing his own opinions, but quoting from Democritus) καὶ κινεῖν τὰ λοιπὰ κινούμενα καὶ αὐτά, ὑπολαμβάνοντες τὴν ψυχὴν εἶναι τὸ παρέχον τοῖς ζῴοις τὴν κίνησιν. *Ibid.* 405 a, 8: Δημόκριτος δὲ καὶ γλαφυρωτέρως εἴρηκεν ἀποφηνάμενος διὰ τί τούτων [sc. τοῦ κινητικοῦ καὶ γνωριστικοῦ] ἑκάτερον [sc. ἡ ψυχή]· ψυχὴν μὲν γὰρ εἶναι ταὐτὸ καὶ νοῦν, τοῦτο δ' εἶναι τῶν πρώτων καὶ ἀδιαιρέτων σωμάτων, κινητικὸν δὲ διὰ μικρομέρειαν καὶ τὸ σχῆμα· τῶν δὲ σχημάτων εὐκινητότατον τὸ σφαιροειδὲς λέγει· τοιοῦτον [scil. εὐκινητότατον] δ' εἶναι τὸν νοῦν καὶ τὸ πῦρ. Cf. *Ibid.* c. 4, 5, 409 a, 10 b, 7, and the following notes, especially p. 259, 2. That Democritus regarded the soul as composed of warm and fiery substances, and of smooth and round atoms, is asserted by many writers, e.g. Cic. *Tusc.* i. 11, 22; 18, 42; Diog. ix. 44; Plut. *Plac.* iv. 3, 4 (Stob. i. 796, the same thing is asserted of Leucippus). Nemesius, *Nat. Hom.* c. 2, p. 28, explains the round atoms which form the soul as 'fire and air,' and Macrobius, *Somn.* i. 14, as '*Spiritus*;' but these are inaccuracies, resulting perhaps from a confusion with Epicurus's doctrine of the soul, or from Democritus's theory of the breath, mentioned *infra*.

there are atoms in all, which, according to their nature, are involved in perpetual motion and also move that which surrounds them:[1] indeed, he goes so far as to say that there is a soul-atom between every pair of body-atoms.[2] But this does not mean that the movement of the atoms must be the same in all parts of the body; on the contrary, according to Democritus, the various faculties of the soul have their seat in different parts of the body: thought in the brain, anger in the heart, desire in the liver.[3] When, therefore, later authors assert that he assigned the whole body to the irrational part of the soul as its abode,[4] and the brain or the heart to the rational part, the statement, though not wholly to be discarded, is only partially correct.[5] On account

[1] Arist. *De An.* i. 3, 406 b, 15: ἔνιοι δὲ καὶ κινεῖν φασὶ τὴν ψυχὴν τὸ σῶμα ἐν ᾧ ἐστὶν ὡς αὐτὴ κινεῖται, οἷον Δημόκριτος . . . κινουμένας γάρ φησι τὰς ἀδιαιρέτους σφαίρας διὰ τὸ πεφυκέναι μηδέποτε μένειν συνεφέλκειν καὶ κινεῖν τὸ σῶμα πᾶν, which Aristotle compares to the fancy of Philippus the comic poet, that Daedalus gave motion to his statues by pouring quicksilver into them. Hence at the beginning of c. 5 he says: εἴπερ γάρ ἐστιν ἡ ψυχὴ ἐν παντὶ τῷ αἰσθανομένῳ σώματι. We find the same, probably quoted from Aristotle, in Iambl. ap. Stob. i. 924, and more concisely in Sext. *Math.* vii. 349; cf. Macrob. *l. c.*

[2] Lucret. iii. 370:—

Illud in his rebus nequaquam sumere possis,
Democriti quod sancta viri sententia ponit,
Corporis atque animi primordia, singula privis
Apposita, alternis variare ac nectere membra.

Lucretius thought that the atoms of the body were much more numerous than those of the soul; and that the latter were therefore distributed at wider intervals than Democritus supposed.

[3] In this sense Democritus, π. ἀνθρώπου φύσιος, *Fr.* 6, calls the brain φύλακα διανοίης; *Fr.* 15 the heart βασιλὶς ὀργῆς τιθηνός; *Fr.* 17 the liver, ἐπιθυμίης αἴτιον.

[4] Plut. *Plac.* iv. 4, 3: Δημόκριτος, Ἐπίκουρος, διμερῆ τὴν ψυχήν, τὸ μὲν λογικὸν ἔχουσαν ἐν τῷ θώρακι καθιδρυμένον, τὸ δ' ἄλογον καθ' ὅλην τὴν σύγκρισιν τοῦ σώματος διεσπαρμένον. Theod. *Cur. Gr. Aff.* v. 22, p. 73: Ἱπποκράτης μὲν γὰρ καὶ Δημόκριτος καὶ Πλάτων ἐν ἐγκεφάλῳ τοῦτο [τὸ ἡγεμονικὸν] ἱδρύσθαι εἰρήκασιν.

[5] The *Placita* manifestly confuse the doctrine of Democritus with that of Epicurus (on which,

of the fineness and mobility of the soul's atoms, there is danger lest they should be forced out of the body by the air that surrounds us. Against this danger Democritus says we are protected by our inspiration, the importance of which lies in its constantly introducing new fiery and vital matter into the body; this in part replaces the soul-atoms that pass off;[1] and also and chiefly hinders by its counter current those which are in the body from gaining egress; thus enabling them to resist the pressure of the outer air. If the breath is impeded, and if this resistance is in consequence overcome by the force of the air, the internal fire wastes away and death is the result.[2] As, however,

cf. Part III. a, 386, second edition). In Theodoretus the conception of the ἡγεμονικόν, at any rate, is interpolated.

[1] That expiration also helps towards this purpose is clear from Arist. *De An.* i. 2 (following note); for the exit of older fiery particles corresponds to the entrance of new. This is said more definitely, but no doubt only on the authority of the passage in Aristotle, by Philop. *De An.* B, 15; Simpl. *De An.* 6 a, and the scholia on π. ἀναπνοῆς; Simpl. *De An.* 165 b.

[2] Aristotle, *De An.* i. 2, continues: διὸ καὶ τοῦ ζῆν ὅρον εἶναι τὴν ἀναπνοήν· συνάγοντος γὰρ τοῦ περιέχοντος τὰ σώματα (Philop. *ad. h. l.* B, 15, in agreement with the Atomistic presuppositions, assigns as a reason for this, the coldness of the περιέχον; cf. also Arist. *De Respir.* c. 4, 472 a, 30): καὶ ἐκθλίβοντος τῶν σχημάτων τὰ παρέχοντα τοῖς ζῴοις τὴν κίνησιν διὰ τὸ μηδ' αὐτὰ ἠρεμεῖν μηδέποτε, βοήθειαν γίγνεσθαι θύραθεν ἐπεισόντων ἄλλων τοιούτων ἐν τῷ ἀναπνεῖν· κωλύειν γὰρ αὐτὰ καὶ τὰ ἐνυπάρχοντα ἐν τοῖς ζῴοις ἐκκρίνεσθαι, συνανείργοντα τὸ συνάγον καὶ πηγνύον· καὶ ζῆν δὲ ἕως ἂν δύνωνται τοῦτο ποιεῖν. Similarly *De Respir.* c. 4: Δημόκριτος δ' ὅτι μὲν ἐκ τῆς ἀναπνοῆς συμβαίνει τι τοῖς ἀναπνέουσι λέγει, φάσκων κωλύειν ἐκθλίβεσθαι τὴν ψυχήν· οὐ μέντοι γ' ὡς τούτου γ' ἕνεκα ποιήσασαν ταῦτο τὴν φύσιν οὐδὲν εἴρηκεν· ὅλως γὰρ ὥσπερ καὶ οἱ ἄλλοι φυσικοὶ καὶ οὗτος οὐδὲν ἅπτεται τῆς τοιαύτης αἰτίας. λέγει δ' ὡς ἡ ψυχὴ καὶ τὸ θερμὸν ταὐτὸν τὰ πρῶτα σχήματα τῶν σφαιροειδῶν. συγκρινομένων οὖν αὐτῶν ὑπὸ τοῦ περιέχοντος ἐκθλίβοντος βοήθειαν γίνεσθαι τὴν ἀναπνοήν φησιν· ἐν γὰρ τῷ ἀέρι πολὺν ἀριθμὸν εἶναι τῶν τοιούτων, ἃ καλεῖ ἐκεῖνος νοῦν καὶ ψυχήν· ἀναπνέοντος οὖν καὶ εἰσιόντος τοῦ ἀέρος συνεισιόντα ταῦτα καὶ ἀνείργοντα τὴν θλῖψιν κωλύειν τὴν ἐνοῦσαν ἐν τοῖς ζῴοις διϊέναι ψυχήν· καὶ διὰ τοῦτο ἐν τῷ ἀναπνεῖν καὶ ἐκπνεῖν εἶναι τὸ ζῆν καὶ ἀποθνήσκειν. ὅταν γὰρ κρατῇ τὸ περιέχον συνθλῖβον καὶ μηκέτι θύραθεν

the fire is not extinguished instantaneously, it may also happen that vital action may be restored when part of the soul's substance has been lost. In this way sleep is explained; in that case only a few fiery particles have left the body.[1] The same process more completely carried out produces the phenomenon of apparent death.[2]

εἰσὶν δύνηται ἀνείργειν, μὴ δυναμένου ἀναπνεῖν, τότε συμβαίνειν τὸν θάνατον τοῖς ζώοις· εἶναι γὰρ τὸν θάνατον τὴν τῶν τοιούτων σχημάτων ἐκ τοῦ σώματος ἔξοδον ἐκ τῆς τοῦ περιέχοντος ἐκθλίψεως. Why all creatures die however, and what is the cause of respiration, Democritus did not say.

[1] Thus much seems to result from the theories of the Epicureans concerning sleep (*Lucret.* iv. 913 sqq.).

[2] Cf. on this point the fragment of Proclus's commentary on the tenth book of the *Republic*, which was first communicated by Alex. Morus on *Ev. Joh.* 11, 39, p. 341; and first corrected by Wyttenbach ad *Plut. de s. Num. Vind.* 563 B (*Animadverss.* ii. 1, 201 sq.); and Mullach, *Democr.* 115 sqq. Democritus had written a treatise on the apparently dead, a subject much discussed in antiquity (vide the writers just mentioned, and what is quoted, p. 120, *n.*, on the person brought to life by Empedocles when apparently dead); and also a treatise, περὶ τῶν ἐν ᾅδου, in which, as Proclus says, he enquired πῶς τὸν ἀποθανόντα πάλιν ἀναβιῶναι δυνατόν; but the only answer is that it is possible the person was not really dead. To these enquiries about the resuscitation of the dead, the graceful fable seems to refer which Julian (*Epist.* 37, p. 413 Spanh., printed in Mullach, 45) relates, of course from older writers; namely, that Democritus, to comfort King Darius for the death of his wife, told him that, in order to recall her to life, it was only necessary to write upon her grave the names of three men who were free from sorrow (Lucian, *Demon.* 25, relates the same thing of Demonax). Pliny may perhaps have been thinking of this story when he says (*H. N.* vii. 55, 189): *reviviscendi promissa a Democrito vanitas, qui non revixit ipse*; but it is also possible that these words may allude to a passage in Democritus's treatises on magic, from which Pliny, ignorant of criticism as he is, quotes only this much; and that Julian's anecdote, which gives a moral turn to the supposed magic, may likewise have reference to a statement that Democritus could raise the dead, or had left instructions how to do it. At any rate, the passage in Pliny is concerned only with magical arts, which the imagination of later fabricators has ascribed to the naturalist of Abdera; and not with the doctrine of immortality, which is altogether irreconcileable with his point of view. Even the words, *qui non revixit ipse*, which would be meaningless as applied to another life, show this: Röth is, therefore, entirely mistaken (*Gesch. d. Abendl. Phil.* i. 362, 433), and so is Brucker (*Hist. Crit. Phil.* i. 1195),

If, however, death has really taken place, and the atoms of which the soul is composed are completely separated from the body, it is impossible that they can ever return to it, or that they can maintain themselves in combination outside the body.[1]

Democritus, therefore, does not deny that there is a difference between soul and body, nor that the soul is superior to the body. The soul with him is the essential in man, the body is only the vessel of the soul,[2] and he admonishes us for this reason to bestow more care on the latter than on the former;[3] he declares corporeal beauty apart from understanding to be something animal;[4] he says the glory of animals consists in bodily excellences,[5] that of man in moral; he seeks the abode of happiness in the soul, the highest good in a right disposition;[6] he makes the soul answerable for

whom he follows, in his inference that Democritus was an adherent of the Persian doctrine of the resurrection.

[1] This lies so entirely in the nature of the subject that we scarcely require the testimony of Iamblichus ap. Stob. *Ecl.* i. 924; Lactantius, *Inst.* vii. 7; Theodoretus, *Cur. Gr. Aff.* v. 24, p. 73; and the *Placita*, iv. 7, 3, to disprove the belief of Democritus in immortality; more especially as it is nowhere stated that Epicurus differed from him in this respect; and, considering the great importance ascribed by Epicurus to the denial of immortality, the veneration with which he and his school regarded Democritus seems to exclude any disagreement between them on this subject. Democritus thus expresses himself, ap. Stob. *Floril.* 120, 20: ἔνιοι θνητῆς φύσιος διάλυσιν οὐκ εἰδότες ἄνθρωποι, ξυνειδῆσι δὲ τῆς ἐν τῷ βίῳ κακοπραγμοσύνης, τὸν τῆς βιοτῆς χρόνον ἐν ταραχῇσι καὶ φόβοισι ταλαιπωρέουσι, ψεύδεα περὶ τοῦ μετὰ τὴν τελευτὴν μυθοπλαστέοντες χρόνου. The obscure statement in the *Placita*, v. 25, 4, that Leucippus referred death to the body only, cannot be taken into account.

[2] Σκῆνος is a common designation for the body with Democritus, *Fr. Mor.* 6, 22, 127, 128, 210.

[3] *Fr. Mor.* 128: ἀνθρώποισι ἁρμόδιον ψυχῆς μᾶλλον ἢ σώματος ποιέεσθαι λόγον· ψυχὴ μὲν γὰρ τελεωτάτη σκήνεος μοχθηρίην ὀρθοῖ, σκήνεος δὲ ἰσχὺς ἄνευ λογισμοῦ ψυχὴν οὐδέν τι ἀμείνω τίθησι.

[4] *Ibid.* 129.

[5] *Ibid.* 127.

[6] *Fr.* 1, &c. Further details *inf.*

the injury it causes to the body;[1] he contrasts the endowments of the soul as divine with those of the body which are merely human;[2] he is even said to have reckoned the intellect of man among the divinities.[3] This, however, presents no contradiction to the materialism of the Atomistic philosophy, if we place ourselves at its own point of view. The soul is something corporeal, like all other things; but since the corporeal substances are as various as the form and composition of the atoms of which they consist, it is also possible that one substance may have qualities which belong to no other; and if the sphere be regarded as the most perfect shape, Democritus may also have held that that which is composed of the finest spherical atoms, fire, or the soul, exceeds all else in worth. Spirit is to him, as to other materialists,[4] the most perfect body.

From this connection of ideas, we can now see in what sense Democritus could assert that soul or spirit dwells in all things, and that this soul, distributed throughout the whole universe, is the Deity. As he identifies reason with the soul, and the soul with the

[1] Plut. *Utr. An. an Corp. s. lib.* (*Plut. Fragm.* 1), c. 2, p. 695 W., Democritus says that if the body arraigned the soul for abuse and ill-treatment, the soul would be condemned.

[2] *Ibid.* 6: ὁ τὰ ψυχῆς ἀγαθὰ ἐρεόμενος τὰ θειότερα, ὁ δὲ τὰ σκήνεος, τἀνθρωπήϊα.

[3] Cic. *N. D.* i. 12, 29: *Democritus qui tum imagines . . . in Deorum numero refert . . . tum scientiam intelligentiamque nostram.* We are justified in regarding this statement as historical evidence; for though Philodemus, whom Cicero here follows, is apt to distort the opinions of the ancient thinkers, yet there is generally some basis of fact underlying his assertions: he reckons among the gods of a philosopher all that that philosopher describes as divine, even in the widest sense. Democritus, however, may well have called νοῦς θεῖος, and in a certain sense θεὸς also.

[4] For example, Heracleitus, the Stoics, &c.

warm and fiery substance, he must necessarily find in all things exactly as much soul and reason as he finds light and warmth. He therefore considers that in the air much soul and reason is distributed: how otherwise could we inhale from it soul and reason?[1] He also ascribed life to plants,[2] and even in corpses he probably thought there remained a portion of vital heat and sensation.[3] This warm and animate element he seems to have described as the Divine in things,[4] and so it may well have been said in the later form of expression that he regarded the Deity as the World-soul and Reason, formed out of round atoms of fire.[5] Such

[1] Aristotle, in the passage quoted, *De Respir.* c. 4: ἐν γὰρ τῷ ἀέρι πολὺν ἀριθμὸν εἶναι τῶν τοιούτων, ἃ καλεῖ ἐκεῖνος νοῦν καὶ ψυχήν. Theophr. *De Sensu*, 53: ὅσῳ ἐμψυχότερος ὁ ἀήρ.

[2] Plut. *Qu. Nat.* 1, 1, p. 911: ζῷον γὰρ ἔγγειον τὸ φυτὸν εἶναι οἱ περὶ Πλάτωνα καὶ Ἀναξαγόραν καὶ Δημόκριτον οἴονται. Ps.-Arist. *De Plant.* c. 1, 815 b, 16: ὁ δὲ Ἀναξαγόρας καὶ ὁ Δημόκριτος καὶ ὁ Ἐμπεδοκλῆς καὶ νοῦν καὶ γνῶσιν εἶπον ἔχειν τὰ φυτά.

[3] Plut. *Plac.* iv. 4, 4: ὁ δὲ Δημόκριτος πάντα μετέχειν φησὶ ψυχῆς ποιᾶς καὶ τὰ νεκρὰ τῶν σωμάτων· διότι ἀεὶ διαφανῶς τινος θερμοῦ καὶ αἰσθητικοῦ μετέχει, τοῦ πλείονος διαπνεομένου. Joh. Damasc. *Parall.* s. ii. 25, 40. Stob. *Floril.* ed. Mein. iv. 236: Δημόκρ. τὰ νεκρὰ τῶν σωμάτων αἰσθάνεσθαι. Similarly, Alexander *in Topica*, 13 (also Parmenides, vide Vol. I. p. 602). In accordance with this last passage, Philippson changes "μικροῦ" into "νεκροῦ," ap. Theophr. *De Sensu*. 71: (φησὶ [Δημόκρ.] γίνεσθαι μὲν ἕκαστον καὶ εἶναι κατ' ἀλήθειαν, ἰδίως δὲ ἐπὶ μικροῦ μοῖραν ἔχειν συνέσεως). The thing, however, is not quite beyond question: Cicero says, *Tusc.* i. 34, 82: *num igitur aliquis dolor aut omnino post mortem sensus in corpore est? nemo id quidem dicit, etsi Democritum insimulat Epicurus: Democritici negant.* According to this passage it would seem that the statement of Democritus was either limited to the time before the corpse becomes completely cold, or that he ascribed to the dead an infinitesimal portion of soul, but neither consciousness nor feeling.

[4] Cic. *N. D.* i. 43, 120: *tum principia mentis quæ sunt in eodem universo Deos esse dicit.* These *principia mentis* are manifestly what Aristotle means in the passage just quoted—the fine and round atoms. Cf. on this point, p. 262, 2; 263, 1.

[5] Stob. *Ecl.* i. 56; Plut. *Plac.* i. 7, 13, ap. Eus. *Pr. Ev.* xiv. 16, 6; Galen, *H. Ph.* c. 8, p. 251, whose imperfect text Krische (*Forsch.* i. 157) rightly refers to the more complete passage, ap. Cyrill. *c. Jul.* i. 4: νοῦν μὲν γὰρ εἶναι τὸν θεὸν

language is, however, inaccurate and misleading, for when Democritus speaks of the Divine, he means not only no personal being, but no one being at all; not a soul, but merely the *substance* of souls,[1] fiery atoms, which produce life and motion, and where they are congregated in larger masses, reason also; this is very different from the one force that moves the Universe, in the sense of Anaxagoras's *νοῦς* or Plato's world-soul.[2] Other writers therefore, who deny that he held the theory of a spirit forming the world and a Divinity ruling it, are more in accordance with the truth. The spiritual from his point of view is not the power above matter collectively; it is a part of matter; the only motive force is gravity and the sole reason why the soul is the most movable of all things, and the cause of motion, is that the substances of which it consists are on account of their size and shape the most easily moved by pressure and impact. The doctrine of spirit did not result from the general necessity of a deeper principle for the explanation of nature; it primarily refers only to the activity of human souls; and though analogues of these are sought in nature, yet the statements of Democritus concerning spirit differ from the corresponding statements of Anaxagoras and Heracleitus and even of Diogenes. The point of difference is this: that he considers spirit, not as the power forming the world, but only as one substance side by side with others; here his doctrine is less advanced than that of Empedocles, which in many respects it much resembles; for Empedocles maintains the ration-

σχυρίζεται καὶ αὐτὸς, πλὴν ἐν πυρὶ σφαιροειδεῖ, καὶ αὐτὸν εἶναι τὴν τοῦ κόσμου ψυχήν.

[1] *Principia mentis*, as Cicero rightly says, ἀρχαὶ νοεραί.

[2] Vide *sup.* p. 239, 3.

ality which he attributes to all things to be an internal quality of the elements; Democritus on the contrary represents it as a phenomenon resulting from the mathematical construction of certain atoms in their relation to the others;[1] sensation and consciousness are merely a consequence of the mobility of those atoms.[2]

Of the faculties of the soul Democritus seems to have bestowed most attention on those of cognition; at any rate, tradition tells us of his attempts to explain these and no others. According to what we have seen of his theories, he could only start, generally speaking, from the presupposition that all presentations consist of corporeal processes.[3] In particular he explained the perceptions of sense as well as thought. The former he derived from the changes which are produced in us by means of external impressions;[4] and since every opera-

[1] Whether this is a defect or, as Lange, *Gesch. d. Mat.* i. 20, believes, a merit in the theory of Democritus, or whether it may perhaps be both, the logical development of a one-sided point of view, I need not here enquire. It is all the less necessary since Lange has acknowledged the substantial correctness of my representation; but he at the same time remarks; 'The want in all materialism is this: that it ends with its explanation of phenomena where the highest problems of philosophy begin.'

[2] This may also explain why the theories of Democritus on the spiritual in nature are here mentioned for the first time: his interpretation of nature did not require these theories; they resulted from his contemplation of the human spirit, and are only to be understood in this connection.

[3] Stob. *Exc. e Joh. Damasc.* ii. 25, 12 (Stob. *Flor.* ed. Mein. iv. 233): Λεύκιππος, Δημοκράτης (-όκριτος) τὰς αἰσθήσεις καὶ τὰς νοήσεις ἑτεροιώσεις εἶναι τοῦ σώματος.

[4] Arist. *Metaph.* iv. 5. 1009 b, 12, of Democritus and others: διὰ τὸ ὑπολαμβάνειν φρόνησιν μὲν τὴν αἴσθησιν, ταύτην δ' εἶναι ἀλλοίωσιν, τὸ φαινόμενον κατὰ τὴν αἴσθησιν ἐξ ἀνάγκης ἀληθὲς εἶναί φασιν. Theoph. *De Sensu*, 49: Δημόκριτος δὲ . . . τῷ ἀλλοιοῦσθαι ποιεῖ τὸ αἰσθάνεσθαι. Theophrastus goes on to observe, in reference to the unanswered question of Democritus—whether each sense perceives what is like itself or what is unlike, that this may admit of a double answer: so far as the sense-perception is a change, it must proceed from what is hete-

tion of one body upon another is conditioned by touch, it may be said that he represented all sensation as contact,[1] and all the senses as various kinds of touch.[2] This contact, however, is not merely direct contact, it is more or less the result of the emanations without which the interaction of things on each other would be inexplicable. As these emanations penetrate through the organs of sense into the body, and spread through all its parts, there arises the presentation of things, sensible perception.[3] But in order that this result should be attained, on the one hand there must be a certain strength in the impression, a certain amount of permeating atoms;[4] and on the other, their material constitution must correspond to that of the organs of sense; for as like can only work upon like,[1] so our senses can only be concerned with what is like them; we perceive each thing, as Empedocles taught, with that part of our nature which is akin to it.[2] If, therefore, Democritus believed that much is perceptible which is not perceived by us, because it is not adapted to our senses,[3] and admitted the possibility that other beings might have senses which are wanting to us,[4] it was quite consistent with his other presuppositions.

rogeneous, so far as like can only affect like (*sup.* p. 221, 2), from what is homogeneous. Cf. p. 267, 2.

[1] Vide *sup.* p. 230.

[2] Arist. *De Sensu*, c. 4, 442 a, 29: *Δημόκριτος δὲ καὶ οἱ πλεῖστοι τῶν φυσιολόγων, ὅσοι λέγουσι περὶ αἰσθήσεως, ἀποπώστατόν τι ποιοῦσιν· πάντα γὰρ τὰ αἰσθητὰ ἁπτὰ ποιοῦσιν. καίτοι εἰ οὕτω τοῦτ' ἔχει, δῆλον ὡς καὶ τῶν ἄλλων αἰσθήσεων ἑκάστη ἁφή τις ἐστίν.*

[3] Theophr. *De Sensu*, 54: *ἄτοπον δὲ καὶ τὸ μὴ μόνον τοῖς ὄμμασιν ἀλλὰ καὶ τῷ ἄλλῳ σώματι μεταδιδόναι τῆς αἰσθήσεως. φησὶ γὰρ διὰ τοῦτο κενότητα καὶ ὑγρότητα ἔχειν δεῖν τὸν ὀφθαλμόν, ἵν' ἐπιπλέον δέχηται καὶ τῷ ἄλλῳ σώματι παραδιδῷ.* § 55: in hearing, the agitated air penetrates through the whole body, but especially through the ear, *ὅταν δὲ ἐντὸς γένηται, σκίδνασθαι διὰ τὸ τάχος.* This is further explained by what follows. § 57: *ἄτοπον δὲ καὶ δι' ὧν* (*ἄτ. δὲ τὸ ἴδιον*, better: *ἄτ. δὲ καὶ ἴδιον*) *κατὰ πᾶν τὸ σῶμα τὸν ψόφον εἰσιέναι καὶ ὅταν εἰσέλθῃ διὰ τῆς ἀκοῆς διαχεῖσθαι κατὰ πᾶν, ὥσπερ οὐ ταῖς ἀκοαῖς ἀλλ' ὅλῳ τῷ σώματι τὴν αἴσθησιν οὖσαν. οὐ γὰρ εἰ καὶ συμπάσχει τι τῇ ἀκοῇ, διὰ τοῦτο καὶ αἰσθάνεται. πάσαις γὰρ* [sc. *ταῖς αἰσθήσεσι*] *τοῦτό γε ὁμοίως ποιεῖ· καὶ οὐ μόνον ταῖς αἰσθήσεσιν, ἀλλὰ καὶ τῇ ψυχῇ.* His opinion in regard to the other senses has not been transmitted to us, but it is clear from the above quotation that he assumed, not merely in smell and taste, but also in the perceptions of touch, the entrance of emanations into the body; since he could only explain sensation as a contact of the whole soul with outer things. For the sensation of warmth seems also to result from the nature of this contact.

[4] Vide *supra*, p. 231, 2; 233, 1; Theophr. *De Sensu*, 55. The tones penetrate indeed through the whole body, but in greatest numbers through the ears, *διὸ καὶ κατὰ μὲν τὸ ἄλλο σῶμα οὐκ αἰσθάνεσθαι, ταύτῃ δὲ μόνον.*

[1] Vide *sup.*, p. 221, 2.

[2] Theophr. *De Sensu*, 50. We see when the eyes are damp, the cornea thin and firm, the internal tissues porous, the channels of the eyes straight and dry: *καὶ ὁμοιοσχημονοῦεν* [sc. *οἱ ὀφθαλμοὶ*] *τοῖς ἀποτυπουμένοις.* Sext. *Math.* vii. 116: *παλαιὰ γάρ τις, ὡς προεῖπον, ἄνωθεν παρὰ τοῖς φυσικοῖς κυλίεται δόξα περὶ τοῦ τὰ ὅμοια τῶν ὁμοίων εἶναι γνωριστικά. καὶ ταύτης ἔδοξε μὲν καὶ Δημόκριτος κεκομικέναι τὰς παραμυθίας*, namely in the passage given on p. 244, 1. That the passage really stood in this connection is established by Plut. *Plac.* iv. 19, 3, where an extract from it is introduced with the words: *Δημόκριτος καὶ τὸν ἀέρα φησὶν εἰς ὁμοιοσχήμονα θρύπτεσθαι σώματα καὶ συγκαλινδεῖσθαι τοῖς ἐκ τῆς φωνῆς θραύσμασιν* (cf. *inf.* p. 269) "*κολοιὸς γὰρ παρὰ κολοιὸν ἵζανει*," etc. On the principle that like is known by like, vide Arist. *De An.* i. 2, 405 b, 12: those who define the nature of the soul by its intellectual faculty, make it one of the elements, or something composed of several elements: *λέγοντες παραπλησίως ἀλλήλοις πλὴν ἑνός* (Anaxagoras)· *φασὶ γὰρ γινώσκεσθαι τὸ ὅμοιον τῷ ὁμοίῳ.*

[3] Stob. *Exc. e Joh. Damasc.* ii. 25, 16 (Stob. *Flor.* ed. Mein. iv. 233): *Δημόκριτος πλείους μὲν εἶναι τὰς αἰσθήσεις τῶν αἰσθητῶν, τῷ δὲ μὴ ἀναλογίζειν τὰ αἰσθητὰ τῷ πλήθει λανθάνειν.* That this statement, which in its present form is so strange, originally had the meaning assumed in the text, is of course merely a conjecture.

[4] Plut. *Plac.* iv. 10, 3 (Galen, c. 24, s. 303): *Δημόκριτος πλείους εἶναι αἰσθήσεις περὶ τὰ ἄλογα ζῷα καὶ* (l. *ἢ*, as Gal. has) *περὶ τοὺς θεοὺς καὶ σοφούς.* This, as it stands, can only be an inference drawn by some opponent, and not Democritus's own assertion; but it clearly shows us what Democritus really said. He must have asserted that animals might have senses which were wanting in other creatures, and from this an adversary, probably a Stoic, deduces the consequence, which seems to him ridiculous, that a knowledge is ascribed to irrational natures, which is not possessed by the highest intellectual natures—gods and wise men.

As to the several senses, we hear of no peculiar views as held by Democritus except in regard to sight and hearing. The rest are discussed by him indeed, but beyond the general theories noticed above, he does not appear to have advanced anything essentially new with respect to them.[1] He explained the perceptions of sight, as Empedocles did, by the hypothesis that emanations fly off from visible things which retain the form of the things; these images are reflected in the eye, and are thence diffused throughout the whole body; thus arises vision. But as the space between the objects and our eyes is filled with air, the images that fly off from things[2] cannot themselves reach our eyes; what does so is the air which is moved by the images as they stream forth, and receives an impression of them. Therefore it is that the clearness of the perception decreases with distance, but as at the same time emanations are going out from our eyes, the image of the object is also modified by these.[3] Thus it is very

[1] Theophr. *De Sensu*, 49: περὶ ἑκάστης δ' ἤδη τῶν ἐν μέρει [αἰσθήσεων] πειρᾶται λέγειν. § 57: καὶ περὶ μὲν ὄψεως καὶ ἀκοῆς οὕτως ἀποδίδωσι, τὰς δ' ἄλλας αἰσθήσεις σχεδὸν ὁμοίας ποιεῖ τοῖς πλείστοις. The short statements on the sense of smell, *l. c.* § 82, and *De Odor.* 64 contain nothing particular. Cf. p. 232, 3.

[2] Εἴδωλα, as they are usually called (Diog. ix. 47 mentions a treatise by Democritus περὶ εἰδώλων). According to the *Etymol. Magn.*, *sub voce* δείκελα, Democritus himself made use of this word, and in that case we ought, no doubt, to substitute "δεικελα" for δεῖν, instead of "δίνη," as Mullach thinks (and with this αὐτὰ agrees), in Simpl. *Phys.* 73 b (*Democr. Fr. Phys.* 6): Δημόκριτος ἐν οἷς φησι "δεῖν ἀπὸ παντὸς ἀποκρίνεσθαι παντοίων εἰδέων," πῶς δὲ καὶ ὑπὸ τίνος αἰτίας μὴ λέγει, ἔοικεν ἀπὸ ταὐτομάτου καὶ τύχης γεννᾶν αὐτά.

[3] The above is deduced from Arist. *De Sensu*, c. 2, 438 a, 5: Δημόκριτος δ' ὅτι μὲν ὕδωρ εἶναί φησι [τὴν ὄψιν] λέγει καλῶς, ὅτι δ' οἴεται τὸ ὁρᾶν εἶναι τὴν ἔμφασιν (the reflection of objects in the eye), οὐ καλῶς· τοῦτο μὲν γὰρ συμβαίνει, ὅτι τὸ ὄμμα λεῖον, etc. τὸ μὲν οὖν τὴν ὄψιν εἶναι ὕδατος ἀληθὲς μέν, οὐ μέντοι συμβαίνει τὸ ὁρᾶν ᾗ ὕδωρ, ἀλλ' ᾗ διαφανές. Alex. *in h. l.* 97 a; Theophr. *De Sensu*, 50: ὁρᾶν μὲν οὖν ποιεῖ τῇ ἐμφάσει· ταύτην δ' ἰδίως λέγει· τὴν γὰρ ἔμφασιν οὐκ εὐθὺς ἐν τῇ κόρῃ γίνεσθαι, ἀλλὰ τὸν ἀέρα τὸν μεταξὺ τῆς ὄψεως καὶ τοῦ ὁρωμένου τυποῦσθαι, συστελλόμενον ὑπὸ τοῦ ὁρωμένου καὶ τοῦ ὁρῶντος· (ἅπαντος γὰρ ἀεὶ γίνεσθαί τινα ἀποῤῥοήν·) ἔπειτα τοῦτον στερεὸν ὄντα καὶ ἀλλόχρων ἐμφαίνεσθαι τοῖς ὄμμασιν ὑγροῖς· καὶ τὸ μὲν πυκνὸν οὐ δέχεσθαι τὸ δ' ὑγρὸν διϊέναι. Theophrastus repeats the same statements afterwards (in § 51, where, however, "τυπούμενον" is to be read for "πυκνούμενον"), in his discussion of this theory, and adds to them what is quoted on p. 266, &c. In support of his theory on images, Democritus appeals to the visible image of the object in the eye (Alex. *l. c.*): the fact that we cannot see in the dark he explains, according to Theophrastus, § 55, by the supposition that the sun must condense the air before it can retain the images. Why he did not imagine that these images themselves entered the eye, instead of their impression on the air, we can see from the notice, ap. Arist. *De An.* i. 7, 419 a, 15: οὐ γὰρ καλῶς τοῦτο λέγει Δημόκριτος, οἰόμενος, εἰ γένοιτο κενὸν τὸ μεταξύ, ὁρᾶσθαι ἂν ἀκριβῶς καὶ εἰ μύρμηξ ἐν τῷ οὐρανῷ εἴη. We find a less exact statement in Plut. *Plac.* iv. 13, 1 (cf. Mullach, p. 402): seeing arises, according to Leucippus, Democritus and Epicurus: κατ' εἰδώλων εἰσκρίσεις καὶ κατά τινων ἀκτίνων εἴσκρισιν μετὰ τὴν πρὸς τὸ ὑποκείμενον ἔνστασιν πάλιν ὑποστρεφουσῶν πρὸς τὴν ὄψιν. How the eye, in the opinion of Democritus, ought to be formed in order to see well we have already found, p. 267, 2. We are told that he also explained the reflections of mirrors on the theory of εἴδωλα; vide Plut. *Plac.* iv. 14, 2, parall. Cf. Lucret. iv. 141 sqq.

[1] Vide p. 231.

[2] Theophr. *l. c.* 55–57; cf. § 53; Plut. *Plac.* iv. 19; Gell. *N. A.* v. 15. 8; Mullach, 342 sqq.; Burchard, *Democr. Phil. de Sens.* 12; cf. p. 266, 3; 267. 2.

[3] Vide p. 244, 1. By means of this conception Democritus, as it seems, sought to explain the relations and musical properties of tones which he discusses in the treatise π. ῥυθμῶν καὶ ἁρμονίης (Diog. ix. 48). A tone, he might say, is so much the purer the more homogeneous are the atoms in the flux of which it consists, and the smaller these atoms are, the more acute is the tone.

evident that our sight does not represent things as they are in themselves.[1] The explanation of hearing and sounds is the same.[2] Sound is a stream of atoms passing from the resonant body, which sets in motion the air that lies before it. In this stream of atoms, and in the air which is moved by it, atoms of like form, according to a law noticed above, come together.[3] When these reach the atoms of the soul, sensations of hearing

are the result. But although sounds enter through the whole body, we only hear with our ears, for this organ is so constructed that it absorbs the largest mass of sounds and affords it the quickest passage, whereas the other parts of the body admit too few to be perceptible to us.[1]

Thought has the same origin as perception. That which perceives, and that which thinks, is one and the same.[2] Perception and thought are both material changes of the soul's body,[3] and both are occasioned, like every other change, by external impressions.[4] If this

[1] From this point of view, the physiological conditions of an acute sense of hearing are investigated ap. Theophr. § 56.

[2] Arist. *De An.* i. 2, 404 a, 27: ἐκεῖνος [Δημόκριτος] μὲν γὰρ ἁπλῶς ταὐτὸν ψυχὴν καὶ νοῦν· τὸ γὰρ ἀληθὲς εἶναι τὸ φαινόμενον (cf. p. 272) διὸ καλῶς ποιῆσαι τὸν Ὅμηρον (in whom, however, this is not to be found concerning Hector; vide the commentators on this passage, and on *Metaph.* iv. 5, and Mullach, 346): ὡς Ἕκτωρ κεῖτ' ἀλλοφρονέων, οὐ δὴ χρῆται τῷ νῷ ὡς δυνάμει τινὶ περὶ τὴν ἀλήθειαν, ἀλλὰ ταὐτὸ λέγει ψυχὴν καὶ νοῦν. *Ibid.* 405 a, 8, *sup.* 257, 2; *Metaph.* iv. 5, 1009 b, 28 (*infra*, 271, 1); Philop. *De An.* A, 16 o, B, 16; Iambl. ap. Stob. *Ekl.* i. 880: οἱ δὲ περὶ Δημόκριτον πάντα τὰ εἴδη τῶν δυνάμεων εἰς τὴν οὐσίαν αὐτῆς [τῆς ψυχῆς] συνάγουσιν. To this belongs what is ascribed to Democritus in the traditional text of Stob. *Floril.* 116, 45: but instead of Democritus we should doubtless read Δημοκήδους (vide Heimsöth. *Democr. de An. Doctr.* p. 3), for the words are in Herod. iii. 134, who puts them into the mouth of Atossa, and indirectly of Democedes.

[3] Stob. cf. *inf.* p. 271, 1; Arist. *Metaph.* iv. 5; Theophr. *De Sensu*, 72: ἀλλὰ περὶ μὲν τούτων ἔοικε [Δημόκρ.] συνηκολουθηκέναι τοῖς ποιοῦσιν ὅλως τὸ φρονεῖν κατὰ τὴν ἀλλοίωσιν, ἥπερ ἐστὶν ἀρχαιοτάτη δόξα. πάντες γὰρ οἱ παλαιοὶ καὶ οἱ ποιηταὶ καὶ σοφοὶ κατὰ τὴν διάθεσιν ἀποδιδόασι τὸ φρονεῖν. Cf. Arist. *De An.* iii. 3, 427 a, 21: οἵ γε ἀρχαῖοι τὸ φρονεῖν καὶ τὸ αἰσθάνεσθαι ταὐτὸν εἶναί φασιν, for which, together with Empedocles' verses quoted p. 169, 2, Homer, *Od.* xviii. 135, is quoted, perhaps from Democritus, with the observation: πάντες γὰρ οὗτοι τὸ νοεῖν σωματικὸν ὥσπερ τὸ αἰσθάνεσθαι ὑπολαμβάνουσιν. Cf. the following note.

[4] Cic. *Fin.* i. 6, 21: (*Democriti sunt*) *atomi, inane, imagines, quæ idola nominant, quorum incursione non solum videamus, sed etiam cogitemus.* Plut. *Plac.* iv. 8, 3; Stob. *Floril.* iv. 233 Mein.; *No.* 18, Leucippus, Democritus and Epicurus: τὴν αἴσθησιν καὶ τὴν νόησιν γίνεσθαι εἰδώλων ἔξωθεν προσιόντων, μηδενὶ γὰρ ἐπιβάλλειν μηδετέραν χωρὶς τοῦ προσπίπτοντος εἰδώλου. Cf. Democr. ap. Sext. *Math.* vii. 136 (*supra*, p. 231, 3).

movement is of such a kind that the soul is placed by it in the proper temperature, it will apprehend objects rightly, and thought is healthy; but if, on the contrary, it is unduly heated or chilled by the movement imparted to it, it imagines false things, and thought is diseased.[1] Though it is difficult to see, upon this theory, how thought is distinguished from sensible perception,[2] Democritus is very far from ascribing the same value to them. He calls sensible perception the

[1] Theophr. *l. c.* 58: περὶ δὲ τοῦ φρονεῖν ἐπὶ τοσοῦτον εἴρηκεν, ὅτι γίνεται συμμέτρως ἐχούσης τῆς ψυχῆς μετὰ τὴν κίνησιν· ἐὰν δὲ περίθερμός τις ἢ περίψυχρος γένηται, μεταλλάττειν φησί. διότι καὶ τοὺς παλαιοὺς καλῶς τοῦθ' ὑπολαβεῖν, ὅτι ἐστὶν ἀλλοφρονεῖν. ὥστε φανερὸν ὅτι τῇ κράσει τοῦ σώματος ποιεῖ τὸ φρονεῖν. Instead of the words μετὰ τ. κίνησιν, Ritter, i. 620, would substitute "κατὰ τὴν κρᾶσιν." I had myself thought of κατὰ τὴν κίνησιν. But it now appears to me that the traditional text, also retained by Wimmer, is in order, and that Theophrastus intends to say: the φρονεῖν (the right judgment of things, in contradistinction to ἀλλοφρονεῖν) gains entrance when the condition of the soul produced by the movement in the organs of sense is a symmetrical condition. This statement of Theophrastus is elucidated by the citations on p. 270, 2, and also by Arist. *Metaph.* iv. 5, 1009 b, 28: φασὶ δὲ καὶ τὸν Ὅμηρον ταὐτὸν ἔχοντα φαίνεσθαι τὴν δόξαν (that all presentations are equally true), ὅτι ἐποίησε τὸν Ἕκτορα, ὡς ἐξέστη ὑπὸ τῆς πληγῆς, κεῖσθαι ἀλλοφρονέοντα, ὡς φρονοῦντας μὲν καὶ τοὺς παραφρονοῦντας, ἀλλ' οὐ ταὐτά.

[2] Brandis (*Rhein. Mus. v. Niebuhr und Brandis*, iii. 139, *Gr.-Röm. Phil.* i. 334) supposes an '*unmittelbares Innewerden der Atome und des Leeren*' (a direct intuition of the atoms and the void), but it is difficult to see how, according to Democritus's presuppositions, the atoms and the void could act upon our souls otherwise than in the things compounded of them, nor how these things could act upon our souls except through the senses. Nor does Johnson's attempted explanation (p. 18 sq. of the treatise mentioned p. 208, 1) enlighten me. Ritter's proposal (*Gesch. d. Phil.* i. 620) is better: viz. to identify clear or rational knowledge with the symmetrical state of the soul (vide previous note); only in that case we must assume what is never ascribed to Democritus, and in itself seems highly unlikely, that in his opinion every sensible perception disturbed the symmetry of the soul. It seems to me most probable that Democritus never tried to establish psychologically the superiority of thought to sensible perception. Vide Brandis, *Gesch. d. Entw.* i. 145.

dark, and the rational perception alone the true; the real constitution of things is hidden from our senses; all that they show us belongs to the uncertain phenomenon; our intellect only discovers, what is too subtle for the senses, the true essence of things, atoms and the void.[1] Though we must start from what is manifest in order to know what is hidden, it is thought alone which can really unfold to us this knowledge.[2] If, therefore, Aristotle attributes to Democritus the opinion that the sensible perception as such is true,[3] the statement is founded merely on his own inferences;[4] because the Atomistic philosophy did not distinguish between the faculty of perception and that of thought, therefore Aristotle concludes that it can have made no distinction between them in respect of their truth.[5] It

[1] Authorities have already been given, p. 219, 3; 225, 3. See also Cic. *Acad.* ii. 23, 73. Later writers have so expressed this as to assert that Democritus ascribed reality to the intelligible alone (Sext. *Math.* viii. 6) and denied sensible phenomena, which he maintained existed not in actuality but only in our opinion (*Ibid.* vii. 136).

[2] Sext. *Math.* vii. 140: Διότιμος δὲ τρία κατ' αὐτὸν ἔλεγεν εἶναι κριτήρια· τῆς μὲν τῶν ἀδήλων καταλήψεως τὰ φαινόμενα, ὥς φησιν Ἀναξαγόρας, ὃν ἐπὶ τούτῳ Δημόκριτος ἐπαινεῖ· ζητήσεως δὲ τὴν ἔννοιαν· αἱρέσεως δὲ καὶ φυγῆς τὰ πάθη. The 'criteria' must here be laid, as well as the whole exposition, to the account of the narrator.

[3] *Gen. et Corr.* i. 2 (*sup.* 219, 2); *De An.* i. 2 (*sup.* 270, 2); *Metaph.* iv. 5 (*sup.* 265, 4). Likewise Theophr. *De Sensu*, 71 (*sup.* 263, 3). γίνεσθαι μὲν ἕκαστον καὶ εἶναι κατ' ἀλήθειαν seems to belong to this connection, only no doubt the text is corrupt: γίνεσθαι μὲν perhaps arose out of (τὸ) φαινόμενον, and ἕκαστον may be a mistake for "ἑκάστῳ."

[4] As he himself indicates in the passage from the *Metaphysics*: ἐξ ἀνάγκης is to be connected not with εἶναι but with φασί, so that the meaning is: 'because they hold thought to be the same as sensation, they must necessarily declare the sensible phenomenon to be true.'

[5] That such procedure is not unusual with Aristotle may be seen from numerous examples. The very passage in *Metaph.* iv. 5 contains only inferences of this kind upon which he founds his complaint against some of the natural philosophers, that they deny the law of contradiction. We have, therefore, no ground for the

is impossible, however, that Democritus could arrive at that conclusion without contradicting the fundamental conceptions of his system; for if things in reality consist only of atoms which our senses do not perceive, the senses plainly do not instruct us concerning the true nature of things; and if Democritus, like Parmenides and Empedocles, declared Becoming and Decay to be unthinkable, he could not escape the conclusion of those philosophers, that perception deceives us with the appearance of Becoming and Decay, nor could he maintain the opposite assertions attributed to him by Aristotle. He himself tells us indeed quite distinctly how far he is from so doing. It would have been no less impossible for him to admit these further conclusions: viz., that if sensation as such be true, all sensations must be true;[1] consequently if the senses in different

theory (Papencordt 60, Mullach 415) that Democritus altered his opinion on this point, and discarded the evidence of the senses which at first he had admitted. Though he may with time have modified his views in regard to certain particulars (Plut. *Virt. Mor.* c. 7, p. 448 A), it does not follow that he could entertain at different times opposite convictions on a subject like the one we are considering, with which the very foundations of the Atomistic system are interwoven. As little can we allow (with Johnson, *l. c.* 24 sq.) that Aristotle's language bears this construction: 'Democritus supposed that the phenomenal is actually present objectively, though it may not be in harmony with our presentation of it to ourselves.' This interpretation is contradicted by the words themselves (τὸ ἀληθὲς, *De An.* and *Gen. et Corr.*) even more decidedly than by the interconnection of the passages quoted. The theory which, according to Johnson, Aristotle attributes to Democritus could not have been charged upon him as an erroneous opinion arising from a confusion of thought with sensation.

[1] Philop. himself attributes this proposition to him, *De An.* B, 16: ἄντικρυς γὰρ εἶπεν [ὁ Δημόκριτος] ὅτι τὸ ἀληθὲς καὶ τὸ φαινόμενον ταὐτόν ἐστι, καὶ οὐδὲν διαφέρειν τὴν ἀλήθειαν καὶ τὸ τῇ αἰσθήσει φαινόμενον, ἀλλὰ τὸ φαινόμενον ἑκάστῳ καὶ τὸ δοκοῦν τοῦτο καὶ εἶναι ἀληθές, ὥσπερ καὶ Πρωταγόρας ἔλεγεν. But Philoponus has probably no other authority than the passages in Aristotle, from which such a theory cannot be deduced. Nor can we take much account of the

persons or at different times declare the contrary concerning the same object, these opposite declarations must be equally true, and therefore also equally false; and thus we can never know how in truth things are constituted.[1] He says no doubt that every thing contains atoms of the most diverse forms, and that this is the reason why things appear so differently;[2] but it does not follow from thence that the Real itself, the atom, has simultaneously opposite qualities. He also complains of the narrowness of human knowledge; he declares that truth lies in the depth; how things really are constituted we know not; our opinions change with external impressions and corporeal conditions.[3]

assertion of Epiphanius, *Exp. Fid.* 1087 D, that Leucippus taught: *κατὰ φαντασίαν καὶ δόκησιν τὰ πάντα γίνεσθαι καὶ μηδὲν κατὰ ἀλήθειαν.*

[1] Cf. Arist. *Metaph.* iv. 5, 1009 a. 38: *ὁμοίως δὲ καὶ ἡ περὶ τὰ φαινόμενα ἀλήθεια* (for the theory that all phenomena and presentations are true, cf. the beginning of this chapter) *ἐνίοις ἐκ τῶν αἰσθητῶν ἐλήλυθεν. τὸ μὲν γὰρ ἀληθὲς οὐ πλήθει κρίνεσθαι οἴονται προσήκειν οὐδ' ὀλιγότητι, τὸ δ' αὐτὸ τοῖς μὲν γλυκὺ γευομένοις δοκεῖν εἶναι τοῖς δὲ πικρόν. ὥστ' εἰ πάντες ἔκαμνον ἢ πάντες παρεφρόνουν, δύο δ' ἢ τρεῖς ὑγίαινον ἢ νοῦν εἶχον, δοκεῖν ἂν τούτους κάμνειν καὶ παραφρονεῖν, τοὺς δ' ἄλλους οὔ. ἔτι δὲ πολλοῖς τῶν ἄλλων ζῴων τἀναντία περὶ τῶν αὐτῶν φαίνεσθαι καὶ ἡμῖν, καὶ αὐτῷ δὲ ἑκάστῳ πρὸς αὑτὸν οὐ ταὐτὰ κατὰ τὴν αἴσθησιν ἀεὶ δοκεῖν. ποῖα οὖν τούτων ἀληθῆ ἢ ψευδῆ ἄδηλον· οὐθὲν γὰρ μᾶλλον τάδε ἢ τάδε ἀληθῆ, ἀλλ' ὁμοίως* (essentially the reasons given by Democritus against the truth of sensible perceptions, vide *sup.* p. 231, 3) *διὸ Δημόκριτος γέ φησιν ἤτοι οὐθὲν εἶναι ἀληθὲς ἢ ἡμῖν γ' ἄδηλον.* Plut. *Adv. Col.* 4, 1, p. 1108: *ἐγκαλεῖ δ' αὐτῷ* [sc. *Δημοκρίτῳ ὁ Κολώτης*] *πρῶτον, ὅτι τῶν πραγμάτων ἕκαστον εἰπὼν οὐ μᾶλλον τοῖον ἢ τοῖον εἶναι, συγκέχυκε τὸν βίον.* Sext. *Pyrrh.* i. 213. Also the doctrine of Democritus is akin to that of the sceptics: *ἀπὸ γὰρ τοῦ τοῖς μὲν γλυκὺ φαίνεσθαι τὸ μέλι, τοῖς δὲ πικρόν, τὸν Δημόκριτον ἐπιλογίζεσθαί φασι τὸ μήτε γλυκὺ αὐτὸ εἶναι μήτε πικρόν, καὶ διὰ τοῦτο ἐπιφθέγγεσθαι τὴν "οὐ μᾶλλον" φωνήν, σκεπτικὴν οὖσαν*; an opinion which Johnson *D. Sensual. d. Democr.* 23, ought not to treat as historical evidence without further examination.

[2] Vide previous note, and p. 224, 1.

[3] Ap. Sext. *Math.* vii. 135 sqq., besides the quotation, p. 225, 3: *"ἐτεῇ μέν νυν ὅτι οἷον ἕκαστόν ἐστιν ἢ οὐκ ἔστιν οὐ ξυνίεμεν, πολλαχῇ δεδήλωται." "γινώσκειν τε χρὴ ἄνθρωπον τῷδε τῷ κανόνι, ὅτι ἐτεῆς ἀπήλλακται." "δηλοῖ μὲν δὴ καὶ οὗτος ὁ λόγος, ὅτι οὐδὲν ἴδμεν περὶ οὐδενὸς, ἀλλ' ἐπιῤῥυσμίῃ ἑκάστοισιν ἡ δόξις." "καίτοι δῆλον ἔσται, ὅτι, ἐτεῇ οἷον ἕκαστον, γανώσκειν, ἐν ἀπόρῳ ἐστίν."* Ap. Diog. ix. 72: *"ἐτεῇ δὲ οὐδὲν ἴδμεν· ἐν βυθῷ γὰρ ἡ ἀληθείη"* (the last is also ap. Cic. *Acad.* ii. 10, 32). Such passages as these are doubtless the only foundation for the remark of Sextus, *Math.* viii. 327, that the empirical physicians dispute the possibility of demonstration: *τάχα δὲ καὶ Δημόκριτος, ἰσχυρῶς γὰρ αὐτῇ διὰ τῶν κανόνων ἀντείρηκεν*, indirectly, otherwise *τάχα* would be unnecessary.

[1] Proel. *in Crat.* 16 supposes that the *ὀνόματα* are *θέσει* according to Democritus. In support of this view he brings forward *πολύσημον ἰσόῤῥοπον* and *νώνυμον*, and contends that many words have several meanings, many things several names; and also many things which, judging from analogy, we might expect to have a distinct designation have none; he seems likewise to have appealed to the change of the names of persons. The further development of these arguments as given by Proclus cannot be referred to Democritus. Cf. Steinthal, *Gesch. d. Sprachwissensch. bei Gr. u. Röm.* 76, 137 sqq., with whose explanation of these expressions I do not, however, entirely agree: the *νώνυμον* especially, he seems to me to have misconceived. Some linguistic writings of Democritus, on the authenticity of which we cannot decide, are mentioned by Diog. ix. 48.

[2] Plut. *l. c.*: *ἀλλὰ τοσοῦτόν γε Δημόκριτος ἀποδεῖ τοῦ νομίζειν, μὴ μᾶλλον εἶναι τοῖον ἢ τοῖον τῶν πραγμάτων ἕκαστον, ὥστε Πρωταγόρα τῷ σοφιστῇ τοῦτο εἰπόντι μεμαχῆσθαι καὶ γεγραφέναι πολλὰ καὶ πιθανὰ πρὸς αὐτόν.* Sext. *Math.* vii. 389: *πᾶσαν μὲν οὖν φαντασίαν οὐκ εἴποι τις ἀληθῆ διὰ τὴν περιτροπήν, καθὼς ὅ τε Δημόκριτος καὶ ὁ Πλάτων ἀντιλέγοντες τῷ Πρωταγόρᾳ ἐδίδασκον.* Cf. *ibid.* vii. 53.

[3] *Fr.* 145, ap. Plut. *Qu. Conv.* i. 1, 5, 2; Clem. *Strom.* i. 3, 279 D, he complains of the *λεξειδίων θηράτορες, ζηλωταὶ τεχνυδρίων, ἐριδάντεες καὶ ἰμαντελίκτεες.*

Lastly, he admits that the names of things are arbitrarily chosen;[1] which might have been made use of in a sceptical sense. But that he meant by this to declare all knowledge impossible, is not credible. Had such been his conviction, he could not have set up a scientific system, or discriminated true knowledge from obscure and confused opinion. Moreover we are told that he expressly and fully contradicted the scepticism of Protagoras,[2] which, according to the above statements, he must have shared; and that he sharply censured the eristics of his time.[3] The later sceptics themselves

point out the essential difference between his doctrine and theirs;[1] and even Aristotle records his testimony (which harmonises ill with the supposed denial of all knowledge), that of all the pre-Socratic philosophers he concerned himself the most with definitions of conceptions.[2] We must, therefore, suppose that the complaints of Democritus as to the impossibility of knowledge are intended only in a narrower sense: only of the sensible perception does he maintain that it is limited to the changing phenomenon, and guarantees no true knowledge. On the other hand, he does not deny that reason may be able to perceive in the atoms and the void the true essence of things, though he deeply feels the limitations of human knowledge and the difficulties in the way of a profound enquiry. It is quite compatible with all this that he should not be deterred by the abundance of his own knowledge and observations, from warning us in the spirit of Heracleitus against indiscriminate

[1] Sext. *Pyrrh.* i. 213 sq.: διαφόρως μέντοι χρῶνται τῇ "οὐ μᾶλλον" φωνῇ οἵ τε Σκεπτικοὶ καὶ οἱ ἀπὸ τοῦ Δημοκρίτου· ἐκεῖνοι μὲν γὰρ ἀπὸ τοῦ μηδέτερον εἶναι τάττουσι τὴν φωνὴν, ἡμεῖς δὲ ἐπὶ τοῦ ἀγνοεῖν πότερον ἀμφότερα ἢ οὐδέτερον τί ἐστι τῶν φαινομένων. προδηλοτάτη δὴ γίνεται ἡ διάκρισις, ὅταν ὁ Δημόκριτος λέγῃ "ἐτεῇ δὲ ἄτομα καὶ κενόν." ἐτεῇ μὲν γὰρ λέγει ἀντὶ τοῦ ἀληθείᾳ. κατ' ἀλήθειαν δὲ ὑφεστάναι λέγων τάς τε ἀτόμους καὶ τὸ κενὸν, ὅτι διενήνοχεν ἡμῶν . . . περιττὸν οἶμαι λέγειν.

[2] *Part. Anim.* i. 1, cf. Vol. I. 185, 3; *Metaph.* xiii. 4; 1078 b, 17: Σωκράτους δὲ περὶ τὰς ἠθικὰς ἀρετὰς πραγματευομένου καὶ περὶ τούτων ὁρίζεσθαι καθόλου ζητοῦντος πρώτου· τῶν μὲν γὰρ φυσικῶν ἐπὶ μικρὸν Δημόκριτος ἥψατο μόνον καὶ ὡρίσατό πως τὸ θερμὸν καὶ τὸ ψυχρόν, &c. (vide *sup.* Vol. I. 505, 3); *Phys.* ii. 2; 194 a, 81: εἰς μὲν γὰρ τοὺς ἀοχαίους ἀποβλέψαντι δόξειεν ἂν εἶναι [ἡ φύσις] τῆς ὕλης· ἐπὶ μικρὸν γὰρ τι μέρος Ἐμπεδοκλῆς καὶ Δημόκριτος τοῦ εἴδους καὶ τοῦ τί ἦν εἶναι ἥψαντο. That Democritus did not altogether satisfy later demands in this respect, we see from the proposition censured by Aristotle, *Part. An.* i. 1, 640 b, 29; Sext. *Math.* vii. 264: ἄνθρωπός ἐστι ὃ πάντες ἴδμεν.

learning, and from placing thought higher than empirical knowledge;[1] that he should assert that men only arrived at culture by degrees, having borrowed, as he thinks, some arts from the animals;[2] that they at first strove only to satisfy their most necessary wants, and then, in the course of time, to beautify their life;[3] on which account Democritus insists all the more that education should come to the help of nature, and by the remodelling of the man, bring forth in him a second nature.[4] We recognise in all these sayings a philosopher who does not undervalue the labour of learning, and does not content himself with the knowledge of external phenomena, but by no means a sceptic who absolutely despairs of knowledge.

A philosopher who discriminates the sensible phenomenon from true essence so decidedly as Democritus does, cannot fail to seek the problem and happiness of human life in the right constitution of mind and temperament, and not in submission to the external world. Such a character is stamped on all that has been handed down to us of his moral views and principles. But however clear this may be, and however numerous the ethical writings which are attributed to him[5] (sometimes indeed unwarrantably),

[1] *Fr. Mor.* 140–142: πολλοὶ πολυμαθέες νόον οὐκ ἔχουσι.—πολυνοΐην οὐ πολυμαθίην ἀσκέειν χρή.—μὴ πάντα ἐπίστασθαι προθύμεο, μὴ πάντων ἀμαθὴς γένῃ. I must abandon my previous doubts as to the Democritean origin of these fragments, as, according to the above remarks, they harmonise well with the views of this philosopher.

[2] Plut. *Solert. Anim.* 29, 1, p. 974.

[3] Philodem. *De Mus.* iv. (Vol. *Herculan.* i. 135, ap. Mullach, p. 237). On this subject cf. Arist. *Metaph.* i. 2, 982 b, 22.

[4] *Fr. Mor.* 133: ἡ φύσις καὶ ἡ διδαχὴ παραπλήσιόν ἐστι· καὶ γὰρ ἡ διδαχὴ μεταῤῥυσμοῖ τὸν ἄνθρωπον μεταῤῥυσμοῦσα δὲ φυσιοποιέει.

[5] Cf. Mullach, 213 sqq. Lortzing in the treatise named on p. 208, 1. The fragments on morals

he was still far from the scientific treatment of Ethics which was inaugurated by Socrates. His ethical doctrine in regard to its form is essentially on a par with the unscientific moral reflection of Heracleitus and the Pythagoreans;[1] we can see indeed a distinct view of life running through the whole, but this view is not as yet based upon general enquiries concerning the nature of moral action, nor carried out into a systematic representation of moral activities and duties. In the manner of the ancient ethics, he considers happiness as the aim of our life: pleasure and aversion are the measure of the useful and injurious; the best thing for man is to go through life, enjoying himself as much, and troubling himself as little, as possible.[2] But Democritus does not conclude from this that sensuous enjoyment is the highest end. Happiness and unhappiness dwell not in herds or in gold, the soul is the abode of the dæmon:[3] not the body and wealth, but uprightness and intelligence produce happiness (*Fr.* 5); the goods of the soul are the divine goods, those of the body, the

(which, for the sake of brevity, I quote only according to the numbers in this collection), ap. Mull. *Democr.* 160 sqq.; *Frag. Philos.* i. 340 sqq.

[1] Cic. *Fin.* v. 29, 87: Democritus neglected his property *quid quaerens aliud, nisi beatam vitam? quam si etiam in rerum cognitione ponebat, tamen ex illa investigatione naturae consequi volebat, ut esset bono animo. Id enim ille summum bonum, εὐθυμίαν et saepe ἀθαμβίαν appellat*, i.e. *animum terrore liberum. Sed haec etsi praeclare, nondum tamen et perpolita. Pauca enim, neque ea ipsa enucleate ab hoc de virtute quidem dicta.*

[2] *Fr. Mor.* 8: οὖρος ξυμφορέων καὶ ἀξυμφορέων τέρψις καὶ ἀτερπίη. To the same effect *Fr.* 9 (cf. Lortzing, p. 28; instead of the incomprehensible περιηκμακότων, we might conjecture πρηκτέων). *Fr.* 2: ἄριστον ἀνθρώπῳ τὸν βίον διάγειν ὡς πλεῖστα εὐθυμηθέντι καὶ ἐλάχιστα ἀνιηθέντι, which is so expressed in Sextus (*sup.* p. 272, 2), as to make the sensations the criterion of desire and detestation.

[3] *Fr.* 1: εὐδαιμονίη ψυχῆς καὶ κακοδαιμονίη οὐκ ἐν βοσκήμασι οἰκέει, οὐδ' ἐν χρυσῷ, ψυχὴ δ' οἰκητήριον δαίμονος.

human.[1] Honour and wealth without wisdom are an uncertain possession,[2] and where reason is wanting, man knows not how to enjoy life or how to overcome the fear of death.[3] Not every enjoyment therefore is desirable, but only the enjoyment of the beautiful:[4] it is fitting that man should bestow more care on the soul than on the body,[5] that he may learn to create his joy out of himself.[6] In a word, happiness according to its essential nature consists only in cheerfulness and well-being, a right disposition and unalterable peace of mind.[7] These, however, will become the portion of man the more surely, and the more perfectly, the more he knows how to keep measure in his appetites and enjoyments, to discriminate the useful from the injurious, to avoid what is wrong and unseemly, and to limit himself in his actions and wishes to that which corresponds with his nature and ability.[8] Contentment,

[1] *Fr.* 6, vide *sup.* p. 262, 1.

[2] *Fr.* 58, 60.

[3] *Fr.* 51–56.

[4] *Fr.* 3; cf. 19.

[5] *Fr.* 128, vide *sup.* p. 261, 3.

[6] *Fr.* 7: αὐτὸν ἐξ ἑαυτοῦ τὰς τέρψιας ἐθιζόμενον λαμβάνειν.

[7] Cic. *sup.* p. 278, 1; Theod. *Cur. Gr. Aff.* xi. 6, vide p. 98, 2; Epiph. *Exp. Fid.* 1088 A; Diog. ix. 45: τέλος δ' εἶναι τὴν εὐθυμίαν, οὐ τὴν αὐτὴν οὖσαν τῇ ἡδονῇ, ὡς ἔνιοι παρακούσαντες ἐξηγήσαντο, ἀλλὰ καθ' ἣν γαληνῶς καὶ εὐσταθῶς ἡ ψυχὴ διάγει, ὑπὸ μηδενὸς ταραττομένη φόβου ἢ δεισιδαιμονίας ἢ ἄλλου τινὸς πάθους. καλεῖ δ' αὐτὴν καὶ εὐεστὼ καὶ πολλοῖς ἄλλοις ὀνόμασιν. Stob. *Ecl.* ii. 76: τὴν δ' εὐθυμίαν καὶ εὐεστὼ καὶ ἁρμονίαν συμμετρίαν τε καὶ ἀταραξίαν καλεῖ. συνίστασθαι δ' αὐτὴν ἐκ τοῦ διορισμοῦ καὶ τῆς διακρίσεως τῶν ἡδονῶν· καὶ τοῦτ' εἶναι τὸ κάλλιστόν τε καὶ συμφορώτατον ἀνθρώποις. Clem. *Strom.* ii. 417 A: Δημόκρ. μὲν ἐν τῷ περὶ τέλους τὴν εὐθυμίαν [τέλος εἶναι διδάσκει] ἣν καὶ εὐεστὼ προσηγόρευσεν. Cf. the following note. Diog. 46 and Seneca, *Tranqu. An.* 2, 3, mention a treatise, π. εὐθυμίης, which is probably identical with the εὐεστὼ described by Diogenes as lost. What Stobæus calls Ataraxia is designated by Strabo, i. 3, 21, p. 61, as ἀθαυμαστία, and by Cicero, *l. c.*, as ἀθαμβία.

[8] Vide the previous note, and *Fr.* 20: ἀνθρώποισι γὰρ εὐθυμίη γίνεται μετριότητι τέρψιος καὶ βίου ξυμμετρίῃ, τὰ δὲ λείποντα καὶ ὑπερβάλλοντα μεταπίπτειν τε φιλέει καὶ

moderation, purity of deed and thought, culture of the mind, these Democritus recommends as the way to true happiness. He allows that happiness is reached only with labour, that misery finds man unsought (*Fr.* 10); but he maintains notwithstanding that all the means of happiness are assured to him, and that it is his own fault if he makes a wrong use of them. The gods give man nothing but good; only man's folly turns the good to evil;[1] as the conduct of a man is, such is his life.[2] The art of happiness consists in using and contenting oneself with what one has got. Human life is short and needy and exposed to a hundred vicissitudes: he who recognises this will be satisfied with moderate possessions and not require anything beyond necessaries for his happiness. What the body needs is easily earned; that which makes trouble and difficulty is an imaginary want.[3]

μεγάλας κινήσιας ἐμποιέειν τῇ ψυχῇ, αἱ δ' ἐκ μεγάλων διαστημάτων κινεόμεναι (that which moves backwards and forwards between two extremes) τῶν ψυχέων οὔτε εὐσταθέες εἰσὶ οὔτε εὔθυμοι. In order to escape this, Democritus advises that we should compare ourselves, not with those who have a brighter lot, but a worse, that so we may find it easier: ἐπὶ τοῖσι δυνατοῖσι ἔχειν τὴν γνώμην καὶ τοῖσι παρεοῦσι ἀρκέεσθαι. *Fr.* 118: He who with a good courage does righteous deeds is happy and free from care; he who despises the right is troubled by fear and by the remembrance of his deeds. *Fr.* 92: τὸν εὐθυμέεσθαι μέλλοντα χρὴ μὴ πολλὰ πρήσσειν μήτε ἰδίῃ μήτε ξυνῇ, μηδὲ ἄσσ' ἂν πρήσσῃ ὑπέρ τε δύναμιν αἱρέεσθαι τὴν ἑωυτοῦ καὶ φύσιν, &c. ἡ γὰρ εὐογκίη ἀσφαλέστερον τῆς μεγαλογκίης. Cf. *M. Aurel.* iv. 24: "'Ολίγα πρῆσσε," φησὶν (who, it is not stated) "εἰ μέλλεις εὐθυμήσειν."

[1] *Fr.* 13: οἱ θεοὶ τοῖσι ἀνθρώποισι διδοῦσι τἀγαθὰ πάντα καὶ πάλαι καὶ νῦν, πλὴν ὁπόσα βλαβερὰ καὶ ἀνωφελέα. τάδε δ' οὐ πάλαι οὔτε νῦν θεοὶ ἀνθρώποισι δωρέονται ἀλλ' αὐτοὶ τοῖσδεσι ἐμπελάζουσι διὰ νόου τυφλότητα καὶ ἀγνωμοσύνην. *Fr.* 11. *Fr.* 12: ἀπ' ὧν ἡμῖν τἀγαθὰ γίνεται, ἀπὸ τῶν αὐτέων καὶ τὰ κακὰ ἐπαυρισκοίμεθ' ἄν· τῶν δὲ κακῶν ἐκτὸς εἴημεν (we could remain free from it). Cf. *Fr.* 96: Most evils come to men from within. *Fr.* 14, *sup.* p. 238, 1.

[2] *Fr.* 45: τοῖσι ὁ τρόπος ἐστὶ εὔτακτος, τουτέοισι καὶ βίος ξυντέτακται.

[3] *Fr.* 22, cf. 23 and 28: τὸ χρῆζον οἶδε, ὁκόσον [perhaps, -ων] χρῄζει, ὁ δὲ χρῄζων οὐ γινώσκει. The neuter τὸ χρῆζον I formerly referred to the body, and I still think this is possible; though I admit that Lortzing's (p. 23) reading, according to which τὸ χρῄζον is the beast and ὁ χρῄζων man, makes good sense.

[1] *Fr.* 24, cf. 26, 27, 35 sq., 38 sq.; cf. *Fr.* 40, on the advantage enjoyed by poverty, of being secure from jealousy and enmity.

[2] *Fr.* 29, cf. 42.

[3] *Fr.* 25: καλὸν ἐπὶ παντὶ τὸ ἴσον, ὑπερβολὴ δὲ καὶ ἔλλειψις οὐ μοι δοκέει. Cf. *Fr.* 33.

[4] *Fr.* 47, cf. 46, 48.

[5] Vide *supra*, p. 279, 7, 8.

[6] *Fr.* 61, cf. 62–64.

The more a man covets, the more he requires; insatiableness is worse than the extreme of want. (*Fr.* 66–68.) To him, on the contrary, who desires little, a little suffices; restriction of desire makes poverty riches.[1] He who has too much, loses that which he has, like the dog in the fable (*Fr.* 21); through excess every pleasure becomes a pain (37); moderation, on the other hand, increases enjoyment (35, 34), and ensures a satisfaction which is independent of fortune (36). He is a fool who desires what he has not, and despises what is at his command (31); the sensible man enjoys what he has, and does not trouble himself about what he has not.[2] The best is therefore always the right measure, excess and deficiency come of evil.[3] To conquer oneself is the noblest victory (*Fr.* 75); he is the valiant man who conquers, not enemies merely, but desire (76); to overcome anger indeed is difficult, but the rational man becomes master of it (77); to be right-minded in misfortune is great (73), but with understanding, we can conquer (74) trouble. Sensuous enjoyment affords but short pleasure and much pain; and no satiating of appetite,[4] only the goods of the soul can give true happiness and inward contentment.[5] Wealth gained by injustice is an evil;[6] culture is

better than possessions;[1] no power and no treasures can be equivalent to the extension of our knowledge.[2] Democritus demands therefore that not merely deed and word,[3] but the will also,[4] shall be pure from injustice; that man should do good, not on compulsion, but from conviction (*Fr.* 135), not from hope of reward, but for its own sake;[5] and should keep himself from evil (117), not from fear, but from a sense of duty; he should be more ashamed before himself than before all others, and avoid wrong equally whether it will be known to no one or to all:[6] he says that only that man pleases the gods who hates wrong;[7] the consciousness of doing right alone brings peace of mind (*Fr.* 111); doing wrong makes a man more unhappy than suffering wrong (224). He extols wisdom, which guarantees us the three greatest goods—to think truly, to speak well, and to act rightly;[8] he holds ignorance to be the cause

[1] *Fr.* 136. With this Lortzing, 23, connects with much probability *Fr.* 18, Stob. *Floril.* 4, 71, if indeed by the εἴδωλα ἐσθῆτι (Meineke has this word instead of αἰσθητικὰ) the emptiness of the ostentatious man is meant to be described.

[2] Dionys. ap. Eus. *Pr. Ev.* xiv. 27, 3: Δημόκριτος γοῦν αὐτός, ὥς φασιν, ἔλεγε βούλεσθαι μᾶλλον μίαν εὑρεῖν αἰτιολογίαν, ἢ τὴν Περσῶν οἱ βασιλείαν γενέσθαι.

[3] *Fr.* 103, 106, 97, 99.

[4] *Ff.* 109: ἀγαθὸν οὐ τὸ μὴ ἀδικεέειν, ἀλλὰ τὸ μηδὲ ἐθέλειν. Cf. *Fr.* 110, 171.

[5] *Fr.* 160: χαριστικὸς (beneficent) οὐκ ὁ βλέπων πρὸς τὴν ἀμοιβήν, ἀλλ' ὁ εὖ δρᾷν προῃρημένος.

[6] *Fr.* 98, 100, 101.

[7] *Fr.* 107, cf. 242.

[8] Democritus, according to Diog., ix. 46; Suid. τριτογ. (cf. *Schol.-Bekker* in *Il.* Θ, 39; Eustath. *ad Il.* Θ. p. 696, 37; Rom. Tzetz. *ad Lycophr.* v. 519; Mullach, p. 119 sq.), had composed a work, Τριτογένεια, in which he explained the Homeric Pallas and her other names as wisdom: ὅτι τρία γίγνεται ἐξ αὐτῆς, ἃ πάντα τὰ ἀνθρώπινα συνέχει, namely, εὖ λογίζεσθαι, λέγειν καλῶς, ὀρθῶς πράττειν. Lortzing, p. 5, considers this an interpolation, and I do not deny that it may be so; but such allegorical language does not seem to exceed that which is elsewhere ascribed to Democritus and his contemporaries (cf. p. 251. 4; 255, 2; 287, 3; Part III. a, 300, 2nd ed.). It is quite different from that employed by the Stoics (*ibid.* 308, 1). Besides, the words need not necessarily have formed part of the main content of the treatise, they may have been merely an introduction to some moral reflection.

of all faults;[1] and recommends instruction and practice as the indispensable means of perfection;[2] he warns men against envy and jealousy,[3] avarice[4] and other faults. All that has been handed down to us of the writings of Democritus shows him to have been a man of extensive experience, acute observation, earnest moral temperament and pure principles. His utterances, too, concerning social life correspond with this character. The value of friendship, with which Greek ethics was so deeply penetrated, he rates very highly; he who has no righteous man for his friend, he says, deserves not to live;[5] but the friendship of one wise man is better than that of all fools (*Fr.* 163); in order to be loved, however, a man must, on his side, love others (171), and this love is only fitting when it is not defiled by any unlawful passion.[6] So also Democritus recognises the necessity of the state. He declares indeed that the wise man must be able to live in every country, and that a noble character has the whole world for its fatherland,[7] but at the same time he says that nothing is so important as a good government, that it embraces all things and everything stands and falls with it;[8] he

[1] *Fr.* 116: ἁμαρτίης αἰτίη ἡ ἀμαθίη τοῦ κρέσσονος.

[2] *Fr.* 130–134, 115, cf. 85 sq., 235 sq.

[3] *Fr.* 30, 230, 147, 167 sq.

[4] *Fr.* 68–70.

[5] *Fr.* 162, cf. 166.

[6] *Fr.* 4: δίκαιος ἔρως ἀνυβρίστως ἐφίεσθαι τῶν καλῶν, which Mullach does not seem to me rightly to understand.

[7] *Fr.* 225: ἀνδρὶ σοφῷ πᾶσα γῆ βατή· ψυχῆς γὰρ ἀγαθῆς πατρὶς ὁ ξύμπας κόσμος.

[8] *Fr.* 212: τὰ κατὰ τὴν πόλιν χρεὼν τῶν λοιπῶν μέγιστα ἡγέεσθαι ὅκως ἄξεται εὖ, μήτε φιλονεικέοντα παρὰ τὸ ἐπεικὲς μήτε ἰσχὺν ἑωυτῷ

thinks the distress of the commonwealth is worse than that of individuals;[1] he would rather live in poverty and freedom under a democracy, than in plenty and dependence with the great (*Fr.* 211). He acknowledges that nothing great can be accomplished except by unanimous cooperation (*Fr.* 199), that civil discord is under all circumstances an evil (200); he sees in law a benefactor of men (187), he requires dominion of the best (191–194), obedience to authority and law (189 sq., 197), unselfish care for the common good (212), general willingness to help others (215); he deplores a state of things in which good rulers are not duly protected, and the misuse of power is rendered easy for evil rulers;[2] and in which political activity is connected with danger and misfortune.[3] Democritus is therefore at one with the best men of his time on this subject.[4] His opinions on marriage are more peculiar; but their

περιτιθέμενον παρὰ τὸ χρηστὸν τοῦ ξυνοῦ. πόλις γὰρ εὖ ἀγομένη μεγίστη ὄρθωσίς ἐστι καὶ ἐν τούτῳ πάντα ἔνι, καὶ τούτου σωζομένου πάντα σώζεται, καὶ τούτου φθειρομένου τὰ πάντα διαφθείρεται. Plut. *adv. Col.* 32, 2, p. 1126: Δημόκρ. μὲν παραινεῖ τήν τε πολιτικὴν τέχνην μεγίστην οὖσαν ἐκδιδάσκεσθαι καὶ τοὺς πόνους διώκειν, ἀφ' ὧν τὰ μεγάλα καὶ λαμπρὰ γίνονται τοῖς ἀνθρώποις, cf. Lortzing, p. 16.

[1] *Fr.* 43: ἀπορίη ξυνὴ τῆς ἑκάστου χαλεπωτέρη· οὐ γὰρ ὑπολείπεται ἐλπὶς ἐπικουρίας.

[2] *Fr.* 205, where, however, the text is not quite in order. *Fr.* 214.

[3] So I understand *Fr.* 213: τοῖσι χρηστοῖσι οὐ ξυμφέρον ἀμελέοντας τοῖσι [τῶν] ἑωυτῶν ἄλλα πρήσσειν, etc.; for taken in an unconditional sense, this warning against political activity would not be in harmony with the other principles of Democritus. Cf. in addition to the above quotations *Fr.* 195.

[4] What Epiphanius, *Exp. Fid.* 1088 A, relates of him: that he despised existing authority and acknowledged only natural right, that he declared law to be an evil invention, and said the wise men should not obey the laws but live in freedom,—is manifestly a misapprehension. The art of exegesis as practised at a later date might easily find in the citations, p. 219, 3, the universal opposition of *νόμος* and *φύσις*, little as this applies to civil laws.

peculiarity is not on the side where from his materialism and his seeming eudæmonism we might expect to find it: a higher moral view of marriage is indeed wanting in him, but not more so than in his whole epoch. What chiefly offends him in marriage is not the moral, but the sensual element of this relation. He has a horror of sexual enjoyment, because consciousness is therein overcome by desire, and the man gives himself over to the debasing charm of the senses.[1] He has also rather a low opinion of the female sex;[2] and desires to have no children because their education withdraws men from more necessary activity, and its results are uncertain;[3] and though he acknowledges that the love of children is universal and natural, he esteems it more prudent to take adopted children whom one can choose, than to beget others in the case of whom it is a chance how they turn out. Though we must allow that these opinions are onesided and defective, we have no right on that account to raise against the ethical principles of Democritus, as a whole, objections which we do not raise against Plato in spite of his community of wives, nor against the Christian votaries of asceticism.

Whether Democritus has connected his ethics with

[1] *Fr.* 50: ξυνουσίη ἀποπληξίη σμικρή· ἐξέσσυται γὰρ ἄνθρωπος ἐξ ἀνθρώπου (to which should probably be added καὶ ἀποσπᾶται πληγῇ τινι μεριζόμενος, cf. Lortzing 21 sq.). *Fr.* 49: ξυόμενοι ἄνθρωποι ἥδονται καί σφι γίνεται ἅπερ τοῖσι ἀφροδισιάζουσι.

[2] *Fr.* 175, 177, 179.

[3] *Fr.* 184–188. Theodoretus, *Cur. Gr. Aff.* xii., censures Democritus for declining marriage and the possession of children because they would be a disturbance to him in his eudæmonism, but this is a misunderstanding; the ἀηδίαι, which Democritus fears, refer to the trouble occasioned by misguided children. Theodoretus is only quoting from Clemens, *Strom.* ii. 421, e., who does not, however, express himself so decidedly.

his scientific theories in such a manner that we must regard them as essentially part of his system, is another question; and I can only answer it in the negative. There is indeed a certain connection between them, as already observed; his theoretic elevation above the sensible phenomenon must have inclined the philosopher in the moral sphere also to ascribe small value to external things; and his insight into the unchangeable order of nature must have awakened in him the conviction that it was best to find satisfaction and contentment in that order. But so far as we know, Democritus did little himself to elucidate this inter-dependence; he did not enquire into the nature of moral activity generally, but promulgated a number of isolated observations and rules of life, which are connected certainly by the same moral temper and mode of thought, though not by definite scientific conceptions; these ethical propositions, however, stand in so slight a connection, that they might one and all have been advanced by a person to whom the Atomistic doctrine was entirely alien. However remarkable and meritorious therefore the ethics of Democritus may be, and willingly as we accept them as a proof of the progress of moral reflection, also evinced contemporaneously by the Sophistic and Socratic doctrine, we can, nevertheless, only see in them an outwork of his philosophical system, which can have but a secondary importance in our estimate of that system.

It is the same with the views of Democritus about religion.[1] That he was unable to share the belief of

[1] Cf. for what follows Krische, *Forschungen*, 146 sqq.

his nation as to the gods is evident. The Divine, in the proper sense, the eternal essence on which all depends, is to him only Nature, or more accurately, the totality of the atoms moved by their weight and forming the world. If the gods are substituted for this in popular language, it is merely a form of expression.[1] In a secondary manner he seems to have designated the animate and rational elements in the world and in man as the Divine, without meaning by it anything more than that this element is the most perfect matter and the cause of all life and thought.[2] Moreover he perhaps named the stars gods, because they are the chief seat of this divine fire;[3] and if he had also ascribed reason to them, this would not have contradicted the presuppositions of his system. In the gods of the popular faith, on the contrary, he could see only images of the fancy: he supposed that certain physical or moral conceptions had originally been represented in them, Zeus signifying the upper air; Pallas, wisdom, &c., but that these forms had afterwards been erroneously taken for actual beings, having a personal existence.[4] That men should have arrived at this opinion,

[1] *Fr. Mor.* 13, *supra*, 280, 1. Similarly, *Fr. Mor.* 107: μοῦνο θεοφιλέες, δσοισι ἐχθρὸν τὸ ἀδικέειν. *Fr. Mor.* 250: θείου νόου τὸ ἀεὶ διαλογίζεσθαι καλόν. In the quotation, p. 267, 4, the mention of the gods, as is there shown, cannot belong to Democritus, who, however, might still have spoken of them hypothetically.

[2] Cf. p. 262 sq.

[3] Tertull. *Ad Nat.* ii. 2: *Cum reliquo igni superno Deos ortos Democritus suspicatur*; this is probably a reference to the origin of the stars; it might also, less fitly, be connected with the existences presently to be discussed, from which the εἴδωλα emanate. That the stars were regarded as gods is shown by the explanation of ambrosia, noticed p. 251, 4.

[4] Clemens, *Cohort.* 45 B (cf. *Strom.* v. 598 B, and concerning the text, Mullach, 359; Burchard, *Democr. de Sens. Phil.* 9; Papen-

he explained partly from the impression which extraordinary natural phenomena, such as tempests, comets, solar and lunar eclipses, &c., produce on them,[1] and partly he believed it to be founded on real observations which were not rightly understood. Free therefore as is his attitude in regard to the popular religion, he cannot resolve to explain all that it relates of the phenomena of higher natures, and their influence on men, absolutely as deception: it might rather seem to him more consistent with his sensualistic theory of knowledge to derive these conceptions also from actual external impressions. He assumed, therefore,[2] that there dwell in

cordt, 72): ὅθεν οὐκ ἀπεικότως ὁ Δημόκριτος τῶν λογίων ἀνθρώπων ὀλίγους φησὶν ἀνατείναντας τὰς χεῖρας ἐνταῦθα ὃν νῦν ἠέρα καλέομεν οἱ Ἕλληνες πάντα (this seems to be incorrect, though it was doubtless in the MS. used by Clemens; perhaps we should read πάντες, or still better, πατέρα) Δία μυθέεσθαι, καὶ (a ὡς or νομίζειν ὡς seems to have dropped out here) πάντα οὗτος οἶδεν καὶ διδοῖ καὶ ἀφαιρέεται καὶ βασιλεὺς οὗτος τῶν πάντων. On Pallas, vide p. 282, 8.

[1] Sext. *Math.* ix. 19. Democritus is of the number of those who derive the belief in gods from extraordinary natural phenomena: ὁρῶντες γάρ, φησι, τὰ ἐν τοῖς μετεώροις παθήματα οἱ παλαιοὶ τῶν ἀνθρώπων, καθάπερ βροντὰς καὶ ἀστραπὰς κεραυνούς τε καὶ ἄστρων συνόδους (comets, so also p. 252, 3; Krische, 147) ἡλίου τε καὶ σελήνης ἐκλείψεις ἐδείματοῦντο, θεοὺς οἰόμενοι τούτων αἰτίους εἶναι.

[2] Sext. *Math.* ix. 19: Δημόκριτος δὲ εἰδωλά τινά φησιν ἐμπελάζειν τοῖς ἀνθρώποις, καὶ τούτων τὰ μὲν εἶναι ἀγαθοποιά, τὰ δὲ κακοποιά. ἔνθεν καὶ εὔχεται εὐλόγχων (so I read, with Krische, p. 154; Burchard, *l. c.* and others, for εὐλόγων on account of the passages quoted, *inf.*) τυχεῖν εἰδώλων. εἶναι δὲ ταῦτα μεγάλα τε καὶ ὑπερμεγέθη καὶ δύσφθαρτα μέν, οὐκ ἄφθαρτα δέ, προπημαίνειν τε τὰ μέλλοντα τοῖς ἀνθρώποις, θεωρούμενα καὶ φωνὰς ἀφιέντα. (Thus far also, almost word for word, the anonymous commentary on Aristotle's *De Divin. p. s.*; Simpl. *De Anima*, p. 148, Ald.; and, very similarly, *Themist.* on the same work, p. 295, Sp. Both substitute εὐλόχων for εὐλόγων, and leave out before ὑπερμεγέθη the words μεγάλα τε καὶ, which are no doubt glosses.) ὅθεν τούτων αὐτῶν φαντασίαν λαβόντες οἱ παλαιοὶ ὑπενόησαν εἶναι θεὸν μηθενὸς ἄλλου παρὰ ταῦτα ὄντος θεοῦ τοῦ ἄφθαρτον φύσιν ἔχοντος. Cf. § 42: τὸ δὲ εἴδωλα εἶναι ἐν τῷ περιέχοντι ὑπερφυῆ καὶ ἀνθρωποειδεῖς ἔχοντα μορφὰς, καὶ καθόλου τοιαῦτα ὁποῖα βούλεται αὐτῷ ἀναπλάττειν Δημόκριτος, παντελῶς ἐστι δυσπαράδεκτον. Plut. *Aemil. P.* c. 1: Δημόκριτος μὲν γὰρ εὔχεσθαί φησι δεῖν, ὅπως εὐλόγχων εἰδώλων τυγχάνωμεν, καὶ τὰ σύμφυλα καὶ τὰ χρηστὰ μᾶλλον ἡμῖν ἐκ τοῦ περιέχοντος, ἢ τὰ φαῦλα καὶ τὰ σκαιὰ, συμφέρηται. *Def. Orac.* c. 7: ἔτι δὲ Δημόκριτος, εὐχόμενος εὐλόγχων εἰδώλων τυγχάνειν, δῆλος ἦν ἕτερα δυστράπελα καὶ μοχθηρὰς γινώσκων ἔχοντα προαιρέσεις τινὰς καὶ ὁρμάς. Cic. (who also mentions this theory in *Divin.* ii. 58, 120), *N. D.* i. 12, 29: *Democritus, qui tum imagines earumque circuitus in Deorum numero refert, tum illam naturam, quae imagines fundat ac mittat, tum scientiam intelligentiamque nostram* (cf. on this point, p. 262 sq.). *Ibid.* 43. 120: *tum enim censet imagines divinitate praeditas inesse in universitate rerum, tum principia mentis, quae sunt in eodem universo, Deos esse dicit; tum animantes imagines, quae vel prodesse nobis soleant vel nocere, tum ingentes quasdam imagines tantasque, ut universum mundum complectantur extrinsecus.* (This latter is certainly a perversion of the doctrine of Democritus, occasioned probably by the mention of the περιέχον, which we also find in Sextus and Plutarch; we ought, moreover, to remember that in both these passages of Cicero, an Epicurean is speaking, who introduces as many absurdities and contradictions as possible into the doctrines of Democritus, in order the more easily to turn them into ridicule.) Clemens, *Strom.* v. 590 C: τὰ γὰρ αὐτὰ (Δημόκρ.) πεποίηκεν εἴδωλα τοῖς ἀνθρώποις προσαίπτοντα καὶ τοῖς ἀλόγοις ζῴοις ἀπὸ τῆς θείας οὐσίας, where θεία οὐσία designates *natura quae imagines fundat*, the beings from whom the εἴδωλα emanate. Cf. Ibid. *Cohort.* 43 D (the first principles of Democritus are the atoms, the void and the εἴδωλα) and Krische, 150, 1; Max. Tyr. *Diss.* xvii. 5: the Deity, according to Democritus, was ὁμοπαθὲς (sc. ἡμῖν, therefore like to men). From a misunderstanding of what was said by Democritus concerning the beneficent and maleficent nature of these existences, and perhaps through the instrumentality of some forged writing, no doubt arose the statements of Plinius, *H. N.* ii. 7, 14, that Democritus supposed there were two deities, *Poena* and *Beneficium*. Iren. *Adv. Hær.* ii. 14, 3, even confounds the atomistic εἴδωλα with the Platonic ideas. For the rest, cf. the account of the Epicurean doctrine (Part III. a, 394 sqq. 2nd ed.).

the air beings who were similar to man in form, but superior to him in greatness, power, and duration of life: these beings manifest themselves when emanations and images, streaming forth from them and often reproducing themselves at a great distance, become visible and audible to men and animals, and they are held to be gods, although in truth they are not divine and imperishable, but only less perishable than man. These

beings and their images are partly of a beneficent, and partly of a destructive nature; for which reason Democritus, we are told, expressed a wish that he might meet with fortunate images: from the same source, lastly, he derived presages and prophecies, for he thought that the phantoms unfold to us the designs of those from whom they emanate, and also what is going on in other parts of the world.[1] In fact, they are nothing else than the dæmons of the popular belief,[2] and Democritus may so far be considered as the first who, in mediating between philosophy and the popular religion, entered upon the course so often pursued in after times, viz., that of degrading the gods of polytheism into dæmons. Together with this physical view of the belief in gods, some words of his have been transmitted to us, which refer to its ethical importance.[3] In no case did he think himself justified in assuming an antagonistic position to the existing religion, and to the order of the commonwealth; it may, therefore, be true of himself, as it was asserted of his followers, perhaps only on account of the Epicureans,[4] that they took part in the accustomed religious services: from the Greek standpoint this would be quite in order, even on the principles of Democritus.

Of a similar kind are some other doctrines in which Democritus likewise follows the popular faith more than

[1] Cf. p. 291, 1.

[2] The dæmons were supposed to be long-lived, but not immortal. Cf., not to mention other references, Plut. *Def. Orac.* c. 11, 16 sq. p. 415, 418, and *sup.* p. 152, 1; 172, 1.

[3] *Fr. Mor.* 107; vide *sup.* 287, 1. Cf. also *Fr.* 242: χρὴ τὴν μὲν εὐσέβειαν φανερῶς ἐνδείκνυσθαι, τῆς δὲ ἀληθείας θαῤῥοῦντως προΐστασθαι. These words, however (as Lortzing remarks, p. 15), do not sound as if written by Democritus.

[4] Orig. *C. Cels.* vii. 66.

his physical system, though he tries to bring them into harmony with it. Thus besides what we have just been speaking of as to the manifestations of superior beings, he believes in prophetic dreams, and seeks to explain them also by the doctrine of images. As dreams in general (so we must understand him) arise because images of all possible things reach sleeping persons, so under certain circumstances, he thinks, it may also happen that these images (like the words or features which we perceive in waking) may reflect the conditions of soul, the opinions and designs of others; and thus dreams arise, which instruct us concerning much that is hidden. But these dreams are not thoroughly trustworthy, partly because the images are in themselves not always equally clear and forcible, partly because on their way to us, according to the constitution of the air, they are subject to greater or lesser changes.[1] The theory of emanations and images is also employed to justify the superstition, so prevalent in Greece even

[1] Plut. *Qu. Conv.* viii. 10, 2: φησὶ Δημόκριτος ἐγκαταβυσσοῦσθαι τὰ εἴδωλα διὰ τῶν πόρων εἰς τὰ σώματα καὶ ποιεῖν τὰς κατὰ τὸν ὕπνον ὄψεις ἐπαναφερόμενα· φοιτᾶν δὲ ταῦτα πανταχόθεν ἀπιόντα καὶ σκευῶν καὶ ἱματίων καὶ φυτῶν μάλιστα δὲ ζῴων ὑπὸ σάλου πολλοῦ καὶ θερμότητος, οὐ μόνον ἔχοντα μορφοειδεῖς τοῦ σώματος ἐκμεμαγμένας ὁμοιότητας . . . ἀλλὰ καὶ τῶν κατὰ ψυχὴν κινημάτων καὶ βουλευμάτων ἑκάστῳ καὶ ἠθῶν καὶ παθῶν ἐμφάσεις ἀναλαμβάνοντα συνεφέλκεσθαι, καὶ προσπίπτοντα μετὰ τούτων ὥσπερ ἔμψυχα φράζειν καὶ διαστέλλειν τοῖς ὑποδεχομένοις τὰς τῶν μεθιέντων αὐτὰ δόξας καὶ διαλογισμοὺς καὶ ὁρμάς, ὅταν ἐνάρθρους καὶ ἀσυγχύτους φυλάττοντα προσμίξῃ τὰς εἰκόνας· τοῦτο δὲ μάλιστα ποιεῖ δι' ἀέρος λείου τῆς φορᾶς γινομένης ἀκωλύτου καὶ ταχείας· ὁ δὲ φθινοπωρινὸς, ἐν ᾧ φυλλορροεῖ τὰ δένδρα, πολλὴν ἀνωμαλίαν ἔχων καὶ τραχύτητα, διαστρέφει καὶ παρατρέπει πολλαχῆ τὰ εἴδωλα καὶ τὸ ἐναργὲς αὐτῶν ἐξίτηλον καὶ ἀσθενὲς ποιεῖ τῇ βραδυτῆτι τῆς πορείας ἀμαυρούμενον, ὥσπερ αὖ πάλιν πρὸς ὀργώντων καὶ διακαιομένων ἐκθρώσκοντα πολλὰ καὶ ταχὺ κομιζόμενα τὰς ἐμφάσεις νοερὰς καὶ σημαντικὰς ἀποδίδωσιν. These theories are alluded to in Arist. *De Divin. p. s. c.* 2, 464 a, 5, 11; Plut. *Plac.* v. 2; Cic. *Divin.* i. 3, 5.

to the present day, of the effect of the evil eye: from the eyes of envious persons images, he thinks, proceed which carrying with them something of their temper, trouble those with whom they settle.[1] The argument for the inspection of offerings, which our philosopher also approved, was simpler.[2] Whether and in what manner, lastly, he connected the belief of the divine inspiration of the poet[3] with his other doctrines, we are not told; but he might very well suppose that certain souls, of a favourable organisation, receive into themselves a greater profusion of images and are set by them in livelier motion than others; and that in this consists the poetic faculty and temperament.

4. *The Atomistic Doctrine as a whole; its historical place and import; later adherents of the School.*

The character and historical position of the Atomistic philosophy have been variously estimated in ancient and modern times. In the ancient order of succession the Atomists are always included in the Eleatic school;[4]

[1] Plut. *Qu. Conv.* v. 7, 6.

[2] Cic. *Divin.* i. 57, 131: *Democritus autem censet, sapienter instituisse veteres, ut hostiarum immolatarum inspicerentur exta, quorum ex habitu atque ex colore tum salubritatis tum pestilentiae signa percipi, nonnunquam etiam, quae sit vel sterilitas agrorum vel fertilitas futura.* The limitation to these cases proves that only such changes in the entrails are intended as are effected by natural causes, and Democritus seems on this subject less explicit than Plato, *Tim.* 71.

[3] Democritus, ap. Di. Chrys. *Or.* 53. Ὅμηρος φύσιος λαχὼν θεαζούσης ἐπέων κόσμον ἐτεκτήνατο παντοίων. *Id.* ap. Clem. *Strom.* vi. 698 B: ποιητὴς δὲ ἅσσα μὲν ἂν γράφῃ μετ' ἐνθουσιασμοῦ καὶ ἱεροῦ πνεύματος (?) καλὰ κάρτα ἐστί. Cic. *Divin.* i. 37, 80: *Negat enim sine furore Democritus quenquam poëtam magnum esse posse.*

[4] By Diogenes, Pseudo-Galen, Hippolytus, Simplicius, Suidas, Tzetzes. In the first three it appears from the place assigned to the Atomists, and in all from their statements as to the teachers of Leucippus and Democritus (vide *sup.* p. 207, 1; 210, *a*). On the same presupposition, Plutarch, ap. Eus. *Pr. Ev.* i. 8, 7, places Democritus immediately after Parmenides and Zeno; Cicero's Epicurean, *N. D.* i. 12, 29, places him with Empedocles and Protagoras after Parmenides.

[1] *Metaph.* i. 4, 985 b, 4.

[2] For example, *Gen. et Corr.* i. 8; vide *supra*, 215, 1.

[3] *e.g.* Degerando, *Geschich. d. Phil.* i. 83 sq. of Tennemann's translation, Tiberghien, *Sur la génération des connaissances humaines*, p. 176. Similarly, Mullach, 373 sq.; Ast, *Gesch. d. Phil.* 88, places the Atomistic philosophy under the category of Italian idealism, although he elsewhere characterises it as Tennemann does.

[4] Reinhold, *Gesch. d. Phil.* i. 48, 53; Brandis, *Rhein. Mus.* iii. 132, 144; *Gr.-röm. Phil.* i. 294, 301; Marbach, *Gesch. d. Phil.* i. 87, 95; Hermann, *Gesch. und System d. Plat.* i. 152 sqq.

[5] Tiedemann, *Geist d. spek. Phil.* i. 224 sq.; Buhle, *Gesch. d. Phil.* i. 324; Tennemann, *Gesch. d. Phil.* 1 A. i. 256 sq.; Fries, *Gesch. d. Phil.* i. 210; Hegel, *Gesch. d. Phil.* i. 321, 324 f; Braniss, *Gesch. d. Phil. s. Kant*, i. 135, 139 sqq.; vide *sup.* Vol. I. p. 168; Strümpell, *Gesch. d. Theoret. Phil. d. Gr.* 69 sqq.; vide Vol. I. p. 209, 1; Haym, *Allg. Enc. Sect.* iii. vol. xxiv. 38; Schwegler, *Gesch. d. Phil.* p 16; *Gesch. d. Gr. Phil.* p. 12, 43; Ueberweg, i. p. 25.

Aristotle generally places them with Empedocles and Anaxagoras, sometimes classing them with these philosophers among the physicists,[1] and sometimes remarking upon their affinity with the Eleatics.[2] In modern times the order of these ancient lists has been followed by a few writers only, who describe the Atomists as a second branch of the Eleatic School, as Eleatic physicists.[3] The more usual course is, either to reckon them among the Ionian physicists,[4] or to place them as a particular form of philosophy among the later schools.[5] But even in this case their relation to predecessors and contemporaries has been variously stated. Though it is generally admitted that the Atomistic doctrine attempted to combine the conclusions of the Eleatics with experience, yet opinions are not agreed as to how far it was influenced by other systems, and especially by those of Heracleitus, Anaxagoras and Empedocles.

While some see in it the completion of the mechanical physics, which were founded by Anaximander,[1] it seems to others a development of the Heracleitean standpoint, or, more accurately, a combination of the conceptions of Heracleitus and those of the Eleatics,[2] an explanation of Becoming, as held by Heracleitus, by means of the Eleatic Being.[3] Wirth places the Atomists side by side with Heracleitus; because Heracleitus maintained Becoming, and the Atomists the plurality of things,[4] as against the Eleatics; Marbach connects them not only with Heracleitus, but with Anaxagoras; Reinhold and Brandis, and likewise Strümpell, derive the Atomistic doctrine from the double opposition to the Eleatic doctrine of the One, and to the dualism of Anaxagoras;[5] lastly, Brandis regards it as the connecting link between Anaxagoras and the Sophists. At an earlier period, Schleiermacher[6] and Ritter[7] had still more decidedly reckoned the Atomists among the Sophists, and had declared their doctrine to be an unscientific corruption of the Anaxagorean and Empedoclean philo-

[1] Hermann, *l. c.*

[2] Hegel, i. 324 sqq. takes this view, observing: In the Eleatic philosophy, Being and non-Being appear in opposition; with Heracleitus both are the same and both equal; but if Being and non-Being be conceived objectively, there results the opposition of the Plenum and the Vacuum. Parmenides set up as his principle, Being or the abstract universal; Heracleitus the process; to Leucippus belongs the determination of Being in its actuality. Cf. Wendt, *zu Tennemann*, i. 322.

[3] Haym, *l. c.*; Schwegler, *Gesch. d. Phil.* 16; cf. the first edition of the present work, i. 212. Schwegler, on the contrary, *Gesch. d. Griech. Phil.* 43, treats the Atomistic philosophy as a reaction of the mechanical view of nature against the dualism of Anaxagoras.

[4] *Jahrb. d. Gegenw.* 1844, 722; *Idee d. Gottheit.* p. 162.

[5] Or, as Brandis says, Anaxagoras and Empedocles.

[6] *Gesch. d. Phil.* 72, 74 sq.

[7] *Gesch. d. Phil.* i. 589 sqq. against him; Brandis, *Rhein. Mus.* iii. 132 sqq.

sophy. This view must here be examined, as it completely destroys the position which we have assigned to the Atomists, and must affect our whole conception of their system.

This conception is founded partly on the literary character of Democritus, and partly on the content of his doctrine. In regard to the former, Ritter[1] finds much to censure. Some words that the philosopher uses at the beginning of a treatise[2] evince arrogance; of his travels and his mathematical knowledge he speaks vaingloriously, his language betrays hypocritical enthusiasm; even the innocent remark that he is forty years younger than Anaxagoras, is meant as an ostentatious comparison with that philosopher. In respect of the character of the *system*, all this would be of no importance. Even supposing that Democritus may have been vain, it does not follow that the doctrine he taught was an empty form of Sophistry, if indeed the doctrine were his alone. This is not, however, the case; for though it is remarkable how his name, both with adversaries and admirers of the Atomistic philosophy, from Epicurus and Lucretius down to Lange, has caused that of his master to be forgotten,[3] yet it is certain that his physics

[1] *Gesch. d. Phil.* i. 594–597.

[2] Ap. Sext. *Math.* vii. 265 (who sees in it only a pretentious boast); Cic. *Acad.* ii. 23, 73: *tάδε λέγω περὶ τῶν ξυμπάντων.*

[3] According to Diog. x. 7, even Epicurus would not reckon Leucippus (whose work was perhaps wholly unknown to him) as a philosopher (*ἀλλ' οὐδὲ Λεύκιππόν τινα γεγενῆσθαί φησι φιλόσοφον*), nor his successor, Hermarchus; while other members of the school regarded him (Epicurus) as Democritus's teacher. Lucretius never mentions him. Lange, in the 18 pages which he devotes to the Atomists, only once refers to him (p. 13) in the remark: 'A doubtful tradition ascribes to him the proposition of the necessity of all that happens;' for the rest, he so expresses himself that anyone not previously acquainted with the true

in all their essential features are derived from Leucippus.[1] But these censures are in themselves most unjust.[2] As to the statement of his age in comparison with Anaxagoras, we know nothing of the connection in which it stood; such statements however were not uncommon in antiquity. The opening words of his book are simply an announcement of what it contains. His self-confidence does not exceed, and often does not nearly equal, that with which Heracleitus, Parmenides and Empedocles express themselves.[3] Lastly his language, though ornate and fervid, is never stilted and affected; what he says of his travels and of his geometrical knowledge[4] may have stood in a connection in

state of the case would suppose Democritus alone to be the founder of the Atomistic system.

[1] For instance, the reduction of generation and decay to the union and separation of underived matter, the doctrine of atoms and the void, vide *sup.* p. 215, 1; 217, 1; 220, 3; the perpetual motion of atoms (236, 1), which he can only have deduced from their gravity, the concussion of the atoms, their rotary motion, and the formation of the world, which resulted from it (p. 242, 2); the conceptions (somewhat different from those of Democritus) on the shape of the earth, the order of the heavenly bodies, the inclination of the earth's axis (249, 2; 250, 3; 251, 5); the nature of the soul (258, 1)—all this shows that Leucippus had treated of cosmology and the theory respecting living beings, though probably not so profoundly as his disciple. The fundamental conceptions of the Atomistic physics, which are precisely those portions on which Lange lays so much stress, belong, therefore, to Leucippus, whom he passes over so unaccountably in silence—a fact, the recognition of which would not indeed have unduly diminished the great merit of Democritus, but would have corrected exaggerated notions of his originality and importance.

[2] Cf. Brandis, *Rhein. Mus.* iii. 133 sq.; also Marbach, *Gesch. d. Phil.* i. 87.

[3] Cf. as to Parmenides, Parm. v. 28 (χρεὼ δέ σε πάντα πυθέσθαι, &c.); vs. 33 sqq., 45 sqq. (Vol. I. p. 584, 1); as to Empedocles, *Emp.* v. 24 (424 K; 462 M) sqq., 352 (389 K; 379 M) sqq. (vide *sup.* p. 118, *n.*). If Democritus is to be regarded as a Sophist on the strength of one expression, which, in truth, is not more boastful than the beginning of Herodotus's history, what would Ritter have said supposing, like Empedocles, he had represented himself as a god wandering among mortals?

[4] Vide *sup.* p. 210, 211.

which special motives might have given rise to it; and speaking generally, a man cannot be considered a Sophist because he asserts in a suitable place a thing of which he has in truth every right to be proud.

But the Atomistic philosophy itself, we are told, bears throughout an antiphilosophical character. In the first place, it is alleged,[1] we find in Democritus an undue predominance of Empiricism over speculation,—an unphilosophical variety of learning; this very tendency, secondly, he erects into a theory, for his whole doctrine of knowledge seems intended to annihilate the possibility of true science and to leave nothing but the idle satisfaction of erudition; thirdly, his physical system is wholly deficient in unity and ideality, his law of nature is chance; he acknowledges neither a god nor the incorporeality of the soul, and the result of all this is that, fourthly, departing from the character of Hellenic philosophy, he entirely separates the mythical element from the dialectical; and finally, his ethics evince a low view of life, and a mind given up to egotistic cavilling and mere enjoyment.

Most of these censures have been already refuted in the course of our exposition, or at any rate considerably modified. It may be true that Democritus accumulated much more empirical material than he was able to master with his scientific theory, although he entered more deeply and particularly into the explanation of phenomena than any of his predecessors. But this is the case with most of the ancient philosophers,

[1] Schleiermacher, *Gesch. d. Phil.* 75 sq.; Ritter, p. 597 sq.; 601, 614 sq.; 622–627.

and it must be so with every philosopher who unites comprehensive observation with philosophical speculation. Is Democritus to be blamed because he did not neglect experimental science, and tried to base his theories upon an actual knowledge of things, and thence to explain the particular? Is it not a merit rather than a defect he should have embraced a larger sphere in his enquiry than any other previous philosopher, and in his insatiable thirst for knowledge should have despised nothing, whether small or great? This zeal for collecting materials could only be detrimental to his philosophical character if he had neglected, or explicitly discarded, the intellectual knowledge of things, in order to bask in idle self-sufficiency in the light of his own erudition. But all that we have seen in the foregoing pages has shown how far he was from this; how decidedly he preferred thought to sensible perception, how industriously he laboured to explain natural phenomena from their causes.[1] If, in so doing, he encounters that which in his opinion cannot be derived from any ulterior principle,[2] we may, perhaps, perceive in this a proof of the insufficiency of his theory, but not[3] a Sophistic neglect of the question respecting ultimate causes: and if the difficulty of the scientific problem forces him to complain of the futility of human knowledge,[4] he may well claim to be judged by the same standard as his predecessors, and not to be considered a Sophistical sceptic for sayings which, coming from a Xenophanes, or a Parmenides, an Anaxagoras or a Heracleitus, would gain for these philosophers the reputation of scientific modesty. It is also made a subject of reproach that he recommended moderation even in the pursuit of knowledge, and consequently undertook his enquiries only for his own gratification and not in the interests of truth.[1] But in the first place this is not compatible with the other charge of superfluous learning, and secondly, we can only wonder how so true and innocent a remark could receive such an interpretation. If even however he had said, what in fact he never does say in so many words, that we should strive after science in order to be happy, it would only be to reiterate the assertion, a hundred times repeated, of the most honoured thinkers of all ages; and we should have no right to represent as a base-minded Sophist, a man who with rare devotion gave his life to science, and who, as it is related, would have refused the kingdom of Persia in exchange for a single scientific discovery.[2]

But the scientific theory advanced by Leucippus and Democritus is no doubt unsatisfactory and one-sided. Their system is throughout materialistic: its specific object is to dispense with all Being save corporeal Being, and with every force save that of gravity: Democritus declared himself in express terms against the *νοῦς* of Anaxagoras.[3] But most of the ancient systems are materialistic: neither the Early Ionian School, nor Heracleitus, nor Empedocles recognised any im-

[1] Vide *sup.* 271 sqq.
[2] Vide *supra*, p. 236, 4.
[3] With Ritter, p. 601.
[4] Vide p. 274.

[1] Ritter, 626, on account of *Fr. Mor.* 142: *μὴ πάντα ἐπίστασθαι προθόμεο, μὴ [ἐπὶ τῇ πολυμαθίῃ ἀνιηθῇς*, we should expect, according to Ritter's representation, but what follows is] *πάντων ἀμαθὴς γένῃ.*
[2] Vide *sup.* p. 282, 2.
[3] Diog. ix. 34; cf. 46.

material essence; even the Being of the Eleatics is the Plenum or the body, and it is precisely the Eleatic conception of Being which forms the basis of the Atomistic metaphysics. The Atomists are only distinguished from their predecessors by the greater severity and consistency with which they have carried out the thought of a purely material and mechanical construction of nature; this can scarcely, however, be counted to their disadvantage, since in so doing they merely deduced the consequences required by the whole previous development, and of which the premisses were already contained in the theories of their predecessors. We therefore mistake their historical significance if we separate their system from the previous natural philosophy, with which it is so closely connected, and banish it under the name of Sophistic beyond the limits of true science. It is likewise unjust to maintain, on account of the multiplicity of the atoms, that this system is altogether wanting in unity. Though its principle is deficient in the unity of numbers, it is not without unity of conception; on the contrary, in attempting to explain all things from the fundamental opposite of the Plenum and the Vacuum, without recourse to further presuppositions, it proves itself the result of consistent reflection, striving after unity. Aristotle is therefore justified in praising its logical consistency and the unity of its principles, and giving the preference to it in that respect as compared with the less consistent doctrine of Empedocles.[1] This

[1] Vide on this point what is quoted (p. 215, 1; 219, 2; 239, 1; from *De Gen. et Corr.* i. 8; i. 2; *De An.* i. 2.

would sufficiently disprove the further statement that it sets chance upon the throne of the universe; but we have already seen how far the Atomists were from so doing.[1] All that can truly be said is that they acknowledge no ultimate causes and no intelligence working to an end. Even this peculiarity however they share with most of the ancient systems, neither the principles of the Early Ionians nor the world-creating Necessity of Parmenides and Empedocles can be credited with more intelligence than the Necessity of Democritus; and Aristotle in this respect makes no distinction between the Atomistic philosophy and the other systems.[2] Can the Atomists then be blamed for proceeding in the direction of the contemporary philosophy, and for bringing its tendency to a scientific completion by the discarding of unwarranted suppositions and mythical imagery? And is it just to praise the ancients when they declare the Necessity of Democritus to be mere chance, while the same statement in regard to Empedocles, who in truth gave greater occasion for it, is received with censure?[3]

The atheism of the Atomistic philosophy is merely another expression for the same defect. But this also is found among others of the ancient philosophies, and at any rate it is no proof of a Sophistic mode of thought. That Democritus denied the popular gods can, least of all, be imputed as a fault to him; on the other hand, he held that the belief in gods was no mere

[1] P. 236 sqq.
[2] Vide *Phys.* ii. 4; *Metaph.* i. 3, 984 b, 11. Concerning Empedocles especially, *Phys.* viii. 1, 252 a, 5 sqq.; *Gen. et Corr.* ii. 6, 333 b, 9. 334 a.
[3] Cf. Ritter, p. 605; cf. 534.

delusion, and sought for something real which might have given rise to it: an attempt deserving of all respect, however imperfect may seem to us his solution of the problem. Even this measure of blame, however, must be limited [1] when we perceive that Democritus, in his hypothesis of the εἴδωλα, only does in his way what so many others have done since his time: namely that he explains the popular gods as dæmons, and in this adheres as logically as possible to the presuppositions of his system. Moreover, if he has purified his exposition from all mythological ingredients, this is not, as Schleiermacher asserts, a fault but a merit which he shares with Anaxagoras and Aristotle. The fact that even a purer idea of God is wanting in the Atomistic system is a graver matter. But this want is not peculiar to Sophistic; the ancient Ionian physics could only logically speak of gods in the same sense as Democritus; Parmenides only mentions the Deity mythically; Empedocles speaks of him (irrespectively of the many dæmon-like gods which are in the same category as those of Democritus) merely from want of consistency. With Anaxagoras first, philosophy attained to the discrimination of spirit from matter; but before this step had been taken the idea of Deity could find no place in the philosophic system as such. If, therefore, we understand by the Deity the incorporeal spirit, or the creative power apart from matter, the whole of the ancient philosophy is atheistical in principle; and if it has in part, notwithstanding, retained a religious tinge, this is either an inconsistency, or it may be due to the form of

[1] Vide *sup.* p. 291.

the exposition, or perhaps is the result of personal faith, and not of philosophic conviction; in all these cases, however, the best philosophers are those who prefer to set aside the religious presentation rather than adopt it without philosophical warrant.

The ethics of Democritus are not indeed so closely connected with the Atomistic system as to furnish any criterion of that system. Nevertheless Ritter brings forward some unreasonable objections to them. In their form they are certainly eudæmonistic, inasmuch as pleasure and aversion are made the standard of human actions. But in all the ancient system, happiness stands at the apex of Ethics, as the highest end of life; even Plato is scarcely an exception; and if happiness is conceived by Democritus in a one-sided manner as pleasure, this merely proves a defective scientific basis in his ethical doctrine, and not a self-indulgent disposition.[1] The principles of Democritus themselves are pure and worthy of respect; and Ritter's objections to them come to very little. It is said that he was not strict about truth, but the maxim from which this is supposed to be taken, asserts something entirely different.[2] Also he is blamed for depriving the love of country of its moral value, and for finding nothing moral in the conjugal and parental relation: our previous discussion, however, will show that this censure is in part wholly

[1] Even Socrates, as a rule, founds moral activities on a merely eudæmonistic basis.

[2] It is in *Fr. Mor.* 125: ἀληθομυθέειν χρεὼν ὅπου λώϊον; but this, it is clear, only means that it is often better to keep silence than to speak; the same thing that is thus expressed in *Fr.* 124: οἰκήϊον ἐλευθερίης παῤῥησίη· κίνδυνος δὲ ἡ τοῦ καιροῦ. Moreover, even Socrates and Plato, as everyone knows, maintain that under certain circumstances a lie is allowable.

unfounded, and in part greatly exaggerated, and that it might be with equal truth applied to many who are never reckoned among the Sophists.[1] Lastly, with regard to his wish that he might meet with favourable εἴδωλα, Ritter observes with all the force of a prejudice: 'An entire surrender of life to accidental occurrences is the end of his teaching.'[2] Such a wish may indeed sound somewhat strange to us, but in itself, and regarded from the Atomistic standpoint, it is as natural as the desire for pleasant dreams or fine weather; how little Democritus makes inward happiness dependent on chance, we have already shown.[3]

But the whole comparison of the Atomistic philosophy with Sophistic doctrines is based upon a view of those doctrines that is much too indefinite. Sophistry is here supposed to be that mode of thought which misses the true and scientific attitude of mind. This, however, is not the nature of Sophistic teaching as seen in history, which rather consists in the withdrawal of thought from objective enquiry, and its restriction to a one-sided reflection, indifferent to scientific truth; in the statement that man is the measure of all things, that all our presentations are merely subjective phenomena, and all moral ideas and principles are merely arbitrary ordinances. Of all these characteristics we find nothing in the Atomists,[4] who were accordingly

[1] Not to mention what has been already quoted of other philosophers, we find the same cosmopolitanism ascribed to Anaxagoras as to Democritus.

[2] Ritter, i. 627.

[3] Vide p. 238, 1; 278. 3; 280, 1.

[4] Braniss says (p. 135) in proof of the similarity between the Atomistic doctrine and that of the Sophists, 'that it regarded spirit, as opposed to the objective in space, as merely subjective,' but this is not accurate. The Atomistic system, in

never reckoned as Sophists by any ancient writer. They are natural philosophers, who are commended[1] and regarded with preference by Aristotle for their logical consistency;[2] and it is precisely in the strictness and exclusiveness of a purely physical and mechanical explanation of nature that the strength and weakness of their system lies. We have, therefore, no ground at all for separating the Atomistic philosophy from the other physical systems; and we can rightly define its historical position only by assigning it to its true place among these.

What that place is, has already been generally indicated. The Atomistic doctrine is, like the physics of Empedocles, an attempt to explain the multiplicity and change of all things, on the basis of Parmenides' proposition concerning the impossibility of Becoming and Decay—to escape the conclusions of Parmenides' system without questioning those first principles—to save the relative truth of experience as against Parmenides, while

common with other physical systems, has among its objective principles no spirit separate from matter; but we have no right to turn this negative proposition into a positive one, and say that they place spirit exclusively in the subject; for they recognise an immaterial principle as little in the subject as out of it. Braniss, p. 143, justifies his statement with the remark that the Atomistic philosophy opposes to inanimate nature only the subject with its joy in the explanation of nature, as spirit; in place of truth it introduces the subjective striving after truth (after *truth*, the real knowledge of things); while apparently taking interest in things, subjective thought is only concerned with itself, its own explanations and hypotheses, but supposes it will attain in these objective truth, &c. Part of this might be asserted of any materialistic system, and the rest is refuted by what has just been said against Ritter. 1.

[1] Vide p. 306, 1.

[2] Of all the pre-Socratic philosophers, none is more frequently quoted in the physical writings of Aristotle than Democritus, because his enquiries entered most particularly into details.

its absolute truth is renounced—to mediate between the Eleatic point of view and that of ordinary opinion.[1] Of all the earlier doctrines, therefore, it is most closely allied with that of Parmenides—allied, however, in a double manner: directly, inasmuch as it adopts part of his propositions; indirectly, inasmuch as it contradicts another part, and opposes thereto its own definitions. From Parmenides it borrows the conception of Being and non-Being, of the plenum and vacuum, the denial of generation and decay, the indivisibility, qualitative simpleness, and unchangeableness of Being; with Parmenides, it teaches that the cause of multiplicity and motion can lie only in non-Being; like him it discards the perception of sense, and seeks for all truth in the reflective contemplation of things. In opposition to Parmenides it maintains the plurality of Being, the reality of motion and quantitative change, and, in consequence, that which most clearly expresses the opposition of the two points of view, the reality of non-Being or the Void. In the physical theories of the Atomists, we are reminded of Parmenides by several particulars,[2] and especially by the derivation of the soul's activity from warm matter; but on the whole the nature of the subject was such that the influence of the Eleatic doctrine could not be very considerable in this direction.

With Melissus also, as well as Parmenides, the Atomistic philosophy seems to have had a direct historical connection. But if there is no doubt that Leucippus is indebted to Melissus, Melissus, on the other hand, seems to have bestowed some attention on the doctrine of Leucippus. For example, if we compare the arguments of Melissus with those of Parmenides and Zeno, it is surprising to find that in the former the conception of the Void plays a part which it does not in the latter; that not only the unity of Being, but likewise the impossibility of motion, is proved by means of the unthinkableness of the Void; and the theory of divided bodies which only enter into connection through contact is expressly controverted.[1] This theory is found in none of the physical systems except that of the Atomists,[2] who alone attempted to explain motion by means of empty space. Are we then to suppose that Melissus, to whom no especial intellectual acuteness is ever ascribed, himself originated and introduced into its proper place this conception which was so important for the subsequent Physics, and that the Atomists first borrowed from him what was one of the corner-stones of their system; or is not the opposite supposition far more probable, viz., that the Samian philosopher, who in general was more closely allied with the doctrines of the contemporary natural philosophy, so carefully studied that conception, only because its importance had been proved by a physical theory which derived the motion and multiplicity of all things from the Void?[3]

[1] Vide *supra*, p. 210 sqq., cf. p. 229 sq.

[2] e.g. the conception of the universe, which, according to the second portion of Parmenides' poem, is surrounded by a fixed sheath; the genesis of living creatures from slime, the statement that a corpse retains a certain kind of sensation.

[1] Vide *supra*, Vol. I. p. 632, 2; 635 sq.

[2] Vide p. 228, 4; 229, 1.

[3] Arist. *Gen. et Corr.* i. 8 (vide *supra*, 215, 1, Vol. I. 632, 2) cannot be brought forward against this. Aristotle here certainly represents the Eleatic doctrine, from which

Whether in their polemic against the Eleatics, the Atomists were at all under the influence of the Heracleitean system cannot be stated with certainty. In regard to Democritus, it is in itself probable, and is confirmed by his ethical fragments, that the treatise of Heracleitus was not unknown to him; for not merely do particular sayings of his agree with Heracleitus, but his whole theory of life closely resembles that of the Ephesian philosopher.[1] Both seek true happiness not in externals, but in the goods of the soul; both declare a contented disposition to be the highest good; both recognise as the only means to this peace of mind, the limitation of our desires, temperance, prudence, and subordination to the course of the universe; both are much alike in their political views.[2] That Leucippus, on the other hand, was acquainted with the Heracleitean doctrine, and made use of it, cannot be so distinctly maintained; but all the theories of the Atomists which brought them into collision with Parmenides, lie in the direction which Heracleitus inaugurated. If the Atomistic system insisted on the reality of motion and of divided Being, it was Heracleitus who maintained,

he passes to Leucippus, primarily according to Melissus, but as his chief concern is to show the relation between the Eleatic and Atomistic systems, without any special reference to the particular philosophers of the two schools, we ought not to conclude from this that he regarded Leucippus as dependent on Melissus.

[1] Such as the statements about encyclopædic learning, *sup.* p. 277, 1, compared with what is quoted from Heracleitus, Vol. I. 510, 4; 336, 5, the proposition that the soul is the dwelling place of the dæmon, p. 278, 3, cf. 98, 5; the theory that all human art arose from the imitation of nature, p. 277, 2, cf. 92, 2; the utterance quoted p. 10, 2, in reference to which Lortzing, p. 19, cites Ps.-Galen, *ὅρ. ἰατρ.* 439, xix. 449 K, where these words are ascribed to Democritus: *ἄνθρωποι εἷς ἔσται καὶ ἄνθρωπος πάντες.*

[2] Vide p. 97 sq., 277 sq.

more decidedly than any other philosopher, that the Real is constantly changing and sundering into opposites; if the Atomists derive all things from Being and non-Being, and believe all motion to be conditioned by this opposition, Heracleitus had previously said that strife is the father of all things, that every motion presupposes an opposite, and that everything is, and equally is not, that which it is. Being and non-Being are the two moments of the Heracleitean Becoming, and the principle of the Atomists that non-Being is as real as Being, might without difficulty be derived from the theories of Heracleitus on the flux of all things, if for absolute Becoming, relative Becoming—Becoming from an unchangeable primitive matter—were substituted in deference to the Eleatics. The Atomists, further, are in accord with Heracleitus in their recognition of an unbroken interdependence of nature, in which, despite their materialism, they acknowledge a rational conformity to law.[1] Like him, they hold that individual worlds arise and perish, while the whole of the original matter is eternal and imperishable. Lastly, the cause of life and consciousness is sought by Democritus in the warm atoms which are diffused throughout the universe, as well as the bodies of living creatures;[2] and this theory, in spite of all divergences as to details, greatly resembles the doctrine of Heracleitus concerning the soul and the universal reason; while the phenomena of life, sleep, and death, are explained in both systems in a similar manner. All these traits make it probable

[1] Vide *supra*, p. 236 sqq.; cf. 39 sq.

[2] Cf. 256 sq.; 262 sq.; cf. 79 sq.

that the Atomistic philosophy was influenced in its beginning, not only by the doctrines of the Eleatics, but of Heracleitus: if even, however, it arose independently of the latter, at any rate the thought of change and Becoming, of multiplicity and of divided Being, is so predominant in it, that it must, from the state of the case, be regarded as a union of the Heracleitean standpoint with the Eleatic, or, more accurately, as an attempt to explain the Becoming and plurality of derived things on the hypothesis of the Eleatic fundamental doctrines, from the nature of the primitive Being.[1]

The Atomistic system, therefore, proposes to itself essentially the same problem as that proposed by the system of Empedocles. Both start from the interest of natural science, to explain the generation and decay, the plurality and change of things. But both concede to the Eleatics that the primitive Reality can neither decay nor alter in its nature or constitution. Both, therefore, adopt the expedient of reducing Becoming and Change to the combination and separation of unchangeable substances, and since this is only possible, and the multiplicity of phenomena is only explicable,

[1] Wirth seems to me less accurate when (vide *supra*, p. 294, 2) he co-ordinates the Atomists and Heracleitus with this observation: 'In the Eleatic doctrine there lies a double antithesis, against Becoming and against plurality; the former conception, that of Becoming, was taken from Heracleitus, the latter, that of plurality, from the Atomists. For on the one hand, as Aristotle perceives (vide *supra*, p. 210 sqq.), the Atomists are as much concerned in the vindication of Becoming and Change as of plurality; on the other, their method is essentially distinct from that of Heracleitus in that they return to the Eleatic conception of Being, and expressly recognising this conception, attempt to explain phenomena; whereas Heracleitus not only does not recognise the conception, but in fact most decidedly annuls it.' Moreover, there is a chronological interval of some decades between them.

if these unchangeable substances are many, both separate the one primitive matter of the earlier philosophers into a plurality—Empedocles into four elements, the Atomists into innumerable atoms. Both systems, therefore, bear the stamp of a purely mechanical explanation of nature; both recognise only material elements, and only a combination of these elements in space; even in the particulars of their theories as to the way in which the substances combine and influence one another, they are so very similar that we need only develop the conceptions of Empedocles more logically to arrive at Atomistic definitions.[1] Lastly, both dispute the truth of the sense-perception, because it does not show us the unchangeable first principles of things, and deludes us with an actual Becoming and Decay. What distinguishes the two theories from each other, is merely the severity with which the Atomistic philosophy, discarding all other presuppositions, develops the thought of mechanical physics. While Empedocles unites with his physical theory mythical and religious notions, we here encounter only a dry naturalism; while he sets up as moving forces the mythical forms of Love and Hate, movement is explained by the Atomists in a purely physical manner as the effect of weight in the Void; while he attributes to the primitive substances a qualitative determinateness from the beginning, the Atomists, maintaining more strictly the conception of Being, reduce all qualitative differences to quantitative differences of form and mass; while he limits the elements according to number, but makes them infinitely divi-

[1] Vide *supra*, p. 134.

sible, the Atomists more logically go back to indivisible primitive bodies, which, in order to explain the plurality of things, are conceived as infinite in number and infinitely various in form and size; while he makes the union and separation of matter alternate periodically, the Atomists find the perpetual union and separation of the atoms based on their eternal motion. Both systems, therefore, follow the same tendency, but this tendency is more simply and logically developed in that of the Atomists, which so far occupies a higher place scientifically than the system of Empedocles. Yet neither bears in its main features such decided traces of dependence on the other that we should be justified in ascribing the doctrine of Empedocles to Atomistic influences; the two systems seem rather to have been developed simultaneously from the same presuppositions. Only when the Atomistic philosophy goes more into detail, as in the doctrine of emanations and *εἴδωλα*, in the explanation of the perceptions of the senses, and the theories on the origin of living creatures, does an express obligation to Empedocles become probable, the more so as he was much reverenced by the later adherents of the Atomistic school.[1] But this further development of the Atomistic doctrine is apparently the work of Democritus, in regard to whom there can be no doubt that he was acquainted with the opinions of his famous Agrigentine predecessor.

No influence of the ancient Ionic School can be traced in the Atomistic system; a knowledge of the Pythagorean doctrine is indeed ascribed to Democritus,[2]

[1] Vide the quotation from Lucretius, p. 185, 1. [2] Vide p. 210.

but whether it was already possessed by Leucippus we do not know. If this were in truth the case, the mathematical and mechanical character of the Atomistic doctrine might have some connection with the Pythagorean mathematics, and in proof of the similarity of the two systems, we might refer to the Pythagorean Atomistic doctrine of Ecphantus,[1] and to the remark of Aristotle,[2] in which he compares the derivation of composite things from atoms with the Pythagorean derivation of things from numbers. In respect to Ecphantus, however, we might more easily suppose that his theory had been influenced by the Atomists. Aristotle's comparison of the two doctrines proves nothing as to any real connection between them; we must, therefore, leave the question undecided, whether or not the founder of the Atomistic doctrine received any scientific impulse from the Pythagoreans.

Lastly there remains the enquiry concerning the relation of the Atomists to Anaxagoras; but as this can only be pursued after we have acquainted ourselves with the opinions of that philosopher, it must be postponed to a future chapter.

As to the history and adherents of the Atomistic philosophy after Democritus, tradition tells us little. Of Nessus, or Nessas,[3] the disciple of Democritus, we know nothing but his name. A disciple of this Nessus, or perhaps of Democritus himself, was Metrodorus of

[1] Vide Vol. I. p. 527.

[2] *De Cœlo*, iii. after the words quoted p. 216, 3: *τρόπον γάρ τινα καὶ οὗτοι πάντα τὰ ὄντα ποιοῦσιν ἀριθμοὺς καὶ ἐξ ἀριθμῶν· καὶ γὰρ εἰ μὴ σαφῶς δηλοῦσιν, ὅμως τοῦτο βούλονται λέγειν.*

[3] Diog. ix. 58; Aristocl. vide following note.

Chius,[1] who seems to have been one of the most important of these later Atomists.

While agreeing with Democritus in his fundamental doctrines, concerning the plenum and vacuum,[2] the atoms,[3] the infinity of matter and of space,[4] the plurality of worlds,[5] and also resembling him in many particulars

[1] Diogenes, *l. c.* mentions both statements, Clem. *Strom.* i. 301 D, and Aristocl. ap. Eus. *Pr. Ev.* xiv. 19, 5, mention Protagoras and Metrodorus; Suidas, Δημόκρ. cf. Πύῤῥων the latter, Democritus's disciple; Aristocles ap. Eus. *Pr. Ev.* xiv. 7, 8, says on the contrary that Democritus was the instructor of Protagoras and Nessas, and that Metrodorus was the disciple of Nessas. The name of Metrodorus's father, according to Stobæus, *Ecl.* i. 304, was Theocritus. Ὁ Χῖος is the usual appellation of this Metrodorus to distinguish him from other philosophers of the same name, especially the two from Lampsacus, of whom the elder was a disciple of Anaxagoras, and the younger of Epicurus. But he is nevertheless sometimes confounded with them; for instance, in Simpl. *Phys.* 257 b, where it can only be through an oversight that the Metrodorus to whom in common with Anaxagoras and Archelaus is attributed the theory of the creation of the world by νοῦς is designated as the Chian. The statements of the *Placita* (except ii. 1, 3, where 'Metrodorus the disciple of Epicurus' is mentioned), of the Eclogæ of Stobæus, and of the pseudo-Galen concerning Metrodorus, relate to the Chian, those in Stobæus' Florilegium to the Epicurean.

[2] Simpl. *Phys.* 7 a (according to Theophrastus): καὶ Μητρόδωρος δὲ ὁ Χῖος ἀρχὰς σχεδὸν τὰς αὐτὰς τοῖς περὶ Δημόκριτον ποιεῖ τὸ πλῆρες καὶ τὸ κενὸν τὰς πρώτας αἰτίας ὑποθέμενος, ὧν τὸ μὲν ὂν τὸ δὲ μὴ ὂν εἶναι, περὶ δὲ τῶν ἄλλων ἰδίαν τινὰ ποιεῖται τὴν μέθοδον. So also Aristocl. ap. Eus. *Pr. Ev.* xiv. 19, 5: Metr. is said to have been instructed by Democritus, ἀρχὰς δὲ ἀποφήνασθαι τὸ πλῆρες καὶ τὸ κενόν· ὧν τὸ μὲν ὂν τὸ δὲ μὴ ὂν εἶναι.

[3] Stob. *Ecl.* i. 304; Theod. *Cur. Gr. Affect.* iv. 9, p. 57, according to whom he called the atoms ἀδιαίρετα. On the void, in particular, cf. Simpl. *l. c.* p. 152, a.

[4] Plut. *Plac.* i. 18, 3; Stob. *Ecl.* i. 380; Simpl. *l. c.* 35 a, cf. following note.

[5] Stob. i. 496 (Plut. *Plac.* i. 5, 5; Galen c. 7, p. 249 K): Μητρόδωρος . . . φησὶν ἄτοπον εἶναι ἐν μεγάλῳ πεδίῳ ἕνα στάχυν γεννηθῆναι καὶ ἕνα κόσμον ἐν τῷ ἀπείρῳ. ὅτι δὲ ἄπειροι κατὰ τὸ πλῆθος, δῆλον ἐκ τοῦ ἄπειρα τὰ αἴτια εἶναι. εἰ γὰρ ὁ κόσμος πεπερασμένος, τὰ δ' αἴτια πάντα ἄπειρα, ἐξ ὧν ὅδε ὁ κόσμος γέγονεν, ἀνάγκη ἀπείρους εἶναι. ὅπου γὰρ τὰ αἴτια πάντα, ἐκεῖ καὶ τὰ ἀποτελέσματα. αἴτια δὲ (adds the narrator) ἤτοι αἱ ἄτομοι ἢ τὰ στοιχεῖα. There is again mention of the All in the singular, when Plutarch ap. Eus. *Pr. Ev.* i. p. 12 says: Μητρόδ. ὁ Χῖος ἀΐδιον εἶναί φησι τὸ πᾶν, ὅτι εἰ ἦν γεννητὸν ἐκ τοῦ μὴ ὄντος ἂν ἦν, ἄπειρον δέ, ὅτι ἀΐδιον, οὐ γὰρ ὅθεν ἤρξατο, οὐδὲ πέρας οὐδὲ

of his explanation of nature,[1] he was separated from him as a physicist by many opinions peculiar to himself;[2] and as a philosopher, by the sceptical inferences

τελευτήν· ἀλλ' οὐδὲ κινήσεως μετέχειν τὸ πᾶν· κινεῖσθαι γὰρ ἀδύνατον, μὴ μεθιστάμενον, μεθίστασθαι δὲ ἀναγκαῖον ἤτοι εἰς πλῆρες ἢ εἰς κενόν (but this would seem to be impossible, since in the πᾶν, the totality of things, all the void and all the full are contained). Even here there is no contradiction to the atomistic standpoint, for the atoms and the void are eternal, and if within the infinite mass of atoms motion has never begun and never ceases, yet this mass as a whole (and only as such is it spoken of) because of its infinity can never be moved. Metrodorus could perfectly, therefore, in regard to it, adopt the doctrine of Melissus on the eternity, unlimitedness, and immobility of Being (that he did so is proved by the comparison in Vol. I. 553 sqq.; even the false deduction of the unlimitedness of the world from its eternity reappears here), and we may disregard the conjecture that Eusebius in his excerpt has mixed up two accounts, one relating to Melissus and one to Metrodorus. On the other hand, there is between the words quoted above, and the words which directly follow them, a lacuna which no doubt is the fault, not of Plutarch, but of the compiler of the Eusebian extracts.

[1] Thus he agreed with Democritus (vide *supra*, p. 252, 2) that not only the moon and the other planets, but also the fixed stars receive their light from the sun (Plut. *Plac.* ii. 17, 1; Stob. *Ecl.* i. 518, 558; Galen, *H. Ph.* c. 13, p. 273 K); the milky way, unlike Democritus, he explained as the ἡλιακὸς κύκλος, probably meaning that it was a circle of light left behind by the sun on his way through the heavens (*Plac.* iii. 1, 5; Stob. 574; Gal. c. 17, p. 285). Like Anaxagoras and Democritus he called the sun a μύδρος ἢ πέτρος διάπυρος (*Plac.* ii. 20, 5; Gal. 14, p. 275; less precisely, Stob. 524, πύρινον ὑπάρχειν). Also his explanation of earthquakes (Sen. *Nat. Qu.* vi. 19) as caused by the penetration of the external air into the hollow spaces within the earth, must have been suggested to him by Democritus, who however ascribed that phenomenon even more to the action of water than to currents of air (*sup.* p. 253, 1). No doubt there were many other theories in which he agreed with Democritus, but which have not been handed down to us, because the compilers chiefly quote from each philosopher those opinions by which he was distinguished from others.

[2] Especially his theories about the formation of the world seem to have been very distinctive. He is said (*Plac.* iii. 9, 5) to have regarded the earth as a precipitate from the water, and the sun as a precipitate from the air; this is, indeed, but a modification of the conceptions of Democritus, and with it agrees what is quoted, p. 247, 4. On the other hand, the statement of Plutarch is much more remarkable (ap. Eus. i. 8, 12): πυκνούμενον δὲ τὸν αἰθέρα ποιεῖν νεφέλας, εἶτα ὕδωρ, ὃ καὶ κατιὸν ἐπὶ τὸν ἥλιον σβεννύναι αὐτὸν, καὶ πάλιν ἀραιούμενον ἐξάπτεσθαι· χρόνῳ δὲ

which he drew from the doctrine of Democritus. For example, he not only questioned the truth of the sense-perception,[1] but declared that we could know nothing, not even *whether* we know something or nothing.[2] Yet he cannot have intended in these propositions to abolish on principle all possibility of knowledge, as in that case he would neither have professed the chief doctrines of the Atomistic system, nor would he have occupied himself so closely with physical enquiries; they must, therefore, be regarded merely as an exaggerated expression of his mistrust of the senses, and of his judgments concerning the actual state of human knowledge. The truth of thought he does not seem to have disputed.[1]

Anaxarchus of Abdera,[2] the companion of Alexander,[3] celebrated for his heroism under a torturing death,[4] is said to have been taught by Metrodorus,[5] or by his disciple, Diogenes. He too was reckoned among the precursors of Scepticism;[6] but the only thing that can

πήγνυσθαι τῷ ξηρῷ τὸν ἥλιον καὶ ποιεῖν ἐκ τοῦ λαμπροῦ ὕδατος ἀστέρας, νύκτα τε καὶ ἡμέραν ἐκ τῆς σβέσεως καὶ ἐξάψεως καὶ καθόλου τὰς ἐκλείψεις ἀποτελεῖν. The words sound as if Metrodorus had supposed the stars to be generated each day afresh through the influence of the sun on the atmospheric water; but even if this portion of his cosmogony has been misrepresented, and he in reality only accounted in this way for the *first* production of the stars, it would still be a considerable divergence from Democritus. What is further said of the daily extinction and rekindling of the sun has more similarity with the theory of Heracleitus than of Democritus. Like Anaxagoras, Metrodorus is said to have regarded the stars as wheel-shaped (Stob. 510), and like him also to have assigned the highest place in the universe to the sun, the next highest to the moon; after them came the fixed stars and planets (*Plac.* ii. 15, 6; Gal. c. 13, p. 272). According to *Plac.* iii. 15, 6, he explains the fact of the earth's remaining in its place in the following manner: μηδὲν ἐν τῷ οἰκείῳ τόπῳ σῶμα κινεῖσθαι, εἰ μή τις προώσειε ἢ καθελκύσειε κατ' ἐνέργειαν· διὸ μηδὲ τὴν γῆν, ἅτε κειμένην φυσικῶς, κινεῖσθαι; the same view which is brought forward by Plato and Aristotle against the Atomistic hypotheses about weight. Cf. further his theories on the Dioscuri (*Pl.* ii. 18, 2); on shooting stars (*Plac.* iii. 2, 11; Stob. i. 580); thunder, lightning, hot blasts (*Pl.* iii. 3, 2; Stob. i. 590 sq.); clouds (Plut. ap. Eus. *l. c.*; on the other hand, *Plac.* iii. 4, 2; Stob. *Floril.* ed. Mein. iv. 151, contain nothing of importance); the rainbow (*Plac.* iii. 5, 12); the winds (*Plac.* iii. 7, 3); the sea (*Plac.* iii. 16, 5); and the quotations in the previous note.

[1] Ap. Joh. Damasc. *Parall. S.* ii. 25, 23; Stob. *Floril.* ed. Mein. iv. 2, 34. The proposition, ψευδεῖς εἶναι τὰς αἰσθήσεις, is ascribed to Metrodorus, as well as to Democritus, Protagoras, and others. Similarly Epiph. *l. c.*: οὐδὲ ταῖς αἰσθήσεσι δεῖ προσέχειν, δοκήσει γὰρ ἐστὶ τὰ πάντα.

[2] Aristocl. ap. Eus. *Pr. Ev.* xiv. 19, 5. At the opening of a treatise περὶ φύσεως, Metrodorus said: οὐδεὶς ἡμῶν οὐδὲν οἶδεν, οὐδ' αὐτὸ τοῦτο πότερον οἴδαμεν ἢ οὐκ οἴδαμεν. The same thing is quoted in Sext. *Math.* vii. 88; cf. 48; Diog. ix. 58; Epiph. *Exp. Fid.* 1088 A; Cic. *Acad.* ii. 23, 73; the last asserts that it stood *initio libri qui est de natura.*

[1] Aristocles, *l. c.*, cites from him the statement: ὅτι πάντα ἐστὶν, ὃ ἄν τις νοήσαι. This may be taken to signify, 'all is for each man what he thinks of it' (cf. Euthydem. *inf.*); but the meaning may also be 'the all is that which we can *think* included in it;' so that it expresses the worth of thought as contrasted with perception. Similarly Empedocles (vide *sup.* 169, 5) opposes νοεῖν to the senses. On this subject, cf. p. 225, 3.

[2] He is described as an inhabitant of Abdera, Diog. ix. 58; Galen. *H. Phil.* c. 3, p. 234 K, and c. 2, p. 228, where instead of ''Αναξαγόρας,' ''Ανάξαρχος' is to be read, as even Diels now admits.

[3] So Diog. ix. 58. More definitely Clem. *Strom.* i. 301 D; and Aristocles, ap. Eus. xiv. 17, 8, name Diogenes as the teacher of Anaxarchus. The native city of this Diogenes was Smyrna; but, according to Epiph. *Exp. Fid.* 1088 A, Cyrene was also mentioned. Epiphanius, on whom, however, we cannot certainly rely, says that his philosophical standpoint was the same as that of Protagoras.

[4] Concerning him, Luzac, *Lectiones Atticæ*, 181–193.

[5] He had fallen into the hands of his enemy, the Cyprian prince Nicocreon, and was by his command pounded in a mortar; unconquered, he called out to the tyrant: πτίσσε τὸν 'Αναξάρχου θύλακον, 'Ανάξαρχον οὐ πτίσσεις. The circumstance is commonly narrated with various minor details; cf. Diog. *l. c.*; Plut. *Virt. Mor.* 10, p. 449; Clem. *Strom.* iv. 496 D; Valer. Max. iii. 3, ext. 4; Plin. *H. Nat.* vii. 23, 87; Tertull. *Apologet.* 50; Ps. Dio Chrys. *Or.* 37, p. 126 R (ii. 306 Dind.). Wiedemann, in the *Philologus*, xxx. 3, 249, 33, refers to other testimonies.

[6] Ps. Galen. *H. Phil.* 3, p. 234 K, reckons him among the sceptics, and Sext. *Math.* vii. 48, includes him, with Metrodorus, among those who admitted no criterion of truth. Also in p. 87 sq. he says: Many think this of Metrodorus, Anaxarchus and Monimus; of Metrodorus, because of the remark quoted above; of Anaxarchus and Monimus: ὅτι σκηνογραφίᾳ ἀπείκασαν τὰ ὄντα, τοῖς δὲ κατὰ ὕπνους ἢ μανίαν προσπίπτουσι ταῦτα ὡμοιῶσθαι ὑπέλαβον.

be quoted as evidence of this is a contemptuous expression about the doings and opinions of men, which does not assert more than we constantly find apart from all connection with any sceptical theory. Other accounts represent him as an adherent of the Democritean theory of nature.[1] He may also be connected with Democritus when he declares happiness to be the highest end of our efforts.[2] On the other hand, he diverges from him in his more precise conception of the practical problems of life, with which his philosophy was mainly concerned, in two directions. On the one side he approaches Cynicism;[3] he praises Pyrrho's indifference;[4] he confronts external pain with that contemptuous pride which appears in his famous utterance while he was being pounded in Nicocreon's mortar; he

[1] Ap. Plut. *Tranqu. An.* 4, p. 466; Valer. Max. viii. 14, ext. 2, he is represented as bringing before Alexander the doctrine of the infinity of worlds, which would be as inappropriate to a sceptic as the language agreeing with the utterances of Democritus (*sup.* 277, 1), quoted in Clem. *Strom.* i. 287 A; Stob. 34, 19 on *πολυμαθίη*, which, though useful to the wise man, is declared to be very injurious to the person who chatters about everything without distinction; a statement which Bernays, *Rh. Mus.* xxiii. 375, also proves to have come from the mechanist Athenæus (vide Wescher's *Poliorcétique des Grecs*, § 4, 202).

[2] It is to this statement, and not to his *ἀπάθεια καὶ εὐκολία τοῦ βίου* (as Diog. ix. 60, asserts), that he owes his appellation *ὁ Εὐδαιμονικὸς* (Diog. and Clem. *l. c.*; Sext. vii. 48; Athen. vi. 250 sq.; Ælian *V. H.* ix. 37). Cf. Galen, *H. Phil.* 3, 230; a philosophic sect might be called *ἐκ τέλους καὶ δόγματος, ὥσπερ ἡ εὐδοιμονική. ὁ γὰρ Ἀνάξαρχος τέλος τῆς κατ' αὐτὸν εὐαγωγῆς* (1. *ἀγωγ.*) *τὴν εὐδαιμονίαν ἔλεγεν*, Diog. *Proœm.* 17. Many of the philosophers are named *ἀπὸ διαθέσεων, ὡς οἱ* Εὐδαιμονικοί, Clearchus ap. Athen. xii. 548 b: *τῶν Εὐδαιμονικῶν καλουμένων Ἀναξάρχῳ.*

[3] Thus Timon speaks, ap. Plut. *Virt. Mor.* 6, p. 446, of his *θαρσαλέον τε καὶ ἐμμανὲς*, his *κύνεον μένος*, and Plut. *Alex.* 52, calls him *ἰδίαν τινὰ πορευόμενος ἐξ ἀρχῆς ὁδὸν ἐν φιλοσοφίᾳ καὶ δόξαν εἰληφὼς ὑπεροψίας καὶ ὀλιγωρίας τῶν συνήθων.*

[4] Diog. ix. 63. Once when Anaxarchus had fallen into a bog, Pyrrho passed by without troubling himself about him, but was praised by Anaxarchus for his *ἀδιάφορον καὶ ἄστοργον.*

takes many liberties with the Macedonian conqueror,[1] corrupting him at the same time with flatteries, couched in the language of honesty.[2] On the other side, in his personal conduct he contradicts his principles by an effeminacy and self-indulgence for which he is censured in many different quarters.[3] Anaxarchus was the instructor of Pyrrho the Sceptic.[4] Nausiphanes also seems to have been indirectly connected with Metrodorus, at least he is described as a follower of Pyrrho's scepticism, and at the same time as the teacher of Epicurus;[5] we

[1] Cf. the anecdotes, ap. Diog. ix. 60. Diogenes himself calls attention to the different account in Plutarch, Plut. *Qu. Conv.* ix. 1, 2, 5; Æl. *V. H.* ix. 37; Athen. vi. 250 sq. (according to Satyrus); even the last seems to me to contain not flattery but irony, as is presupposed by Alexander's answer.

[2] I know not how otherwise to regard his behaviour after the murder of Clitus (Plut. *Alex.* 52, *ad princ. iner.* 4, 1, p. 781; Arrian, *Exp. Alex.* iv. 9, 9), on which Plutarch observes, that through it he made himself greatly beloved, but exercised the worst influence over the king: and I see no reason to mistrust the narrative of Plutarch. On the other hand, it may be true that it was not Anaxarchus, as Arrian says, *l. c.* 9, 14. 10, 7, prefacing his statements with *λόγος κατέχει*, but Cleon. (so Curt. *De Reb. Alex.* viii. 17, 8 sqq.), who recommended to the Macedonians the adoration of Alexander. That Alexander valued *τὸν μὲν ἁμωνικὸν* (*l. τὸν εὐδαιμονικὸν*) *Ἀνάξαρχον*, Plutarch likewise observes, Plut. *Alex. Virt.* 10, p. 331.

[3] Clearchus ap. *Athen.* xii. 548 b, reproaches him with love of pleasure, and proves it by many examples. Ap. Plut. *Alex.* 52, Callisthenes says to him, when the question was under discussion whether it were warmer in Persia or in Greece, *he* must, doubtless, have found it colder in Persia since in Greece he had exchanged his cloak for three coverings; but even Timon says, ap. Plut. *Virt. Mor.* 6, p. 446: his *φύσις ἡδονοπλὴξ* drew him aside against his better knowledge. To see in all this, as Luzac does, only a peripatetic calumny the final motive of which lies in the enmity between Callisthenes and Anaxarchus, seems to me hazardous, though I attach no undue importance to the assertion of Clearchus.

[4] Diog. ix. 61, 63, 67; Aristocl. ap. Eus. *l. c.* and 18, 20.

[5] Diog. *Proœm.* 15, where together with him a certain Nausicydes, otherwise unknown, is introduced as a disciple of Democritus and an instructor of Epicurus, x. 7 sq. 14; ix. 64, 69; Suid. *Ἐπίκ.*; Cic. *N. D.* i. 26, 73. 33, 93; Sext. *Math.* i. 2 sq.; Clemens, *Strom.* i. 301 D. According to Clem. *Strom.* ii. 417 A, he declared *ἀκαταπληξία* to be the highest

may, therefore, suppose that, like Metrodorus, he combined an Atomistic theory of physics with a sceptical view of human knowledge.[1] In general, among the successors of Democritus, the Atomistic philosophy seems to have followed the sceptical tendencies which might so easily be deduced from its physical presuppositions, though it did not itself abandon these presuppositions; while previously and contemporaneously, a similar modification of the Heracleitean physics was undertaken by Cratylus and Protagoras, and of the Eleatic doctrine by Gorgias and the Eristics. Whether Diagoras, the famous Atheist, who became proverbial in antiquity, can be rightly included in the school of Democritus, appears the more doubtful since he would seem to have been older, or at any rate not younger, than Democritus, and not a single proposition of his philosophy has been recorded.[2]

good, which was called by Democritus ἀθαμβία. As to his relation with Epicurus cf. Part III. a, 342, 2nd ed.

[1] This connection between Epicurus and Metrodorus, through the medium of Nausiphanes, may have given rise to the statement (Galen. *H. Phil.* c. 7, p. 249; Stob. *Ecl.* i. 496), that Metrodorus was the καθηγητὴς Ἐπικούρου.

[2] Concerning Diogenes, vide Diodorus xiii. 6 end; Jos. *c. Apion.* c. 37; Sext. *Math.* ix. 5, 3; Suidas, *sub voce*; Hesch. *De Vir. Illustr. sub voce*; Tatian, *Adv. Gr.* c. 27; Athenag. *Supplic.* 4; Clemens, *Cohort.* 15 B; Cyrillus, *c. Jul.* vi. 189 E; Arnob. *Adv. Gent.* iv. 29; Athen. xiii. 611 a; Diog. vi. 59. From these passages we get the following result: that Diagoras was born in Melos, and was at first a dithyrambic poet; that he originally feared the gods but became an atheist, because a flagrant wrong committed against him (as to which particular accounts differ) remained unpunished by the gods; he was then condemned to death in Athens for blasphemous words and actions, especially for divulging the mysteries, and a reward offered for delivering him up; in his flight he was lost in a shipwreck. Aristophanes already alludes to his atheism. *Clouds*, v. 830 (Ol. 89, 1), and to his condemnation, *Birds*, v. 1073 (Ol. 91, 2). Cf. with this last quotation Backhuysen v. d. Brinck, v. *Lectt. ex Hist. Phil.* 41 sqq. His condemnation is also assigned by Diodorus to Ol. 91, 2; the statements of Suidas that he flourished in Ol. 78 (which Eusebius likewise maintains in his *Chron.* on Ol. 78), and was set free by Democritus from imprisonment, mutually confute one another. In the accounts of his death, perhaps he is confused with Protagoras. A treatise in which he published the mysteries is quoted under the title of φρύγιοι λόγοι, or ἀποπυργίζοντες.

Of the Democritean philosopher Bion of Abdera,[1] we know no particulars whatever.

III. *ANAXAGORAS.*[2]

1. *Principles of his system: Matter and Mind.*

Anaxagoras, born about 500 B.C.,[3] was a contemporary

[1] Diog. iv. 58. What is said by the comic poet, Damoxenus, ap. Athen. 102 a, on the popularity of the physics of Democritus, relates to the Epicurean physics, and only indirectly through these, to the Democritean philosophy.

[2] On the life, writings and doctrine of Anaxagoras, vide Schaubach, *Anaxagoræ Claz. Fragmenta*, &c., Leipzig, 1827, where the accounts of the ancients are most carefully collected; Schorn, *Anaxagoræ Claz. et Diogenis Apoll. Fragmenta*, Bonn, 1829; Breier, *Phil. d. Anaxag.* Berl. 1840; Krische, *Forsch.* 60 sqq.; Zévort, *Dissert. sur la vie et la doctrine d'Anaxagore*, Par. 1843; Mullach, *Fragm. Philos.* i. 243 sqq. Among modern writers, cf. the treatise of Gladisch and Clemens, *De Philos. Anax.* Berl. 1839 (quoted Vol. I. p. 35). Concerning older monographs, especially those of Carus and Hemsen, cf. Schaubach, p. 1, 35; Brandis, i. 232; Ueberweg, i. § 24.

[3] This date, previously accepted universally, has been recently disputed by Müller, *Fragm. Hist.* ii. 24; iii. 504; K. F. Hermann, *De Philos. Ion. ætatibus*, 10 sqq.; and Schwegler (*Gesch. d. Griech. Phil.* p. 35; cf. *Röm. Gesch.* iii. 20, 2); and the life of Anaxagoras has been placed 34 years earlier, so that his birth would fall in Ol. 61, 3 (534 B.C.), his death in Ol. 79, 3 (462 B.C.), his residence in Athens between Ol. 70, 4, and 78, 2 (497–466). An attempt had already (1842) been made by Bakhuysen von den Brinck (*Var. Lectt. de Hist. Philos. Ant.* 69 sqq.) to prove that Anaxagoras was born in Ol. 65, 4, came to Athens at the age of 20 in Ol. 70, 4, and left the city in Ol. 78, 2. I opposed this view in the second edition of the present work, and at p. 10 sqq. of my treatise, *De Hermodoro* (Marb. 1859), with almost universal acquiescence. It would seem from Diog. ii. 7, that Apollodorus probably, after Demetrius Phaler. (Diels, *Rh. Mus.* xxxi. 28), placed the birth of Anaxagoras in Ol. 70, 1 (500–496 B.C.). Still more definite is the statement (*ibid.* with the prefix λέγεται) that he was 20 at the invasion of Greece by Xerxes, and lived to the age of 72; that his birth took place in Ol. 70, 1 (500 B.C.), and his death in Ol. 88, 1 (528, 7 B.C.); and though the traditional text of Dio-

genes, *l. c.*, represents Apollodorus as assigning Ol. 78, 1 as the year of his death, we should doubtless read (as most agree) ἑβδομηκοστῆς instead of ὀγδοηκοστῆς. The conjecture of Bakhuysen v. d. Brinck (p. 72), that the number of the Olympiad should be retained, but that instead of 'τεθνηκέναι' ἡκμηκέναι should be substituted, has little in its favour. The ordinary theory is confirmed also by Hippol. *Refut.* i. 8, who, no doubt, places the ἀκμή of this philosopher in Ol. 88, 1, merely because he found this year mentioned as the year of his death, and erroneously referred it to the time of his ἀκμή. With this agrees also the statement of Demetrius Phal. (ap. Diog. *l. c.*), in his list of the archons: ἤρξατο φιλοσοφεῖν Ἀθήνησιν ἐπὶ Καλλίου, ἐτῶν εἴκοσι ὤν, without even changing (with Meursius, &c., cf. Menage, *ad h. l.*; Brandis, *Gr. Röm. Phil.* i. 233; Bakhuysen v. d. Brinck, *l. c.* 79 sq.; Cobet in his edition) Καλλίου into Καλλιάδου, as these are only different forms of the same name. A Kalliades was Archon Eponymus in 480 B.C. We therefore get the year 500 B.C. as the birth-year of Anaxagoras. Only we must suppose Diogenes or his authority to have misunderstood the statement of Demetrius, who must either have said of Anaxagoras: ἤρξατο φιλοσοφεῖν ἐπὶ Καλλίου, or more probably, ἤρξ. φιλοσ. Ἀθήνησι ἄρχοντος Καλλίου; for in that case ἤρξ. φιλ. could not relate to the appearance of Anaxagoras as a teacher, for which the age of 20 would be much too young, but only to the commencement of his philosophic studies. What could have induced him to come for this purpose at the very moment when the armies of Xerxes were pouring down upon Athens, to a city which neither then, nor for many decades previously, had harboured any noteworthy philosopher within its walls? (Schaubach, 14 sq.; Zévort, 10 sq., etc., propose that without changing the name of the archon, "τεσσαράκοντα" should be substituted for εἴκοσι; that is, 'M' should be substituted for 'K;' so that Anaxagoras would have come to Athens at the age of forty, in 456 B. when Pallias was archon.) Now it is true that Diodorus, Eusebius and Cyrillus assign dates to Democritus, which are not compatible with this; for if Democritus (as Diodorus, xxiv. 11, says) died in Ol. 94, 1 (403, 4 B.C.) at the age of 90, or if (as Eusebius and Cyrillus say, vide *sup.* 209) he was born in Ol. 69, 3, or Ol. 70, Anaxagoras, who was 40 years older (Diog. ix. 41; vide *sup.* p. 209), must have been at the beginning of the fifth century a man of from 33 to 41 years old. But there are many important reasons to be urged against this theory. In the first place, it is not only Eusebius and Cyrillus who, in their dates, are guilty of so many contradictions, and in the case of Democritus incredible contradictions and errors (examples may be found in regard to Eusebius in my treatise, *De Hermodoro*, p. 10; cf. also *Præp. Ev.* x. 14, 8 sq.; xiv. 15, 9, where Xenophanes and Pythagoras are made contemporary with Anaxagoras, and Euripides and Archelaus are nevertheless called his disciples. As to Cyrillus, it is enough to remember that in *C. Jul.* 13 b, he assigns the ἀκμή of Democritus simultaneously to Ol. 70 and 86; and Parmenides to Ol. 86, and makes Anaximenes the philosopher, no doubt by a confusion with the

rhetorician of Lampsacus, a contemporary of Epicurus. Cedren. 158 C, also describes him as a teacher of Alexander the Great); but also Diodorus who, in chronological accuracy, is not to be compared with Apollodorus. Hermann thinks that the three statements on the date of Democritus, viz. of Apollodorus, Thrasyllus and Diodorus, are to be traced back to this: that they are all founded on a previous notice, according to which Democritus was born 723 years after the destruction of Troy; and each calculated the date after his own Trojan era (placed by Apollodorus in 1183, by Thrasyllus in 1193, by Diodorus, in agreement with Ephorus, in 1217 B.C.); and that they then determined the date of Anaxagoras according to that of Democritus. Even if this were true, it would not follow that Diodorus is right, and that the other two are wrong; in itself, however, the conjecture is not probable. For, on the one hand, it cannot even be proved that Ephorus assigned the destruction of Troy to 1217 (Bakhuysen v. d. Brinck, *Philol.* vi. 589 sq., agrees with Boeckh and Welcker in saying 1150; and Müller, *Ctes. et Chronogr. Fragm.* 126, does not seem to me to have proved anything to the contrary); only this much is clear from Clemens, *Strom.* i. 337 A; Diodorus, xvi. 76, that he fixed the migration of the Heraclidæ in 1070 or 1090–1 B.C.; and it is, moreover, very improbable that Apollodorus and his predecessor, Eratosthenes, arrived at their conclusions about the dates of Democritus and Anaxagoras, in the way that Hermann suggests. For Democritus's own statement, that he composed the μικρὸς διάκοσμος in the 730th year after the destruction of Troy, must have been well known to them; indeed, from Diog. ix. 41, it would seem that Apollodorus founded his calculation of Democritus's birth-year upon this very statement. But in that case they could not possibly have placed the birth of the philosopher in the 723rd year of the same era in the 730th year of which he had composed his work; they could only have found its date by making the statements of Democritus as to his epoch correspond with their era instead of his own. In regard to Anaxagoras, however, Demetrius Phalereus, and others, ap. Diog. ii. 7, are in accord with them, who cannot certainly have arrived at all their theories through a wrong application of one and the same Trojan era. Even to an Eratosthenes, an Apollodorus, or a Thrasyllus, it would be impossible to ascribe so careless a procedure as that with which Hermann credits them. In the *second* place, Diodorus himself, Hermann's chief witness, agrees with the above testimonies concerning Anaxagoras; since in xii. 38 sq., when discussing the causes of the Peloponnesian war, he observes: 'The embarrassment in which Pericles was placed by his administration of the public treasure was increased by some other accidental circumstances: the process against Pheidias, and the charge of Atheism against Anaxagoras.' Here the trial of Anaxagoras is assigned, with the greatest possible explicitness, to the time immediately preceding the Peloponnesian war, and consequently his birth in the beginning of the fifth or the end of the sixth century. Hermann's explanatory comment (p. 19), that upon occa-

sion of the charges against Pheidias, the old complaints against Anaxagoras were revived, is so unnatural that scarcely any one could admit it. 'The enemies of Pericles,' says Diodorus, 'obtained the arrest of Pheidias: καὶ αὐτοῦ τοῦ Περικλέους κατηγόρουν ἱεροσυλίαν. πρὸς δὲ τούτοις Ἀναξαγόραν τὸν σοφιστὴν, διδάσκαλον ὄντα Περικλέους, ὡς ἀσεβοῦντα εἰς τοὺς θεοὺς ἐσυκοφάντουν. Who can believe that Diodorus would have thus expressed himself if he had been alluding, not to a suspicion attaching to Anaxagoras, who was then living, but to the charges that had been brought against a man who had been dead for thirty years? The present forms, διδάσκαλον ὄντα and ἀσεβοῦντα, alone would prove the contrary. Plutarch also (Pericl. 32) places the accusation of Anaxagoras in the same period and historical connection; and he also observes, *Nic.* 23, upon the occasion of a lunar eclipse during the Sicilian campaign, 'Anaxagoras, who was the first to write openly and clearly on lunar eclipses, οὔτ' αὐτὸς ἦν παλαιὸς, οὔτε ὁ λόγος ἔνδοξος (acknowledged by public opinion), on account of the disfavour in which the physical explanation of nature was at that time held in Athens, his opinions were, however, received with caution and in a narrow circle.' Plutarch, therefore, agrees with Diodorus, that Anaxagoras was in Athens until near the beginning of the Peloponnesian war. No argument against this can be derived from the fact that Satyrus, ap. Diog. ii. 12, names Thucydides (son of Melesias) as the accuser of Anaxagoras; for Sotion (*ibid.*) had designated Cleon as such, who only attained to any celebrity towards the end of Pericles's life (Plut. *Per.* 33); and, according to Plut. *Per.* 32, the ψήφισμα against those who denied the gods, and taught Metarsiologia, was the work of Diopeithes, who is mentioned by Aristophanes (*Birds*, v. 988) as still alive (414 B.C.). Nor is it prejudiced by the circumstance on which Brandis, *Gesch. d. Entw.* i. 120 sq., greatly relies, that Socrates, in Plato's *Phaedo*, 97 B, derives his knowledge of the Anaxagorean doctrine, not from Anaxagoras himself, but from his treatise. Plato *might*, no doubt, have brought him into personal connection with Anaxagoras, but that he *must* have done so, if Anaxagoras was in Athens until 434 B.C., cannot be maintained. *Thirdly*, it tells against Hermann's view that Xenophon (*Mem.* iv. 7, 6 sq.) and Plato (*Apol.* 26 D) treat Anaxagoras as the physical philosopher whose doctrines and writings were universally known in Athens towards the end of the fifth century, just as they were represented by Aristophanes in the *Clouds*. Now, if he had left Athens more than sixty years before, nobody would have remembered him and his trial, and the enemies of philosophy would have directed their attacks against newer men and doctrines. Plato, in the *Cratylus* (409 A), the date of which cannot possibly be earlier than the two last decades of the fifth century (Plato attended the lectures of Cratylus about 409–407 B.C.), describes Anaxagoras's theory of the moon as something ὃ ἐκεῖνος νεωστὶ ἔλεγεν. Moreover, Euripides (born 480 B.C.) is called a disciple of Anaxagoras (*inf.* 328, 1), and if he himself seems to betray that he was so (vide Vol. II. a, 12, third edition),

this presupposes that the philosopher did not die before 462 B.C., several years after he had quitted Athens. If it be objected that the authors who attest this relation of Euripides to Anaxagoras are comparatively recent, there is a valid answer even to that objection. For, according to Athenæus, v. 220 b, the 'Callias' of Æschines the Socratic contained: τὴν τοῦ Καλλίου πρὸς τὸν πατέρα διαφορὰν καὶ τὴν Πρωδίκου καὶ Ἀναξαγόρου τῶν σοφιστῶν διαμώκησιν (mockery); he had consequently connected Anaxagoras and Prodicus with Callias, who was not born at the time when, according to Hermann, Anaxagoras left Athens. Hermann's only resource in this difficulty is the conjecture that we should read Πρωταγόρου instead of Ἀναξαγόρου in Athenæus. (*De Aesch. Socrat. Reliqu.* 14.) But this alteration is quite arbitrary, and no reason can be assigned for it except the impossibility of reconciling the traditional text with Hermann's hypothesis. That Anaxagoras, according to the language of the time, might have been called a Sophist, is clear from Vol. I. p. 302, 1, and will be made clearer further on (*inf.* Chap. III. *Soph.*). Hermann expressly acknowledges this, Diodorus himself (vide *supra*) calls him so, and the name involved no evil imputation. Why then a Socratic like Æschines should have objected to class him with other Sophists it is hard to see; for Socrates himself, in Xenophon's *Mem.* ii. 1, 21, passes a much more favourable judgment on Prodicus than on Anaxagoras. Hermann thinks, lastly, that as Callias was still (ap. Xen. *Hellen.* vi. 3, 2 sq.) in Ol. 102, 2 (371 B.C.) occupied with state affairs, he could no longer have attended the lectures of Anaxagoras; and as his father, Hipponicus, fell at Delium in 424 B.C., he could not before that date have been represented as favouring the Sophists. But against this we have not only Plato's account, which makes Protagoras even before the beginning of the Peloponnesian war entertain a number of the most distinguished Sophists, but the still more decisive proof that Callias's younger half-brother Xanthippus was already married before the year 429 (Plut. *Per.* 24, 36; cf. Plato, *Prot.* 314 E). If we add to these arguments the fact that Anaxagoras (as will be shown at the end of this chapter), not only was strongly influenced by Parmenides, whose older contemporary, according to Hermann, he was, but in all probability studied Empedocles and Leucippus, the correctness of the popular theory as to his date will no longer be doubtful. No argument against this can be founded on the statement in Plutarch, *Themist.* 2, that Stesimbrotus asserted that Themistocles had listened to the teaching of Anaxagoras, and had occupied himself with Melissus. For though Plut. *Cimon*, 4 says of Stesimbrotus that he was περὶ τὸν αὐτὸν ὁμοῦ τι χρόνον τῷ Κίμωνι γεγονὼς, this evidence can be no more worthy of belief in regard to Anaxagoras than to Melissus, who was somewhat younger, and not older than Anaxagoras, according to the reckoning of Apollodorus; and we have the choice between two alternatives—either to suppose that Themistocles, during his stay in Asia Minor (474 to 470 B.C.), actually came in contact (it could not have amounted to more than this) with Anaxagoras, who was then in Lampsacus, and with Melissus; or that the

of Empedocles and Leucippus. This learned man,[1] who is also named with distinction among the most ancient mathematicians and astronomers,[2] came from his native

writer, whose work, according to Plut. *Per.* 36, was composed more than forty years after Themistocles's death, and of whose untrustworthiness Plutarch (*Per.* 13, 36; *Themist.* 24) furnishes conclusive proofs, is in this case also speaking groundlessly, or inventing with some ulterior purpose. To me the latter is far the more probable. As little can be said for the statement that Archelaus, the disciple of Anaxagoras, was regarded by Panaetius as the author of a consolatory poem addressed to Cimon after the death of his wife (Plut. *Cim.* 4), for this is apparently a mere conjecture, as to the truth of which we know nothing; and even if we accept it as true, we are altogether ignorant how long this poem was composed before Cimon's death (450), how old Archelaus was at the time, and how much younger he was than Anaxagoras. Plutarch, who assigns the flight of Anaxagoras from Athens to the period immediately preceding the Peloponnesian war, thinks, however, that the chronology is in favour of the opinion of Panaetius. For similar reasons, we should not be justified by the statement (even were it correct) that Socrates was a disciple of Anaxagoras, in assigning Anaxagoras's residence in Athens to the first third of the fifth century. I have already shown, however, elsewhere (Part II. a, 47, third edition) how little this statement is to be trusted. Hermann alleges in support of his theory, that it is only on his calculation that Protogoras can be the disciple of Democritus, and Democritus the disciple of the Persians, whom Xerxes brought into his paternal house; but this is little to the purpose, for the supposed discipleship of Protagoras emanates, as will be shown, from very doubtful sources; and as to the Persian instructors of Democritus, we have already seen (*sup.* p. 210) that the story is altogether unworthy of credit.

[1] Καζομένιος is his usual appellation. His father, according to Diog. ii. 6, &c. (cf. Schaubach, p. 7), was called Hegesibulus, or also Eubulus; on account of his wealth and good family he occupied a prominent position.

[2] That Anaxagoras was so, there is no doubt, but how he arrived at his extensive knowledge it is no longer possible to discover. In the διαδοχή, he was usually placed after Anaximenes, and therefore was called the disciple and successor of that philosopher (Cic. *N. D.* i. 11, 26; Diog. *Proœm.* 14, ii. 6; Strabo, xiv. 3, 36, p. 645; Clem. *Strom.* i. 301 A.; Simpl. *Phys.* 6 b; Galen. *H. Phil.* c. 2, &c.; cf. Schaubach, p. 3; Krische, *Forsch.* 61); but this is, of course, a wholly unhistorical combination, the defence of which ought not to have been attempted by Zévort, p. 6 sq.; the same theory seems to have been adopted by Eusebius (*Pr. Ev.* x. 14, 16) and Theodoretus (*Cur. Gr. Aff.* 22, p. 24, cf. iv. 45, p. 77), when they represent him as the contemporary of Pythagoras and Xenophanes, and when Eusebius places his ἀκμὴ in

city Clazomenæ[1] to Athens,[2] where in his person philosophy first became naturalised;[3] and though throughout his many years' residence in this city, he had to struggle with the mistrust and prejudice of the majority of the inhabitants,[4] yet there were not wanting intellectual men,

Ol. 70–3 and his death in Ol. 79–2. What is said about a journey of Anaxagoras to Egypt for the purposes of culture, by Ammian, xxii. 16, 22; Theod. *Cur. Gr. Aff.* ii. 23, p. 24; Cedren. *Hist.* 94 B; cf. Valer. viii. 7, 6, deserves no credit. Josephus brings him into connection with the Jews (*C. Ap.* c. 16, p. 482), but this is not correct. The most trustworthy accounts are entirely silent as to his teachers and the course of his education. From love of knowledge, it is said, he neglected his property, left his land to be pasture for sheep, and finally resigned his property to his relations (Diog. ii. 6 sq.; Plat. *Hipp. Maj.* 283 A; Plut. *Pericl.* c. 16; *De V. Ære Al.* 8, 8, p. 831; Cic. *Tusc.* v. 39, 115; Valer. Max. viii. 7, *ext.* 6, &c.; Schaubach, 7 sq.; cf. Arist. *Eth. N.* vi. 7, 1141 b, 3); nor did he trouble himself about politics, but regarded the sky as his fatherland, and the contemplation of the stars as his vocation (Diog. ii. 7, 10; Eudem. *Eth.* i. 5, 1216 a, 10; Philo, *Ætern. M.* p. 939 B; Iamb. *Protrept.* c. 9, p. 146 Kiessl.; Clem. *Strom.* ii. 416 D; Lactant. *Instit.* iii. 9, 23; cf. Cic. *De Orat.* iii. 15, 56.

[1] Ps.-Plato, *Anterast.*; Procl. *in Euclid.* 19 65 sq. Friedl. (after Eudemus): πολλῶν ἐφήψατο κατὰ γεωμετρίαν; Plut. *De Exil.* 17 end. In after times, some pretended to know the very mountain (Mimas, in the neighbourhood of Chios) on the summit of which Anaxagoras pursued his astronomical observations (Philostr. *Apoll.* ii. 5, 3). With his mathematical knowledge are also combined the prophecies which are ascribed to him; the most famous of these, the fabled prognostication of the much talked of meteoric stone of Aegospotamus, relates to an occurrence in the heavens, and is brought into connection with his theory of the stars: Diog. ii. 10; Ael. *H. Anim.* vii. 8; Plin. *H. Nat.* ii. 58, 149; Plut. *Lysand.* 12; Philostr. *Apollon.* i. 2, 2, viii. 7, 29; Ammian. xxii. 16, 22; Tzetz. *Chil.* ii. 892; Suid. Ἀναξαγ.; Schaubach, p. 40 sqq.

[2] According to the account of Diog. ii. 7, prefaced with φασίν, he lived in Athens for thirty years. In that case his arrival there must have taken place about 463 or 462 B.C. For the rest, in regard to dates, cf. p. 321 sqq.

[3] Zeno of Elea is also said to have lived for a while in Athens, vide Vol. I. p. 609, 1.

[4] Cf. the passage from Plut. *Nic.* 23 discussed *supra*, p. 324; Plato, *Apol.* 26 c, sq.; and Aristophanes, *Clouds.* Even the appellation Νοῦς, which is said to have been given him, was no doubt rather a nickname than a sign of respect and recognition (Plut. *Pericl.* 4; Timon, ap. Diog. ii. 6; the later writers quoted by Schaubach, p. 36, probably copied from them).

who sought his instructive society;[1] and in the great Pericles especially he found a protector whose friendship was a compensation for the disfavour of the populace.[2] When, however, in the period immediately preceding the Peloponnesian War, the enemies of that statesman began to attack him in his friends, Anaxagoras became implicated in a charge of denying the gods of the state, from which even his powerful friend could not altogether shield him; he was therefore obliged to quit Athens,[3]

[1] Besides Archelaus and Metrodorus (who will be mentioned later on) and Pericles, Euripides is also spoken of as a disciple of Anaxagoras (Diog. ii. 10, 45; Suid. Εὐριπ.; Diodor. i. 7 end; Strabo, xiv. 1, 36, p. 645; Cic. *Tusc.* iii. 14, 30; Gell. *N. A.* xv. 20, 4, 8; Alexander Aetolus, whom he quotes; Heracl. *Alleg. Hom.* 22, p. 47; M. Dionys. Halic. *Ars Rhet.* 10, 11, p. 300, 355 R, &c.; cf. Schaubach, p. 20 sq.), and he himself seems to allude to the person as well as to the doctrines of this philosopher (cf. Vol. II. a, 12, 3rd ed.). According to Antyllus ap. Marcellin. *V. Thucyd.* p. 4 D, Thucydides had also heard the discourses of Anaxagoras. That it is a mistake to represent Empedocles as his disciple, has been shown, p. 187, cf. p. 118; for evidence that Democrates and Socrates could not have been so, cf. p. 210 and Part II. a, 47, 3rd ed.

[2] On Pericles' relation to Anaxagoras, cf. Plut. *Per.* 4, 5, 6, 16; Plato, *Phædr.* 270 A; *Alcib.* i. 118 C; *Ep.* ii. 311 A; Isocr. *π. ἀντιδόσ.* 235; Ps.-Demosth. *Amator.* 1414; Cic. *Brut.* 11, 44; *De Orat.* iii. 34, 138; Diodor. xii. 39 (*sup.* p. 323); Diog. ii. 13, &c., ap. Schaubach, p. 17 sq. But this relation became the prey of anecdote and scandalmongers (even no doubt at the time); among their idle inventions I include the statement in Plut. *Per.* 16, which is not very happily explained by Backhuysen v. d. Brinck, that once, when Pericles could not look after him for a long time, Anaxagoras fell into great distress, and had almost resolved to starve himself when his patron opportunely interposed.

[3] Concerning these events, cf. Diog. ii. 12–15; Plut. *Per.* 32; *Nic.* 23; Diodor. xii. 39; Jos. *c. Ap.* ii. 37; Olympiod. *in Meteorol.* 5 a, 1, 136 Id. (where, in opposition to all the most trustworthy evidences, Anaxagoras is represented as having returned); Cyrill. *C. Jul.* vi. 189 E; also Lucian, *Timon.* 10; Plato, *Apol.* 26 D; *Laws*, xii. 967 C.; Aristid. *Orat.* 45, p. 83 Dind.; Schaubach, p. 47 sqq. The details of the trial are variously given. Most accounts agree that Anaxagoras was put in prison, but some say that he escaped with the help of Pericles; others that he was set at liberty, but banished. The statement of Satyrus, ap. Diog. ii. 12 (as to the real meaning of which Gladisch, *Anax. u. d. Isocr.* 97, offers a very improbable conjecture), that he was accused, not only of *ἀσέβεια* but also of *μηδισμός*, stands quite alone. As to the date of the charge and the accusers, vide p. 323 sq.

and betook himself to Lampsacus,[1] where he died, about the year 428 B.C.[2] His scientific theories had been embodied in a treatise of which valuable fragments have been preserved.[3]

The doctrine of Anaxagoras is closely related to the

[1] That he founded a school of philosophy there, is very insufficiently proved by the statement of Eusebius, *Pr. Ev.* x. 14, 13, that Archelaus took charge of his school at Lampsacus; and from his advanced age, it is not likely. Indeed it is a question whether the conception of a school, generally speaking, can rightly be applied to him and his friends.

[2] These dates are given by Diog. ii. 7 in part after Apollodorus; vide *sup.* p. 321; that at the time of his trial he was old and weak, is mentioned also by Hieronymus, ap. Diog. 14. The assertion that he died from voluntary starvation (Diog. ii. 15; Suid. Ἀναξαγ. and *ἀποκαρτερήσας*) is very suspicious: it seems to have arisen either from the anecdote mentioned p. 328, 1, or from the statement of Hermippus, ap. Diog. ii. 13, that he killed himself, from grief on account of the disgrace that came upon him through his trial. This anecdote, however, as we have said, is very doubtful, and relates to something else; the assertion of Hermippus cannot be reconciled either with the fact of his residence in Lampsacus, or with what we know of the equability with which Anaxagoras bore his condemnation and banishment, as well as other misfortunes. The people of Lampsacus honoured his memory by a public funeral, by altars, and (according to Ælian, dedicated to Νοῦς and Ἀλήθεια) by a yearly festival which lasted for a century (Alcidamas, ap. Arist. *Rhet.* ii. 23, 1398 b, 15; Diog. ii. 14 sq.; cf. Plut. *Præc. Ger. Reip.* 27, 9, p. 820; Ael. *V. H.* viii. 19).

[3] This, like most of the treatises of the ancient philosophers, bears the title *περὶ φύσεως*. For the fragments of which cf. Schaubach, Schorn and Mullach. Besides this treatise he is said (Vitruv. vii. *Præf.* 11) to have written on Scenography; and, according to Plutarch, *De Exil.* 17, p. 607, he composed a treatise in prison, or more properly, a figure which related to the squaring of the circle. Schorn's notion (p. 4), that the author of the work on Scenography is another person of the same name, is certainly incorrect. Zévort's conjecture seems more plausible—that the treatise on Scenography formed part of the treatise *περὶ φύσεως*, and that this was his only work; as Diogenes, i. 16, no doubt on more ancient authority, gives us to understand. Of other writings there are no definite traces (vide Schaubach, 51 sqq.; Ritter, *Geschich. d. Ion. Phil.* 208). For the opinions of the ancients on Anaxagoras cf. Schaubach, 35 sq., cf. Diog. ii. 6.

contemporaneous systems of Empedocles and Leucippus. The common starting point of all three is found in the propositions of Parmenides on the impossibility of generation and destruction; their common aim is the explanation of the actual, the plurality and variability of which they acknowledge; and for this purpose they all presuppose certain unchangeable primitive substances, from which all things are formed by means of combination and separation in space. Anaxagoras, however, is distinguished from the two other philosophers in his more precise definitions concerning the primitive substances and the cause of their motion. *They* conceive the original substances without the qualities of the derived: Empedocles as elements qualitatively distinct from each other, and limited in number; Leucippus as atoms, unlimited as to form and number, but homogeneous as to quality. Anaxagoras, on the other hand, supposes all the qualities and differences of derived things already inherent in the primitive matter, and therefore conceives the original substances as unlimited in kind, as well as in number. Moreover, while Empedocles explained motion by the mythical forms of Love and Hate, and therefore in reality not at all; and the Atomists on their side explained it mechanically by the effect of weight, Anaxagoras came to the conclusion that it can be only understood as the working of an incorporeal force; and he accordingly opposes to matter, mind, as the cause of all motion and order. On these two points all that is peculiar to his philosophy, so far as we are acquainted with it, may be said to turn.

The first presupposition of his system lies, as before

remarked, in the theorem of the unthinkableness of absolute Becoming. 'Of generation and destruction the Greeks do not speak correctly. For nothing is generated nor destroyed, but out of existing things everything is compounded, and again separated. The right course, therefore, would be to designate generation as combination, and destruction as separation.'[1] Anaxagoras, accordingly, is as unable to conceive generation and destruction in the specific sense of the words, as Parmenides; for this reason he also maintains that the totality of things can neither increase nor diminish;[2] and in his opinion it is an improper use of language to employ such expressions at all.[3] In truth, the so-called Becoming of the new and cessation of the old, is only the change of something that previously existed, and continues afterwards; and this change is not a qualitative, but a mechanical change: the substance remains what it was, only the mode of its composition changes; generation consists in the combination, destruction in the separation, of certain substances.[4]

[1] *Fr.* 22 *Schaub.* 17 Mull.: τὸ δὲ γίνεσθαι καὶ ἀπόλλυσθαι οὐκ ὀρθῶς νομίζουσιν οἱ Ἕλληνες. οὐδὲν γὰρ χρῆμα γίνεται, οὐδὲ ἀπόλλυται, ἀλλ' ἀπ' ἐόντων χρημάτων συμμίσγεταί τε καὶ διακρίνεται, καὶ οὕτως ἂν ὀρθῶς καλοῖεν τό τε γίνεσθαι συμμίσγεσθαι καὶ τὸ ἀπόλλυσθαι διακρίνεσθαι. The *treatise* of Anaxagoras did not begin with these words; but that is, of course, no reason why they should not form the starting-point of his *system*.

[2] *Fr.* 14: τουτέων δὲ οὕτω διακεκριμένων γινώσκειν χρή, ὅτι πάντα οὐδὲν ἐλάσσω ἐστὶν οὐδὲ πλέω· οὐ γὰρ ἀνυστὸν πάντων πλέω εἶναι, ἀλλὰ πάντα ἴσα αἰεί.

[3] In the fragment just quoted "νομίζειν" seems to allude (as, indeed, the mention of "Ἕλληνες" would lead us to suspect) to the current expression, which corresponds with the "νόμῳ" of Empedocles and Democritus (p. 124, 1; 219, 3), and with the "ἔθος" of Parmenides (V. 54, vide *sup.* Vol. I. p. 584, 1), and is therefore not quite accurately translated by 'believe.'

[4] Arist. *Phys.* i. 4, 187 a, 26: ἔοικε δὲ Ἀνοξαγόρας ἄπειρα οὕτως οἰηθῆναι [τὰ στοιχεῖα] διὰ τὸ ὑπολαμβάνειν τὴν κοινὴν δόξαν τῶν

In this manner a plurality of original substances was at once admitted; but whereas Empedocles and the Atomists maintain the simplest bodies to be the most primitive, and accordingly ascribe to their primitive substances, besides the universal qualities of all matter only the mathematical characteristic of form, or the simple qualities of the four elements, Anaxagoras, on the contrary, believes that the individually determinate bodies—such as flesh, bones, gold, &c.—are the most primitive, and that the elementary substances are only a mixture,[1] the apparent simpleness of which he explains

φυσικῶν εἶναι ἀληθῆ, ὡς οὐ γινομένου οὐδενὸς ἐκ τοῦ μὴ ὄντος· διὰ τοῦτο γὰρ οὕτω λέγουσιν, "ἦν ὁμοῦ τὰ πάντα" καὶ "τὸ γίνεσθαι τοιόνδε καθέστηκεν ἀλλοιοῦσθαι," οἱ δὲ σύγκρισιν καὶ διάκρισιν. ἔτι δ' ἐκ τοῦ γίνεσθαι ἐξ ἀλλήλων τἀναντία· ἐνυπῆρχεν ἄρα, etc. The words τὸ γίν. — ἀλλοιοῦσθαι seem to me to contain, like the preceding words, a direct citation; so that we should translate the passage thus: 'For therefore they say all things were united together,' and 'Becoming means to change,' or they also speak of combination and separation. There is another allusion to these words in *Gen. et Corr.* i. 1, 314 a, 13: καίτοι Ἀναξαγόρας γε τὴν οἰκείαν φωνὴν ἠγνόησεν· λέγει γοῦν ὡς τὸ γίγνεσθαι καὶ ἀπόλλυσθαι ταὐτὸν καθέστηκε τῷ ἀλλοιοῦσθαι (which is repeated by Philop. *ad h. l.* p. 3). In any case, we find in this a confirmation of the statement that Anaxagoras expressly reduced 'Becoming' to ἀλλοίωσις (cf. p. 71); when, therefore, Porphyry (ap. Simpl. *Phys.* 34 b), in this passage of the *Physics*, proposes to refer the words τὸ γίνεσθαι, etc., to Anaximenes instead of Anaxagoras, he is certainly in error. On σύγκρισις and διάκρισις, vide *Metaph.* i. 3 (following note) and *Gen. An.* i. 18 (*inf.* p. 334, 1). Later testimonies reiterating that of Aristotle, ap. Schaubach, 77 sq., 136 sq.

[1] Arist. *Gen. et Corr.* i. 1, 314 a, 18: ὁ μὲν γὰρ (Anaxag.) τὰ ὁμοιομερῆ στοιχεῖα τίθησιν οἷον ὀστοῦν καὶ σάρκα καὶ μυελὸν καὶ τῶν ἄλλων ὧν ἑκάστου συνώνυμον (sc. τῷ ὅλῳ, as Philoponus, *ad h. l.* 3 a, rightly explains) τὸ μέρος ἐστίν . . . ἐναντίως δὲ φαίνονται λέγοντες οἱ περὶ Ἀναξαγόραν τοῖς περὶ Ἐμπεδοκλέα· ὁ μὲν γάρ φησι πῦρ καὶ ὕδωρ καὶ ἀέρα καὶ γῆν στοιχεῖα τέσσαρα καὶ ἁπλᾶ εἶναι μᾶλλον ἢ σάρκα καὶ ὀστοῦν καὶ τὰ τοιαῦτα τῶν ὁμοιομερῶν, οἱ δὲ ταῦτα μὲν ἁπλᾶ καὶ στοιχεῖα, γῆν δὲ καὶ πῦρ καὶ ὕδωρ καὶ ἀέρα σύνθετα· πανσπερμίαν γὰρ εἶναι τούτων (for they, the four elements, are an assemblage of them, the determinate bodies). Similarly, *De Cœlo.* iii. 3, 302 a. 28: Ἀναξαγόρας δ' Ἐμπεδοκλεῖ ἐναντίως λέγει περὶ τῶν στοιχείων. ὁ μὲν γὰρ πῦρ καὶ γῆν καὶ τὰ σύ-

by saying that, on account of the amalgamation of all possible determinate substances, not one of these is per-

στοιχα τούτοις στοιχεῖά φησιν εἶναι τῶν σωμάτων καὶ συγκεῖσθαι πάντ' ἐκ τούτων, Ἀναξαγόρας δὲ τοὐναντίον. τὰ γὰρ ὁμοιομερῆ στοιχεῖα (λέγω δ' οἷον σάρκα καὶ ὀστοῦν καὶ τῶν τοιούτων ἕκαστον), ἀέρα δὲ καὶ πῦρ μῖγμα τούτων καὶ τῶν ἄλλων σπερμάτων πάντων· εἶναι γὰρ ἑκάτερον αὐτῶν ἐξ ἀοράτων ὁμοιομερῶν πάντων ἠθροισμένων. In like manner Simpl., *in h. l.*, *sup.* Vol. I. p. 233, 1; 236, 1; cf. Theophr. *H. Plant.* iii. 1, 4; *ibid.* ap. Simpl. *Phys.* 6 b; Lucret. i. 834 sq.; Alex. Aphr. *De Mixt.* 141 b; cf. 147 b; Diog. ii. 8, etc., vide p. 333 sq. This seems to be contradicted by Arist. *Metaph.* i. 3, 984 a, 11: Ἀναξαγόρας δὲ . . . ἀπείρους εἶναί φησι τὰς ἀρχάς· σχεδὸν γὰρ ἅπαντα τὰ ὁμοιομερῆ, καθάπερ ὕδωρ ἢ πῦρ, οὕτω γίγνεσθαι καὶ ἀπόλλυσθαί φησι συγκρίσει καὶ διακρίσει μόνον, ἄλλως δ' οὔτε γίγνεσθαι οὔτ' ἀπόλλυσθαι, ἀλλὰ διαμένειν ἀΐδια. But the words καθάπερ ὕδωρ ἢ πῦρ may also signify that the conception of ὁμοιομερὲς is explained through them by Aristotle only in his own name; while, at the same time, σχεδὸν indicates that Anaxagoras did not reckon all which Aristotle includes under this conception as primitive substances (Breier, *Philos. d. Anax.*, 40 sq., after Alexander, *ad h. l.*); or, still better, the words may be an allusion to what has previously been quoted from Empedocles: for he maintains that all bodies of equal parts, as well as the elements (according to Empedocles), originate only in the given manner, through combination and separation (cf. Bonitz, *in h. l.*). The passages, as Schwegler remarks, only assert the same thing as the fragment quoted, p. 331, 1, and we have no reason (with Schaubach, p. 81) to mistrust the express statements of Aristotle in the two passages first quoted. Philoponus indeed, *Gen. et Corr.* 3 b, contradicts his statement with the assertion that the elements also belong to the class of things that have equal parts. But this is of little importance; for if we may argue from other analogies, this theory has only been invented by Philoponus from the Aristotelian conception of that which has equal parts. The mode of conception which Aristotle ascribes to Anaxagoras, moreover, perfectly agrees with the general tendency of his doctrine; since he supposes that no quality, perceptible to sense, appears in the original mixture of substances, it may also seem to him natural that, after its first imperfect separation, only the most universal qualities, the elementary, should be observable. Moreover, Anaxagoras (vide *infra*) does not suppose the four elements to be equally primitive; but, first, he makes fire and air separate themselves, and out of fire and air arise water and earth. When Heracleitus, *Alleg. Hom.*, 22, p. 46, ascribes to Anaxagoras the theory which is elsewhere ascribed to Xenophanes—that water and earth are the elements of all things (not merely of men, as Gladisch says, *Anax. u. d. Isr.*)—he can only have arrived at that incomprehensible statement through the verses there quoted from Euripides, the supposed disciple of Anaxagoras.

ceived in its distinctive individuality, but only that is perceived wherein they all agree.[1] Empedocles and the Atomists hold that the organic is formed from the elementary; Anaxagoras, conversely, that the elementary is formed from the constituents of the organic. Aristotle usually expresses this by asserting that Anaxagoras maintained the bodies of similar parts (*τὰ ὁμοιομερῆ*) to be the elements of things,[2] and later writers call his primitive substances by the name of *ὁμοιομέρειαι*.[3]

[1] In the same way perhaps that seemingly colourless light arises from the mixture of all coloured lights.

[2] Vide, besides the quotations in the note before the last, *Gen. Anim.* i. 18, 723 a, b (on the opinion that the seed must contain in itself parts of all the members): *ὁ αὐτὸς γὰρ λόγος ἔοικεν εἶναι οὗτος τῷ Ἀναξαγόρου, τῷ μηθὲν γίγνεσθαι τῶν ὁμοιομερῶν.* *Phys.* i. 4, 187 a, 25: *ἄπειρα τά τε ὁμοιομερῆ καὶ τἀναντία (ποιεῖ Ἀναξ.).* *Ibid.* iii. 4, 203 a, 19: *ὅσοι δ' ἄπειρα ποιοῦσι τὰ στοιχεῖα, καθάπερ Ἀναξαγόρας καὶ Δημόκριτος, ὁ μὲν ἐκ τῶν ὁμοιομερῶν ὁ δ' ἐκ τῆς παντοπερμίας τῶν σχημάτων, τῇ ἁφῇ συνεχὲς τὸ ἄπειρον εἶναι φασιν.* *Metaph.* i. 7, 988 a, 28: *Ἀναξαγόρας δὲ τὴν τῶν ὁμοιομερῶν ἀπειρίαν [ἀρχὴν λέγει].* *De Cœlo*, iii. 4: *πρῶτον μὲν οὖν ὅτι οὐκ ἔστιν ἄπειρα [τὰ στοιχεῖα] . . . θεωρητέον καὶ πρῶτον τοὺς πάντα τὰ ὁμοιομερῆ στοιχεῖα ποιοῦντας, καθάπερ Ἀναξαγόρας.* *Gen. Anim.* ii. 4 sq., 740 b, 16, 741 b, 13, can scarcely be quoted in this connection.

[3] The word is first met with in Lucretius, who, however, uses it, not in the plural for the several primitive elements, but in the singular, for the totality of these; so that *ἡ ὁμοιομέρεια* is synonymous with *τὰ ὁμοιομερῆ* (so at least his words seem to me best explained; Breier, p. 11, explains them somewhat differently); for the rest he gives a sufficiently accurate account, i. 830:—

nunc et Anaxagoræ scrutemur homœomeriam,
quam Graii memorant, &c.

834:—

principio, rerum quom dicit homœomeriam (al. principium rer. quam d. hom.)
ossa videlicet e pauxillis atque minutis -
ossibus hic, et de pauxillis atque minutis
visceribus viscus gigni, sanguenque creari
sanguinis inter se multis coëuntibu' guttis,
ex auruque putat micis consistere posse
aurum, et de terris terram concrescere parvis
ignibus ex ignis, umorem umoribus esse,
cetera consimili fingit ratione putatque.

The plural *ὁμοιομέρειαι* is first found in later writers. Plut. *Pericl.* c. 4: *νοῦν . . . ἀποκρίνοντα τὰς ὁμοιομερείας.* Sext. *Pyrrh.* iii. 33: *τοῖς περὶ Ἀναξαγόραν πᾶσαν αἰσθητὴν ποιότητα περὶ ταῖς ὁμοιομερείαις ἀπολείπουσιν.* *Math.* x. 25, 2: *οἱ γὰρ ἀτόμους εἰπόντες ἢ ὁμοιομερείας ἢ ὄγκους.* § 254. Diog. ii. 8: *ἀρχὰς δὲ τὰς ὁμοιομερείας· καθάπερ γὰρ ἐκ τῶν ψηγμάτων λεγομένων τὸν χρυσὸν συνεστάναι, οὕτως ἐκ τῶν ὁμοιομερῶν μικρῶν σωμάτων τὸ πᾶν συγκεκρίσθαι.* Simpl. *Phys.* 258 a: *ἐδόκει δὲ λέγειν ὁ Ἀναξ., ὅτι ὁμοῦ πάντων ὄντων χρημάτων καὶ ἠρεμούντων τὸν ἄπειρον πρὸ τοῦ χρόνου, βουληθεὶς ὁ κοσμοποιὸς νοῦς διακρῖναι τὰ εἴδη* (kinds of things, not as the word has been translated, 'ideas;' it seems to refer to Anaxag. *Fr.* 3). *ἅπερ ὁμοιομερείας καλεῖ, κίνησιν αὐταῖς ἐνεποίησεν.* *Ibid.* 33 a, 106 a, 10, and Porphyry and Themistius, who are both cited by him here (*Phys.* 15 b, p. 107 Sp.). Philop. *Phys.* A, 10; Ibid. *Gen. et Corr.* 3 b; Plut. *Plac.* i. 3, 8 (Stob. i. 296): *Ἀναξαγ. . . . ἀρχὰς τῶν ὄντων τὰς ὁμοιομερείας ἀπεφήνατο,* and after the reasons of this theory have been discussed: *ἀπὸ τοῦ οὖν ὅμοια τὰ μέρη εἶναι ἐν τῇ τροφῇ τοῖς γενναμένοις ὁμοιομερείας αὐτὰς ἐκάλεσε.*

[1] Schleiermacher was the first to announce this (on Diog. *Werke*, iii. 2, 167; *Gesch. d. Phil.* 43), afterwards Ritter (*Ion. Phil.* 211, 269; *Gesch. d. Phil.* i. 303); Philippson (*Ὕλη ἀνθρ.* 188 sqq.); Hegel (*Gesch. d. Phil.* i. 359); and subsequently Breier (*Phil. d. Anax.* 1–54), with whom modern writers almost without exception agree, and whom we chiefly follow in our exposition, places it beyond a doubt by a thorough enquiry into this whole doctrine. The opposite theory is held by all the earlier writers, and by Schaubach, p. 89; Wendt, *zu Tennemann*, i. 384; Brandis. *l. c.* 245 (otherwise in *Gesch. d. Entw.* i. 123); Marbach, *Gesch. d. Phil.* i. 79; Zévort, 53 sqq.

Anaxagoras himself cannot have employed these expressions,[1] for not merely are they wholly absent from the fragments of his treatise,[2] but they can only be explained in connection with Aristotle's use of language.[3]

[2] In places where we should have expected the words *τὰ ὁμοιομερῆ*, as in *Fr.* i. 3, 6 (4), Anaxagoras has *σπέρματα*, or, still more indefinitely, *χρήματα*. Cf. Simpl. *De Cœlo*, 268 b, 37 (*Schol.* 513 a, 39): *Ἀναξαγ. τὰ ὁμοιομερῆ οἷον σάρκα καὶ ὀστοῦν καὶ τὰ τοιαῦτα, ἅπερ σπέρματα ἐκάλει.*

[3] Aristotle designates by the name of *ὁμοιομερὲς* (*Gleichtheilig*) of like parts, bodies which in all their parts consist of one and the same substance, in which, therefore, all parts are of like kind with each other and with the whole (cf. on this point *Gen. et Corr.* i. 1, and Philop. *in h. l.* p. 332, 1; *ibid.* i. 10, 328 a, 8 sqq.; *Part. Anim.* ii. 2, 647 b, 17, where *ὁμοιομερὲς* and *τὸ μέρος ὁμώνυμον τῷ ὅλῳ* express the same idea. Alexander, *De Mixt.* 147 b: *ἀνομοιομερῆ μὲν τὰ ἐκ διαφερόντων μερῶν συνεστῶτα, ὡς πρόσωπον καὶ χεὶρ, ὁμοιομερῆ δὲ σάρξ τις [τε] καὶ ὀστᾶ, μῦς καὶ αἷμα καὶ φλὲψ, ὅλως ὧν τὰ μόρια τοῖς ὅλοις ἐστὶ συνώνυμα*), and he distinguishes from the *ὁμοιομερὲς* on the one hand, the elementary (which, however, is reckoned with the *ὁμοιο-*

He certainly cannot have spoken of elements, for this term was first introduced into philosophy by Plato and Aristotle;[1] and the primitive substances of Anaxagoras are besides, in accordance with what we have already said, something different from the elements. His meaning is rather that the substances of which things consist, are in this, their qualitative determinateness, underived and imperishable; and since there are innumerable things, of which no two are perfectly alike, he says that there are innumerable seeds, not one of which resembles another,[2]

μερές, *sup.* p. 332, 1, and *De Cœlo*, iii. 4, 302 b, 17); and on the other, the so-called organic in the narrower sense. In this graduated scale, formed by these three kinds, he always indicates the lower as the constituent and condition of the higher; the ὁμοιομερὲς consists of the elements; the organic, of the substances of like parts; to the ὁμοιομερὲς belong flesh, bone, gold, silver, &c.; to the organic, or of unlike parts, the face, hands, &c., vide *Part. Anim.* ii. 1; *De Gen. Anim.* i. 1, 715 a, 9; *Meteor.* iv. 8, 384 a, 30; *De Cœlo*, iii. 4, 302 b, 15 sq., *Hist. Anim.* i. 1: τῶν ἐν τοῖς ζῴοις μορίων τὰ μέν ἐστιν ἀσύνθετα, ὅσα διαιρεῖται εἰς ὁμοιομερῆ, οἷον σάρκες εἰς σάρκας, τὰ δὲ σύνθετα, ὅσα εἰς ἀνομοιομερῆ, οἷον ἡ χεὶρ οὐκ εἰς χεῖρας διαιρεῖται οὐδὲ τὸ πρόσωπον εἰς πρόσωπα. Further details in Breier, *l. c.* 16 sqq.; Ideler on the *Meteor. l. c.*, where references to Theophrastus, Galen, and Plotinus are given. In the discrimination of like and unlike parts, Plato anticipated Aristotle (*Prot.* 329 D, 349 C); the expression ὁμοιομερὴς, it is true, does not occur, which is another proof of its Aristotelian origin, but the idea is there very decidedly: πάντα δὲ ταῦτα μόρια εἶναι ἀρετῆς, οὐχ ὡς τὰ τοῦ χρυσοῦ μόρια ὅμοιά ἐστιν ἀλλήλοις καὶ τῷ ὅλῳ οὗ μόριά ἐστιν, ἀλλ' ὡς τὰ τοῦ προσώπου μόρια καὶ τῷ ὅλῳ οὗ μόριά ἐστι καὶ ἀλλήλοις ἀνόμοια. The comprehensive application of this distinction, however, which we find in Aristotle, is wanting in Plato. According to what has been said, the explanation in the *Placita*, *l. c.*; Sext. *Math.* x. 318; Hippol. *Refut.* x. 7, of the Homoeomeries as ὅμοια τοῖς γεννωμένοις, is incorrect.

[1] Cf. p. 126, 1.

[2] *Fr.* 6 (4): ἡ σύμμιξις πάντων χρημάτων, τοῦ τε ἱεροῦ καὶ τοῦ ξηροῦ, καὶ τοῦ θερμοῦ καὶ τοῦ ψυχροῦ, καὶ τοῦ λαμπροῦ καὶ τοῦ ζοφεροῦ, καὶ γῆς πολλῆς ἐνούσης καὶ σπερμάτων ἀπείρων πλήθους οὐδὲν ἐοικότων ἀλλήλοις. οὐδὲ γὰρ τῶν ἄλλων (besides the substances already named, the θερμὸν, &c.) οὐδὲν ἔοικε τῷ ἑτέρῳ τὸ ἕτερον. *Fr.* 13 (6): ἕτερον οὐδέν (besides νοῦς) ἐστιν ὁμοιον οὐδενὶ ἑτέρῳ ἀπείρων ἐόντων, *Fr.* 8: ἕτερον δὲ οὐδέν ἐστιν ὅμοιον οὐδενὶ ἄλλῳ. The infinite number of primitive matters is often mentioned, *e.g.* in *Fr.* 1 (*inf.* p. 338, 1); *e.g. Fr.* 1; Arist. *Metaph.* i. 3, 7;

but they are different in shape, colour, and taste.[1] Whether this statement relates only to the various *classes* of the original substances, and to the things compounded from them, or whether the individual atoms of matter of the same class are also unlike each other, is not specified, and this question was probably not entertained by Anaxagoras; nor is there any trace of his having brought the infinitely heterogeneous character of the primitive substances into connection with more general metaphysical considerations;[2] it is most probable, therefore, that, like the Atomists, he founded it merely upon the multiplicity of phenomena as shown by experience. Among the opposite qualities of things, we find the categories of the rare and the dense, the warm and the cold, light and dark, moist and dry, brought into especial prominence;[3] but as Anaxagoras

Phys. i. 4, iii. 4; *De Cœlo*, iii. 4 (*sup.* p. 332, 1; 334, 1); *De Melisso*, c. 2, 975 b, 17, &c., vide Schaubach, 71 sq. Cicero, *Acad.* ii. 37, 118, says Anaxagoras taught: *materiam infinitam, sed ex ea particulas similes inter se minutas*, but this is only a wrong interpretation of the ὁμοιομερῆ, which he no doubt took from his Greek authority; in order to correspond with οὐδὲν ἐοικότων in *Fr.* 6 we should here read *dissimiles*. In favour of this conjecture we might quote Aug. *Civ. D.* viii. 2: *de particulis inter se dissimilibus, corpora dissimilia* (vide *infra*, Anaxagorean School; Archelaus).

[1] *Fr.* 3: τουτέων δὲ οὕτως ἐχόντων χρὴ δοκέειν ἐνεῖναι (this reading, suggested by Simpl. *De Cœlo*, 271 a, 31; *Schol.* 513 b, 45, is rightly adopted by Schaubach and Mullach: Brandis, p. 242; and Schorn, p. 21, defend ἓν εἶναι, but this makes no proper sense), πολλά τε καὶ παντοῖα ἐν πᾶσι τοῖς συγκρινομένοις (this will be further discussed later on) καὶ σπέρματα πάντων χρημάτων καὶ ἰδέας παντοίας ἔχοντα καὶ χροιὰς καὶ ἡδονάς. On the meaning of ἡδονὴ, vide Vol. I. p. 291, 2, and *supra*, p. 38, 1. Here also it may be translated 'smell,' but 'taste' is much more appropriate. It is most probable, however, that the word, like the German '*Schmecken*' in certain dialects, unites both significations without any accurate distinction.

[2] Like that of Leibnitz, ascribed to him by Ritter, *Ion. Phil.* 218; *Gesch. d. Phil.* i. 307, that everything maintains its individual character through its relation to the whole.

[3] *Fr.* 6, p. 336, 2; *Fr.* 8 (6):

supposed the particular substances to be original, without deriving them from *one* primitive matter, the perception of these universal opposites cannot have the same importance for him as for the Physicists of the ancient Ionian School or for the Pythagoreans.

All these different bodies Anaxagoras then conceives as originally mixed together, so completely and in such minute particles, that not one of them was perceptible in its individuality, and, consequently, the mixture as a whole displayed none of the definite qualities of things.[1] Even in derived things, however, he believes the separation cannot be complete, but each must contain parts of all;[2] for how could one come out of

ἀποκρίνεται ἀπό τε τοῦ ἀραιοῦ τὸ πυκνὸν, καὶ ἀπὸ τοῦ ψυχροῦ τὸ θερμὸν, καὶ ἀπὸ τοῦ ζοφεροῦ τὸ λαμπρὸν, καὶ ἀπὸ τοῦ διεροῦ τὸ ξηρόν. *Fr.* 19 (8): τὸ μὲν πυκνὸν καὶ διερὸν καὶ ψυχρὸν καὶ ζοφερὸν ἐνθάδε συνεχώρησεν, ἔνθα νῦν ἡ γῆ, τὸ δὲ ἀραιὸν καὶ τὸ θερμὸν καὶ τὸ ξηρὸν ἐξεχώρησεν εἰς τὸ πρόσω τοῦ αἰθέρος. Vide p. 339, 1. It is no doubt in reference to these and similar passages that Aristotle, *Phys.* i. 4 (*sup.* p. 334, 2), calls the ὁμοιομερῆ also ἐναντία (cf. Simpl. *Phys.* 33 b; *ibid.* 10 a).

[1] *Fr.* 1 (opening words of his treatise): ὁμοῦ πάντα χρήματα ἦν, ἄπειρα καὶ πλῆθος καὶ σμικροτῆτα, καὶ γὰρ τὸ σμικρὸν ἄπειρον ἦν καὶ πάντων ὁμοῦ ἐόντων οὐδὲν εὔδηλον (al. ἔνδηλον) ἦν ὑπὸ σμικροτῆτος. Simplicius, who reports these words in *Phys.* 33 b, repeats the first clause on p. 106 a; but what he there adds is his own emendation; Schaubach, therefore, is in error when he makes a separate fragment of it, p. 126. Similarly his *Fr.* 17 b, ap. Diog. ii. 3 (as is rightly maintained by Schorn, p. 16; Krische, *Forsch.* 64 sq.; Mullach, 248), contains not the very words of Anaxagoras, but merely an epitome of his doctrine, connected with the commencement of his treatise. On the other hand, Simpl. *De Cœlo*, 271 a, 15 (Schol. 513 b, 32), has retained the words which Mullach passes over: "ὥστε τῶν ἀποκρινομένων μὴ εἰδέναι τὸ πλῆθος μήτε λόγῳ μήτε ἔργῳ." *Fr.* 6 (4): πρὶν δὲ ἀποκριν θῆναι ταῦτα, πάντων ὁμοῦ ἐόντων, οὐδὲ χροιὴ εὔδηλος (ἔνδ.) ἦν οὐδεμίη. ἀπεκώλυε γὰρ ἡ σύμμιξις πάντων χρημάτων, etc. (vide p. 337, 1). The expression ὁμοῦ πάντα, which became a proverb among the ancients, is continually alluded to; *e.g.* by Plato, *Phædo*, 72 C; *Gorg.* 465 D; Arist. *Phys.* i. 4 (*supra*, p. 331, 4); *Metaph.* iv. 4, 1007 b, 25, x. 6, 1056 b, 28, xii. 2, 1069 b, 20 (cf. also Schwegler); Schaubach, 65 sq.; Schorn, 14 sq.

[2] *Fr.* 3, *supra*, p. 337, 1; cf. Schaubach, p. 86; *Fr.* 5, *infra*, p. 341, 3; *Fr.* 7 (5): ἐν παντὶ παντὸς μοῖρα ἔνεστι πλὴν νόου, ἔστι οἷσι δὲ καὶ νόος ἔνι. *Fr.* 8, *infra*, p. 341, 3; *Fr.* 11 (13): οὐ κεχώρισται τὰ ἐν ἑνὶ κόσμῳ οὐδὲ ἀποκέκοπται πελέκεϊ, οὔτε τὸ θερμὸν ἀπὸ τοῦ ψυχροῦ οὔτε τὸ ψυχρὸν ἀπὸ τοῦ θερμοῦ. *Fr.* 12 (6), which is referred to in Theophr. ap. Simpl. *Phys.* 35 b: ἐν παντὶ πάντα οὐδὲ χωρὶς ἔστιν εἶναι. ἀλλὰ πάντα παντὸς μοῖραν μετέχει· ὅτε δὲ τοὐλάχιστον μὴ ἔστιν εἶναι, οὐκ ἂν δύναιτο χωρισθῆναι, οὐδ' ἂν λίαν ἀφ' (*Cod.* D better: ἐφ' cf. *Fr.* 8) ἑωυτοῦ γενέσθαι, ἀλλ' ὅπερ (or ὅκως) περὶ ἀρχῆς, εἶναι (this word seems to be correct) καὶ νῦν πάντα ὁμοῦ. ἐν τῶσι δὲ πολλὰ ἔνεστι καὶ τῶν ἀποκρινομένων ἴσα πλῆθος ἐν τοῖς μείζοσί τε καὶ ἐλάττοσι ('and in all things, even those divided from the original intermixture, *i.e.* individual things, are substances of different kinds, in the least, as much as in the greatest.' The same idea is thus expressed at the commencement of the fragment: ἴσαι μοῖραί εἰσι τοῦ τε μεγάλου καὶ τοῦ σμικροῦ). This is frequently repeated by Aristotle (vide the following notes). Alex. *De Sensu*, 105 b; Lucret. i. 875 sq. &c.; vide Schaubach, 114 sq., 88, 96; Philop. *Phys.* A 10, and Simpl. *Phys.* 106 a, do not express this quite correctly when they say that in every Homœomeria all others are present.

[1] Arist. *Phys.* iii. 4, 203 a, 23: ὁ μὲν (Anaxag.) ὁτιοῦν τῶν μορίων εἶναι μίγμα ὁμοίως τῷ παντὶ διὰ τὸ ὁρᾶν ὁτιοῦν ἐξ ὁτουοῦν γιγνόμενον· ἐντεῦθεν γὰρ ἔοικε καὶ ὁμοῦ ποτὲ πάντα χρήματα φάναι εἶναι, οἷον ἥδε ἡ σὰρξ καὶ τόδε τὸ ὀστοῦν καὶ οὕτως ὁτιοῦν· καὶ πάντα ἅρα. καὶ ἅμα τοίνυν· ἀρχὴ γὰρ οὐ μόνον ἐν ἑκάστῳ ἐστὶ τῆς διακρίσεως, ἀλλὰ καὶ πάντων, etc., which Simpl. *in h. l.* p. 106 a, well explains. *Ibid.* i. 4 (after the quotation on p. 331, 4): εἰ γὰρ πᾶν μὲν τὸ γινόμενον ἀνάγκη γίνεσθαι ἢ ἐξ ὄντων ἢ ἐκ μὴ ὄντων, τούτων δὲ τὸ μὲν ἐκ μὴ ὄντων γίνεσθαι ἀδύνατον . . . τὸ λοιπὸν ἤδη συμβαίνειν ἐξ ἀνάγκης ἐνόμισαν ἐξ ὄντων μὲν καὶ ἐνυπαρχόντων γίνεσθαι, διὰ μικρότητα δὲ τῶν ὄγκων ἐξ ἀναισθήτων ἡμῖν. διό φασι πᾶν ἐν παντὶ μεμῖχθαι διότι πᾶν ἐκ παντὸς ἑώρων γινόμενον· φαίνεσθαι δὲ διαφέροντα καὶ προσαγορεύεσθαι ἕτερα ἀλλήλων ἐκ τοῦ μάλιστ' ὑπερέχοντος διὰ πλῆθος ἐν τῇ μίξει τῶν ἀπείρων· εἰλικρινῶς μὲν γὰρ ὅλον, λευκὸν ἢ μέλαν ἢ γλυκὺ ἢ σάρκα ἢ ὀστοῦν οὐκ εἶναι, ὅτου δὲ πλεῖστον ἕκαστον ἔχει, τοῦτο δοκεῖν εἶναι τὴν φύσιν τοῦ πράγματος. In the *Placita*, i. 3, 8, and Simpl. *l. c.*, the doctrine of the ὁμοιομερῆ is derived more immediately from the observation that in the nourishment of our bodies the different substances contained in the body are formed from the same means of nutrition; but that Anaxagoras was also thinking herein of the transmutation of inorganic matter is shown by his famous assertion that snow is black (that is, there is in it the dark as well the light); for the water of which it consists is black (Sext. *Pyrrh.* i. 33; Cic. *Acad.* ii. 23, 72, 31, 100, and after

another if it were not in it; and how could the transition of all things, even of the most opposite things, one into another, be explained, if they were not all of them in all?[1] If, therefore, an object appears to us to contain

some one quality to the exclusion of other qualities, this is only because more of the corresponding substance than of other substances is in it; but in truth each thing has substances of every kind in it, though it is named from those only which predominate.[1]

This theory is certainly not without difficulties. If we accept the original mixture of matter in its strict meaning, the mixed substances could not retain their particular qualities, but must combine into a homogeneous mass; we should consequently have, instead of a medley consisting of innumerable different substances, a single primitive matter, to which none of the qualities of particular substances would belong, like the Infinite of Anaximander, to which Theophrastus reduces this mixture of Anaxagoras,[2] or the Platonic matter, to which it is reduced by Aristotle.[3] If, on the other hand, the determinate qualities of the substances are to be maintained in the mixture, it becomes evident, as in the system of Empedocles, that this would be impossible unless the ultimate atoms were incapable of division or of amalgamation with others; and thus we should arrive at the indivisible bodies, which are likewise by some writers ascribed to Anaxagoras.[1] Not only, however, is he himself far from holding the theory of one uniform primitive matter,[2] but he expressly maintains that the division and increase of bodies goes on to infinity.[3]

him Lactant. *Inst.* iii. 23; Galen, *De Simpl. Medic.* ii. 1 B; xi. 461 Kühn. *Schol. in Iliad.* ii. 161). The sceptical propositions which were deduced even by Aristotle from the above theory of Anaxagoras will be discussed later on. Ritter (i. 307) explains the sentence, 'all is in all,' to mean that the *activity* of all primitive constituents is in each of them; but this seems to me compatible neither with the unanimous testimony of the ancients, nor with the spirit of Anaxagoras's doctrine.

[1] Vide in addition to the two last notes Arist. *Metaph.* i. 9, 991 a, 14, and Alex. *in h. l.* A criticism of Anaxagoras's doctrine concerning the Being of all things is to be found in Arist. *Phys.* i. 4. The distinction between matter and quality of which I have made use for the sake of clearness is, of course in this form, alien to Anaxagoras, vide Breer, p. 48.

[2] Vide *sup.*, Vol. I. p. 233, 1; 236.

[3] *Metaph.* i. 8, 989 a, 30 (cf. Bonitz, *ad h. l.*): Ἀναξαγόρας δ' εἴ τις ὑπολάβοι δύο λέγειν στοιχεῖα, μάλιστ' ἂν ὑπολάβοι κατὰ λόγον, ὃν ἐκεῖνος αὐτὸς μὲν οὐ διήρθωσεν, ἠκολούθησε μέντ' ἂν ἐξ ἀνάγκης τοῖς ἐπάγουσιν αὐτόν· . . . ὅτε γὰρ οὐθὲν ἦν ἀποκεκριμένον, δῆλον ὡς οὐθὲν ἦν ἀληθὲς εἰπεῖν κατὰ τῆς οὐσίας ἐκείνης . . . οὔτε γὰρ ποιόν τι οἷόν τε αὐτὸ εἶναι οὔτε ποσὸν οὔτε τί. τῶν γὰρ ἐν μέρει τι λεγομένων εἰδῶν ὑπῆρχεν ἓν αὐτῷ, τοῦτο δὲ ἀδύνατον μεμιγμένων γε πάντων· ἤδη γὰρ ἂν ἀπεκέκριτο . . . ἐκ δὴ τούτων συμβαίνει λέγειν αὐτῷ τὰς ἀρχὰς τό τε ἓν (τοῦτο γὰρ ἁπλοῦν καὶ ἀμιγὲς) καὶ θάτερον, οἷον τίθεμεν τὸ ἀόριστον πρὶν ὁρισθῆναι καὶ μετασχεῖν εἴδους τινός. ὥστε λέγεται μὲν οὔτ' ὀρθῶς οὔτε σαφῶς, βούλεται μέντοι τι παραπλήσιον τοῖς τε ὕστερον λέγουσι καὶ τοῖς νῦν φαινομένοις μᾶλλον.

[1] Never indeed in express words; for Simpl. *Phys.* 35 b, only says that the primitive substances do not separate *chemically*, any further; not that they cannot be divided in regard to space. And (ap. Stob. *Ecl.* i. 356) it is evidently by a mere transposition of the titles that the atoms are attributed to Anaxagoras and the homœomeries to Lencippus. Yet some of our authorities seem to look upon the homœomeries as minute bodies, *e. g.*, Cicero in the passage quoted *sup.* p. 336, 2; but especially Sextus, who repeatedly mentions Anaxagoras with the various atomists, Democritus, Epicurus, Diodorus Cronus, Heracleides and Asclepiades; and identifies his ὁμοιομερῆ with the ἄτομοι, the ἐλάχιστα καὶ ἀμερῆ σώματα, the ἄναρμοι ὄγκοι (*Pyrrh.* iii. 32; *Math.* ix. 363, x. 318). That he is here following older accounts, we have the less reason to doubt, since Hippol. *Refut.* x. 7, p. 500 D, agrees word for word with *Math.* x. 318; and in an extract from a Pythagorean, *i. e.*, a neo-Pythagorean treatise, *ib.* x. 252, we read: οἱ γὰρ ἀτόμους εἰπόντες ἢ ὁμοιομερείας ἢ ὄγκους ἢ κοινῶς νοητὰ σώματα; similarly, *ibid.* 254. Among modern writers Ritter (i. 305) is inclined to regard the primitive seeds as indivisible.

[2] This is clear from our previous citations from Aristotle. We may refer also, however, to *Phys.* iii. 4 (*sup.* p. 334, 2), where ἁφὴ designates the mechanical combination, as distinguished from the chemical (μίξις); and to the discussion, *Gen. et Corr.* i. 10, 327 b, 31 sqq., where Aristotle evidently has in view the Anaxagorean doctrine mentioned shortly before. Stobæus, *Ecl.* i. 368, is therefore right when he says: Ἀναξ. τὰς κράσεις κατὰ παράθεσιν γίνεσθαι τῶν στοιχείων.

[3] *Fr.* 5 (15): οὔτε γὰρ τοῦ σμικροῦ γέ ἐστι τό γε ἐλάχιστον, ἀλλ' ἔλασσον ἀεί· τὸ γὰρ εἶον οὐκ ἔστι τὸ μὴ οὐκ εἶναι (l. τομῇ οὐκ εἶναι. It is impossible that Being should be annihilated by infinite division, as others maintain; vide *sup.* Vol. I. 615; II. 218): ἀλλὰ

His primitive substances are, therefore, distinguished from the atoms, not merely through their qualitative determinateness, but through their divisibility. He also contradicts, quite as emphatically, the second fundamental doctrine of the Atomistic system, when he disputes, on insufficient grounds it is true, the presupposition of empty space.[1] His opinion is, that the different substances are absolutely mixed, without therefore becoming one matter; Empedocles had also maintained this in regard to the mixture of the elements in the Sphairos, perceiving, as little as Anaxagoras, the latent contradiction.

But if a world is to be formed from these substances, there must be in addition an ordering and moving power, and this, as our philosopher believes, can only lie in the thinking essence, in spirit or mind (*Geist*).[2] The reasons for this theory are not given in a general manner in the fragments of Anaxagoras's treatise; but

καὶ τοῦ μεγάλου ἀεί ἐστι μεῖζον καὶ ἴσον ἐστὶ τῷ σμικρῷ πλῆθος (increase has as many gradations as diminution; literally, there is as much great as small). πρὸς ἑωυτὸ δὲ ἕκαστόν ἐστι καὶ μέγα καὶ σμικρόν, εἰ γὰρ πᾶν ἐν παντί, καὶ πῶν ἐκ παντὸς ἐκκρίνεται, καὶ ἀπὸ τοῦ ἐλαχίστου δοκέοντος ἐκκριθήσεταί τι ἔλαττον ἐκείνου, καὶ τὸ μέγιστον δοκέον ἀπό τινος ἐξεκρίθη ἑωυτοῦ μείζονος. *Fr.* 12 (16): τοὐλάχιστον μὴ ἔστιν εἶναι.

[1] Arist. *Phys.* iv. 6, 213 a, 22: οἱ μὲν οὖν δεικνύναι πειρώμενοι ὅτι οὐκ ἔστιν [κενὸν], οὐχ ὃ βούλονται λέγειν οἱ ἄνθρωποι κενὸν, τοῦτ' ἐξελέγχουσιν, ἀλλ' ἁμαρτάνοντες λέγουσιν, ὥσπερ Ἀναξαγόρας καὶ οἱ ταὐτὸν τὸν τρόπον ἐλέγχοντες. ἐπιδεικνύουσι γὰρ ὅτι ἔστι τι ὁ ἀὴρ, στρεβλοῦντες τοὺς ἀσκοὺς καὶ δεικνύντες ὡς ἰσχυρὸς ὁ ἀὴρ, καὶ ἐναπολαμβάνοντες ἐν ταῖς κλεψύδραις (cf. also p. 135, 3). Lucret. i. 843:

nec tamen esse ulla idem [Anaxag.] *ex parte in rebus inane*
concedit, neque corporibus finem esse secandis.

[2] So I translate, with other writers, the Νοῦς of Anaxagoras, although the two expressions do not exactly coincide in their meaning: for the German language contains no more exact equivalent. The precise conception of νοῦς, indeed, can only be taken from the explanations of Anaxagoras himself.

they result from the characteristics by which mind is distinguished from the various substances. "These are three—the singleness of its nature, its power, and its knowledge. Everything else is mixed with all things, mind must be apart from all, for itself; for only if it is unmixed with other things, can it have all things in its power. It is the rarest and purest of all things; and for this reason it is in all essences entirely homogeneous; as to other things, no individual thing can be like another, because each is compounded in a particular manner out of different substances. Spirit, on the contrary, has no heterogeneous particles in it; it is, therefore, everywhere self-identical; in one substance there will be more, in another less of it; but the smaller mass of spirit is of the same nature as the greater; things are distinguished only according to the quantity, and not by the quality of the spirit inherent in them.[1]

[1] *Fr.* 8 (6): τὰ μὲν ἄλλα παντὸς μοῖραν ἔχει, νόος δέ ἐστι ἄπειρον καὶ αὐτοκρατὲς καὶ μέμικται οὐδενὶ χρήματι, ἀλλὰ μοῦνος αὐτὸς ἐφ' ἑωυτοῦ ἐστιν. εἰ μὴ γὰρ ἐφ' ἑωυτοῦ ἦν, ἀλλά τεῳ ἐμέμικτο ἄλλῳ, μετεῖχεν ἂν ἀπάντων χρημάτων, εἰ ἐμέμικτό τεῳ (ἐν παντὶ γὰρ παντὸς μοῖρα ἔνεστιν, ὥσπερ ἐν τοῖς πρόσθεν μοι λέλεκται) καὶ ἐκώλυεν ἂν αὐτὸν τὰ συμμεμιγμένα, ὥστε μηδενὸς χρήματος κρατέειν ὁμοίως, ὡς καὶ μοῦνον ἐόντα ἐφ' ἑωυτοῦ. ἔστι γὰρ λεπτότατόν τε πάντων χρημάτων καὶ καθαρώτατον . . . παντάπασι δὲ οὐδὲν ἀποκρίνεται ἕτερον ἀπὸ τοῦ ἑτέρου πλὴν νόου. νόος δὲ πᾶς ὁμοίός ἐστι καὶ ὁ μέζων καὶ ὁ ἐλάσσων. ἕτερον δὲ οὐδέν ἐστιν ὅμοιον οὐδενὶ ἄλλῳ, ἀλλ' ὅτεων (so Preller, *Hist. Phil. Gr.-Rom.* § 53, and Mullach, instead of ὅτῳ ap. Simpl. *Phys.* 33 b) πλεῖστα ἔνι, ταῦτα ἐνδηλότατα ἦν ἕκαστον ἐστὶ καὶ ἦν. The same is repeated by later writers in their own mode of expression; cf. Plato, *Crat.* 413 C: εἶναι δὲ τὸ δίκαιον ὃ λέγει Ἀναξαγόρας, νοῦν εἶναι τοῦτο· αὐτοκράτορα γὰρ αὐτὸν ὄντα καὶ οὐθενὶ μεμιγμένον πάντα φησὶν αὐτὸν κοσμεῖν τὰ πράγματα διὰ πάντων ἰόντα. Arist. *Metaph.* i. 8 (*sup.* p. 340, 3); *Phys.* viii. 5, 256 b, 24: there must be something that moves, and is itself unmoved. διὸ καὶ Ἀναξαγόρας ὀρθῶς λέγει, τὸν νοῦν ἀπαθῆ φάσκων καὶ ἀμιγῆ εἶναι, ἐπειδήπερ κινήσεως ἀρχὴν αὐτὸν ποιεῖ εἶναι· οὕτω γὰρ ἂν μόνος κινοίη ἀκίνητος ὢν καὶ κρατοίη ἀμιγὴς ὤν. *De An.* i. 2, 405 a, 13: Ἀναξαγόρας δ' . . . ἀρχὴν

To spirit must also belong absolute power over matter, the motion of which can only proceed from spirit.[1] It must, lastly, possess an unlimited knowledge,[2] for only through its knowledge is it in a position to order all things for the best:[3] *νοῦς* must, therefore, be simple, because it could not otherwise be all-mighty and omniscient, and it must be all-mighty and omniscient, that it may order the world: the fundamental idea of the doctrine of *νοῦς*, and the idea chiefly brought forward by the ancient writers,[1] lies in the conception of world-forming force. We must, therefore, assume that this was actually the point from which Anaxagoras attained his doctrine. He knew not how to explain motion, by means of matter as such;[2] and still less the regulated motion which produced a result so beautiful and so full of design as the world. He would not have recourse to an irrational Necessity, nor to Chance,[3] and so he assumed an incorporeal essence, which has moved and ordered matter: that he really had such an essence in view[4] cannot well be doubted, as his emphatic asser-

γε τὸν νοῦν τίθεται μάλιστα πάντων· μόνον γοῦν φησὶν αὐτὸν τῶν ὄντων ἁπλοῦν εἶναι καὶ ἀμιγῆ τε καὶ καθαρόν; 405 b, 19: Ἀναξ. δὲ μόνος ἀπαθῆ φησὶν εἶναι τὸν νοῦν καὶ κοινὸν οὐθὲν οὐθενὶ τῶν ἄλλων ἔχειν. τοιοῦτος δ' ὢν πῶς γνωριεῖ καὶ διὰ τίν' αἰτίαν, οὔτ' ἐκεῖνος εἴρηκεν, οὔτ' ἐκ τῶν εἰρημένων συμφανές ἐστιν. *Ibid.* iii. 4, 429 a, 18: ἀνάγκη ἄρα, ἐπεὶ πάντα νοεῖ, ἀμιγῆ εἶναι, ὥσπερ φησὶν Ἀναξαγόρας, ἵνα κρατῇ, τοῦτο δ' ἐστὶν, ἵνα γνωρίζῃ (this is Aristotle's own comment): παρεμφαινόμενον γὰρ κωλύει τὸ ἀλλότριον καὶ ἀντιφράττει. By the apathy which is attributed to *νοῦς* in some of these passages Aristotle understands its unchangeableness; for, according to *Metaph.* v. 21, he describes as *παθός* a *ποίοτης καθ' ἣν ἀλλοιοῦσθαι ἐνδέχεται* (cf. Breier, 61 sq.). This quality is a direct consequence of the simpleness of *νοῦς*; for since, according to Anaxagoras, all change consists in a change of the parts of which a thing is composed, the simple is necessarily unchangeable. Aristotle may therefore have derived this conception from the words of Anaxagoras quoted above. But Anaxagoras may perhaps himself have spoken of it. In this qualitative unchangeableness, however, there is not as yet the immovableness in space, the *ἀκίνητον* which Simpl., *Phys.* 285 a, derives from Aristotle. Further evidence repeating that of Aristotle ap. Schaubach, 104.

[1] After the words "*καὶ καθαρώτατον*," Anaxagoras continues, *Fr.* 83: *καὶ γνώμην γε περὶ παντὸς πᾶσαν ἴσχει καὶ ἰσχύει μέγιστον. ὅσα τε ψυχὴν ἔχει καὶ τὰ μέζω καὶ τὰ ἐλάσσω πάντων νόος κρατέει. καὶ τῆς περιχωρήσιος τῆς συμπάσης νόος ἐκράτησεν, ὥστε περιχωρῆσαι τὴν ἀρχήν.* Cf. note 3, and p. 343, 1. The infinity which is ascribed to it in the last passage seems chiefly to refer to the power of *νοῦς*.

[2] Vide previous note, and the following words: *καὶ τὰ συμμιγόμενά τε καὶ ἀποκρινόμενα καὶ διακρινόμενα πάντα ἔγνω νόος* (which are also quoted by Simpl. *De Cœlo*, 271 a, 20; *Schol.* 513 b, 35).

[3] Anaxagoras continues: *καὶ ὁκοῖα ἔμελλεν ἔσεσθαι καὶ ὁκοῖα ἦν καὶ ἄσσα νῦν ἔστι καὶ ὁκοῖα ἔσται, πάντα διεκόσμησε νόος· καὶ τὴν περιχώρησιν ταύτην, ἣν νῦν περιχωρέει τά τε ἄστρα καὶ ὁ ἥλιος καὶ ἡ σελήνη καὶ ὁ ἀὴρ καὶ ὁ αἰθὴρ οἱ ἀποκρινόμενοι.* Cf. what is quoted, Vol. I. 286, 1, from Diogenes.

[1] Plato, *Phædo*, 97 B (*inf.* p. 351, 1); Laws, xii. 967 B (*ibid.*); Crat. 400 A: *τί δέ; καὶ τὴν τῶν ἄλλων ἁπάντων φύσιν οὐ πιστεύεις Ἀναξαγόρᾳ νοῦν καὶ ψυχὴν εἶναι τὴν διακοσμοῦσαν καὶ ἔχουσαν;* Arist. *Metaph.* i. 4, 984 b, 15: the most ancient philosophers knew only of material causes; in course of time it became evident that to these a moving cause must be added; and at last, after prolonged enquiry, it was acknowledged that both were insufficient to explain the beauty and design of the system and course of the universe: *νοῦν δή τις εἰπὼν ἐνεῖναι καθάπερ ἐν τοῖς ζῴοις καὶ ἐν τῇ φύσει τὸν αἴτιον τοῦ κόσμου καὶ τῆς τάξεως πάσης, οἷον νήφων ἐφάνη παρ' εἰκῆ λέγοντας τοὺς πρότερον.* Plut. *Pericl.* c. 4: *τοῖς ὅλοις πρῶτος οὐ τύχην οὐδ' ἀνάγκην, διακοσμήσεως ἀρχὴν, ἀλλὰ νοῦν ἐπέστησε καθαρὸν καὶ ἄκρατον, ἐμμεμιγμένον τοῖς ἄλλοις, ἀποκρίνοντα τὰς ὁμοιομερείας.* Further details p. 346 sq., and in Schaubach, 152 sqq.

[2] This is clear from the statement to be mentioned later on, that the primitive mixture before the working of mind upon it had been unmoved: for it is in that primitive state that the essence of the corporeal presents itself purely and absolutely. What Aristotle quotes (*Phys.* iii. 5. 205 b, 1) concerning the repose of the infinite does not belong here.

[3] That he explicitly repudiated both is asserted by later writers only: Alex. Aphr. *De An.* 161 a, m (*De Fato*, c. 2): *λέγει γὰρ (Ἀναξ.) μηδὲν τῶν γινομένων γίνεσθαι καθ' εἱμαρμένην, ἀλλ' εἶναι κενὸν τοῦτο τοὔνομα.* Plut. *Plac.* i. 29, 5 (Stob. *Ecl.* i. 218; Theodoret, *Gr. Aff. Cur.* vi. p. 87): Ἀναξαγ. *καὶ οἱ Στωϊκοὶ ἄδηλον αἰτίαν ἀνθρωπίνῳ λογισμῷ (τὴν τύχην).* In point of fact, however, the statement contains nothing improbable, even though the words employed by our authorities may not be those of Anaxagoras. Tzetz. *in Il.* p. 67, cannot be quoted against it.

[4] As is asserted by Philop. *De An.* c, 7, 9; Procl. *in Parm.* vi. 217 Cous.; and is presupposed by all philosophers from Plato onwards, according to their idea of *νοῦς*. Vide especially Aristotle, p. 343.

tion of the pre-eminence of mind above all else can rest on no other basis; and though it may not be wholly due to the inadequacy of his language, that the conception of the Incorporeal comes out vaguely in his description[1]—though he may actually have regarded spirit as a more subtle kind of matter, entering into things in extension[2]—this does not interfere with his general purpose.[3] Our experience affords no other analogy for incorporeality and for design towards an end than that of the human spirit; and it is, therefore, quite natural that Anaxagoras should define his moving cause, according to this analogy, as thinking. But because he primarily required spirit only for the purpose of explaining nature, this new principle is neither purely apprehended, nor strictly and logically carried out. On the one side, spirit is described as a nature that knows and exists for itself,[4] and thus we might suppose we had reached the full conception of spiritual personality, of free, self-conscious subjectivity; on the other hand, it is also spoken of as if it were an impersonal matter, or an impersonal force; it is called the subtlest of all

[1] Vide *infra* and Zévort, p. 84 sqq.

[2] The proof of this lies partly in the words λεπτότατον πάντων χρημάτων (*Fr.* 8, p. 343), but especially in what will immediately be observed on the existence of νοῦς in things.

[3] The same half-materialistic presentations of νοῦς are also to be found among philosophers who in theory maintain the opposition of mind and matter most emphatically. Aristotle, for instance, when he conceives the terrestrial sphere as surrounded by the Deity, can scarcely be considered free from them. When, therefore, Kern, *Ueb. Xenophanes*, p. 21, finds no proof that Anaxagoras taught an immaterial principle unextended in space, this does not touch the matter. He probably did not teach it in so many words, but his design is nevertheless to distinguish νοῦς in its nature from all composite things.

[4] μοῦνος ἐφ' ἑωυτοῦ ἐστι (*Fr.* 8),

things,[1] it is said that parts of it are in particular things,[2] and the amount given is designated by the expressions 'greater and lesser spirit,'[3] while no specific distinction is observed between the lowest stages of life and the highest stages of rationality.[4] Though we ought not to conclude from this that Anaxagoras of set purpose wished to represent spirit as impersonal, these traits will prove that he had not as yet the pure idea of personality, nor did he apply it to spirit; for an essence, parts of which inhere in other essences as their soul, cannot with any propriety be called a personality; and when we further observe that precisely the distinctive tokens of personal life, self-consciousness and free self-determination, are nowhere ascribed to *νοῦς*,[5] that its existence for self (*Fürsichsein*) primarily relates only to the singleness of its nature, and would hold good just as much of any substance with which no other substances are mingled;[6] finally, that knowledge was not unfrequently attributed by the ancient philosophers to essences which were indeed temporarily per-

[1] *Sup.* 346, 2.

[2] *Fr.* 7, where also the second νόος can only be understood of a μοῖρα νόου. Arist. *De An.* i. 2, 404 b, 1: Ἀναξαγόρας δ' ἥττον διασαφεῖ περὶ αὐτῶν (on the nature of the soul). πολλαχοῦ μὲν γὰρ τὸ αἴτιον τοῦ καλῶς καὶ ὀρθῶς τὸν νοῦν λέγει, ἑτέρωθι δὲ τοῦτον εἶναι τὴν ψυχήν· ἐν ἅπασι γὰρ αὐτὸν ὑπάρχειν τοῖς ζῴοις, καὶ μεγάλοις καὶ μικροῖς καὶ τιμίοις καὶ ἀτιμοτέροις. Cf. what was quoted from Diogenes, Vol. I. p. 287, 1, 7.

[3] *Fr.* 8; cf. p. 343.

[4] Cf. *sup.* note 2.

[5] For αὐτοκρατής, *Fr.* 8, and the similar expressions of the various accounts (*sup.* p. 343) describe, indeed, like the one quoted p. 344, 1, absolute power over matter, but not freewill; and so the knowledge of Νοῦς chiefly relates to its knowledge of primitive substances, and what is to be formed out of them. Whether Νοῦς is a self-conscious Ego, and whether its action proceeds from free will, Anaxagoras probably never thought of asking, because he only required Νοῦς as world-forming force.

[6] As is clear from the connection of *Fr.* 8 just quoted.

sonified by them, but were not seriously regarded as persons, as individuals;[1] when all this is borne in mind, the personality of the Anaxagorean spirit becomes very uncertain. The truth probably is, that Anaxagoras defined, indeed, his conception of *νοῦς* according to the analogy of the human mind, and in attributing thought to it, ascribed to it a predicate which strictly belongs only to a personal being; but that he never consciously proposed to himself the question of its personality, and, in consequence, combined with these personal conceptions others which were taken from the analogy of impersonal forces and substances. Were it even true, as later writers[1] maintain, probably without foundation,[2] that he describes *νοῦς* as Deity, his theory would be only on one side theistic;[3] on the other it is naturalistic, and its peculiar character is shown in this: that spirit, in spite of its distinction in principle from the corporeal, is also conceived as a force of nature, and under such conditions as could apply neither to a personal nor to a purely spiritual nature.[3]

[1] Thus Heracleitus, and afterwards the Stoics, regarded fire as at the same time the world-intelligence; Heracleitus represents man as inhaling reason from the surrounding air; with Parmenides thought is an essential predicate of Being, of the universal material substance; Philolaus describes number as a thinking nature (*sup.* Vol. I. p. 371, 2), and Diogenes (Vol. I. p. 287, 7) believes he can transfer all that Anaxagoras had said of mind simply to the air. Even Plato may be mentioned in this connection, for his world-soul is conceived according to the analogy of human personality, but with a very uncertain personality of its own; and at the beginning of the *Critias*, he invokes Cosmos, the derived god, to impart to the speaker true knowledge. Wirth (*d. Idee Gottes*, 170) objects to the two first of these analogies, that Heracleitus and the Eleatics, in the conceptions just referred to, transcend their own principles; but our previous exposition will serve to show how untrue this is. He also discovers, in my view of Diogenes, merely a proof of the bias, which will see nothing but Pantheism everywhere in philosophy (as if the doctrine of Diogenes would not have been truly pantheistic, and in that case only, if he had made the personal Deity into the substance of all things). For my part, I do not see what we are to understand by a person, if the air of Diogenes, the matter from which all things are formed by condensation and rarefaction, can be so regarded. That it must be a person, because 'the self-conscious principle in man is air,' is more than a hazardous inference. In that case, the air of Anaximenes, the warm vapour of Heracleitus, the round atoms of Democritus and Epicurus, the corporeal in the doctrine of Parmenides and the blood in that of Empedocles—would each be a self-conscious personality. It by no means follows from what I have said that Diogenes was 'not in earnest' when he asserted that the air has knowledge; he is certainly in earnest, but is still so far from clear conceptions on the nature of knowledge, that he supposes that this quality, just as much as warmth, extension, etc., may be attributed to lifeless, impersonal matter. But if matter is thereby necessarily personified, there is still a great difference between the involuntary personification of that which is in itself impersonal, and the conscious setting up of a personal principle. Still less can be proved by the mythical personification of natural objects, which Wirth also quotes against me: if the sea was personified as Oceanus and the air as Here, these gods were discriminated from the elementary substances by their human forms. Water *as such*, air *as such*, were never regarded as persons, either by Homer or Hesiod.

[1] Cic. *Acad.* ii. 37, 118: *in ordinem adductas* [*particulas*] *a mente divina*. Sext. *Math.* ix. 6: *νοῦν, ὅς ἐστι κατ' αὐτὸν θεός*. Stob. *Ecl.* i. 56; Themist. *Orat.* xxvi. 317 c; Schaubach, 152 sq.

[2] For not merely the fragments, but the majority of our testimonies are silent on this point; and those which allude to it are not very trustworthy about such things. The question, however, is not very important, since Νοῦς, in any case, does, in fact, correspond with Deity.

[3] Wirth says, *l. c.*, that 'in the doctrine of Anaxagoras there is a *theistic element*.' I have not the least ground for denying this, nor have I denied it, as he supposes, in the *Jahrb. d. Gegenw.* 1844, p. 826. All that I maintained, and do maintain, is this: that the breach between spirit and nature, though begun by Anaxagoras, was not completed, that spirit is not actually conceived as a subject independent of nature, because though, on the one hand, it is represented as incorporeal and thinking; on the other, it is regarded as an element divided among individual natures, and working after the manner of a physical force. Krische, *Forsch.* 65 sq., expresses himself quite in accordance with this view. Gladisch, however (*Anax. u. d. Isr.* 56; xxi. *et pass.*), and F. Hoffmann (*Ueber die Gottesidee des Anax. Socr. u. Platon*, Würzb. 1860. *Der dualistische Theismus des Anax. und der Monotheismus d. Sokr. u. Pl.*; in Eichte's *Zeitschrift f. Philos N. F.* xl. 1862, p. 2 sqq.) have attempted to prove that our philosopher's doctrine of God was pure Theism. But neither of these writers has shown how the pure and logically developed concept of personality

This will become still clearer when we perceive that even the statements concerning the efficient activity of spirit are chargeable with the same contradiction. So far as spirit is to be an intelligent essence which, out of its knowledge and according to its predetermined purpose,[1] has formed the world, the result must have been for Anaxagoras a teleological view of nature; for as the

is compatible with the statement that Νοῦς is divided among all living creatures, and that the various classes of these creatures are distinguished indeed by the quantity, but not by the quality of this νοῦς inhering in them. Hoffmann, however, expressly allows that the two things are not compatible (*F. Zeitschrift*, p. 25); but when he deduces from this that we cannot 'seriously ascribe to Anaxagoras the doctrine that Νοῦς is a essence which has parts and can be divided, so that parts of it abide in other natures as their soul,' this is (if we may say so without offence) to turn the question upside down. What may be ascribed to Anaxagoras we can only judge of from his own statements, which, in this case, are explicit enough; and if these statements are not altogether compatible with each other, we can only conclude that Anaxagoras was not quite clear about the consequences of his own point of view. All that I maintain is this: I do not deny that Anaxagoras conceived his Νοῦς as an intelligent nature, working according to design; but I do deny that he combined with the conception of such a nature, all the presentations which *we* are accustomed to connect with the idea of a personal being, and excluded all those which *we* exclude from that idea; and that he *may* have proceeded in this way (not, as Hoffm. *F. Zeitschrift*, 26, says, '*must* have done so), I conclude, among other reasons, from the circumstance, that many noteworthy philosophers have actually taken this course. To find fault with this opinion of mine on the score of 'Halbheit' (*l. c.* 21) is strange; if I say that Anaxagoras remained half-way, this is something different from *my* remaining half-way. But my adversary has not sufficiently discriminated the historical question: how *did* Anaxagoras conceive the Deity as νοῦς? from the dogmatic question, how *ought* we to conceive it? Whereas it is quite immaterial for our conception of the personality of God, whether Anaxagoras and other ancient philosophers had or had not this conception, and whether they apprehended or developed it more or less purely or imperfectly.

[1] This is indicated in the words (p. 344, 3): ὁκοῖα ἐμελλεν ἔσεσθαι διεκόσμησε νόος. Anaxagoras perhaps also spoke of mind as sustaining the universe, cf. Suid. Ἀναξαγ. (Also ap. *Harpokration*, Cedren. *Chron.* 158 C): νοῦν πάντων φρουρὸν εἶπεν. But it does not follow that he himself employed the expression, φρουρός.

spirit itself is conceived after the analogy of the human spirit, so must its operation be conceived; its activity is the realisation of its thoughts through the medium of matter—activity working to an end. But the physical interest is much too strong with our philosopher to allow of his being really satisfied with the teleological view of things; as the idea of spirit has been in the first instance forced upon him by the inadequacy of the ordinary theories, so he makes use of it only in cases where he cannot discover the physical causes of a phenomenon. As soon as ever there is a prospect of arriving at a materialistic explanation, he gives it the preference; spirit divides matter, but it does this in a mechanical manner, by the rotatory movement it produces; all things are then developed according to mechanical laws from the first motion, and spirit only enters as a *Deus ex machina* wherever this mechanical explanation fails.[1] Still less, even when it is present, is any special

[1] Plato, *Phædo*, 97 B: ἀλλ' ἀκουσας μέν ποτε ἐκ βιβλίου τινὸς, ὡς ἔφη Ἀναξαγόρου, ἀναγιγνώσκοντος καὶ λέγοντος, ὡς ἄρα νοῦς ἐστὶν ὁ διακοσμῶν τε καὶ πάντων αἴτιος, ταύτῃ δὴ τῇ αἰτίᾳ ἥσθην τε καὶ ἔδοξέ μοι τρόπον τινὰ εὖ ἔχειν τὸ τὸν νοῦν εἶναι πάντων αἴτιον, καὶ ἠγησάμην, εἰ τοῦθ' οὕτως ἔχει, τόν γε νοῦν κοσμοῦντα πάντα καὶ ἕκαστον τιθέναι ταύτῃ ὅπῃ ἂν βέλτιστα ἔχῃ· εἰ οὖν τις βούλοιτο τὴν αἰτίαν εὑρεῖν περὶ ἑκάστου, ὅπῃ γίγνεται ἢ ἀπόλλυται ἢ ἔστι, τοῦτο δεῖν περὶ αὐτοῦ εὑρεῖν, ὅπῃ βέλτιστον αὐτῷ ἐστὶν ἢ εἶναι ἢ ἄλλο ὁτιοῦν πάσχειν ἢ ποιεῖν, etc.; but when I came to know his treatise better (98 B), ἀπὸ δὴ θαυμαστῆς ἐλπίδος, ὦ ἑταῖρε, ᾠχόμην φερόμενος, ἐπειδὴ προϊὼν καὶ ἀναγιγνώσκων ὁρῶ ἄνδρα τῷ μὲν νῷ οὐδὲν χρώμενον οὐδέ τινας αἰτίας ἐπαιτιώμενον εἰς τὸ διακοσμεῖν τὰ πράγματα, ἀέρας δὲ καὶ αἰθέρας καὶ ὕδατα αἰτιώμενον καὶ ἄλλα πολλὰ καὶ ἄτοπα, etc.; *Laws*, xii. 967 B: καί τινες ἐτόλμων τοῦτό γε αὐτὸ παρακινδυνεύειν καὶ τότε, λέγοντες ὡς νοῦς εἴη ὁ διακεκοσμηκὼς πάνθ' ὅσα κατ' οὐρανόν. οἱ δὲ αὐτοὶ πάλιν ἁμαρτάνοντες ψυχῆς φύσεως . . . ἅπανθ' ὡς εἰπεῖν ἕπος ἀνέτρεψαν πάλιν, ἑαυτοὺς δὲ πολὺ μᾶλλον· τὰ γὰρ δὴ πρὸ τῶν ὀμμάτων πάντα αὐτοῖς ἐφάνη τὰ κατ' οὐρανὸν φερόμενα μεστὰ εἶναι λίθων καὶ γῆς καὶ πολλῶν ἄλλων ἀψύχων σωμάτων διανεμόντων τὰς αἰτίας παντὸς τοῦ κόσμου. Aristotle's language is quite in accordance with this. On

rôle assigned to it in the world. Anaxagoras not only is silent as to any personal interference of the Deity in the course of the universe, but we find in him no trace[1] even of the thought of a Divine government—

the one hand he acknowledges that an essentially higher principle was discovered in νοῦς, that in it all things are referred to the Good, or final cause, but on the other he complains, partly in the words of the *Phædo*, that in the actual development of the system the mechanical causes are brought forward and mind is only introduced as a stop-gap. Besides the quotations on p. 344, 4; 346, 6, vide *Metaph.* i. 3, 984 b, 20: οἱ μὲν οὖν οὕτως ὑπολαμβάνοντες (Anax.) ἅμα τοῦ καλῶς τὴν αἰτίαν ἀρχὴν εἶναι τῶν ὄντων ἔθεσαν καὶ τὴν τοιαύτην ὅθεν ἡ κίνησις ὑπάρχει τοῖς οὖσιν (cf. c. 6 end.); xii. 10, 1075 b, 8: Ἀναξαγόρας δὲ ὡς κινοῦν τὸ ἀγαθὸν ἀρχήν· ὁ γὰρ νοῦς κινεῖ, ἀλλὰ κινεῖ ἕνεκά τινος; xiv. 4, 1091 b, 10: τὸ γεννῆσαν πρῶτον ἄριστον τιθέασι . . . Ἐμπεδοκλῆς τε καὶ Ἀναξαγόρας. But on the contrary he says, in chap. i. 4, 985 a, 18: the ancient philosophers have no clear consciousness of the import of their principles—Ἀναξαγόρας τε γὰρ μηχανῇ χρῆται τῷ νῷ πρὸς τὴν κοσμοποιΐαν, καὶ ὅταν ἀπορήσῃ, διὰ τίν' αἰτίαν ἐξ ἀνάγκης ἐστί, τότε παρέλκει αὐτόν, ἐν δὲ τοῖς ἄλλοις πάντα μᾶλλον αἰτιᾶται τῶν γιγνομένων ἢ νοῦν. C. 7, 988 b, 6: τὸ δ' οὗ ἕνεκα αἱ πράξεις καὶ αἱ μεταβολαὶ καὶ αἱ κινήσεις, τρόπον μέν τινα λέγουσιν αἴτιον, οὕτω (as final cause) δ' οὐ λέγουσιν, οὐδ' ὅπερ πέψυκεν. οἱ μὲν γὰρ νοῦν λέγοντες ἢ φιλίαν ὡς ἀγαθὸν μέν τι ταύτας τὰς αἰτίας τιθέασιν, οὐ μὴν ὡς ἕνεκά γε τούτων ἢ ὂν ἢ γιγνόμενόν τι τῶν ὄντων, ἀλλ' ὡς ἀπὸ τούτων τὰς κινήσεις οὔσας λέγουσιν. Later writers who repeat the judgment of Plato and Aristotle are cited by Schaubach, p. 105 sq. In this place it will suffice to quote Simpl. *Phys.* 73 b: καὶ Ἀναξ. δὲ τὸν νοῦν ἐάσας, ὅς φησιν Εὔδημος, καὶ αὐτοματίζων τὰ πολλὰ συνίστησι.

[1] The *Placita* attributed to Plutarch, i. 7, 5 (also ap. Eus. *Pr. Ev.* xiv. 16, 2), say, indeed: ὁ δ' Ἀναξαγόρας φησὶν, ὡς εἰστήκει κατ' ἀρχὰς τὰ σώματα νοῦς [δὲ] αὐτὰ διεκόσμησε θεοῦ καὶ τὰς γενέσεις τῶν ὅλων ἐποίησεν, and after mentioning the similar exposition of Plato (in the *Timæus*) it is added: κοινῶς οὖν ἁμαρτάνουσιν ἀμφότεροι, ὅτι τὸν θεὸν ἐποίησαν ἐπιστρεφόμενον τῶν ἀνθρωπίνων, ἢ καὶ τούτου χάριν τὸν κόσμον κατασκευάζοντα· τὸ γὰρ μακάριον καὶ ἄφθαρτον ζῷον . . . ὅλον ὂν περὶ τὴν συνοχὴν τῆς ἰδίας εὐδαιμονίας καὶ ἀφθαρσίας ἀνεπιστρεφές ἐστι τῶν ἀνθρωπίνων πραγμάτων· κακοδαίμων δ' ἂν εἴη ἐργάτου δίκην καὶ τέκτονος ἀχθοφορῶν καὶ μεριμνῶν εἰς τὴν τοῦ κόσμου κατασκευήν. But to see in this passage 'an explicit and clear testimony of Plutarch, which makes all further enquiry superfluous,' to believe that 'Plutarch ascribes so definitely to Anaxagoras the superintending care of νοῦς, even in human affairs, that he even makes it a ground of censure to this philosopher' (Gladisch, *Anax. d. u. Isr.* 123; cf. 165), requires all the prejudice and hastiness into which the lively desire

of that belief in Providence which had such great importance with philosophers like Socrates, Plato, and

to substantiate a favourite opinion often betrays writers not otherwise deficient in learning or in the art of methodical enquiry. Gladisch knows as well as any of us that the *Placita*, in their present form, are not the work of Plutarch, but a much later compilation, patched together from various, and sometimes very doubtful, sources; besides, he cannot be so unacquainted with Plutarch's theological views as not to admit that it would be impossible for him to have raised such objections against the belief in Providence, and especially against Plato's conception of it; he can scarcely dispute that the Epicurean origin of this belief appears absolutely certain at the first glance (cf. with the passage we are considering the quotations in Part III. a, 370–390, 2nd ed.); and yet he speaks as though we were here concerned with the undoubted testimony of *Plutarch*. The supposed Plutarch does not even say what Gladisch finds in him: he only gives as Anaxagoras's own statement the same passage as all other writers, viz., that the Divine Nous formed the world: when he attributes to Anaxagoras the belief in a Divine Providence over men, this is simply an inference of the Epicurean who was enabled by it to apply the usual objections of his school against that belief, 'to the Anaxagorean doctrine. This inference, however, has as historical evidence no higher value than, for example, the equally Epicurean exposition in Cic. *N. D.* i. 11, 26 (cf. Krische, *Forsch.* 66), according to which νοῦς is a ζῷον endowed with sensation and motion. When Gladisch further (p. 100 sq., 118) puts into the mouth of our philosopher the propositions that there is nothing out of order and irrational in nature; that νοῦς as the arranger of the universe is also the author of all which is usually regarded as evil,—this is more than can be proved. Arist. *Metaph.* xii. 10, 1075 b, 10, blames Anaxagoras indeed because τὸ ἐναντίον μὴ ποιῆσαι τῷ ἀγαθῷ καὶ τῷ νῷ, but we ought not to conclude from this that he referred evil also to the causality of νοῦς, for it is likewise possible that he never attempted to solve the problem of the existence of evil; and *Metaph.* i. 4, 984 b, 8 sqq., 32 sq., unmistakeably favours the latter view. The passage in Alex. *ad. Metaph.* 4 b, 4; Bon. 553 b, 1 Br.: Ἀναξαγόρᾳ δὲ ὁ νοῦς τοῦ εὖ τε καὶ κακῶς μόνον ἦν ποιητικὸν αἴτιον, ὡς εἴρηκεν (sc. Ἀριστοτ.), would in no case prove much, for it would merely be an inference, and by no means a necessary inference, from the principles of Anaxagoras (for Anaxagoras might equally well have derived evil from matter, as Plato did). It is, however, manifest (as even Gladisch inclines to admit) that we ought here to read "καλῶς" for "κακῶς." Arist. *Metaph* i. 3, 984 b, 10, and Alexander himself, p. 25, 22 Bon. 537 a, 30 Br. describe the νοῦς of Anaxagoras as the cause of the εὖ καὶ καλῶς. Still less can be inferred from Themist. *Phys.* 58 b (413 Sp.): 'According to Anaxagoras nothing irrational and unordered finds place in nature.' He is rather in this passage opposing Anaxagoras from his own standpoint.

the Stoics. Whether this be matter for praise or blame, in any case it proves that the inferences which would result from the conception of an omniscient framer of the world, ordering all things according to set purpose, were very imperfectly drawn by him; that he consequently cannot have apprehended this conception itself purely, or made clear to himself all that it involves. Anaxagoras's doctrine of spirit is thus, on the one side, the point to which the realism of the older natural philosophy leads up beyond itself; but on the other side, the doctrine still rests to some extent on the ground of this realism. The cause of natural Becoming and Motion is sought for, and what the philosopher finds is spirit; but because he has sought this higher principle primarily for the purpose of explaining nature, he can only employ it imperfectly; the teleological view of nature is immediately changed into the mechanical view. Anaxagoras has, as Aristotle says, the final cause, and he uses it merely as motive force.

2. *Origin and System of the Universe.*

In order to form a world out of the original chaos, Mind first produced at one point of this mass a rotatory motion, which, immediately spreading, involved in its action an ever-increasing portion of the mass, and extended itself further and further.[1] This motion,

[1] *Fr.* 8 (*sup.* p. 343, 1): καὶ τῆς περιχωρήσιος τῆς συμπάσης νοῦς ἐκράτησεν, ὥστε περιχωρῆσαι τὴν ἀρχήν· καὶ πρῶτον ἀπὸ τοῦ σμικροῦ ἤρξατο περιχωρῆσαι ἔπειτε πλέον περιεχώρεε, καὶ περιχωρήσει ἐπὶ πλέον, note 3. In this description, Anaxagoras seems to have primarily in view the idea of a fluid mass, into which, a body being cast, there arise whirling eddies, spreading over further and further.

through its extraordinary swiftness, effected a division of the substances, which were in the first instance separated into two great masses,[1] according to the most universal distinctions of dense and rare, cold and warm, dark and bright, moist and dry;[2] and the reciprocal action of these is of decisive importance in the further conformation of things. Anaxagoras called them Aether and Air, including under Aether all that is warm, light and rare; and under Air all that is cold, dark and dense.[3] The dense and moist were driven by the rotation into the centre, and the rare and warm without, just as in all eddies of water or air the

Perhaps it was some expression of this kind which gave rise to the erroneous statement of Plotinus, *Enn.* ii. 4, 7, that the μῖγμα is water.

[1] For the warm and dry are with Anaxagoras, as with the other physicists, identical with the rare and light, vide *infra*, note 3.

[2] *Fr.* 18 (7): ἐπεὶ ἤρξατο ὁ νόος κινέειν, ἀπὸ τοῦ κινεομένου παντὸς ἀπεκρίνετο, καὶ ὅσον ἐκίνησεν ὁ νόος πᾶν τοῦτο διεκρίθη· κινεομένων δὲ καὶ διακρινομένων ἡ περιχώρησις πολλῷ μᾶλλον ἐποίεε διακρίνεσθαι. *Fr.* 21 (11): οὕτω τουτέων περιχωρεόντων τε καὶ ἀποκρινομένων ὑπὸ βίης τε καὶ ταχυτῆτος· βίην δὲ ἡ ταχυτὴς ποιέει, ἡ δὲ ταχυτὴς αὐτέων οὐδενὶ ἔοικε χρήματι τὴν ταχυτῆτα τῶν νῦν ἐόντων χρημάτων ἐν ἀνθρώποισι, ἀλλὰ πάντως, πολλαπλασίως ταχύ ἐστι. *Fr.* 8, 19, vide p. 337, 3.

[3] This theory, already advanced by Ritter (*Ion. Phil.* 266, *Gesch. d. Phil.* i. 321) and Zévort, 105 sq., is based upon the following passages. *Anax. Fr.* 1 (after what is quoted, p. 338, 1): πάντα γὰρ ἀὴρ τε καὶ αἰθὴρ κατεῖχεν, ἀμφότερα ἄπειρα ἐόντα. ταῦτα γὰρ μέγιστα ἔνεστιν ἐν τοῖσι σύμπασι καὶ πληθεῖ καὶ μεγάθεϊ. *Fr.* 2: καὶ γὰρ ὁ ἀὴρ καὶ ὁ αἰθὴρ ἀποκρίνεται ἀπὸ τοῦ περιέχοντος τοῦ πολλοῦ. καὶ τόγε περιέχον ἄπειρόν ἐστι τὸ πλῆθος. Arist. *De Cœlo*, iii. 3 (*sup.* p. 332, 1): ἀέρα δὲ καὶ πῦρ μῖγμα τούτων καὶ τῶν ἄλλων σπερμάτων πάντων . . . δ.ὸ καὶ γίγνεσθαι πάντ' ἐκ τούτων (air and fire)· τὸ γὰρ πῦρ καὶ τὸν αἰθέρα προσαγορεύει ταὐτό. Theophr. *De Sensu*, 59: ὅτι τὸ μὲν μανὸν καὶ λεπτὸν θερμὸν τὸ δὲ πυκνὸν καὶ παχὺ ψυχρόν. ὥσπερ Ἀναξ. διαιρεῖ τὸν ἀέρα καὶ τὸν αἰθέρα. That Anaxagoras understood by æther the fiery element, is also confirmed by Arist. *De Cœlo*, i. 3, 270 b, 24; *Meteor.* i. 3, 339 b, 21; ii. 9, 369 b, 14. Similarly, Plut. *Plac.* ii. 13, 3; Simpl. *De Cœlo*, 55 a, 8, 268 b, 43 (*Schol.* 475 b, 32, 513 a, 39); Alex. *Meteorol.* 73 a, 111 b; Olympiodorus, *Meteorol.* 6 a (*Arist. Meteor.* ed. Id. i. 140), where we read in addition that Anaxagoras derived αἰθὴρ from αἴθω.

heavier elements are carried towards the centre.[1] From the lower mass of vapour water was at length secreted, and from water earth; from earth stone is formed through the action of cold.[2] Detached masses of stone, torn away from the earth by the force of the revolution, and having become incandescent in the æther, illumine the earth; these are the stars, including the sun.[3] By means of the sun's heat the earth, which at first consisted of slime and mud,[4] was dried

[1] *Fr.* 19, vide *sup.* p. 337, 3, cf. Arist. *De Cœlo*, ii. 13, 295 a, 9; *Meteor.* ii. 7; Simpl. *Phys.* 87 b; *De Cœlo*, 235 b, 31 sqq. The words of Anaxagoras are followed by Hippol. *Refut.* i. 8, and less accurately by Diog. ii. 8.

[2] *Fr.* 20 (9): ἀπὸ τουτέων ἀποκρινομένων συμπήγνυται γῆ· ἐκ μὲν γὰρ τῶν νεφελέων ὕδωρ ἀποκρίνεται, ἐκ δὲ τοῦ ὕδατος γῆ· ἐκ δὲ τῆς γῆς λίθοι συμπήγνυνται ὑπὸ τοῦ ψυχροῦ. The doctrine of the elements cannot be ascribed to Anaxagoras, either on the strength of this passage, or on that of the Aristotelian texts quoted p. 332, 1; 334, 2. In his system it would have had quite another meaning from that of Empedocles; cf. the previous note, and Simpl *De Cœlo*, 269 b, 14, 41 (*Schol.* 513 b, 1), 281 a, 4.

[3] Plut. *Lysand.* c. 12: εἶναι δὲ καὶ τῶν ἄστρων ἕκαστον οὐκ ἐν ᾧ πέφυκε χώρᾳ· λιθώδη γὰρ ὄντα βαρέα λάμπειν μὲν ἀντερείσει καὶ περικλάσει τοῦ αἰθέρος, ἕλκεσθαι δὲ ὑπὸ βίας σφιγγόμενον [-α] δίνῃ καὶ τάχει τῆς περιφορᾶς, ὥς που καὶ τὸ πρῶτον ἐκρατήθη μὴ πεσεῖν δεῦρο, τῶν ψυχρῶν καὶ βαρέων ἀποκρινομένων τοῦ παντός. *Plac.* ii. 13, 3: Ἀναξαγ. τὸν περικείμενον αἰθέρα πύρινον μὲν εἶναι κατὰ τὴν οὐσίαν. τῇ δ' εὐτονίᾳ τῆς περιδινήσεως ἀναρπάζοντα πέτρους ἐκ τῆς γῆς καὶ καταφλέξαντα τούτους ἠστερικέναι. Hippol. *l. c.*: ἥλιον δὲ καὶ σελήνην καὶ πάντα τὰ ἄστρα λίθους εἶναι ἐμπύρους συμπεριληφθέντας ὑπὸ τῆς τοῦ αἰθέρος περιφορᾶς. That Anaxagoras believed the stars to be stones, and the sun in particular to be a red-hot mass (λίθος διάπυρος, μύδρος διάπυρος), we are repeatedly informed. Cf. (besides many other passages quoted by Schaubach, 139s qq., 159) Plato, *Apol.* 26 D, *Laws* xii. 967 C.; Xenoph. *Mem.* iv. 7, 6 sq. According to Diog. ii. 11 sq., he appealed in support of this opinion to the phenomenon of meteoric stones. What is said in the *Placita*, as to the terrestrial origin of these stony masses, is confirmed by the passages in Plutarch; and not only so, but from the whole interconnection of his doctrines, it is impossible to see how he could have imagined stones arose except from the earth, or at any rate in the terrestrial sphere. Cf. the last two notes. The sun and moon must have arisen at the same time (Eudem. ap. Procl. *in Tim.* 258 C).

[4] Cf. the following note and Tzetz. *in Il.* p. 42.

up, and the water that was left became, in consequence of evaporation, salt and bitter.[1]

This cosmogony labours under the same difficulty that we find in all attempts to explain the origin of the universe. If on the one hand the substance of the world, and on the other the world-forming force, is eternal, how comes it that the world itself, at a definite moment of time, began to exist? We have no right, however, on that account to explain away the statements of our philosopher, which throughout presuppose a beginning of motion in time; or to adopt the opinion of Simplicius,[2] that Anaxagoras spoke of a beginning of motion merely for the sake of argument, without really believing in it.[3] He himself adopts the same tone in speaking of the beginning of motion and the original intermixture as in treating of other subjects, and he nowhere implies by a single word that what he says has any other than the obvious sense. Aristotle[4] and Eudemus[5] both so understood him; and, indeed, it is impossible to see how he could have spoken of a con-

[1] Diog. ii. 8; Plut. *Plac.* iii. 16, 2; Hippol. *Refut.* i. 8. Alex. *Meteor.* 91 b, ascribes to Anaxagoras the statement (Arist. *Meteor.* ii. 1, 353 b, 13) that the taste of sea-water is caused by the admixture of certain earthy ingredients; only this admixture is not brought about (as Alexander seems first to have concluded from the passage in Aristotle) by percolation through the earth, but results from the original constitution of the fluid, the earthy portions of which remained behind in the process of evaporation.

[2] *Phys.* 257 *b.*

[3] So Ritter, *Ion. Phil.* 250 sqq.; *Gesch d. Phil.* i. 318 sq.; Brandis, i. 250; Schleiermacher, *Gesch. d. Phil.* 44.

[4] *Phys.* viii. 1, 250 b, 24: φησὶ γὰρ ἐκεῖνος [Ἀναξ.], ὁμοῦ πάντων ὄντων καὶ ἠρεμούντων τὸν ἄπειρον χρόνον, κίνησιν ἐμποιῆσαι τὸν νοῦν καὶ διακρῖναι.

[5] Simpl. *Phys.* 273 a: ὁ δὲ Εὔδημος μέμφεται τῷ Ἀναξαγόρᾳ οὐ μόνον ὅτι μὴ πρότερον οὖσαν ἄρξασθαί ποτε λέγει τὴν κίνησιν, ἀλλ' ὅτι καὶ περὶ τοῦ διαμένειν ἢ λήξειν ποτὲ παρέλιπεν εἰπεῖν, καίπερ οὐκ ὄντος φανεροῦ.

tinual increase of motion without presupposing a commencement of that motion. Simplicius, on the other hand, is no more to be trusted in this case than when he applies the intermixture of all substances to the unity of the Neo-Platonists and the first separation of opposites to the world of ideas;[1] but, in regard to the inherent difficulties of his presentation, Anaxagoras may easily have overlooked them, as others have done before and since his time. With more reason we may ask whether our philosopher supposed there would be at some time or other a cessation of motion, a return to the original state of the universe.[2] According to the most trustworthy witnesses he did not express himself clearly on this point;[3] but his language respecting the increasing spread of motion[4] does not sound as if he contemplated any end to it, nor is there any connecting link with such a conception in his system. How should *νοῦς*, after once bringing the world into order, again plunge it into chaos? This statement had its origin, no doubt, in a misunderstanding of that which Anaxagoras had said about the world and its alternating conditions.[5] Lastly, it is inferred from an obscure

[1] *Phys.* 8 a; 33 b sq.; 106 a; 257 b; vide Schaubach, 91 sq.

[2] As Stobæus, *Ecl.* i. 416, maintains. Since he classes Anaxagoras in this respect with Anaximander and other Ionians, we must understand his statement as referring to an alternate construction and destruction of the world.

[3] Vide p. 357, 5; cf. Arist. *Phys.* viii. 1, 252 a, 10; Simpl. *De Cœlo*, 167 b, 13 (*Schol.* 491 b, 10 sqq.). This last passage cannot be quoted in favour of the opposite view, for it only asserts that Anaxagoras seems to regard the motion of the heavens and the repose of the earth in the centre as eternal. It is stated more definitely in Simpl. *Phys.* 33 a, that he regarded the world as imperishable; but it is doubtful whether this is founded on any express statement of Anaxagoras.

[4] *Supra*, p. 354, 1.

[5] According to Diog. ii. 10, he maintained that the mountains around Lampsacus would some time in the distant future be covered with the sea. Perhaps he was led to this conjecture by observations like those of Xenophanes (Vol. I. p. 569).

fragment of his treatise[1] that Anaxagoras believed in many universes similar to our own;[2] but this conjecture I must also discard. For even if we attach no weight to the testimony of Stobæus,[3] that Anaxagoras taught the unity of the world;[4] yet, as he himself describes the world as one, he must certainly have regarded it as an interdependent whole, and this whole can only form one universal system, since the movement of the original mass proceeds from one centre, and in the separation of matter, like parts are brought into one and the same place—the heavy going downwards, the light upwards. This fragment must therefore refer, not to a distinct universe, but to a part of our own, most probably to the moon.[5] Beyond the world

[1] *Fr.* 4(10): *ἀνθρώπους τε συμπαγῆναι καὶ τἄλλα ζῷα ὅσα ψυχὴν ἔχει, καὶ τοῖσι γε ἀνθρώποισιν εἶναι καὶ πόλιας συνῳκημένας καὶ ἔργα κατεσκευασμένα, ὥσπερ παρ' ἡμῖν καὶ ἡέλιόν τε αὐτοῖσιν εἶναι καὶ σελήνην καὶ τἄλλα, ὥσπερ παρ' ἡμῖν, καὶ τὴν γῆν αὐτοῖσι φύειν πολλά τε καὶ παντοῖα ὧν ἐκεῖνοι τὰ ὐνήϊστα συνενεικάμενοι ἐς τὴν οἴκησιν χρέονται.* Simpl. *Phys.* 6 b, speaking of this, makes use of the plural, *τοὺς κόσμους*; but this is of no importance.

[2] Schaubach, 119 sq.

[3] *Ecl.* i. 496.

[4] *Fr.* 11, *sup.* p. 338, 2.

[5] The words (the context of which we do not know) may refer either to a different part of the earth from our own, or to the earth in a former state, or to another world. The first is not probable, as it could not be asserted of a different part of the world, that it likewise had a sun and moon, for Anaxagoras, entertaining the notions he did of the form of the earth and of the Above and Below (vide p. 360, 3), cannot have believed in antipodes, in regard to whom the observation might have been in place. The second explanation is excluded by the present forms *εἶναι, φύειν, χρέονται*. There remains, therefore, only the third, and we can but suppose that the moon is intended; moreover, we know that Anaxagoras elsewhere says it is inhabited, and calls it an earth. If a moon is also assigned to it, this would then signify that another star is related to the moon as the moon is to the earth.

spreads infinite matter, of which more and more is drawn into the cosmos,[1] by means of the advancing vortex. Of this infinite Anaxagoras said it rested in itself, because it has no space outside itself in which it could move.[2]

In his theories concerning the arrangement of the universe, Anaxagoras is for the most part allied with the ancient Ionian physicists. In the midst of the whole rests the earth as a flat cylinder, borne, on account of its breadth, upon the air.[3] Around the earth the heavenly bodies moved at the beginning, laterally; so that the pole which is visible to us stood always perpendicularly over the centre of the plane of the earth. Afterwards the position of the earth became oblique, and on account of this the stars, during part of their course, go under it.[4] As to the order of the heavenly bodies, Anaxagoras agreed with all the more ancient astronomers in placing the sun and moon next the earth; but he thought that between the moon and the earth there were other bodies invisible to us: these, as well as the earth's shadow, he supposed to be the cause of lunar eclipses,[5] while eclipses of the sun were caused

[1] Vide *supra*, p. 354, 1; 355. 3.

[2] Arist. *Phys.* iii. 5, 205 b, 1: Ἀναξαγόρας δ' ἀτόπως λέγει περὶ τῆς τοῦ ἀπείρου μονῆς· στηρίζειν γὰρ αὐτὸ αὐτό φησι τὸ ἄπειρον. τοῦτο δὲ ὅτι ἐν αὑτῷ· ἄλλο γὰρ οὐδὲν περιέχει. Cf. what is quoted from Melissus, Vol. I. p. 635.

[3] Arist. *De Cœlo*, ii. 13, vide *supra*, p. 249, 2; *Meteor.* ii. 7, 365 a, 26 sqq.; Diog. ii. 8; Hippol. *Refut.* i. 8; Alex. *Meteor.* 66 b, and others ap. Schaub. 174 sq. According to Simplicius, *De Cœlo*, 167 b, 13 (Schol. 491 b, 10), he mentioned the force of the rotation as a further reason for the quiescence of the earth; but Simplicius seems here to be unwarrantably transferring to him what Aristotle says of Empedocles; cf p 156. 2, 3.

[4] Diog. ii. 9; Plut. *Plac.* ii. 8; also Hippol. i. 8 (cf. Vol. I. p. 293, 4; and *sup.* 251, 1).

[5] Hippol. *l. c.* p. 22; Stob. *Ecl.* i. 560, according to Theophrastus, also Diog. ii. 11; cf. Vol. I. p. 455, 3.

solely by the passing of the moon between the earth and sun.[1] The sun he held to be much larger than it seems to us, though he had no idea of its real size.[2] As we have already seen, he described it as a glowing mass of stone. The moon he believed to have mountains and valleys like the earth, and to be inhabited by living beings;[3] and this, its terrestrial nature, he thought, explained why its own light (as shown in lunar eclipses) was so dim;[4] its ordinary brighter light he derived from the reflection of the sun, and though it is not to be supposed that he himself made this discovery,[5] yet he was certainly one of the first to introduce it into Greece.[6] How he accounted for the annual revolution of the sun, and the monthly changes of the

[1] Hippol. *l. c.*, also the observation: οὗτος ἀφώρισε πρῶτος τὰ περὶ τὰς ἐκλείψεις καὶ φωτισμούς, cf. Plut. *Nic.* c. 23: ὁ γὰρ πρῶτος σαφέστατόν τε πάντων καὶ θαρραλεώτατον περὶ σελήνης καταυγασμῶν καὶ σκιᾶς λόγον εἰς γραφὴν καταθέμενος Ἀναξαγόρας.

[2] According to Diog. ii. 8; Hippol. *l. c.*, he said it was larger, and according to Plut. *Plac.* ii. 21, many times larger than the Peloponnesus, while the moon (according to Plut. *Fac. L.* 19, 9, p. 932) was the same size as that peninsula.

[3] Plato, *Apol.* 26 D: τὸν μὲν ἥλιον λίθον φησὶν εἶναι τὴν δὲ σελήνην γῆν. Diog. ii. 8; Hippol. *l. c.*; Stob. i. 550 *parall.* (*supra*, p. 249, 3); Anaxag. *Fr.* 4 (*supra*, p. 359, 1). From Stob. i. 564, it would seem (and it is besides probable in itself) that Anaxagoras connected with this the face in the moon; according to Schol. *Apoll. Rhod.* i. 498 (vide Schaubach, 161), cf. Plut. *Fac. L.* 24, 6, he explained the fable that the Nemean lion had fallen from the heavens by the conjecture that he might have come from the moon.

[4] Stob. i. 564; Olympiod. in *Meteor.* 15 b, i. 200 Id.

[5] Parmenides maintained this before him, and Empedocles contemporaneously with him, vide Vol. I. p. 600, 2, and *sup.* p. 156, 8. The former, v. 144, for this reason calls the moon: νυκτιφαὲς περὶ γαῖαν ἀλώμενον ἀλλότριον φῶς. On the other hand, the discovery is wrongly ascribed to Thales (Vol. I. p. 225, 1).

[6] Plato, *Crat.* 409 A: ὃ ἐκεῖνος [Ἀναξ.] νεωστὶ ἔλεγεν, ὅτι ἡ σελήνη ἀπὸ τοῦ ἡλίου ἔχει τὸ φῶς. Plut. *Fac. Lun.* 16, 7, p. 929; Hippol. *l. c.*; Stob. i. 558; cf. p. 356, 3. According to Plutarch's *Plac.* ii. 28, 2, the Sophist Antiphon still thought the moon shone by her own light.

moon, cannot be discovered with certainty.[1] The stars he supposed to be, like the sun, glowing masses, the heat of which we do not feel on account of their distance and their colder surroundings;[2] like the moon they have, besides their own light, a light borrowed from the sun; in this respect he makes no distinction between planets and fixed stars: those to which the sun's light cannot penetrate at night, because of the earth's shadow, form the milky way.[3] Their revolution is always from east to west.[4] From the close juxtaposition of several planets arises the phenomenon of comets.[5]

How Anaxagoras explained the various meteorological and elemental phenomena is here only shortly indicated,[6] as we must now examine, in detail, his theories respecting living beings and man.

[1] From Stob. *Ecl.* i. 526; Hippol. *l. c.* we only learn that the periodical return of both is derived from the resistance of the condensed air driven before them; and the reason the moon returns oftener in her course than the sun, is said to be that the sun by his heat warms and rarefies the air, and so conquers this resistance for a longer period. Cf. Vol. I. p. 276, 1.

[2] Hippol. *l. c.* and *supra*, p. 356, 3.

[3] Arist. *Meteor.* i. 8, 345 a, 25, and his commentators: Diog. ii. 9; Hippol. *l. c.*; Plut. *Plac.* iii. 1, 7, cf. p. 252, 2.

[4] Plut. *Plac.* ii. 16. Democritus was of the same opinion.

[5] Arist. *Meteor.* i. 6; Alex. and Olympiod. *ad h. l. supra*, p. 252, 3; Diog. ii. 9; Plut. *Plac.* iii. 2, 3; Schol. *in Arat. Diosem.* 1091 (359).

[6] Thunder and lightning arise from the breaking forth of the æthereal fire through the clouds (Arist. *Meteor.* ii. 9, 369 b, 12; Alex. *ad h. l.* 111 b; Plut. *Plac.* iii. 3, 3; Hippol. *l. c.* Sen. *Nat. Qu.* ii. 19; cf. ii. 12, less precisely Diog. ii. 9), similarly hurricanes and hot blasts (τυφὼν and πρηστὴρ, *Plac. l. c.*); other winds from the current of air heated by the sun (Hippol. *l. c.*); hail from vapours, which, heated by the sun, ascend to an altitude at which they freeze (Arist. *Meteor.* i. 12, 348 b, 12; Alex. *Meteor.* 85 b, 86 a; Olymp. *Meteor.* 20, ap. Philop. *Meteor.* 106 a, i. 229, 233 Id.); falling stars are sparks which the fire on high emits by reason of its oscillation (Stob. *Ecl.* i. 550; Diog. ii. 9; Hippol. *l. c.*); rainbows and mock suns are caused by the refraction of the sun's rays in the clouds (*Plac.* iii. 5, 11; *Schol. Venet. ad Il.* p. 547); earthquakes by the penetrating of the æther into the hollows by which the earth is pierced (Arist. *Meteor.* ii. 7; Alex. *ad h. l.* 106 b; Diog. ii. 9; Hippol. *l. c.*; Plut. *Plac.* iii. 15, 4; Sen. *Nat. Qu.* vi. 9; Ammian. Marc. xvii. 7, 11, cf. Ideler, *Arist. Meteorol.* i. 587 sq.); the rivers are nourished by rain, and also by the subterranean waters (Hippol. *l. c.* p. 20); the inundations of the Nile are the result of the melting of the snow on the Ethiopian mountains (Diodor. i. 38, &c.). Vide on these subjects Schaubach, 170 sqq., 176 sqq.

3. *Organic Beings. Man.*

If, in opposition to the prevalent opinion of his time, our philosopher degraded the stars into lifeless masses which are moved by Mind in a purely mechanical manner, through the rotation of the whole, in living beings he recognises the immediate presence of Mind. 'In all things are parts of all except Mind, but in some Mind is also.'[1] 'That which has a soul, the greater things and the smaller, therein rules Mind.'[2] In what way Mind could exist in particular things he doubtless never inquired; but, from his whole exposition and mode of expression, it is clear that there floated before him the analogy of a substance which is in them in an extended manner.[3] This substance, as has already been shown, he conceived as homogeneous in all its parts, and he accordingly maintained that the mind of one creature was distinguished from that of another, not in kind, but in degree: all mind is alike, but one is greater, another less.[4] It does not, however, follow from this that he necessarily reduced the differences of mental endowment to the varieties of corporeal structure.[5] He himself speaks expressly of a

[1] *Fr.* 7, vide p. 272, 1.

[2] *Fr.* 8, p. 343, 1. κρατεῖν, as is clear from what immediately follows, indicates moving force. Cf. Arist. *sup.* 347, 2.

[3] Vide *sup.* 345 sq.

[4] Cf. p. 343.

[5] As is thought by Tennemann, i. a; i. 326 sq.; Wendt, *ad h. l.* p.

various amount of mind,[1] and this is quite logical according to his own presuppositions. Also, when he said that man is the most sensible of all living beings, because he has hands,[2] he probably did not mean to deny the advantage of a superior order of mind,[3] but is merely employing a strong expression for the value and indispensability of hands.[4] Nor can we suppose that Anaxagoras regarded the soul itself as something corporeal, as air. On the other hand, Aristotle is right in asserting that he made no distinction between the soul and Mind,[5] and in transferring to the soul upon this presupposition what Anaxagoras primarily says of Mind, that it is the moving force.[6] Mind is always and everywhere that which moves matter. Even if a

417 sq.; Ritter, *Ion. Phil.* 290; *Gesch. d. Phil.* i. 328; Schaubach, 188; Zévort, 135 sq., &c.

[1] In the *Placita*, v. 20, 3, the opinion is ascribed to him that all living beings have active, but all have not passive intelligence; this he cannot possibly have said; and in order to express the special prerogative of man above animals, the sentence must be inverted.

[2] Arist. *Part. Anim.* iv. 10, 687 a, 7: Ἀναξαγόρας μὲν οὖν φησὶ, διὰ τὸ χεῖρας ἔχειν φρονιμώτατον εἶναι τῶν ζῴων ἄνθρωπον. Cf. the verse in Syncellus, *Chron.* 149 c, to which the Anaxagoreans are there said to appeal: χειρῶν ὀλλυμένων ἔρρει πολύμητις Ἀθήνη.

[3] This is also shown by the observation of Plutarch, *De Fortunâ*, c. 3, p. 98: 'in respect of our bodies, we are far surpassed by the beasts:' ἐμπειρίᾳ δὲ καὶ μνήμῃ καὶ σοφίᾳ καὶ τέχνῃ κατὰ Ἀναξαγόραν σφῶν τε αὐτῶν χρώμεθα καὶ βλίττομεν καὶ ἀμέλγομεν καὶ φέρομεν καὶ ἄγομεν συλλαμβάνοντες.

[4] *Plac.* iv. 3, 2: οἱ δ' ἀπ' Ἀναξαγόρου ἀεροειδῆ ἔλεγόν τε καὶ σῶμα [τὴν ψυχήν]. This theory is more definitely ascribed to Anaxagoras and Archelaus, ap. Stob. *Ecl.* i. 796; Theod. *Cur. Gr. Aff.* v. 18, p. 72; cf. Tert. *De An.* c. 12; Simpl. *De An.* 7 b; ap. Philop. *De An.* B. 16 (Anaxagoras described the soul as a self-moving number); Brandis, *Gr.-Röm. Phil.* i. 264, rightly substitutes Ξενοκράτης. Cf. *ibid.* c. 5.

[5] *De An.* 1, 2; *sup.* p. 347, 2; *ibid.* 405 a, 13: Ἀναξαγόρας δ' ἔοικε μὲν ἕτερον λέγειν ψυχήν τε καὶ νοῦν, ὥσπερ εἴπομεν καὶ πρότερον, χρῆται δ' ἀμφοῖν ὡς μιᾷ φύσει, πλὴν ἀρχήν γε etc. vide p. 343, 1.

[6] *l. c.* 404 a, 25: ὁμοίως δὲ καὶ Ἀναξαγόρας ψυχὴν εἶναι λέγει τὴν κινοῦσαν, καὶ εἴ τις ἄλλος εἴρηκεν ὡς τὸ πᾶν ἐκίνησε νοῦς.

being moves itself, it must be Mind which produces this motion, not only mechanically, from without, but from within; in such a being, consequently, Mind itself must dwell—it becomes in him a soul.[1]

This animating influence of mind Anaxagoras recognises even in plants, to which, like Empedocles and Democritus, he ascribes life and sensibility.[2] The origin of plants he explains in accordance with the fundamental ideas of his system; for he supposed their germs to come from the air,[3] which, like the other elements, is a mixture of all possible seeds.[4] In the same manner the animals originally arose;[5] the slimy earth was fructified by the germs contained in the æther.[6] This was asserted contemporaneously by Em-

[1] Cf. p. 363.

[2] So Plut. *Qu. N.* c. 1, p. 911; Ps.-Arist. *De Plant.* c. 1, 815 a, 15; b, 16 (*sup.* p. 159, 4; 263, 2): ὁ μὲν Ἀναξαγόρας καὶ ζῷα εἶναι [τὰ φυτὰ] καὶ ἥδεσθαι καὶ λυπεῖσθαι εἶπε, τῇ τε ἀπορροῇ τῶν φύλλων καὶ τῇ αὐξήσει τοῦτο ἐκλαμβάνων. According to the same treatise, c. 2, he also attributed breath to plants; on the other hand, Arist. *De Respir.* 2, 440 b, 30, refers πάντα to ζῷα only.

[3] Theophr. *H. Plant.* iii. 1, 4: Ἀναξαγόρας μὲν τὸν ἀέρα πάντων φάσκων ἔχειν σπέρματα· καὶ ταῦτα συγκαταφερόμενα τῷ ὕδατι γεννᾶν τὰ φυτά. Whether it is meant that plants are still produced in this manner is not clear. According to Arist. *De Plant.* c. 2, 817 a, 25, Anaxagoras called the sun the father, and the earth the mother of plants; but this is unimportant.

[4] Cf. on this subject p. 332, 1.

[5] Yet their higher nature seems to be indicated in the derivation of their seeds, not from the air and moisture, but from the fiery element, the æther.

[6] Iren. *Adv. Haer.* ii. 14, 2: *Anaxagoras . . . . dogmatizavit, facta animalia decidentibus e cœlo in terram seminibus.* Hence Euripides, *Chrysipp. Fr.* 6 (7): souls arise from æthereal seeds, and return after death to the æther, as the body returns to the earth from which it sprang. This is not contradicted but rather completed by what we read in Hippol. *Refut.* i. 8, p. 22, and Diog. ii. 9: ζῷα δὲ τὴν ἀρχὴν ἐν ὑγρῷ γενέσθαι, μετὰ ταῦτα δὲ ἐξ ἀλλήλων, and, ζῷα γενέσθαι ἐξ ὑγροῦ καὶ θερμοῦ καὶ γεάδους· ὕστερον δὲ ἐξ ἀλλήλων. According to Plut. *Plac.* ii. 8, this happened before the inclination of the plane of the earth (*sup.* p. 360, 4); as Anaxagoras doubtless assumed because the sun might then work upon the earth without interruption.

pedocles, previously by Anaximander and Parmenides, and subsequently by Democritus and Diogenes.[1] Anaxagoras also agrees with Empedocles and Parmenides in his theories on generation and the origin of the sexes.[2] Of his opinions about animals, excepting the assertion that all animals breathe,[3] tradition has told us nothing of any importance;[4] and the same may be said (with the exception of what has already been quoted) of our information concerning the corporeal life of man.[5] The statement that he represented the soul as perishing at its separation from the body is very

[1] Vide *sup.* p. 159 sq.; Vol. I. pp. 256, 601; Vol. II. 255, 1; Vol. I. 295. Also the Anaxagoreans, Archelaus (vide *infra*), and Euripides, ap. Diodor. i. 7.

[2] According to Aristotle, *Gen. Anim.* iv. 1, 793 b, 30; Philop. *Gen. An.* 81 b, 83 b; Diog. ii. 9; Hippol. *l. c.* (certain divergences, ap. Censorin. *Di. Nat.* 5, 4. 6, 6, 8; Plut. *Plac.* v. 7, 4, need not be considered), he supposed that the male alone furnished the seed, the female only the place for it; the sex of the child is determined by the nature and origin of the seed; boys spring from the right side of the uterus, and girls from the left. Cf. *sup.* Vol. I. p. 601, 4; Vol. II. p. 162, 5. Censorinus further says that he thought the brain of the fœtus was formed first, because all the senses proceed from this; that the body was formed from the æthereal warmth contained in the seed (which harmonises well with what is quoted in 365, 6), and that the child received nourishment through the navel. According to Cens. 5, 2, he opposed the opinion of his contemporary Hippo (Vol. I. p. 282, 5) that the seed comes from the marrow.

[3] Arist. *De Respir.* 2, 470 b, 30. The *Scholia ad h. l.* (after Simpl. *De An.* Venet. 1527), p. 164 b, 167 a. With Diogenes, this theory, which he shared with Anaxagoras, stands in connection with his view of the nature of the soul. With Anaxagoras this is not the case (vide p. 365, 6); but the thought must have been obvious to him, that all things, in order to live, must inhale vital warmth. Cf. p. 365, 6.

[4] We have only the observations in Aristotle, *Gen. Anim.* iii., that he thought certain animals copulate through the mouth; and ap. Athen. ii. 57 d, that he called the white in the egg the milk of birds.

[5] According to Plut. *Plac.* v. 25, 3, he said that sleep merely concerned the body and not the soul; in support of which he no doubt appealed to the activity of the soul in dreams. According to Arist. *Part. An.* iv. 2. 677 a, 5, he (or possibly his disciples only) derived feverish diseases from the gall.

uncertain;[1] and it is a question whether he ever expressed any opinion on this point. From his own presuppositions, however, we must necessarily conclude that mind, as such, is indeed eternal, like matter; but that mental individuality is, on the contrary, as perishable as corporeal.

Among mental activities Anaxagoras seems to have kept that of the intellect primarily in view, as indeed knowledge appeared to him personally (vide *infra*) to be the highest end of life. But though he decidedly gave the preference to thought over sensible perception, yet he seems to have treated more at length of the latter than of the former. In contradiction to the ordinary theory, he adopted the view of Heracleitus, that the sense-perception is called forth, not by that which is akin, but by that which is opposite to it. That which is of like kind, he says, makes on its like no impression, because it introduces no change in it; only the unlike works upon another, and for this reason every sense-perception is united with a certain distaste.[2]

[1] Plut. *l. c.* under the title *ποτέρου ἐστὶν ὕπνος ἢ θάνατος, ψυχῆς ἢ σώματος*; continues: *εἶναι δὲ καὶ ψυχῆς θάνατον τὸν διαχωρισμόν.* This statement is the more untrustworthy, as the proposition that death concerns the body only, and not the soul, is referred to Leucippus, and on the other hand, Empedocles, in spite of his belief in immortality, is credited with the theory that it concerned both. It is plain that no inference can be drawn from the expression ap. Diog. ii. 11; Cic. *Tusc.* i. 43, 104 (vide *inf.* 371, 5); and the utterances, ap. Diog. ii. 13, Æl. *V. H.* iii. 2. &c., if they are historical, would rather seem to show that he regarded death as a simple necessity of nature, without thinking of a future life after death; but this inference would be likewise uncertain.

[2] Theophr. *De Sensu*, 1: *περὶ δ' αἰσθήσεως αἱ μὲν πολλαὶ καὶ καθόλου δόξαι δύο εἰσίν. οἱ μὲν γὰρ τῷ ὁμοίῳ ποιοῦσιν, οἱ δὲ τῷ ἐναντίῳ.* To the former belong Parmenides, Empedocles, and Plato; to the latter Anaxagoras and Heracleitus. § 27: *Ἀναξαγόρας δὲ γίνεσθαι μὲν τοῖς ἐναντίοις· τὸ γὰρ ὅμοιον ἀπαθὲς ἀπὸ τοῦ ὁμοίου· καθ' ἑκάστην δὲ*

The chief confirmation of his theory lay however, he believed, in the consideration of the several senses. We see because of the reflection of objects in the apple of the eye: this reflection is formed, according to Anaxagoras, not in the part which resembles the object in colour, but which is different; as the eye is dark, we can see in the day if the objects are illuminated; but in certain instances the opposite is the case.[1] Similarly with touch and taste; we receive the impression of heat and cold from such things only as are warmer or colder than our body; we perceive the sweet with the bitter, the fresh with the salt element in ourselves.[2] So we smell and hear the opposite with the opposite; the more precise explanation of smell is that it arises from respiration; of hearing, that the tones are transmitted to the brain through the cavity of the skull.[3] In respect to all the senses, Anaxagoras believed that large organs were more capable of perceiving the great and

πειρᾶται διαριθμεῖν. After this has been shown in detail, he continues, § 29: ἅπασαν δ' αἴσθησιν μετὰ λύπης· (similarly in § 17) ὅπερ ἂν δόξειεν ἀκόλουθον εἶναι τῇ ὑποθέσει. πᾶν γὰρ τὸ ἀνόμοιον ἁπτόμενον πόνον παρέχει, as we clearly see in those sensible impressions, which are especially strong and lasting. Cf. p. 89, 2.

[1] *Theophr. l. c.* § 27.

[2] *l. c.* 28 (cf. 36 sqq.), where it is thus expressed: the sensation follows κατὰ τὴν ἔλλειψιν τὴν ἑκάστου· πάντα γὰρ ἐνυπάρχειν ἐν ἡμῖν. Cf. with the last proposition the quotations from Anaxagoras, p. 338 sq., from Parmenides, Vol. I. p. 165, 3, and from Empedocles, *supra*, p. 165, 3.

[3] *l. c.* Concerning hearing and tones, other writers tell us a few further particulars. According to Plut. *Plac.* iv. 19, 6, Anaxagoras believed that the voice was caused by the current of air proceeding from the speaker striking against condensed air and returning to the ears; in this way also he explained the echo. According to Plut. *Qu. Conv.* viii. 3, 3, 7 sq., Arist. *Probl.* xi. 33, he thought that the air was made to vibrate with a tremulous motion by the heat of the sun, as we see in solar motes; and that in consequence of the noise that results from this, we hear less distinctly by day than by night.

distant, and smaller organs the small and near.[1] As to the share of *νοῦς* in the sense-perception, he does not seem to have expressed any definite opinion, but to have presupposed, notwithstanding, that *νοῦς* is the percipient subject, while the senses are merely organs of perception.[2]

But if the sense-perception is conditional on the nature of the bodily organs, we cannot expect that it should reveal to us the true nature of things. Every corporeal thing is an intermixture of the most various ingredients; how then can any object be purely reflected in it? Spirit alone is pure and unmixed: it alone can separate and distinguish things; it alone can procure us true knowledge. The senses are too weak to ascertain truth. This Anaxagoras proved from the fact that we do not perceive the minute atoms which are intermingled in a body, nor the gradual transitions from one state into the opposite.[3] That he therefore denied all possibility of knowledge,[4] or declared all presentations to be alike true,[5] we cannot suppose,

[1] *Theophr. l. c.* 29 sq.

[2] This seems to be conveyed by the words of Theophrastus, *De Sensu*, 38. He says Clidemus (vide *infra*) supposed that the ears do not themselves perceive objects, but transfer the sensation to *νοῦς*, οὐχ ὥσπερ Ἀναξαγόρας ἀρχὴν ποιεῖ πάντων τὸν νοῦν.

[3] Sext. *Math.* vii. 90: Ἀ. ὡς ἀσθενεῖς διαβάλλων τὰς αἰσθήσεις, "ὑπὸ ἀφαυρότητος αὐτῶν," φησίν, "οὐ δυνατοί ἐσμεν κρίνειν τἀληθές" (*Fr.* 25). τίθησι δὲ πίστιν αὐτῶν τῆς ἀπιστίας τὴν παρὰ μικρὸν τῶν χρωμάτων ἐξαλλαγήν. εἰ γὰρ δύο λάβοιμεν χρώματα, μέλαν καὶ λευκόν, εἶτα ἐκ θατέρου εἰς θάτερον κατὰ σταγόνα παρεγχέοιμεν, οὐ δυνήσεται ἡ ὄψις διακρίνειν τὰς παρὰ μικρὸν μεταβολάς, καίπερ πρὸς τὴν φύσιν ὑποκειμένας. The further reason, that the senses cannot distinguish the constituents of things, is alluded to in the passages quoted, p. 272, 2, and in the statement (*Plac.* i. 3, 9; Simpl. *De Cœlo*, 268 b, 40; *Schol.* 513 a, 42) that the so-called ὁμοιομερῆ are perceived, not by the senses, but by the reason alone.

[4] Cic. *Acad.* i. 12, 44.

[5] Arist. *Metaph.* iv. 5, 1009 b, 25: Ἀναξαγόρου δὲ καὶ ἀπόφθεγμα μνημονεύεται πρὸς τῶν ἑταίρων τινὰς,

since he himself states his opinions with full dogmatic conviction; as little can we infer, as Aristotle does, from the doctrine of the mixture of all things, that he denied the law of contradiction;[1] for his opinion is not that opposite qualities belong to one and the same thing as such, but that different things are inextricably intermingled: the inferences which a later writer, rightly or wrongly, derives from his propositions ought not to be ascribed to himself. He regards the senses, indeed, as inadequate; he admits that they only instruct us imperfectly as to the nature of things; yet he argues from phenomena to their hidden causes,[2] having really attained to his own theory in this and no other way; and as the world-creating Mind knows all things, so the portion of Mind which is in man must be allowed its share in this knowledge. When it is said that he declared reason to be the criterion,[3] this is true in fact, though not literally. He doubtless never attempted any precise definitions of the nature and distinctive character of thought.[4]

The moral life of man was, in all probability, not

ὅτι τοιαῦτ' αὐτοῖς ἔσται τὰ ὄντα οἷα ἂν ὑπολάβωσιν, which, if the tradition is true, no doubt is only intended to assert that things contain *for us* another meaning when we consider them from another standpoint; the course of the world will correspond to our wishes, or contravene them, according as we have a right or a wrong theory of the world. Cf. also Ritter, *Ion. Phil.* 295 sq. The alteration which Gladisch, *Anax. u. d. Isr.* 46, proposes in the words of Anaxagoras, and the explanation he gives of them, hardly require a refutation.

[1] *Metaph.* iv. 4, 5, 17, 1007 b, 25, 1009 a, 22 sqq. 1012 a, 24, xi. 6, 1063 b, 24; Alex. *in Metaph.* p. 295, 1 Bon. 684 a, 9 Br.

[2] *Supra*, p. 272, 2.

[3] Sext. *Math.* vii. 91: Ἀναξ. κοινῶς τὸν λόγον ἔφη κριτήριον εἶναι.

[4] This we must infer from the silence of the fragments, and of all testimony: even Philop. *De An.* C 1, 7, does not ascribe the Aristotelian definitions: "ὁ κυρίως λεγόμενος νοῦς ὁ κατὰ τὴν φρόνησιν,"

included by Anaxagoras in the sphere of his scientific enquiry. There are, indeed, some isolated expressions of his, in which he describes the contemplation of the cosmos as the highest task of man,[1] and blames the superficiality of the ordinary view of life;[2] and traits are related of him which evince an earnest and yet gentle disposition,[3] a magnanimous indifference to external possessions,[4] and a quiet fortitude in distress;[5]

"ὁ νοῦς ἁπλαῖς ἀντιβολαῖς τοῖς πράγμασιν ἀντιβάλλων ἢ ἔγνω ἢ οὐκ ἔγνω," to the philosopher himself; he only makes use of them in the discussion of his doctrines.

[1] Eudem. *Eth.* i. 5, 1216 a, 10 (and others, p. 326, 2), says (prefixing *φασίν*): Anaxagoras replied to the question why life has any value: τοῦ θεωρῆσαι [ἕνεκα] τὸν οὐρανὸν καὶ τὴν περὶ τὸν ὅλον κόσμον τάξιν. Diog. ii. 7: πρὸς τὸν εἰπόντα· "οὐδέν σοι μέλει τῆς πατρίδος;" "εὐφήμει, ἔφη, ἐμοὶ γὰρ καὶ σφόδρα μέλει τῆς πατρίδος," δείξας τὸν οὐρανόν. He calls his country the heavens either because his interest and his thoughts are at home there, or because of the theory mentioned p. 365, 6, on the origin of the soul; or in allusion to both at once, he may mean that the heavens from which our soul springs are the worthiest object of its interest.

[2] Eudem. *l. c.* c. 4, 1215 b, 6: Ἀναξ. . . . ἐρωτηθείς, τίς ὁ εὐδαιμονέστατος; "οὐθείς, εἶπεν, ὃν σὺ νομίζεις, ἀλλ' ἄτοπος ἄν τίς σοι φανείη."

[3] Cic. *Acad.* ii. 23, 72, praises his grave and dignified demeanour; Plut. *Per.* c. 5, ascribes the well-known seriousness of Pericles to his intercourse with Anaxagoras; and Ælian, *V. H.* viii. 13, relates that he was never seen to laugh; on the other hand, the anecdote told of him in Plut. *Praec. Ger. Reip.* 27, 9, p. 820; Diog. ii. 14, that on his death-bed, he asked, instead of any other honours, that the children might have a holiday from school on the anniversary of his death, shows a genial and kindly disposition.

[4] Cf. what is said, p. 326, 2, on the neglect of his property. All the more incredible is the calumny ap. Tert. *Apologet.* c. 46. Themistius, *Orat.* ii. 30 C, uses δικαιότερος Ἀναξαγόρου proverbially.

[5] According to Diog. ii. 10 sqq. he replied to the news of his condemnation (this, however, is also told by Diog. ii. 35, of Socrates) that 'the Athenians as well as himself have been long ago condemned to death by nature:' to the observation, "ἐστερήθης Ἀθηναίων," "οὐ μὲν οὖν, ἀλλ' ἐκεῖνοι ἐμοῦ;" to a condolence upon his being forced to die in banishment, 'it is the same distance everywhere to Hades' (this is also in Cic. *Tusc.* i. 43, 104); to the news of the death of his sons: ἤδειν αὐτοὺς θνητοὺς γεννήσας. The last is told by Plut. *Cons. ad. Apoll.* 33, p. 118; Fanaetius ap. Plut. *Coh. Ira*, 16, p. 463 E, and by many others, but of Solon and Xenophon as well

but we know of no scientific rules belonging to this department,[1] and even the statements mentioned above are not taken from the treatise of our philosopher.

Nor did he enter much into the subject of religion. The charge against him was made, indeed, on the score of atheism, that is, denial of the gods of the state;[2] but this censure was only based on his theories about the sun and moon: as to the relation of these theories to the popular faith he had doubtless hardly expressed an opinion. The same is probably the case in regard to his naturalistic explanation of phenomena, in which his contemporaries were accustomed to see miracles and portents.[3] Lastly, he is said to have been the first to interpret the Homeric myths in a moral sense;[4] but it would appear that in this respect he is wrongly credited with what really belongs to his disciples,[5] and especially to Metrodorus;[6] for if the allegorical

as Anaxagoras, vide Schaubach, p. 53.

[1] The statement of Clemens, *Strom.* ii. 416 D (repeated by Theod. *Cur. Gr. Aff.* xi. 8, p. 152): Ἀναξαγόραν . . . τὴν θεωρίαν φάναι τοῦ βίου τέλος εἶναι καὶ τὴν ἀπὸ ταύτης ἐλευθερίαν, is no doubt derived simply from the ethics of Eudemus (*supra*, p. 371, 1).

[2] Vide the writers cited p. 328, 3; Iren. ii. 14, 2, calls him for this reason *Anaxagoras, qui et atheus cognominatus est.*

[3] Such as the much talked of stone of Ægospotamos, ap. Diog. ii. 11, and the ram with one horn, ap. Plut. *Per.* 6.

[4] Diog. ii. 11: δοκεῖ δὲ πρῶτος, καθά φησι Φαβωρῖνος ἐν παντοδαπῇ ἱστορίᾳ, τὴν Ὁμήρου ποίησιν ἀποφήνασθαι εἶναι περὶ ἀρετῆς καὶ δικαιοσύνης· ἐπὶ πλέον δὲ προστῆναι τοῦ λόγου Μητρόδωρον τὸν Λαμψακηνὸν γνώριμον ὄντα αὐτοῦ, ὃν καὶ πρῶτον σπουδάσαι τοῦ ποιητοῦ περὶ τὴν φυσικὴν πραγματείαν. Heraclit. *Alleg. Homer.* c. 22, p. 46, has no connection with this.

[5] Syncell. *Chron.* p. 149 C: ἑρμηνεύουσι δὲ οἱ Ἀναξαγόριοι τοὺς μυθώδεις θεούς, νοῦν μὲν τὸν Δία, τὴν δὲ Ἀθηνᾶν τέχνην, ὅθεν καὶ τὸ· χειρῶν, etc. Vide p. 364, 2.

[6] Vide concerning Metrodorus (who is also mentioned by Alex. *Meteorol.* 91 b, and Simpl. *Phys.* 257 b, as a disciple of Anaxagoras, and in Plato's *Ion.* 530 C, as a solemn expounder of the Homeric poems), Tatian. *C. Graec.* c. 21, p. 262 D: καὶ Μητρόδωρος δὲ ὁ Λαμψακηνὸς ἐν τῷ περὶ Ὁμήρου λίαν εὐήθως διείλεκται πάντα εἰς ἀλληγορίαν μετάγων. οὔτε γὰρ Ἥραν οὔτε Ἀθηνᾶν οὔτε Δία τοῦτ' εἶναί φησιν, ἅπερ οἱ τοὺς περιβόλους αὐτοῖς καὶ τὰ τεμένη καθιδρύσαντες νομίζουσι, φύσεως δὲ ὑποστάσεις καὶ στοιχείων διακοσμήσεις. We might just as well, adds Tatian, explain the fighting heroes as merely symbolical persons; and according to Hesychius (Ἀγαμέμ.), Metrodorus actually interpreted Agamemnon as the æther. But as a rule, as may be seen from Tatian's censure, allegory was not employed by him in respect to the human figures of the Homeric poems.

interpretation of the poets is altogether more in harmony with the taste of the Sophistic period, the moral interpretation is least of all suited to Anaxagoras, who paid so little attention to ethics. Of him we may venture to say that, in his enquiries, he confined himself entirely to physics.

IV.—Anaxagoras in relation to his predecessors. Character and Origin of his Doctrine. The Anaxagorean School: Archelaus.

We have already observed, in regard to Empedocles and Democritus, Melissus and Diogenes, that in the course of the fifth century the various schools of philosophy and their doctrines were gradually beginning to exert a livelier and more important influence over one another. The example of Anaxagoras only confirms our observation. This philosopher seems to have known and made use of most of the ancient doctrines: from Pythagoreanism alone he stands so entirely aloof that we can discern no influence, however indirect, from that quarter upon his doctrines, nor even an involuntary coincidence between the two systems. On the other hand, the influence of the Ionian physicists is unmistakable in his doctrine of primitive opposites,[1]

[1] P. 355, cf. Vol. I. p. 250, 272, 2.

in his astronomical theories,[1] in his views about the formation of the earth,[2] and the origin of living creatures;[3] what he says of the mixture of all things and the unlimitedness of matter reminds us of Anaximander and Anaximenes, and though in particular details he has no such striking points of contact with Heracleitus,[4] yet his whole system is directed to the explanation of phenomena—the reality of which Heracleitus was more forward to acknowledge than any other philosopher,—of change, to which all things are subject, and of the multiplicity resulting from change. Still more clearly can we trace in him the influence of the Eleatic doctrine. The propositions of Parmenides on the impossibility of Becoming and Decay form the starting-point of his whole system. He coincides with the same philosophers in mistrust of the sensible perception, in denial of empty space,[5] and in certain of his physical theories;[6] the only doubt is whether these doctrines came to him directly from Parmenides, or through the medium of Empedocles and the Atomists.

To these his contemporaries (the Ionians and the Eleatics), as has been already observed, Anaxagoras is primarily allied. The three systems equally propose to themselves the problem of explaining the formation of the universe, the Becoming and individual generation of

[1] P. 360, cf. Vol. I. p. 273 sq.
[2] P. 356, cf. Vol. I. p. 255, 254, 1.
[3] P. 365 sq.
[4] His theories concerning the sense-perception, however (*sup.* p. 367 sq.), seem to betray the influence of Heracleitus.
[5] *Sup.* p. 342, 1. Ritter (i. 306) thinks that this may have arisen independently of Eleatic influences, out of the polemic against Atomists or Pythagoreans; but, considering the unmistakeable interdependence of the Anaxagorean and Parmenidean doctrines on the whole, it seems to me improbable.
[6] Cf. p. 365, 6; 366, 2; 368, 2.

beings, and the changes and multiplicity of phenomena, without, however, maintaining an absolute Becoming and Decay, and a qualitative change of the primitive matter, or giving up any part of the Parmenidean theories concerning the impossibility of these processes. To this end they all adopt the expedient of reducing generation to the union, and decay to the separation of substances, which, being underived and imperishable, change in that process, not their quality, but only their place and relation in space. But in their more precise definitions the three systems differ. A plurality of original substances they must all indeed assume, in order to make intelligible the multiplicity of derived things; but to these substances Empedocles ascribes the elementary qualities; Leucippus and Democritus merely the universal qualities, which belong to every corporeal thing as such; Anaxagoras, the qualities of determinate bodies. In order to account for the innumerable differences in the nature and constitution of derived things, Empedocles maintains that the four elements are mingled in infinitely various proportions, the Atomists hold that the homogeneous matter is divided into an infinite number of primitive bodies of various shapes, while Anaxagoras says that the innumerable substances are capable of the most various intermixture. The primitive substances, therefore, are conceived by Empedocles as limited in number and differences of kind, but infinitely divisible; by the Atomists, as unlimited in number and variety of form, but indivisible; by Anaxagoras, as unlimited in number and distinctions of kind, and infinitely divisible.

Lastly, in order to explain motion—on which all generation of derived things is based—Empedocles adds to the four elements two moving forces; but as these are wholly mythical forms, the question as to the natural cause of motion remains unanswered. The Atomists find a purely natural cause of motion in weight; and that this may operate and produce the infinite multiplicity of movements, they introduce empty space between the atoms. Anaxagoras feels indeed the necessity of adding to matter a moving force; he does not, however, seek this in a mythical image, external to nature and reality, but recognises in spirit or mind the natural ruler and mover of matter.

In the further application of his principles to the explanation of nature, Anaxagoras is also in many respects agreed with Empedocles and Democritus. All three begin with a chaotic mixture of primitive substances, out of which they say the world arose by means of a whirling motion, self-engendered, in this mass. In their conceptions of the universe there is hardly one important difference between Anaxagoras and Democritus. As Democritus regarded the three lower elements as a medley of the most various kinds of atoms, Anaxagoras saw in the elements generally a medley of all seeds.[1] All three philosophers are in accord about several theories, such as the obliquity of the ecliptic,[2] the animate nature of plants,[3] the origin of living beings from the terrestrial slime;[4] Empedocles and

[1] Cf. p. 225, 1, with 332, 1; Aristotle uses the same expression, *πανσπερμία*, in both cases.

[2] Vide p. 157, 5; 251, 5; 360, 4.

[3] P. 175, 3; 263, 2; 365, 2.

[4] P. 365, 6; 366, 1.

Anaxagoras also in regard to the generation and development of the fœtus;[1] and, at any rate, the first and last-named of these theories are so remarkable that we cannot regard the coincidence as fortuitous.

Although, however, it thus appears unquestionable that the above-mentioned philosophers are not merely allied as to their doctrines, but that they actually and historically influenced one another, it is not so easy to determine which of them first advanced the propositions that are common to all three. Anaxagoras, Empedocles and Leucippus are contemporaries, and tradition has not told us which was the first to promulgate his system. Aristotle indeed says of Anaxagoras, in a well-known passage, that he was earlier as to his age, and later as to his works, than Empedocles.[2] But whether this means that his doctrines appeared later, or that they were more matured, or on the other hand, more imperfect, than those of Empedocles, it is not easy to discover.[3] If we try to decide the question according to

[1] Pp. 162; 366, 2.

[2] *Metaph.* i. 3, 984 a, 11: *Ἀναξαγόρας δὲ . . . τῇ μὲν ἡλικίᾳ πρότερος ὢν ταύτου, τοῖς δ' ἔργοις ὕστερος.*

[3] The words allow of all three interpretations. In regard to the first, even if Breier (*Phil. d. Anax.* 85) is right in saying that *ἔργα* cannot refer to the writings, the *Opera omnia*; nothing hinders our translating the text thus: 'his achievements fall later.' Moreover, as what is later is as a rule riper and more advanced, *ὕστερος* may also be used in this sense; and Aristotle, c. 8, 989 b, 5, 19, actually says of Anaxagoras: if we deduce the consequence of his theories, *ὕσως ἂν φανείη καινοπρεπεστέρως λέγων . . . βούλεται μέντοτι παραπλήσιον τοῖς ὕστερον λέγουσι*; and in still closer correspondence with our text, *De Cœlo*, iv. 2, 308 b, 30: *καίπερ ὄντες ἀρχαιότεροι τῆς νῦν ἡλικίας καινοτέρως ἐνόησαν περὶ τῶν νῦν λεχθέντων*. On the other hand, *ὕστερον* also designates that which is inferior to something else in value. Cf. Arist. *Metaph.* v. 11, 1081 b, 22: *τὸ γὰρ ὑπερέχον τῇ δυνάμει πρότερον*, and Theophrast. ap. Simpl. *Phys.* 6 b, who, using the same expression conversely, says of Plato: *τούτοις ἐπιγενόμενος Πλάτων, τῇ μὲν δόξῃ*

the internal relation of the doctrines, we shall probably be drawn in two opposite directions. On the one hand, it would seem that Anaxagoras's derivation of motion from spirit must be later than the mythical derivation assigned to it by Empedocles, or the purely material explanation it receives from the Atomists; for in the idea of Spirit not only is a new and a higher principle introduced into philosophy, but this principle is the same with which the subsequent development is chiefly connected; whereas Empedocles, in his conception of the moving forces, approximates to the mythic cosmogony, and the Atomists do not advance beyond the pre-Socratic materialism. On the other hand, however, the theories of Empedocles and the Atomists appear to be more scientific in regard to the primitive substances than those of Anaxagoras; for Anaxagoras places the qualities of derived things immediately in the primitive substances, while the other two systems seek to explain those substances by reference to their elementary and atomistic constituents: consequently, the procedure of

καὶ τῇ δυνάμει πρότερος, τοῖς δὲ χρόνοις ὕστερος. This signification is given to the words of our text by Alexander, p. 22, 13 Bon. 534 b, 17 Br. The words, thus understood, contain a rhetorical and not a logical antithesis; for, in point of fact, there would be nothing surprising in the older view being the less perfect; but if Theophrastus could express himself as he does (*l. c.*), Aristotle may have said the same in the same sense. If, on the contrary, we understand by ὕστερος the riper, there arises the difficulty (of which Alexander reminds us), that in the question of the primitive substances with which our text is concerned, Aristotle could not possibly have rated the doctrine of Anaxagoras higher than that of Empedocles, which he himself followed. But it may be that in the predicate τοῖς ἔργοις ὕστερος he had in view the whole of Anaxagoras's doctrine, in which he certainly recognised an essential progress, as compared with previous philosophers, and that his observation was merely intended to explain why he had placed Anaxagoras, in spite of his age, immediately after Empedocles.

the Atomists is more thorough, because they are not content with attaining sensibly perceived substances, but derive these, individually and collectively, from something still more primitive. This might incline us to suppose that the Atomists appeared later than Anaxagoras, and Empedocles at any rate not earlier; and that it was precisely the inadequacy of Anaxagoras's explanation of nature which caused them to abandon Spirit as a separate principle side by side with matter, and to set up a uniform and strictly materialistic theory.[1]

But the opposite view has nevertheless preponderating reasons in its favour. In the first place, it has already been shown[2] that Empedocles was acquainted with the poem of Parmenides, and that he took from that source what he says on the impossibility of generation and decay. If we compare with this Anaxagoras's utterances on the same subject,[3] we find that the thoughts and expressions in them exactly harmonise with those of Empedocles, whereas they have no similar connection with the corresponding verses of Parmenides. The passages in Empedocles therefore presuppose an acquaintance with Parmenides, and can be explained on the basis of such an acquaintance, without any assistance from Anaxagoras; conversely, the statements of Anaxagoras can perfectly be understood on the supposition that he was acquainted with Empedocles's poem: there is nothing in them that implies a direct obligation to Parmenides. This relation of the three systems makes it highly probable that Empedocles first

[1] Cf. p. 293 sq.
[2] P. 195 sq.; 161 sq. v. 36 sqq., 40 sqq. 69 sqq., 89, 92 (p. 122, 1, 2; 123, 1, 2; 124, 1).
[3] *Sup.* 331, 1, 2, 3; cf. *Emped.*

derived his statement that all generation is the union, and all decay the separation, of substances, from the doctrine of Parmenides of the impossibility of Becoming; while, on the other hand, Anaxagoras first borrowed the theory from Empedocles: and this conjecture is confirmed when we observe that it harmonises better with the other presuppositions of Empedocles than with those of Anaxagoras. For to identify generation with mixture, and decay with division, must have been easy to a philosopher who regarded the elementary substances as the original principle out of which the particular was formed, merely through combination; and who, in connection with this, considered the uniting power as the truly divine and beneficent, and the intermixture of all matter as the most blessed and perfect state. It is, on the contrary, much less easy if, with Anaxagoras, we regard particular substances as the most primitive, their original intermixture as an unordered chaos, and the separation of the mixed substances as the special work of the spiritual and divine essence. In that case the generation of individual beings must be derived primarily from the separation, and in the second place only from the union, of the fundamental substances; while their decay must be brought about by their return to the elementary condition of intermixture.[1] Among

[1] Steinhart (*Allg. L. Z.* 1845, *Novbr.* p. 893 sq.), on the other hand, thinks that the doctrine of the generation of individuals from mixture and separation does not harmonise with the four primitive substances of Empedocles; it could only have been an organic part of a doctrine in which the physical elements were not the simplest. But what is mixture, if not the generation of a composite something from something more simple? If, therefore, all things arose out of intermixture, the simplest substances must be the most primitive; as indeed all mechanical physicists, except Anaxagoras, have assumed for this very reason, and do assume, even to the present day.

the other theories of Anaxagoras, especially in what he says of the sense-perception, he seems sometimes to contradict Empedocles, and sometimes to show traces of his influence.[1] We may therefore suppose that the philosophical opinions of Empedocles were published before those of Anaxagoras, and that Anaxagoras made use of them.

The same holds good of the founder of the Atomistic School. Democritus certainly seems to have borrowed much from Anaxagoras, especially in his astronomical conceptions, in which he is allied with the older theory of Anaximander and Anaximenes.[2] Anaxagoras, on the contrary, seems to be referring to Leucippus when he refutes the doctrine of empty space in its details by physical experiments. When he expressly asserts the unity of the world, and protests against the division of primitive substances,[3] he can scarcely have in view any other adversary than the Atomistic philosophy. The Pythagoreans, who alone of all the other schools might be intended, give quite another meaning to the conception of the Void; and the older enemies of this conception, Parmenides and Heracleitus—who were anterior to the Atomistic theory—bestow on it no detailed refutation. The Atomistic philosophy seems to have been the first to arouse serious discussion as to the possibility of empty space.[4] There is doubtless a reference to this philosophy, also,

[1] Cf. p. 367, 2; 368, 2; with p. 165, 3.

[2] Vide *supra*, p. 360, 3, 4; 374, 1; 248 sqq.

[3] Vide *supra*, p. 342, 1; *Fr.* 11, *supra*, p. 338, 2.

[4] Cf. p. 306.

in the remark[1] that there can be no 'smallest,' since Being cannot be annihilated by division; for here the theory of indivisible bodies is directly supported by the assertion that things are annihilated by infinite division: which, indeed, had already been pointed out by Zeno, though he gave a different application to the theory. Anaxagoras's denial of a blind Fate[2] has also been said, though less certainly, to have reference to the Atomists: there is no other system to which it would better apply. I should therefore suppose that Leucippus must have preceded Anaxagoras in his doctrine, and that Anaxagoras had directed his attention to it. That this was quite possible chronologically we have already seen[3] in the course of our discussion.[4]

The special philosophic importance of Anaxagoras

[1] Vide *supra*, p. 341, 3, cf. p. 218; Vol. I. 614.

[2] Vide *sup.* p. 345, 3, cf. p. 238 sq.

[3] P. 306.

[4] Further confirmation of this might be found in the treatise *De Melisso*, c. 2, 976 a, 13. According to the most probable reading, though this is partly founded on conjecture, we are there told: καὶ γὰρ ὅμοιον οὕτω λέγει τὸ πᾶν εἶναι, οὐχὶ ὡς ἄλλα . . . τινὶ (Mullach completes this in agreement with Beck, ἄλλοι ἑτέρῳ τινὶ, I should myself conjecture ἄλλῳ ὁμοίῳ τινι) ὅπερ καὶ Ἀναξαγόρας (Beck rightly substitutes Anaxagoras for Ἀθηναγόρας, which we find in *Cod. Lips.*) ἐλέγχει, ὅτι ὅμοιον τὸ ἄπειρον· τὸ δὲ ὅμοιον ἑτέρῳ ὁμοίῳ, ὥστε δύο ἢ πλείω ὄντα οὐκ ἂν ἓν οὐδ' ἄπειρον εἶναι. These words, it seems to me, can only be understood to mean that Anaxagoras contradicted the theory that the Unlimited is ὅμοιον. Mullach's interpretation *quod etiam Anaxagoras ostendit infinitum sui simile esse* (so far, according to *Fr.* 8, *supra*, p. 343, 1, as νοῦς is infinite, and at the same time πᾶς ὅμοιος), introduces a thought that is superfluous and irrelevant to the context, and is besides contradicted by ἐλέγχειν; for though this word is used not merely for 'refute,' but also for 'prove,' yet it always designates a proof by which an opposite opinion is refuted. But as the writer does not expressly say that Anaxagoras contradicted the opinion of Melissus concerning the homogeneous nature of the ἄπειρον, his language may also be understood thus: 'Even Anaxagoras contradicts the opinion that the ἄπειρον must be homogeneous, so far as he represents the infinite mass of the primitive matter as consisting entirely of heterogeneous parts.'

is based upon the doctrine of νοῦς. With this doctrine his theory of matter is, however, so intimately connected that the one is conditioned by the other. Matter in itself, as he represents it in the primitive state before Spirit had begun to work upon it, can only be a chaotic, motionless mass; for all motion and separation must come from Spirit. But matter must nevertheless contain all the constituents of derived things as such; for Spirit creates nothing new: it only divides what actually exists. Conversely, Spirit is necessary, because matter, as such, is unordered and unmoved, and the activity of matter is restricted to the separation of substances, because they are already supposed to contain within themselves all their determinate qualities. The one doctrine is so directly given in the other that we cannot even enquire which was the earlier and which the later; for this conception of matter could only result if an incorporeal moving cause, distinct from it and working in this particular manner, were maintained: and such a moving cause could only be maintained if the nature of matter were conceived in this particular way and no other. Both definitions are so far equally original—they merely indicate the two sides of the opposition of Spirit and matter, as conceived by Anaxagoras. If we ask how this opposition itself arose in the mind of our philosopher, an answer has already been given in the course of the present discussion.[1] Ancient physics recognised only corporeal nature. With this corporeal nature Anaxagoras cannot satisfy himself, because he knows

[1] P. 345.

not how to explain from such a cause the movement of nature, the beauty and design of the universe, especially as he has learned from Parmenides, Empedocles and Leucippus, that the corporeal substance is something underived and unchangeable, not moved dynamically from within, but mechanically from without. Accordingly, he discriminates Spirit, as moving and ordering force, from matter; and as he finds all order conditional on a division of the unordered, all knowledge conditional on discrimination, he thus defines the opposition of Spirit and matter: Spirit, he says, is the dividing and discriminating force, and consequently is itself simple and unmixed; matter is that which is absolutely mixed and composite: a definition which was closely connected with the traditional ideas of chaos, and more recently with the doctrines of Empedocles and the Atomists concerning the primitive state of the universe. If, however, matter really consists originally in a mixture of all things, and the operation of moving force in a separation of them, things as these definite substances must already be contained in the original matter, and in place of the elements and atoms the so-called Homoeomeries are introduced.

The fundamental conceptions, therefore, of the Anaxagorean system are without difficulty to be explained as resulting partly from the theories of earlier and contemporary philosophers, and partly from such considerations as might easily and naturally occur to its author. Such being the case, we can the more readily dispense with the other sources of this doctrine, which some even among the ancients sought to derive from Hermotimus,

the mythical magician,[1] or from the wisdom of the East;[2] but these views have so little to recommend them that there can scarcely be a doubt of their groundlessness. As to any dependence of Anaxagoras on Oriental doctrines, there exists no tradition on which the smallest reliance can be placed, nor does the nature of his system render it in any way probable.[3] Hermotimus is manifestly not a

[1] Arist. *Metaph.* i. 3, 984 b, 18, after mention of νοῦς: φανερῶς μὲν οὖν Ἀναξαγόραν ἴσμεν ἁψάμενον τούτων τῶν λόγων, αἰτίαν δ' ἔχει πρότερον Ἑρμότιμος ὁ Κλαζομένιος εἰπεῖν. The same is repeated by Alexander, &c., *ad h. l.* (*Schol. in Ar.* 536 b); Philop. *ad h. l.* p. 2; ap. Simpl. *Phys.* 321 a; Sext. *Math.* ix. 7; Elias, *Cret. in Greg. Naz. Orat.* 37, p. 831 (in Carus, *Nachg. W.* iv. 341), with no other authority for the statement except this text of Aristotle.

[2] To these belong the statement already mentioned, p. 326, 2, that Anaxagoras visited the East and especially Egypt; also the hypotheses of Gladisch (*Die Rel. und die Philosophie Anaxag. und die Israeliten*), and some of the ancients (on whom cf. *Anaxag. und d. Isr.* p. 4), who would connect him with Judaism.

[3] How inadequate are the authorities for Anaxagoras's visit to Egypt, we have already seen in the notice of them, p. 326, 2. Not one is less recent than the last decade of the Fourth Century after Christ; even Valerius Maximus does not speak of a journey to Egypt, but only of a *diutina peregrinatio*, while the property of Anaxagoras was laid waste, and it is very possible that he was thinking of Anaxagoras's residence in Athens, or of nothing definite. But even if he had named Egypt as the destination of this journey, his evidence could easily be contradicted, and the saying concerning the grave of Mausolus, which Diog. (ii. 10) puts into the mouth of our philosopher (who died 19 Olympiads, *i.e.* 76 years, before it was built), would scarcely lend it any confirmation. If it be urged that the Greeks from the time of Anaxagoras were so inclined to place their scientific greatness in connection with Egypt, that it is improbable an Egyptian journey, known to have been undertaken by this philosopher, should have received no mention, we can only infer from the complete silence of all authorities on the subject, that nothing whatever was known of such a journey. Concerning the hypothesis of Gladisch, I have already given my opinion on the general presuppositions and collective result of this, Vol. I. p. 36. The interpretation of facts to suit the interest of arbitrary combinations, with which he is there censured, is not wanting in the present case. For example, from the dogmas of the Old Testament, not only does he deduce, p. 19, the doctrine of pre-existent matter (for which the Alexandrian Book of Wisdom is cited among other evidence as perfectly valid

historical contemporary of Anaxagoras, but a mythical figure in the past, who has only been associated with Anaxagoras by the idle ingenuity of later writers.[1]

testimony); but also the Anaxagorean Homoeomeries (p. 48); and conversely, from Anaxagoras (as has been shown, p. 352, 1) he derives, by the most inadequate reasoning, the Jewish notions of the government of the universe. The doctrine of the Old Testament of the creation of the world by the direct Divine behest is represented as in all essential respects 'entirely the same' (p. 43) as that of Anaxagoras, of the first movement of matter by νοῦς, from which movement all things arise in a purely mechanical manner. A parallelism that is instituted in such a way can be of no assistance from an historical point of view.

[1] The statements of the ancients in regard to Hermotimus (the most complete collection has been made by Carus, '*Ueber die Sagen von Hermotimus*,' *Nachg. Werke*, iv. 330 sqq., and previously in *Fülleborn's Beiträge*) are of three kinds. The first has just been quoted from Aristotle, &c. Secondly, it is asserted that Hermotimus had this wonderful faculty—that his soul often quitted his body for a long time, and after its return to the body would give news of things at a distance; but once his enemies took advantage of this state to burn his body as if he had been dead. Thus Pliny, *H. N.* vii. 53; Plut. *Gen. Socr.* c. 22, p. 592; Apollon. Dysc. *Hist. Commentit.* c. 3. All three, however, are evidently dependent on the same source (probably *Theopompus*; cf. Rohde, *Rhein. Mus.* xxvi. 558); Lucian, *Musc. Enc.* c. 7; Orig. *c. Cels.* iii. 3; Tert. *De An.* c. 2, 44, who adds that the inhabitants of Clazomenæ erected a shrine to Hermotimus after his death. Thirdly, Hermotimus is mentioned by Heracleides ap. Diog. viii. 4 sq. among those in whom the soul of Pythagoras had dwelt in its previous wanderings; and this is repeated by Porph. *V. Pyth.*; Hippol. *Refut.* i. 2, p. 12; Tert. *De An.* 28, 31. That the statement refers to the Hermotimus we are discussing there can scarcely be a doubt, though Hippolytus erroneously calls him a Samian. But since in these narrations Hermotimus appears as a fabulous personage of the distant past, it is obvious that the statement which Aristotle mentions must be devoid of all historical foundation; not to mention the modern writers who would even make Hermotimus the teacher of Anaxagoras (vide Carus, 334, 362 sq.). This statement no doubt originated in the myth, in an attempt to find in the separation of the soul from the body, which is related of the old soothsayer, an analogue of Anaxagoras's distinction of mind and matter. It is possible that Democritus may have been the author of this interpretation, cf. Diog. ix. 34. Similar legends are found in India, as Rohde shows, *l. c.*; and it may well be that the story, like other myths and some of our fables about animals, may have had its rise there: whether we suppose it to have been brought by the ancestors of the Hellenes in very ancient times from their Asiatic

We may therefore discard all these conjectures, and consider the doctrine of Anaxagoras as the natural product of the previous philosophic development. And it is also the natural end of that development. For if in Spirit a higher principle has been found through which nature itself is conditioned, and without which neither the movement of nature nor its order and design can be explained, there arises henceforward the demand that this higher cause of nature shall also be recognised, the one-sided philosophy of nature comes to an end, and along with nature, and even before it, spirit becomes an object of investigation.

The school of Anaxagoras did not itself take this course. We are indeed reminded of the Sophists in Metrodorus's allegorical interpretations;[1] but on the other hand Archelaus,[2] the only disciple of Anaxagoras

home, or to have come by way of further Asia to the Ionians on the coasts.

[1] P. 372, 6.

[2] Archelaus, son of Apollodorus, or, according to others, of Myson, is described by most writers as an Athenian, but by some as a Milesian (Diog. ii. 16; Sext. *Math.* vii. 14, ix. 360; Hippol. *Refut.* i. 9; Clemens, *Cohort.* 43 D; Plut. *Plac.* i. 3, 12; Justin, *Cohort.* c. 3; and Simpl. *Phys.* 6). That he was a scholar of Anaxagoras we are frequently told (cf., besides the writers just cited, Cic. *Tusc.* v. 4, 10; Strabo, xiv. 3, 36, p. 645; Eus. *Pr. Ev.* x. 14, 8 sq.; August. *Civ. D.* viii. 2). According to Eusebius, *l. c.*, he first presided in Lampsacus over the school of Anaxagoras, whose successor he is called, ap. Clem. *Strom.* i. 301 A; Diog. *Prœm.* 15; Eus. xiv. 15, 9; Aug. *l. c.*, and from thence emigrated to Athens. The same presupposition, or a negligent use of the source employed by Clemens, seems to have given rise to the astounding assertion (Diog. ii. 16; cf. Schaubach, *Anax.* 22 sq.) that he first transplanted Physics from Ionia into Athens. Most probably, however, both the first and second of these statements are merely inferences from the supposed connection of the διαδοχή. Cf. p. 329, 1. The same judgment must be passed on the statement (Cic., Sext., Diog., Simpl. *l. c.*: *Io, Aristoxenus und Diokles* ap. Diog. ii. 19, 23, x. 21; Eus. *Pr. Ev.* x. 14, 9, xiv. 15, 9, xv. 62, 8; Hippol. i. 10; Galen, *H. Phil.* 2, &c.) that Socrates was his disciple. This is not historical tradition, but a pragmatical con-

of whom we know any particulars,[1] remained faithful to

jecture, shown to be improbable not merely by the silence of Xenophon, Plato, and Aristotle, but also by the mutual relation of the doctrines of the two men, and by the philosophic character of Socrates. (Cf. Part II. a, 47 sq., 3rd ed.) The accounts concerning the doctrine of Archelaus would lead us to conjecture that it was expounded in writings. A book of Theophrastus about him, which is mentioned by Diog. v. 42, was perhaps only a section of a larger work. Simpl. *l. c.* seems to refer to Theophrastus's *Physics* and not to this exposition.

[1] The Anaxagorean school (Ἀναξαγόρειοι, Plato, *Crat.* 409 B; Syncell. *Chron.* 149 C; οἱ ἀπ' Ἀναξαγόρου, Plut. *Plac.* iv. 3, 2—οἱ περὶ Ἀν. in the texts which Schaubach, p. 32, quotes is merely a paraphrase) is sometimes mentioned without any further account of it. A trace of its influence has already come before us (p. 70 sq.) in the treatise of the pseudo-Hippocrates, π. διαίτης. A scholiast on Plato's *Gorgias* (p. 345, Bekk.) calls the sophist Polus an Anaxagorean; but this is evidently an inference unjustifiably drawn from 465 D. In regard to Clidemus, also, it seems to me doubtful whether Philippson is right in assigning him to the school of Anaxagoras (Ὕλη ἀνθρ. 197), though I cannot agree with Ideler (Arist. *Meteorol.* i. 617 sq.), who makes him an adherent of Empedocles. It would rather appear that this naturalist, who is mentioned by Theophrastus (*H. Plant.* iii. 1, 4) after Anaxagoras and Diogenes, and again (*De Sensu*, 38) between them, and whom we may probably regard as a contemporary of Diogenes and Democritus, had no fixed theory of philosophy, but occupied himself merely with particular investigations. Arist. *Meteor.* ii. 9, 370 a, 10, says he supposed lightning to be only a phenomenon of light, like the glittering of water in motion. Theophrastus, *H. Pl. l. c.*, says that, according to him, plants consist of the same substances as animals, only that they are less pure and warm; and (*Caus. Plant.* i. 10, 3) that the colder plants flower in winter, the warmer in summer. The same author (*l. c.* iii. 23, 1, sq.) mentions his opinion on the best time for sowing; and (V. 9, 10) his view concerning a disease of the vine; lastly he tells us (*De Sensu*, 38) that Clidemus expressed some opinions on the perceptions of the senses: αἰσθάνεσθαι γάρ φησι τοῖς ὀφθαλμοῖς μὲν (so Wimmer reads instead of μόνον) ὅτι διαφανεῖς· ταῖς δ' ἀκοαῖς ὅτι ἐμπίπτων ὁ ἀὴρ κινεῖ· ταῖς δὲ ῥισὶν ἐφελκομένους τὸν ἀέρα, τοῦτον γὰρ ἀναμίγνυσθαι· τῇ δὲ γλώσσῃ τοὺς χυμοὺς καὶ τὸ θερμὸν καὶ τὸ ψυχρὸν, διὰ τὸ σωμῆν εἶναι· τῷ δ' ἄλλῳ σώματι παρὰ μὲν ταῦτ' οὐθὲν, αὐτῶν δὲ τούτων καὶ τὸ θερμὸν καὶ τὰ ὑγρὰ καὶ τὰ ἐναντία· μόνον δὲ τὰς ἀκοὰς αὐτὰς μὲν οὐδὲν κρίνειν, εἰς δὲ τὸν νοῦν διαπέμπειν· οὐχ ὥσπερ Ἀναξαγόρας ἀρχὴν ποιεῖ πάντων (of all sense-perceptions) τὸν νοῦν. This alone shows that Clidemus did not share the philosophic opinions of Anaxagoras; and, indeed, nothing is anywhere said of him in a philosophic point of view. That he is a different person from Clidemus, or Clitodemus the historian (Müller, *Hist. Gr.* i. 359 sqq.), with whom he is identified by Meyer, *Gesch. d. Botanik*, i. 23 sqq. and others, is proved by Kirchner, *Jahrb. f. Philol. Suppl. N. F.* vii. 501 sq.

the physical tendency of his master, and while he sought to soften down his dualism, approximated somewhat to the ancient materialistic physics. But even in his case our information is very scanty. We are told that in respect to ultimate causes he agreed with Anaxagoras; that, like him, he assumed an infinite number of small bodies of equal parts, from which all things arise by means of mechanical combination and separation, and conceived these substances as originally mingled together; but that he distinguished Spirit from the corporeal as the power which rules over it.[1] The original mixture of all substances he (approximating herein to Anaximenes and the ancient Ionic school) supposed to be like air,[2] which, indeed, Anaxagoras had re-

[1] Simpl. *Phys.* 7 a (after Theophrastus): ἐν μὲν τῇ γενέσει τοῦ κόσμου καὶ τοῖς ἄλλοις πειρᾶταί τι φέρειν ἴδιον. τὰς ἀρχὰς δὲ τὰς αὐτὰς δίδωσιν ἅσπερ Ἀναξαγόρας· οὗτοι μὲν οὖν ἀπείρους τῷ πλήθει καὶ ἀνομογενεῖς τὰς ἀρχὰς λέγουσι τὰς ὁμοιομερείας τιθέντες ἀρχάς. (The latter also in *De Cœlo*, 269 b, 1; *Schol. in Ar.* 513 a.) Clem. *Cohort.* 43 D: οἱ μὲν αὐτῶν τὸ ἄπειρον καθύμνησαν, ὧν . . . Ἀναξαγόρας . . καὶ . . Ἀρχέλαος· τούτω μέν γε ἄμφω τὸν νοῦν ἐπεστησάτην τῇ ἀπειρίᾳ. Hippol. *Refut.* i. 9: οὗτος ἔφη τὴν μίξιν τῆς ὕλης ὁμοίως Ἀναξαγόρᾳ τάς τε ἀρχὰς ὡσαύτως. Aug. *Civ. D.* viii. 2: *etiam ipse de particulis inter se dissimilibus, quibus singula quæque fierent, ita omnia constare putavit, ut inesse etiam meniem diceret, quæ corpora dissimilia, i. e. illas particulas, conjungendo et dissipando ageret omnia.* Alex. Aphr. *De Mixt.* 141 b: Anaxagoras and Archelaus were of opinion that ὁμοιομερῆ . . . τινα ἄπειρα εἶναι σώματα, ἐξ ὧν ἡ τῶν αἰσθητῶν γένεσις σωμάτων, γινομένη κατὰ σύγκρισιν καὶ σύνθεσιν, wherefore they are both counted among those who regard all mixture as a mass of substantially separate matters. Philop. *De An.* B 16: Archelaus belongs to those ὅσοι εἰρήκασι τὸ πᾶν ὑπὸ τοῦ νοῦ κεκινῆσθαι.

[2] Through this theory, which is confirmed by what immediately follows, the statement that Archelaus held air to be the primitive matter may easily be combined, as it appears to me, with the other accounts. Cf. Sext. *Math.* ix. 360: Ἀρχ . . . ἀέρα [ἔλεξε πάντων εἶναι ἀρχὴν καὶ στοιχεῖον]. Plut. *Plac.* i. 3, 12 (word for word the same: Justin, *Cohort.* c. 3 end): Ἀρχ. . . ἀέρα ἄπειρον [ἀρχὴν ἀπεφήναντο] καὶ τὴν περὶ αὐτὸν πυκνότητα καὶ μάνωσιν· τούτων δὲ τὸ μὲν εἶναι πῦρ τὸ δὲ ὕδωρ.

garded as a mixture of primitive substances of various kinds, but still only as a part of the original mass.[1] Moreover, while Anaxagoras strongly insisted on the unmixed nature of Spirit, Archelaus, it is said, represented Spirit as mixed with matter;[2] so that in air animated by Spirit, he had a principle similar to that of Anaximenes and Diogenes, but different from theirs by reason of its dualistic composition.[3] He also agreed with these philosophers in describing the first separation of the primitive mixture as rarefaction and condensation.[4] In this first separation the warm and the cold were divided, as had been taught by Anaximander, and also by Anaxagoras;[5] but, as the original mixture was already declared to be air, Archelaus (herein differing from Anaxagoras) called these two principal masses of derived things fire and water.[6] Following the example of his master, he regarded fire as the active, and water as the passive element; and since he tried to explain the formation of the universe in a purely physical manner from their joint operation, it might seem as if these material bases were the ultimate cause of the universe, and that Spirit had no concern with it. This cannot,

[1] P. 355, 3.

[2] Hippol. *l. c.*: αὐτος δὲ τῷ νῷ ἐνυπάρχειν τι εὐθέως μῖγμα.

[3] Stob. *Ecl.* i. 56, may so far be correct: Ἀρχ. ἀέρα καὶ νοῦν τὸν θεόν, *i.e.*, he may have characterised air and Spirit as the eternal and divine.

[4] Plut. *Plac.*; vide 389, 2.

[5] Vide Vol. I. p. 250, and Vol. II. p. 355.

[6] Plut. *Plac. l. c.*, Diog. ii. 16: ἔλεγε δὲ δύο αἰτίας εἶναι γενέσεως, θερμὸν καὶ ὑγρόν. Herm. *Irris.* c. 5: Ἀρχ. ἀποφαινόμενος τῶν ὅλων ἀρχὰς θερμὸν καὶ ψυχρόν. Hippol. *l. c.*: εἶναι δ' ἀρχὴν τῆς κινήσεως τὸ ἀποκρίνεσθαι (so Duncker, after Röper and Ritter) ἀπ' ἀλλήλων τὸ θερμὸν καὶ τὸ ψυχρὸν, καὶ τὸ μὲν θερμὸν κινεῖσθαι, τὸ δὲ ψυχρὸν ἠρεμεῖν. Cf. Plato, *Soph.* 242 D: δύο δὲ ἕτερος εἶπὼν, ὑγρὸν καὶ ξηρὸν ἢ θερμὸν καὶ ψυχρὸν, συνοικίζει τε αὐτὰ καὶ ἐκδίδωσι. The reference to Archelaus is not, however, certain.

however, have been the meaning of Archelaus;[1] he no doubt supposed, like Anaxagoras, that spirit produced a vortex in the primitive infinite mass, and that from that vortex arose the first division of heat and cold, from which all other things spontaneously proceeded.

In the division of matter the water ran together in the midst; through the influence of heat, part of this evaporated and ascended as air, another part condensed and became earth; from the earth came the stars, which are detached portions of earth. The earth, which is a very small part of the universe, is kept in its place in the rotation by the air, and the air by fire. The surface of the earth must, according to Archelaus, be depressed towards the centre; for if it were absolutely level, the sun would rise and set everywhere at the same time. The stars at first revolved laterally around the earth, which, on account of its raised edge, lay in perpetual shadow; only when the inclination of the heavens began, could the light and warmth of the sun operate upon the earth and dry it up.[2] In all these conceptions there is little to distinguish Archelaus from

[1] Vide previous note and Stob. *l. c.*: οὐ μέντοι κοσμοποιὸν τὸν νοῦν.

[2] The above results from Hippol. *loc. cit.*, where, however, the text is very corrupt; and from Diog. ii. 17, where the traditional reading is equally inadmissible in its meaning. According to this the words run thus: τηκόμενόν φησι τὸ ὕδωρ ὑπὸ τοῦ θερμοῦ, καθὸ μὲν εἰς τὸ πυρῶδες συνίσταται, ποιεῖν γῆν· καθὸ δὲ περιῤῥεῖ, ἀέρα γεννᾷν. For πυρῶδες Ritter, i. 342, reads τυρῶδες; perhaps we should substitute for this πηλῶδες, and for the obscure περιῤῥεῖ, πυρὶ περιῤῥεῖται, as Diog. continues: ὅθεν ἡ μὲν ὑπὸ τοῦ ἀέρος, ὁ δὲ ὑπὸ τῆς τοῦ πυρὸς περιφορᾶς κρατεῖται. Byk, *Vorsokrat. Phil.* i. 247 sq., proposes to transpose the sentence thus: καθὸ μὲν περιῤῥεῖ ποιεῖν γῆν, καθὸ δὲ εἰς τὸ πυρῶδες συνίσταται ἀέρα γεννᾷν. But what then would be the meaning of περιῤῥεῖ? In the same passage is the statement τὴν δὲ θάλατταν ἐν τοῖς κοίλοις διὰ τῆς γῆς ἠθουμένην συνεστάναι. In this way no doubt the taste of sea-water was explained.

Anaxagoras,[1] whom he likewise resembles in his opinions concerning living beings, so far as we are acquainted with them. The cause of animation in all creatures is Spirit,[2] which Archelaus seems to have connected with the air that they breathe.[3] They first arose from the heat of the sun: this produced from the terrestrial slime various kinds of animals, which were nourished by the slime and only lived a short time; subsequently, sexual propagation was introduced, and men raised themselves above the other creatures by their arts and manners.[4] Concerning his other theories about men and animals, nothing has been told us; but it seems reasonable to conjecture that in them also he followed Anaxagoras, and that, like him and other predecessors, he bestowed special attention on the activities of the senses.[5] The statement that he believed in the exist-

[1] Cf. p. 355 sq., 360. Archelaus (vide *supra*, 362, 6) also agrees with Anaxagoras in his explanation of earthquakes, ap. Sen. *Qu. N.* vi. 12.

[2] Hippol. *l. c.*: νοῦν δὲ λέγει πᾶσιν ἐμφύεσθαι ζῴοις ὁμοίως. χρήσασθαι γὰρ ἕκαστον καὶ τῶν σωμάτων ὅσῳ τὸ μὲν βραδυτέρως τὸ δὲ ταχυτέρως. Instead of χρήσασθαι we should read no doubt χρῆσθαι, and instead of the obscure words, τῶν σωμάτων ὅσῳ τῷ σώματι ὁμοίως, as Ritter suggests (*Ion. Phil.* 304).

[3] This, I conjecture, partly from his general theories on Spirit, discussed above, and partly from the testimonies quoted, p. 364, 4. Also the fact that that opinion was attributed to Anaxagoras is most easily explained on this theory.

[4] Hippol. *l. c.*: περὶ δὲ ζῴων φησὶν, ὅτι θερμαινομένης τῆς γῆς τὸ πρῶτον ἐν τῷ κατὰ μέρος [κάτω μέρει], ὅπου τὸ θερμὸν καὶ τὸ ψυχρὸν ἐμίσγετο, ἀνεφαίνετο τά τε ἄλλα ζῷα πολλὰ καὶ ἀνόμοια· πάντα τὴν αὐτὴν δίαιταν ἔχοντα ἐκ τῆς ἰλύος τρεφόμενα, ἣν δὲ ὀλιγοχρόνια· ὕστερον δὲ αὐτοῖς καὶ ἡ ἐξ ἀλλήλων γένεσις ἀνέστη καὶ διεκρίθησαν ἄνθρωποι ἀπὸ τῶν ἄλλων, καὶ ἡγεμόνας καὶ νόμους καὶ τέχνας καὶ πόλεις καὶ τὰ ἄλλα συνέστησαν. The same is to be found in part ap. Diog. ii. 16; cf. p. 365, 6. A misapprehension of this tradition seems to have given rise to the statement of Epiphanius, *Exp. Fid.* 1087 a, that Archelaus thought all things originated from earth, which he regarded as the ἀρχὴ τῶν ὅλων.

[5] There seems to be an allusion to this in the short notice, ap. Diog. ii. 17: πρῶτος δὲ εἶπε φωνῆς γένεσιν τὴν τοῦ ἀέρος πλῆξιν, where

ence of an infinite number of worlds[1] is, no doubt, founded on a misapprehension.

Some writers maintain that Archelaus occupied himself with ethical enquiries as well as physics, and that he was in this respect a precursor of Socrates.[2] In particular, he is said to have sought the origin of right and wrong, not in nature, but in custom.[3] These statements, however, seem to have arisen from the impossibility of conceiving the supposed teacher of Socrates to be without an ethical philosophy; and confirmation of this presupposition was looked for in a passage which originally had quite another meaning.[4] That Archelaus accomplished anything important in the sphere of ethics is improbable, from the silence of Aristotle, who never once mentions him.

But although the school of Anaxagoras remained faithful, as he himself did, to physical investigations, yet

however πρῶτος is incorrect, vide *sup.* p. 368. 3.

[1] Stob. *Ecl.* i. 496, vide *supra*, Vol. I. p. 262, 3.

[2] Sext. *Math.* vii. 14: Ἀρχ. . . . τὸ φυσικὸν καὶ ἠθικὸν [μετήρχετο]. Diog. ii. 16: ἔοικε δὲ καὶ οὗτος ἅψασθαι τῆς ἠθικῆς. καὶ γὰρ περὶ νόμων πεφιλοσόφηκε καὶ καλῶν καὶ δικαίων· παρ' οὗ Σωκράτης τῷ αὐξῆσαι αὐτὸς εὑρεῖν ὑπελήφθη.

[3] Diog. *l. c.*: ἔλεγε δὲ . . . τὰ ζῷα ἀπὸ τῆς ἰλύος γεννηθῆναι· καὶ τὸ δίκαιον εἶναι καὶ τὸ αἰσχρὸν οὐ φύσει ἀλλὰ νόμῳ.

[4] At any rate in Diogenes the remarkable combination of the two propositions concerning the genesis of animals, and the origin of right and wrong, would lead us to suppose that his utterances are ultimately derived from the same passage in Archelaus's treatise as that quoted on p. 392, 4, from Hippolytus. Archelaus in that case had merely said that men were at first without law or morals, and only attained to them in course of time; and from this, later writers deduced the sophistical statement that right and wrong are not founded on nature. Ritter's explanation of this proposition (*Gesch. d. Phil.* i. 344): 'That good and evil in the world arise from the distribution (νόμος) of the primal seeds in the world,' seems to me impossible: this signification of νόμος is not proved by any of the analogies which he adduces. Diogenes, moreover, certainly took the sentence which he quotes only in its ordinary meaning.

the new principle which he had introduced into physics necessitated an altered direction of enquiry; and thus he is immediately connected with the phenomenon which marks the end of the previous philosophy, and the transition to a new form of scientific thought—viz., the rise of Sophistic opinion.

§ III.—THE SOPHISTS.[1]

1. *Origin of the Sophistic doctrine.*

PHILOSOPHY, until about the middle of the fifth century, was confined to the small circles which the love of science had assembled in particular cities around the authors and representatives of physical theories. Scientific enquiry concerned itself but little with practical life. The necessity of theoretical instruction was only felt by a few, and as yet the attempt had never been made on an extended scale to make science common property, and to found moral and political activity on scientific culture. Even Pythagoreanism can hardly be regarded as such an attempt; for in the first place it was only the members of the Pythagorean Society on whom its educating influence was exerted; and secondly,

[1] Jac. Geel, *Historia critica Sophistarum, qui Socratis ætate Athenis floruerunt* (*Nova acta literaria societ. Rheno-Traject. P. II.*), Utr. 1823. Hermann, *Plat. Phil.* pp. 179–223, 296–321. Baumhauer, *Disputatio literaria, quam vim Sophistæ habuerint Athenis ad ætatis suæ disciplinam mores ac studia immutanda* (Utr. 1144), a laborious work, but without important results. Grote, *Hist. of Greece*, viii. 474–544; to which discussions I shall often have occasion to refer, on account of their very great importance. Schanz, *Beitr. z. vorsokrat. Phil. aus Plato*, 1. *H. Die Sophisten*. Gött. 1867; Siebeck, *Ueb. Sokrates Verh. z. Sophistik; Untersuch. z. Phil. d. Gr.* 1873. p. 1 sqq.; Ueberweg, *Grundr.* i. § 27.

its science had no immediate reference to practical life: Pythagorean morality is a kind of popular religion; Pythagorean science, conversely, is physics. The principle that practical capability is conditioned by scientific culture was, generally speaking, quite alien to antiquity.

Meanwhile, in the course of the fifth century, various causes combined to alter this state of things. The mighty impulse which Greece had received since the Persian wars, and Gelon's victory over the Carthaginians, must, in its subsequent influence, have deeply affected Greek science also, and the relation of science to the nation at large. Through a magnanimous enthusiasm, a rare devotion on the part of all individuals, these extraordinary successes had been attained: a proud self-reliance, a youthful desire for action, a passionate struggle for freedom, glory and power, were their natural result. The traditional institutions and national customs became too narrow for a nation that was spreading itself on all sides: the old constitutional forms could nowhere, except in Sparta, maintain their ground against the spirit of the age—the old customs, even in Sparta, were unable to do so. The men who had staked their lives for the independence of their country would not suffer their interest in the conduct of its affairs to decline; and in the greater number, and the most intellectually active of the cities,[1] a democracy arose to power which in course of time was able without difficulty, to set aside the few barriers of law yet remaining.

[1] Especially in Athens and among her allies in Syracuse, and the other Sicilian colonies.

Athens, who by her glorious deeds had become the ruling centre of Greek national life, and since Pericles, had also united in herself more and more the scientific powers and efforts of the nation, was foremost to pursue this course. The result was an incredibly rapid progress in all spheres, an active rivalry, a joyful straining of all the powers which, let loose by freedom, were guided by the great genius of Pericles to the highest ends; and so this city was enabled within a single generation to attain a height of prosperity and power, of glory and culture, of which history affords no parallel. With the increase of culture the claims on individuals necessarily increased, and the customary means of education were no longer sufficient. Education had, till then, been limited to music and gymnastic, together with some elementary arts; everything further was left to the unmethodical practice of life, and to the personal influence of relatives and fellow-citizens.[1] Even politics and the art of oratory, so indispensable to a statesman, were learned in the same manner. This method had indeed produced the most brilliant results. From the school of practical experience the greatest heroes and statesmen went forth, and in the words of the poets—of Epicharmus and Pindar, of Simonides and Bacchylides, of Æschylus and Sophocles—an abundant store of practical wisdom and observation of mankind, of pure moral principles and profound religious ideas, was deposited in the most perfect form, for the benefit of all. But just because men had gone so far, they found it necessary to go farther. If a higher cultivation of taste and intellect, such as could be attained in the

[1] Vide Vol. I. p. 77.

accustomed way, was universally disseminated, the man who wished to distinguish himself was forced to look around him for something new. If all were habituated, through political activity and multifarious intercourse, to a keen apprehension of the relation of things, to rapid judgment and resolute action, only a special training could give decided ascendency to individuals; if an appreciative sense of the beauties of language and the subtleties of expression were quickened in all, speech required to be treated in a more artistic manner than heretofore; and the value of this artistic eloquence became necessarily greater as more importance was attached, in the all-powerful popular assemblies, to the momentary charm and impression of the speeches. For this reason there arose in Sicily, independently of the Sophists, and almost contemporaneously with them, the rhetorical school of Corax. But the necessities of the time required not merely a methodical introduction to rhetoric, but scientific instruction concerning all things of value in practical, and more especially in civil, life; and if Pericles himself did not disdain to feed his refined and commanding spirit upon intercourse with Anaxagoras and Protagoras, the disciples of this scientific culture might the more confidently expect to benefit—as it became easier for a receptive intellect, by the proper use of dialectic, to discover weaknesses and contradictions in the ordinary notions about ethics, and thereby to attain, even as against the most skilled and experienced men of practice, the consciousness of superiority.[1]

[1] Cf. the remarkable conversation between Pericles and Alcibiades, Xen. *Mem.* i. 2, 40 sq.

Philosophy, in its earlier one-sided physical tendency, could not satisfy this need; but it had itself arrived at a point where its form must of necessity undergo a change. It had started from the contemplation of the external world; but already Heracleitus and Parmenides had shown, and all subsequent systems had agreed with them, that the senses cannot teach us the true essential nature of things. These philosophers did not indeed on that account cease to regard the explanation of nature as their proper task: they hoped to establish by reason that which is hidden from sense. But what right had they to this assumption until the specific character of intellectual thought and its object, as distinguished from the sensible perception and sensible phenomenon, had been more closely investigated? If thought, like perception, acts according to the nature of the body and of external impressions,[1] it is not easy to understand why the one should be more trustworthy than the other; and all that the early philosophers, from their various standpoints, had said against the senses may be said universally against the human faculty of cognition. If there is nothing besides corporeal Being, the mistrust of the Eleatics and the principles of Heracleitus may be applied to all reality. They had contended against the reality of the Many by showing the contradictions that would result from its divisibility and extension in space: and the reality of the One might be questioned on the same grounds. Heracleitus had said that nothing is fixed except reason and the law of the universe; and it might with equal right be asserted

[1] Vide Vol. I. p. 602; Vol. II. pp. 79, 171.

that the law of the universe must be as changeable as the fire of which it consists—our knowledge as changeable as the thing to which it relates, and the soul in which it dwells.[1] The ancient physics, in a word, contained in its materialism the germ of its destruction. If there be only corporeal Being, all things are extended in space and divisible, and all presentations arise from the working of external impressions upon the corporeal soul—from sensation; therefore, if the reality of divided Being and the truth of the sensible phenomenon be renounced from this standpoint, truth and reality are altogether cancelled, all things are resolved into a subjective appearance; and, with the belief in the cognisability of things, the endeavour after the knowledge of them must likewise be at an end.

As Physics thus indirectly paved the way for an altered tendency of thought, so this tendency was directly forced upon Physics from without. Though we ought not, perhaps, to lay much stress upon the fact that the later physicists, as compared with the earlier, bestow far more attention on the study of man, and that Democritus, already a contemporary of the Sophists, also occupied himself to a great extent with ethical questions—yet we must in any case regard the Anaxagorean doctrine of Spirit as the direct preparation for the Sophistic doctrine, or, more accurately, as the clearest indication of the change which was even then taking place in the Greek theory of the world. The

[1] That such inferences were really deduced from the doctrines of the Eleatics and Heracleitus will be shown in the fourth Chapter of this section. In regard to Heracleitus it has already been shown, p. 115, 1; and in regard to the Atomists, p. 314 sq.

νοῦς of Anaxagoras is not, indeed, the human mind as such; and when he said that νοῦς rules all things he did not mean that man has all things in his power by means of thought. But he had nevertheless created the conception of mind out of his own consciousness, and though it may have been treated by him as a force of nature, in its essence it was not distinct from the mind of man. Consequently, when others transferred what Anaxagoras had said of Mind to the human mind —the only Mind given in our experience—they went only one step farther upon the road which he had opened—they reduced the νοῦς of Anaxagoras to its basis in actual fact, and set aside a presupposition which must have seemed to others untenable: they allowed that the world is the work of the thinking essence; but as the world was to them a subjective phenomenon, so the world-creating consciousness became human consciousness, and man became the measure of all things. Sophistic did not directly arise from this reflexion. The first appearance of Protagoras, at any rate, can hardly be assigned to a later date than the development of Anaxagoras's doctrine, and we know of no Sophist who had any express connection with that doctrine. But the doctrine shows us, speaking generally, an alteration in the attitude of thought to the outer world; whereas previously, the grandeur of nature had so absorbed man that he was carried away, and became self-forgetful in his admiration of it, man now discovered in himself a power which, distinct from everything corporeal, orders and rules the corporeal world; spirit appears to him something higher as compared with nature; he turns from the

investigation of nature, in order that he may be occupied with himself.[1]

That this would immediately take place in the right way was hardly to be expected. With the culture and brilliancy of the epoch of Pericles there went hand-in-hand an increasing relaxation of the ancient discipline and morality. The undisguised self-seeking of the greater States, their tyrannical conduct to the lesser, even their successes, undermined the public morals; the ceaseless internal feuds opened a wide field for hatred and revenge, for avarice, ambition, and all the passions; men accustomed themselves to the violation, first of public, then of private rights, and the curse of all self-aggrandising policy was fulfilled in the most powerful cities, such as Athens, Sparta and Syracuse: the recklessness with which the State trampled upon the rights of other States destroyed in its own citizens respect for right and law.[2] And when individuals had sought their glory for a while in devotion to the ends of the common selfishness, they began to apply the same principle of egoism in an opposite direction, and to sacrifice the welfare of the State to their own interests.[3] Moreover, as democracy in most of the States increasingly threw aside all the restraints of law, the most extravagant notions were formed con-

[1] A similar relation to that between Anaxagoras and the Sophists is to be found later between Aristotle and the post-Aristotelian philosophy, with its practical one-sidedness, and its abstract subjectivity. Cf. Part III. a, 13, 2nd ed.

[2] Cf. in reference to this Part II. a, 23, 3rd ed.

[3] No more forcible reason could be given for the Sophistic theory of egoism than that brought forward by the Platonic Callicles (*Gorg.* 483 D), and afterwards repeated in Rome by Carneades (vide Part III. a, 467, 2nd ed.), that in politics men only proceed on these principles.

cerning popular government and civil equality; there grew up a licentiousness which respected no customs or proprieties,[1] and the perpetual alteration of the laws seemed to justify the opinion that they arose without internal necessity, merely from the whims, or the interests, of those temporarily in power.[2] Finally, the advancing culture must itself have more and more removed the limits which were formerly set by morality and religious faith to selfishness. The unqualified admiration of home institutions, the simple presupposition, so natural to a restricted stage of culture, that everything must be as we have been accustomed to see it at home, necessarily vanished before a wider knowledge of the world and of history, and a keener observation of mankind.[3] For the man who had once accustomed himself to ask for reasons in everything, traditional usage naturally lost its sanctity; and he who felt himself superior to the mass of the people in intelligence would not be inclined to venerate, in the resolutions of the ignorant multitude, an inviolable law. Nor could the ancient belief in the gods hold its place before the growing enlightenment; the religious services and the gods themselves belonged to the things which some nations regard in one way, and some in another; moreover, the old myths contained much that was incompatible with the purer moral conceptions, and newly attained insight. Even art contributed

[1] Here again Athens is an example; the fact itself requires no confirmation; in place of all other evidence we may refer to the masterly description in the *Republic*, viii. 557 B sqq., 562 C sqq.

[2] Cf. on this point the quotations that will be cited later on in connection with the Sophistic theories on right and law.

[3] Cf., for example, *Herod.* iii. 38.

to the undermining of faith. Plastic art, by its very perfection, made men recognise in the gods the work of the human mind, which in art actually proved that it was capable of creating from itself the divine ideal, and was free to control it.[1] But still more dangerous for the traditional customs and religion must have been the development of poetry, and, above all, of the drama, the most effective and popular kind of poetry. The whole action of the drama, comic as well as tragic, is based upon the collision of duties and rights, of views and interests, upon the contradiction between traditional usage and natural laws, between faith and the speculations of reason, between the spirit of innovation and the predilection for what is old, between versatile cleverness and simple rectitude—in a word, upon the dialectic of moral relations and duties.[2] The more perfectly this dialectic unfolded itself, the lower poetry descended from the sublime study of the moral whole to the relations of private life, the more she sought her glory (after the manner of Euripides) in the subtle observation and accurate dissection of dispositions and motives, the more the gods were subjected to human standards, and the weaknesses of their anthropomorphic nature exposed,—the more unavoidable was it that the drama should serve to nourish moral doubt, to undermine the old faith, and along with pure and exalted utterances, to bring into circulation some that were

[1] The most flourishing period of art, even of religious art, seems in general to occur when some form of faith is beginning to waver, and its transformation is being prepared: we need only think of the artists of the fifteenth and sixteenth centuries.

[2] Part II. a, 4, 3rd edition.

frivolous and dangerous to morals.[1] Of what use was it to recommend the virtue of the ancients, and to complain, like Aristophanes, of the moderns, if everyone was alike quitting the standpoint of past times, and making merry in a wanton humour with all that had then been holy? The whole epoch was penetrated with a spirit of revolution and of progress, and none of the existing powers was in a position to exorcise it.

It was impossible that philosophy should not be infected by this spirit. Essential points of contact with it were already to be found in the systems of the Physicists. When Parmenides and Heracleitus, Empedocles, Anaxagoras and Democritus with one accord distinguish between nature and traditional custom, between truth and human tradition, this distinction needed only to be applied to the sphere of practice in order to maintain the Sophistical view of the positive element in morals and law. If several of these philosophers had expressed themselves with bitter contempt in regard to the senselessness and folly of mankind, the conclusion was not far to seek—that the opinions and laws of this foolish multitude were not binding on the wise. In respect to religion, this declaration had long since been made. The bold and telling assaults of Xenophanes had given a shock to the Greek popular belief, from which it never again recovered. Heracleitus agreed with him in a passionate polemic against the theological poets and their myths. Even the mystical school of the Pythagoreans, even the prophet

[1] The character of Greek poetry in the fifth century is discussed more at length in the introduction to the second part of this work.

Empedocles, appropriated this purer conception of God, which, outside of philosophy—not unfrequently in the verses of a Pindar, an Æschylus, a Sophocles, an Epicharmus—gleams out amidst the luxuriant growth of mythical imagery. The stricter physicists, lastly—such as Anaxagoras and Democritus—occupy towards the faith of their country an attitude of complete independence: the visible gods, the sun and moon, are in their opinion lifeless masses; and whether the guidance of the universe be entrusted to a blind natural necessity or to a thinking mind, whether the gods of the popular creed are quite set aside, or are changed into the εἴδωλα of Democritus, makes no great difference as far as any connection with the existing religion is concerned.

More important however for the purpose of our enquiry, than all that we have been considering, is the whole character of the earlier philosophy. All the factors which promoted the development of a sceptical mode of thought, were also of necessity favourable to moral scepticism; if truth, speaking generally, disappears from consciousness on account of the deceptions of the senses and the flux of phenomena, moral truth must likewise disappear from it. If man is the measure of all things, he is also the measure of what is commanded and permitted; and if we cannot expect that all men should conceive things in the same manner, neither can we expect that all men in their actions should follow one and the same law. This sceptical result could only be escaped through a scientific method, which should be able to reconcile contradictions by the union of that which is apparently opposed,

to distinguish the essential from the unessential, to point out abiding laws in changing phenomena and in the capricious actions of men; and, in this manner, Socrates saved himself and philosophy from the errors of the Sophists. But it was here, precisely, that all the earlier philosophers failed. Starting from a limited observation, they brought forward now one, and now another quality in things, to the exclusion of all other qualities, as their first principle. Even those among them who sought to combine the opposite principles of Unity and Multiplicity, Being and Becoming—viz. Empedocles and the Atomists—did not get beyond a one-sided physical and materialistic theory of the world; and though Anaxagoras completed the material causes by the addition of Mind, he only apprehended Mind as a force of nature. The one-sidedness of their procedure made the ancient philosophers not merely incapable of opposing a dialectic which combated these partial notions by means of one another, and cancelled them by each other, but in the progress of reflection they must necessarily have been forced to adopt it. If the Plurality of Being were maintained, the Eleatics proved that All is One; if its Unity were asserted, this was met by the consideration which had led the later Physicists beyond the Eleatic doctrine—viz., that with Plurality all concrete qualities of things must likewise be given up. If something unchangeable were sought as the object of thought, Heracleitus upheld the universal experience of the variability of phenomena. If the fact of their variability were admitted, then the objections of the Eleatics against Becoming and Being

had to be overcome. If natural enquiries were pursued, the newly-awakened consciousness of the higher importance of spirit turned aside the enquirer. If moral duties were attempted to be established, no point of fixity could be found in the vortex of opinions and usages, and natural law seemed to lie only in the justification of this caprice, in the dominion of subjective pleasure and advantage. This uncertainty of all scientific and moral convictions was first brought to an end by Socrates, who showed how the various experiences were to be weighed against each other dialectically, and combined in general conceptions, which teach us to know the unchangeable essence of things in the change of their accidental characteristics. The earlier philosophers, to whom this method was still strange, could not withstand him—their one-sided theories mutually destroyed each other. The revolution which was then being accomplished in all the spheres of Greek life took possession also of science, and philosophy became Sophisticism.

2. *The External History of the Sophists.*

The first person who is mentioned[1] as having come forward under the name and with the pretensions of a

[1] The fullest account of Protagoras is given by Frei in his *Quæstiones Protagoreæ* (Bonn, 1845); this is merely confirmed and supplemented as to details, by O. Weber, *Quæstiones Protagoreæ* (Marb. 1850), and Vitringa, *De Prot. Vita et Philos.* (Gron. 1853). Of the earlier writers, Geel, *Hist. Crit. Soph.* p. 68–120, is unimportant; the monograph of Herbst in Petersen's *Philol.-Histor. Studien* (1832), pp. 88–164, contains much matter, but treats it rather superficially; Geist, *De Protagoræ Vita*, Giessen, 1827, confines himself to a short discussion of the biography of Protagoras.

Sophist is Protagoras,[1] of Abdera.[2] The activity of this man extends over almost the whole of the second half of the fifth century. Born about 480 B.C., or perhaps somewhat earlier,[3] from his thirtieth year upwards[1] he passed from one Greek city to another, offering his instructions in exchange for payment, to all who sought to gain practical ability and higher mental culture;[2] and so brilliant was his success, that the youths of the educated classes everywhere flocked to

[1] All writers, from Plato downwards, describe him as a native of Abdera (*Prot.* 309 C; *Rep.* x. 600 C). Eupolis, according to Diog. ix. 50, &c., calls him instead a Teian, but this is only a difference of expression. The Abderites were called Teians because their city was a colony of Teos. In Galen, *H. Phil.* c. 8, instead of Protagoras the Elean, Diagoras the Melian should be substituted. The father of Protagoras is sometimes called Artemon, sometimes Mæandrius, also Mæandrus or Menander; vide Frei, 5 sq.; Vitr. 19 sq.

[2] In Plato, *Prot.* 316 B, sqq., he says himself that the Sophistic art is of ancient date, but that those who practised it formerly disguised themselves under other names: *ἐγὼ οὖν τούτων τὴν ἐναντίαν ἅπασαν ὁδὸν ἐλήλυθα, καὶ ὁμολογῶ τε σοφιστὴς εἶναι καὶ παιδεύειν ἀνθρώπους*, &c. In reference to this we read further on, 349 A: *σύ γ' ἀναφανδὸν σεαυτὸν ὑποκηρυξάμενος εἰς πάντας τοὺς Ἕλληνας σοφιστὴν ἐπονομάσας σεαυτὸν ἀπέφηνας παιδεύσεως καὶ ἀρετῆς διδάσκαλον πρῶτος τούτου μισθὸν ἀξιώσας ἀργυρίου.* (The latter statement is repeated in Diog. ix. 52; Philostr. *V. Soph.* i. 10, 2; Plato, *Hipp. Maj.* 282 C, &c.) When in the *Meno*, 91 E, certain predecessors of the Sophists are mentioned, this does not refer to Sophists proper, but to the persons previously spoken of in *Prot.* 316 sq.

[3] The dates in the life of Protagoras are uncertain, as with most of the ancient philosophers. Apollodorus, ap. Diog. ix. 56, assigns his most flourishing period to *Ol.* 84 (444–440 B.C.). That he was considerably older than Socrates we learn from Plato, *Prot.* 317 C, where it is said that there was none of those present of whom he might not have been the father (though this remark may not be intended literally); from *Prot.* 318 B. *Theæt.* 171 C, and from the circumstance that the Platonic Socrates often speaks of him (*Theæt.* 164 E sq., 168 C, D, 171 D. *Meno*, 91 E; cf. *Apol.* 19 E) as dead, and in the *Meno*, *l. c.* he is said to have nearly attained the age of seventy. In regard to the time of his death, the words in the *Meno*: *ἔτι εἰς τὴν ἡμέραν ταυτηνὶ εὐδοκιμῶν οὐδὲν πέπαυται* imply that he belonged to the distant past; and if the statement of Philochorus, ap. Diog. ix. 55, is correct, that Euripides, who died in 406 or 407 B.C., alluded to him in Ixion, he cannot be supposed to have lived beyond 408 B.C. That this theory is not contradicted by the verse of Timon, ap. Sext. *Math.* ix. 57, has already been shown by Hermann (*Zeitschr. f. Alterthumsw.* 1834, p. 364), Frei, p. 62, &c. The assertion (Diog. ix. 54) that his accuser Pythodorus was one of the Four Hundred, makes it probable that his trial took place in the time of the Four Hundred; though it must be granted to the writers named above that this does not absolutely follow; and another testimony (*inf.* 409, 2) designates Euathlus as his accuser. The other authorities in favour of his persecution by the Four Hundred (cf. Frei. 76; Weber, 19 sq.) are uncertain. The statement that he was ninety years old at his death (*ἔνιοι*, ap. Diog. ix. 56; *Schol. ad Plat. Rep.* x. 600 C), which contradicts the testimony of Plato, followed also by Apollodorus (ap. Diog. ix. 56), deserves no attention. According to the foregoing evidence, the conjecture (Geist, 8 sq.; Frei, 64; Vitringa, 27 sq.) that his birth was in 480 B.C. and his death in 411 B.C. does not make him at all too old; his birth may probably be assigned still more accurately to 481–2 (Diels, *Rh. Mus.* xxxi. 44); on the other hand, Schanz, *l. c.* 23, doubtless goes too far in assigning his birth to 490–487, and his death to 420–417 B.C. Cf. the detailed discussion of Frei, p. 13 sqq., and Weber, p. 12.

[1] According to Plato, *Meno*, 91 E; Apollod. ap. Diog. ix. 56, he practised his profession as a Sophist for forty years.

[2] Vide p. 408, 3; 411, 1; Plato, *Theæt.* 161 D, 179 A. The fee that he asked (for a whole course) is said by Diog. ix. 50, 52; Quintil. iii. 1, 10, &c. (Frei. 165) to have been 100 minæ, and Gell. v. 3, 7, speaks of a *pecunia ingens annua*. The sum is no doubt greatly exaggerated, though it appears from *Prot.* 310 D, that he demanded considerable remuneration. According to Plato, *Prot.* 328 B; Arist. *Eth. N.* ix. 1, 1164 a, 24, he asked, indeed, a fixed sum, but left it to his pupil to decide at the end of the instructions what he would give, if the price seemed to him excessive. All the more improbable is the well-known story of his law-suit with Euathlus, ap. Gell. v. 10; Apul. *Floril.* iv. 18, p. 86 Hild.; Diog. ix. 56; Marcellin, *Vit. Gr. Ed.* Walz, iv. 179 sq. Especially as Sext. *Math.* ii. 96; *Prolegg. in Hermogen.*; *Rhet. Gr.* Ed. Walz, iv. 13 sq.; Sopater, *in Hermog. ibid.* v. 6, 65, iv. 154 sq.; Max. Plan. *Prolegg. ibid.* v. 215; Doxopater, *Prolegg. ibid.* vi. 13 sq., say the same of Corax and Tisias. The case here supposed of an unanswerable question seems to have been a favourite theme for sophistic rhetorical exercises; if Pythagoras's *δίκη ὑπὲρ μισθοῦ* (Diog. ix. 55) was genuine, we might assume that this theme had been discussed in it, and that the anecdote arose from thence; if it was not genuine, the opposite assumption, that the anecdote gave occasion to its fabrication, has more in its favour. According to Diog. ix. 54; cf. Cramer, *Anecd.* Paris, i. 172 (Frei, 76). Euathlus was named by Aristotle as the person who accused Protagoras of atheism; but this is perhaps only the ignorant repetition of an expression relating to the lawsuit about his payment. According to Diog. ix. 50, Protagoras also collected money from those present for single lectures.

him and overwhelmed him with admiration and with gifts.[1] Besides his native city,[2] Sicily and Magna Græcia[3] are mentioned as the scene of his labours, but especially Athens,[4] where not only Callias, but also Pericles and Euripides sought his society;[5] the exact

[1] The most vivid account of the enthusiastic veneration accorded to Protagoras, is given by Plato, *Prot.* 310 D sqq., 314 E sq., &c. Cf. *Rep.* x. 600 C (*inf.* 418, 1); *Theæt.* 161 C; as to his gains we read in the *Meno*, 91 E, that his art yielded more than that of Pheidias to himself and ten other sculptors; Athenæus, iii. 113 c, speaks proverbially of the gains of Gorgias and Protagoras. Dio Chrys. *Or.* liv. 280 R, cannot be quoted as evidence to the contrary, as is shown by Frei, p. 167 sq.

[2] According to Ælian, *V. H.* iv. 20; cf. Suid. Πρωταγ. *Schol. ad. Plato. Rep.* x. 600 C. his fellow citizens called him λόγος. Favorinus, ap. Diog. ix. 50, says, through a mistake for Diogenes (vide *sup.* p. 213, *n.*): σοφία.

[3] His residence in Sicily is mentioned in Plato's *Greater Hippias*, 282 D, which, however, itself is not very trustworthy. There is a reference to Lower Italy in the statement that he gave laws to the Athenian colony in Thurii (Heracleid. ap. Diog. ix. 50, and Frei, 65 sqq., Weber, 14 sq., Vitringa, 43 sq.), since he no doubt himself in that case accompanied the colonists. From Sicily he may have gone to Cyrene, and there formed a friendship with the mathematician Theodorus, whom Plato mentions, *Theæt.* 161 B, 162 A.

[4] Protagoras was repeatedly in Athens, for Plato (*Prot.* 310 E) represents him as speaking of a former visit which took place a considerable time before the second, to which the dialogue is assigned. Plato makes this second visit begin before the commencement of the Peloponnesian War, for that is, irrespective of trifling anachronisms, the supposed date of the dialogue, which was held on the second day after the arrival of the Sophist (vide Steinhart, *Platon's Werke*, i. 425 sqq., and my treatise on the *Platon. Anachronismen, Abh. d. Berl. Akad.* 1873; *Phil. Hist. Kl.* p. 83 sq.). That Protagoras was at that time in Athens, we find also from the fragment, ap. Plut. *Cons. ad Apoll.* 33, p. 118, and *Periel.* c. 36. Whether he remained there until his exile, or continued his wanderings in the interim, we are not told, but the latter supposition is far the most probable.

[5] In regard to Callias, the famous patron of the sophists, who, according to Plato, *Apol.* 20 A, had expended more money upon them than everyone else put together, this is well known from Plato (*Protag.* 314 D, 315 D, *Crat.* 391 B), Xenophon (*Symp.* i. 5), &c. In regard to Euripides, we gather it from the quotations, p. 408, 3, and also from the statement (Diog. ix. 54), that Protagoras read aloud his treatise on the gods in Euripides' house. In regard to Pericles, vide the quotations from Plutarch

date and duration, however, of his residence in these different places we cannot precisely ascertain. On account of his treatise concerning the Gods, he was persecuted as an Atheist, and obliged to leave Athens; in his voyage to Sicily he was drowned: his treatise was burnt for political reasons.[1] Of his doctrine nothing is known to us; he is said to have been a pupil of Democritus,[2] but this, in spite of Hermann's opinion to the contrary,[3] I consider to be as fabulous[4] as the

in the previous note; for even if the anecdote mentioned in the second quotation be merely a piece of gossip, such gossip would have been impossible unless the intercourse of Pericles with Protagoras had been a recognised fact. Concerning other disciples of Protagoras, vide Frei, 171 sqq.

[1] The above is attested by Plato, *Theæt.* 171 D; Cic. *N. D.* i. 23, 63; Diog. ix. 51 f, 54 sq.; Eus. *Pr. Ev.* xiv. 19, 10; Philostr. *V. Soph.* i. 10; Joseph. c. *Ap.* ii. 37; Sext. *Math.* ix. 56, &c.; but the evidence is not agreed as to the particular circumstances, and especially as to whether Protagoras left Athens as an exile or as a fugitive. Vide Frei, 75 sq.: Krische, *Forsch.* 139 sq.; Vitringa, 52 sqq. 'Diagoras' is substituted for Protagoras in Valer. Max. I., i. ext. 7; but this is of no importance.

[2] The oldest evidence for this is an Epicurean letter, Diog. ix. 53: πρῶτος τὴν καλουμένην τύλην, ἐφ' ἧς τὰ φορτία βαστάζουσιν, εὗρεν, ὥς φησιν Ἀριστοτέλης ἐν τῷ περὶ παιδείας· φορμοφόρος γὰρ ἦν, ὡς καὶ Ἐπίκουρός που φησι, καὶ τοῦτον τὸν τρόπον ἦρθη πρὸς Δημόκριτον, ξύλα δεδεκὼς ὀφθείς; *Id.* x. 8, Timocrates, a pupil of Epicurus, who afterwards quarrelled with him, reproached him with despising all other philosophers, and with having called Plato a sycophant of Dionysius, and Aristotle a debauchee (ἄσωτος) φορμοφόρον τε Πρωταγόραν καὶ γραφέα Δημοκρίτου καὶ ἐν κώμαις γράμματα διδάσκειν. The same is asserted by Suidas, Πρωταγόρας κοτύλη, φορμοφόρος, by the Scholiast in Plato's *Rep.* x. 600 C, and somewhat more at length from the same Epicurean letter, by Athen. viii. 354 c. Lastly, Gellius v. 3 elaborates the story still further, but without adding any different features. Protagoras is also called the pupil of Democritus by Philostr. *V. Soph.* i. 10, 1; Clem. *Strom.* i. 301 D, and Galen, *H. Phil.* c. 2; and the statement in Diogenes is based upon the same assumption.

[3] *De Philos. Ionic. Ætatt.* 17, cf. *Zeitschr. für Alterthumsw.* 1834; 369 *F. Gesch. d. Plat.* 190. Vitringa follows him, p. 30 sqq.; Brandis also gives credit to the statement of Epicurus, while Mullach, *Democr. Fragm.* 28 sq., Frei, 9 sq., and others, contest it.

[4] My reasons are these. In the first place there is no credible testimony for the statement. In regard to our authorities, Diogenes

statement of Philostratus, according to which he was instructed by the Magi [1]—the same, who, according to others, were the teachers of Democritus himself.[2] Of his writings, which were tolerably numerous,[3] only a few fragments have been preserved.

Gorgias of Leontium was a contemporary of Protagoras, perhaps somewhat anterior to him.[1] He also came to Athens, where he made his first appearance in the year 427 B.C., at the head of an embassy to solicit

and Athenæus name as their source only the Epicurean letter; Suidas and the Scholiast of Plato depend only on Diogenes; the representation of Gellius is evidently a mere amplification of that which Athenæus relates as from Epicurus. All these testimonies, therefore, are wholly derived from the statement of Epicurus. What value, however, can we attach to this when we see what slanders the writer permits himself, in the same letter, against Plato, Aristotle, and others? (As to the conjecture of its spuriousness, Weber, p. 6, which is not justified by Diog. x. 3, 8, I say nothing; nor can I attribute any weight in the discussion of the question to the words of Protagoras in the Scholium in Cramer's *Anecd.* Paris, i. 171.) The statement of Epicurus is perfectly accounted for by the contemptuousness of this philosopher (whose self-satisfied vanity depreciated all his predecessors), even if it had no further foundation than the above-mentioned notice of Aristotle. The statements of Philostratus, Clemens, and the pseudo-Galen may ultimately have had the same origin; in any case they cannot claim more credit than other statements of the same authors concerning the διαδοχή. But the discipleship of Protagoras to Democritus, besides being altogether uncertain, contradicts the most trustworthy theories as to the chronological relation of the two men (cf. p. 209, 321 sqq.), and since we shall presently find that there is not a trace of Democritean influence in the doctrines of the Sophists, we may venture to regard the whole as most probably an unhistorical invention.

[1] *V. Soph.* i. 10, 1. His father, Mæander, by his magnificent reception of Xerxes, is said to have obtained the instruction of the Magi for his son. Dino in his Persian History mentions Protagoras and his father, but it does not follow from this, as Weber supposes, p. 6, that he related the above story of the Magi, though the thing is possible. The story is irreconcilable with the statement of Epicurus; for, according to the latter, he was only a day-labourer, while in the former he appears as the son of a rich man, who gained the favour of Xerxes by his princely gifts and hospitality.

[2] Cf. p. 210 *n.*

[3] The scanty statements of the ancients concerning these will be found in Frei, 176 sqq.; Vitringa, 113 sq., 150 sq.; cf. Bernays, Καταβάλλοντες *des Prot.*, *Rh. Mus.* vii. (1850) 464 sqq.; those which claim our attention will be mentioned later on.

[1] Vide Foss, *De Gorgia Leontino* (Halle, 1828), who treats of him far more particularly and exhaustively than Geel (p. 13–67); Frei, *Beiträge z. Gesch. der Griech.*; *Sophistik*, *Rhein. Mus.* vii. (1850) 527 sqq., viii. 268 sqq. The native city of Gorgias is unanimously stated to have been Leontini (Leontium). On the other hand, the statements as to his date differ considerably. According to Pliny, *H. N.* xxxiii. 4, 83, in *Ol.* 70, he had already erected a statue to himself of massive gold in Delphi: here, however there must be a mistake in the calculation of the Olympiads, whether arising from the author, or the transcribers. Porphyry ap. Suid. *sub voce*, assigns him to *Ol.* 80: Suidas himself declares him to be earlier. Eusebius in his *Chronicle* places his acme in *Ol.* 86. According to Philostr. *V. Soph.* i. 9, 2 (on which little stress can be laid), he came to Athens ἤδη γηράσκων. Olympiodorus *in Gorg.* p. 7 (*Jahn's Jahrbb. Supplementb.* xiv. 112), makes him twenty-eight years younger than Socrates; but the statement on which this is founded, that he wrote in *Ol.* 84 (444–440 B.C.) περὶ φύσεως implies the contrary. The safest clue, though it may not be altogether accurate, is to be found in the two facts that in *Ol.* 88, 2 (427 B.C.), he appeared in Athens as the ambassador of his country (the date is given in Diog. xii. 53, cf. Thucyd. iii. 86), and that his long life (cf. Plato, *Phædr.* 261 B; Plut. *Def. Orac.* c. 20, p. 420), the duration of which is sometimes fixed at 108 years (Plin. *H. N.* vii. 48, 156; Lucian. *Macrob.* c. 23; Cens. *Di. Nat.* 15, 3; Philostr. v.; *Soph.* 494; *Schol. ad Plato. l. c.*; cf. Valer. Max. viii. 13, ext. 2), sometimes at 109 (Apollodor. ap. Diog. viii. 58; Quintil. iii. 1, 9; Olympiod. *l. c.* Suid.), sometimes at 107 (Cic. *Cato*, 5, 13), sometimes at 105 (Pausan. vi. 17, p. 495), sometimes less precisely at more than 100 (Demetr. *Byz.* ap. Athen. xii. 548 d), came to an end subsequently to the death of Socrates. This is clear from Quintilian's evidence, *l. c.*, according to the pertinent remark of Foss (p. 8 sq.), also from Xenophon's statements concerning Proxenus, the pupil of Gorgias (*Anabas.* ii. 6, 16 sq.), also from Plato (*Apol.* 19 E), and from the statement (Pausan. vi. 17, p. 495) that Jason of Pheræ highly esteemed him (vide Frei, *Rh. M.* vii. 535); this agrees with another statement, that Antiphon, who was born about the time of the Persian War (the second, no doubt), is called rather younger than Gorgias (Pseudoplut. *Vit. X.*: *Orat.* i. 9, p. 832, with which cf. Frei, *l. c.* 530 sq.). According to all these indications, Gorgias can scarcely have lived earlier than Foss, p. 11, and Dryander, *De Antiphonte* (Halle, 1838), 3 sqq. suppose, viz. from *Ol.* 71, 1 to 98, 1. But he may perhaps have been later (as Krüger, *ad Clinton Fasti Hell.* p. 388 thinks), and Frei may be more correct in assigning his birth proximately to *Ol.* 74, 2 (483 B.C.), and his death to *Ol.* 101, 2 (375 B.C.).

help against the Syracusans.[1] Already much esteemed in his own country as an orator and teacher of rhetoric,[2] he charmed the Athenians by his ornate and flowery language,[3] and if it be true that Thucydides and other important writers of this and the succeeding epoch imitated his style,[4] he must be allowed to have exercised

[1] Vide, concerning this embassy, the previous note and Plato, *Hipp. Maj.* 282 B; Paus. *l. c.* Dionys. *Jud. Lys.* c. 3, p. 458; Olympiod. *in Gorg.* p. 3 (likewise Plut. *Gen. Soc.* c. 13, p. 583, in itself not indeed historical evidence), and Foss, p. 18 sq.

[2] This appears probable from the expressions of Aristotle ap. Cic. *Brut.* 13, 46, and especially from his having been sent as ambassador to Athens. Hardly anything besides is known of Gorgias' previous life, for the names of his father (ap. Paus. vi. 17, p. 494, Karmantidas, ap. Suid., Charmantidas), of his brother (Herodicus, Plato, *Gorg.* 448 B, 456 B), and of his brother-in-law (Deicrates, Paus. *l. c.*) are immaterial to us; and the statement that Empedocles had been his teacher (vide on this point Frei, *Rh. Mus.* viii. 268 sqq.) is not established by Satyrus ap. Diog. viii. 58; Quintil. *l. c.*, Suidas, and the scholia on Plato's *Gorgias*, 465 D; and it cannot be deduced from the language of Aristotle, quoted p. 119, *note*. However credible it may be, therefore, that Gorgias may have received impulses from Empedocles, as an orator and rhetor, and may also have appropriated something from his physical theories (as we may infer from Plato, *Meno*, 76 C; Theophr. *Fr.* 3; *De Igne*, 73); it is questionable whether this involves actual discipleship, and whether moreover the remark of Satyras, which primarily refers to the rhetoric of Gorgias, does not rest upon mere conjecture, perhaps even upon the passage in the Meno. The same may be said of the statement in the prolegomena to Hermogenes, *Rhet. Gr.* ed. Walz, iv. 14, where Gorgias is represented as having been taught by Tisias, with whom, according to Pausan. vi. 17, he contended in Athens. To infer from Plut. *De Adul.* c. 23, p. 64; *Conj. Præc.* 43, p. 144, that Gorgias led an immoral life is the less justifiable, as the anecdote in the second of these passages, concerning his married life, contradicts the express testimony of Isocrates π. ἀντιδόσ. 157, that he was unmarried.

[3] Diodor. *l. c.*; Plato, *Hipp. l. c.*; Olymp. *l. c.*; *Prolegg. in Hermog. Rhet. Gr.* ed. Walz, iv. 15; Doxopater, *ibid.* vi. 15, &c.; vide Welcker, *Klein. Schr.* ii. 413.

[4] This is said of Thucydides in Dionys. *Ep.* ii. c. 2, p. 792; *Jud. de Thuc.* c. 24, p. 869; Antyllus ap. Marcell. *V. Thuc.* p. 8, xi. Dind.; of Critias in Philostr. *V. Soph.* i. 9, 2; *Ep.* xiii. 919; cf. Isocrates, who was a hearer of Gorgias in Thessaly; Aristoteles ap. Quintil. *Inst.* iii. 1, 13; Dionys. *Jud. d. Isocr.* c. 1, 535; *De vi dic. Demosth.* c. 4, 963; Cic. *Orator*, 52, 176; *Cato*, 5, 13; cf. Plut. *V.*

considerable influence over Attic prose and even poetry. Sooner or later after his first visit,[1] Gorgias seems to have betaken himself permanently to Greece Proper, where he wandered through the cities as a Sophist,[2] earning thereby much wealth.[3] In the last period of

Dec. Orat. Isocr. 2, 15, p. 836 sq.; Philostr. *V. Soph.* i. 17, 4, &c. (Frei, *l. c.* 541); of Agathon in Plato, *Symp.* 198 C, and the Scholiast on the beginning of this dialogue, cf. Spengel, Συναγ. Τεχν. 91 sq.; of Æschines in Diog. ii. 63; Philostr. *Ep.* xiii. 919; cf. Foss, 60 sq. That Pericles was not a 'hearer' of Gorgias is self-evident, and is shown by Spengel, p. 64 sqq.

[1] For the supposition (*Prolegg. in Hermog. Rhet. Gr.* iv. 15) that he remained there after his first visit, is contradicted by Diodor. *l. c.*, and by the nature of the errand on which he went.

[2] In Plato he says, *Gorg.* 449 B, that he teaches οὐ μόνον ἐνθάδε ἀλλὰ καὶ ἄλλοθι; this is confirmed by Socrates, *Apol.* 19 E, and hence Theag. 128 A. In the *Meno*, 71 C, Gorgias is absent, but a former sojourn of his in Athens is spoken of. Cf. Hermippus ap. Athen. xi. 505 d, where some unimportant and very uncertain anecdotes on Gorgias and Plato are to be found (likewise ap. Philostr. *V. Soph. Proœm.* 6, on Gorgias and Chaerephon). There is mention of a journey to Argos, where attendance at his lectures was forbidden, in Olympiod. *in Gorg.* p. 40; Proxenus, according to Xenoph. *Anab.* ii. 6, 16 (after 410 B.C.), seems to have had instruction from him in Bœotia. Among the writings of Gorgias, an Olympic discourse is named, which, according to Plut. *Conj. Præc.* c. 43, p. 144; Paus. vi. 17; Philostr. *V. Soph.* i. 9, 2; *Ep.* xiii. 919, he himself delivered at Olympia; also according to Philostr. *V. S.* i. 9; 2, 3, a discourse on the fallen in Athens, and the Pythian oration in Delphi. Much reliance, however, could not be placed on these statements as such, if the facts they assert were not in themselves probable. In regard to Süvern's mistaken conjecture that Peisthetærus in the *Birds* of Aristophanes is intended for Gorgias, vide Foss, 30 sqq.

[3] Diod. xii. 53, and Suidas, represent him as asking a premium of 100 minæ, which is also said by others of Protagoras and of Zeno the Eleatic (vide p. 409, 2; Vol. I. 609, *a.*); in Plato's *Greater Hippias*, 282 B, it is asserted that he gained much money in Athens; similarly in Athen. iii. 113 e; cf. also Xenoph. *Symp.* i. 5; *Anab.* ii. 6, 16. On the other hand, Isocrates says περὶ ἀντιδόσ. 155, that he was indeed the richest of all the Sophists with whom he was acquainted, but that at his death he left only 1,000 staters, which even if they were gold staters would only amount to 15,000 marks (750*l.*). The magnificence of his external appearance would seem to have corresponded with his supposed wealth as, according to Ælian, *V. H.* xii. 32, he used to appear in purple raiment; but the golden statue in Delphi is especially famous; which, according to Paus. *l. c.* and x. 18, p. 842; Hermipp. ap. Athen. xi. 505 d; Plin.

his life, we find him in Larissa in Thessaly,[1] where, after an extraordinarily long and hale old age,[2] he appears to have died. Among the treatises ascribed to him[3] is one of a philosophic nature; two declamations which bear his name[4] are probably spurious.[5]

Prodicus[6] is mentioned[7] among the disciples of

H. N. xxxiv. 4, 83, he himself erected, whereas according to Cic. *De Orat.* iii. 32, 129; Valer. Max. viii. 15, ext. 2, and apparently also Philostr. i. 9, 2, it was erected by the Greeks. Pliny and Valerius describe it as massive; Cicero, Philostratus and the so-called Dio Chrys. *Or.* 37, p. 115 R, as golden, Pausanias as gilded.

[1] Plato, *Meno*, at the beginning. Arist. *Polit.* iii. 2, 1275 b, 26; Paus. vi. 17, 495; Isocr. π. ἀντιδόσ. 155.

[2] In regard to the length of his life, vide *supra*; in regard to his green and hale old age, and the temperate life of which it was the fruit, vide Quintil. xii. 11, 21; Cic. *Cato*, 5, 13 (repeatedly in Valer. viii. 13, ext. 2); Athen. xii. 548 d (Geel, p. 30, rightly conjectures γαστέρος for ἑτέρων); Lucian, *Macrob.* c. 23; Stob. *Floril.* 101, 21; cf. Foss, 37 sq.; Mullach, *Fr. Phil.* ii. 144 sqq. According to Lucian, he starved himself to death. One of his last sayings is reported by Ælian, *V. H.* ii. 35.

[3] Six discourses, probably also a system of Rhetoric, and the treatise π. φύσεως ἢ τοῦ μὴ ὄντος. Vide the detailed enquiry of Spengel, Συναγ. Τεχν. 81 sqq.; Foss, pp. 62–109. Foss and Schönborn (p. 8 of his dissertation quoted below) give the fragment of the discourse on the Fallen, which Planudes, in *Hermog. Rhet. Gr.* ed. Walz, v. 548, repeats from Dionysius of Halicarnassus.

[4] The *Defence of Palamedes* and the *Praise of Helen*.

[5] Opinions on this point are divided. Geel, 31 sq., 48 sqq., considers the *Palamedes* to be genuine and the *Helen* spurious. Schönborn, *De authentia declamationum Gorg.* (Bresl. 1826) defends both; Foss, 78 sqq., and Spengel, *l. c.* 71 sqq., reject both. Steinhart (*Plato's Werke*, ii. 509, 18) and Jahn, *Palamedes* (Hamb. 1836), agree with the last writers. To me the *Palamedes* appears, if only on account of its language, decidedly spurious, and the *Helen* very doubtful; but I cannot agree with Jahn's conjecture that these writings may have been composed by the later Gorgias, Cicero's contemporary. Spengel may more probably be right in assigning the *Praise of Helen* to the rhetorician Polycrates, a contemporary of Isocrates.

[6] Welcker, *Prodikos von Keos, Vorgänger des Sokrates. Klein. Schr.* ii. 393–541, previously in *Rhein. Mus.* 1833.

[7] *Scholia ad Plat. Rep.* x. 600 C (p. 421 Bekk.), of whom one calls him the pupil of Gorgias, another the pupil of Protagoras and Gorgias, and a contemporary of Democritus. Suid. Πρωταγ. and Πρόδ. Vide, on the other hand, Frei, *Quæst. Prot.* 174.

Protagoras and Gorgias; but this is doubtless only so far true that, judging from his age, he might have been so.[1] A citizen of Iulis,[2] a town in the little island of Ceos, renowned for the purity of the manners of its inhabitants;[3] a fellow-townsman of the poets Simonides and Bacchylides, he seems to have first come forward in his own country as an ethical teacher: whether it be true or not that he frequently journeyed, on public affairs,[4] to Athens, under whose dominion Ceos stood,[5] it was there only that he could find an important sphere of action. That he visited other cities is not altogether certain,[6] but it is possible. Like all the Sophists, he required payment for his instructions;[7] the esteem, in which he was held, is attested not only

[1] This may be deduced from Plato, for Prodicus already appears in the *Protagoras* (perhaps indeed rather too soon) as a Sophist of repute; and yet it is said, 317 C, that Protagoras might be his father; also in *Apol.* 19 E, he is brought forward among the still living and active Sophists; he can therefore neither be older, nor very much younger, than Socrates, and his birth may be approximately assigned to 460–465 B.C. This agrees in a general manner with what is said of him by Eupolis and Aristophanes, and in the Platonic Dialogues, and also with the statement that Isocrates was his pupil (vide Welcker, 397 sq.); although we cannot assert anything very definite on the strength of it. The description of his personality in the *Protagoras*, 315 C sq. would imply that the traits there mentioned, the careful attention to the invalid Sophist, and his deep voice, were known to Plato from his own observation, and were fresh in the remembrance of his hearers.

[2] This is asserted by Suidas, and indirectly by Plato, *Prot.* 339 E, when he calls Simonides his fellow-citizen. Prodicus is always without exception called Κεῖος or Κῖος (vide, concerning the orthography, Welcker, 393).

[3] Cf. on this point the passages cited by Welcker, 441 sq. from Plato, *Prot.* 341 E; *Laws*, i. 638; A. Athen. xiii. 610; D. Plut. *Mul. Virt.* Κῖαι, p. 249.

[4] Plato, *Hipp. Maj.* 282 C; Philostr. *V. Soph.* i. 12.

[5] Welcker, 394.

[6] What Plato says, *Apol.* 19 E, does not appear decisive, and the accounts of Philostr. *V. S.* i. 12; *Proœm.* 5; Liban. *Pro Socr.* 328 Mor.; Lucian, *Herod.* c. 3, may easily be founded on mere conjecture.

[7] Plato, *Apol.* 19 E; *Hipp. Maj.* 282 C; Xen. *Symp.* 1, 5, 4,

by the assertions of the ancients,[1] but by the celebrated names that are found among his pupils and acquaintances.[2] Even Socrates is known to have made use

62; Diog. ix. 50; according to Plato, *Crat.* 384 B; Arist. *Rhet.* iii. 14, 1415 b, 15, his lecture on the right use of words cost fifty drachmas; another doubtless of a popular kind intended for a more general audience (like the lecture on Heracles perhaps), only a single drachma. The pseudo-Platonic Axiochus, p. 366 C, speaks of lectures at half-a-drachma, at two, and at four drachmas; but upon this we cannot depend.

[1] Plato, *Apol.* 19 E; *Prot.* 315 D, and particularly *Rep.* x. 600 C, where it is said of Prodicus and Protagoras that they could persuade their friends: *ὡς οὔτε οἰκίαν οὔτε πόλιν τὴν αὐτῶν διοικεῖν οἷοί τ' ἔσονται ἐὰν μὴ σφεῖς αὐτῶν ἐπιστατήσωσι τῆς παιδείας, καὶ ἐπὶ ταύτῃ τῇ σοφίᾳ οὕτω σφόδρα φιλοῦνται, ὥστε μόνον οὐκ ἐπὶ ταῖς κεφαλαῖς περιφέρουσιν αὐτοὺς οἱ ἑταῖροι.* Also it appears from Aristophanes (cf. Welcker, p. 403 sq.) that Prodicus was respected at Athens, and even by this poet, the relentless foe of all other Sophists. Though he may have occasionally reckoned him (*Tagenistæ*, *Fr.* 6) among the 'chatterers;' yet in the *Clouds*, v. 360 sq., he praises his wisdom and prudence in contrast with Socrates, without irony: in the *Tagenistæ* (*Fr.* 6), he seems to have assigned him a worthy rôle, and in the *Birds*, v. 692, he introduces him at any rate as a well-known teacher of wisdom. The proverb (ap. Apostol. xiv. 76) *Προδίκου σοφώτερος* (not *Προδίκου τοῦ Κίου*, as Welcker supposes, 395) has doubtless nothing to do with the Sophist, but means 'wiser than an arbitrator:' Apostol., who takes *πρόδικος* for a proper name, without thinking of the Cean, has, as Welcker observes, misunderstood the word. Welcker, p. 405, tries to show that this proverb occurs at the beginning of the thirteenth Socratic letter, where we certainly find "*Προδίκῳ τῷ Κίῳ σοφώτερον*," but the expression here does not sound like a proverb: it relates only to supposed utterances of Simon concerning the *Heracles* of Prodicus. Even the predicate *σοφὸς* (Xen. *Mem.* ii. 1; *Symp.* 4, 62; *Axioch.* 366 C; *Eryx.* 397 D) proves nothing, for it is identical with 'Sophist' (Plato, *Prot.* 312 C, 337 C, *et pass.*), still less does Plato's ironical *πάσσοφος καὶ θεῖος*. *Prot.* 315 E (cf. *Euthyd.* 271 C; *Lys.* 216 A).

[2] *e.g.*, Damon the musician (Plato, *Lach.* 197 D), Theramenes, himself a Cean by birth (Athen. v. 220 b; Schol. on *Aristoph. Clouds*, 360; Suid. *Θηραμ.*); Euripides (Gell. xv. 20, 4; *Vita Eurip.* ed. Elmsl. cf. Aristoph. *Frogs*, 1188); Isocrates (Dionys. *Jud. Is.* c. 1, p. 535; Plut. *X. Orat.* 4, 2, p. 836; repeated by Phot. *Cod.* 260, p. 486 b, 15, vide Welcker, 458 sqq.). That Critias also attended his instructions is in itself probable, but is not proved by Plato, *Charm.* 163 D; nor can it be established by *Prot.* 338 A, cf. *Phædr.* 267 B, that Hippias the Sophist was influenced by Prodicus; of Thucydides, it is merely said, by Marcellinus *V. Thuc.* p. viii. Dind. and the Scholion ap. Welcker 460 (Spengel, p. 53), that in his mode of expression, he

of,[1] and recommended, his instruction,[2] though neither Socrates nor Plato assumed an attitude towards him really different from that in which they stood to Protagoras and Gorgias.[3] Beyond this we know nothing of

took for his model the accuracy of Prodicus; the truth of which observation Spengel, *Συν. Τεχν.* 53 sqq., proves by examples from Thucydides. According to Xenoph. *Symp.* 4, 62, cf. i. 5, Prodicus was introduced to Callias, in whose house we find him in the *Protagoras*, by Antisthenes, who was also one of his followers.

[1] Socrates often calls himself, in Plato, the pupil of Prodicus. *Meno*, 96 D: [*κινδυνεύει*] *σέ τε Γοργίας οὐχ ἱκανῶς πεπαιδευκέναι καὶ ἐμὲ Πρόδικος.* *Prot.* 341 A: you, Protagoras, do not seem to understand the distinctions of words: *οὐχ ὥσπερ ἐγὼ ἔμπειρος διὰ τὸ μαθητὴς εἶναι Προδίκου τουτουί*: Prodicus always corrects him, he says, when he applies a word wrongly. *Charm.* 163 D: *Προδίκου μυρία τινὰ ἀκήκοα περὶ ὀνομάτων διαιροῦντος.* On the other hand, we read in *Crat.* 384 B, that he knows nothing about the correctness of names, as he has not heard the fifty-drachma course of Prodicus, but only the single drachma course. In *Hipp. Maj.* 282 C, Socrates calls Prodicus his *ἑταῖρος*. Dialogues like those of *Axiochus* (366 C sqq.) and Eryxias (397 C sqq.) cannbt be taken into consideration in regard to this question.

[2] In Xen. *Mem.* ii. 1, 21, he appropriates to himself the story of Heracles at the cross ways, which he repeats in all its details, from Prodicus; and in Plato, *Theæt.* 151 B, he says that those who are not in travail with any mental birth, he assigns to other teachers: *ὧν πολλοὺς μὲν δὴ ἐξέδωκα Προδίκῳ, πολλοὺς δὲ ἄλλοις σοφοῖς τε καὶ θεσπεσίοις ἀνδράσι.* On the other hand, it is Antisthenes and not Socrates, through whom Prodicus makes the acquaintance of Callias.

[3] All the remarks of the Platonic Socrates concerning the instruction which he received from Prodicus, even those in the *Meno*, have an unmistakeably ironical tone, and as to any historical content, nothing is to be derived from them, beyond the fact that Socrates was acquainted with Prodicus, and had heard lectures from him as from other Sophists. That he sent certain individuals of his acquaintance to him does not prove any special preference, for, according to the passage in the *Theætetus*, he sent others to other Sophists. We have no right to make of these others, *one* other, viz., Evenus, as Welcker does, p. 401. In Xen. *Mem.* iii. 1, Socrates even recommends the tactician Dionysodorus to a friend. He not only takes rebukes from Hippias in the *Greater Hippias* (301 C, 304 C), to which I cannot attach much weight, but from Polus, in the *Gorgias*, 461 C, without expressing himself in the ironical manner which he does (*Prot.* 341 A) to Prodicus. He describes Hippias likewise as a wise man (*Prot.* 337 C), and Protagoras (*Prot.* 338 C, 341 A), Gorgias and Polus (*Gorg.* 487 A); he calls the two last his

the life of Prodicus.[1] His character is described, but only by later and untrustworthy testimonies,[2] as licentious and avaricious. Of his writings, tradition has only handed down imperfect accounts and some imitations.[3]

friends, and in the *Theæt.* 161 D, he expresses himself as grateful to Protagoras with the same graceful irony as elsewhere in speaking of Prodicus. Although, therefore, it may be true (Welcker, 407) that Plato never brings his Socrates into collision in argument with Prodicus, nor introduces any pupil of his who might bring discredit on his teacher, as Callicles or Gorgias, yet this proves little, for neither does he introduce any such pupils of Protagoras and Hippias; and Callicles himself is not *specially* quoted as a pupil of Gorgias. Whether the non-appearance of Prodicus in the arguments shows a high estimation of him or the reverse would be matter of enquiry. But if we recall the satirical manner in which Plato, *Prot.* 315 C, represents this Sophist as a suffering Tantalus; what insignificant and absurd parts he assigns him, *ibid.* 337 A sqq., 339 E sqq.; the fact that nothing special is recorded of him except his distinctions of words (vide *inf.*), which are treated with persistent irony; and a rhetorical rule of the simplest kind in *Phædr.* 267 B; and that he is always placed in the same category with Protagoras and other Sophists (*Apol.* 19 E; *Rep.* x. 600 C; *Euthyd.* 277 E, and throughout the *Protagoras*), we shall receive the impression that Plato regarded him indeed as one of the most harmless of the Sophists, but of far less importance than Protagoras and Gorgias; and that he recognised no essential difference between his labours and theirs. Cf. also Hermann, *De Socr. Magistr.* 49 sqq.

[1] According to Suidas and the scholiast on Plato, *Rep.* x. 600 C, he was condemned at Athens as a corrupter of youth to drink hemlock. The falsity of this statement is undoubted, vide Welcker, 503 sq., 524. Nor is there any ground for the theory that he chose this death voluntarily for himself.

[2] The scholium on *Clouds*, v. 360, which perhaps is only repeated erroneously from v. 354, and Philostr. *V. S.* i. 12, where he is represented as employing people to act as recruiting officers for his instructions (perhaps merely on account of Xen. *Symp.* iv. 62). Vide, on this subject, Welcker, 513 sqq. On the other hand, Plato, *Prot.* 315 C, describes him, not merely as weak in health, but as effeminate.

[3] Of his works there are known to us the discourse upon Heracles, or, as the proper title was, Ὧραι (*Schol.* on *Clouds*, 360; Suidas, Ὧραι Πρόδ.), the contents of which are given by Xen. *Mem.* ii. 1, 21 sqq. (other details in Welcker, 406 sqq.), and the lecture περὶ ὀνομάτων ὀρθότητος (Plato, *Euthyd.* 277 E; *Crat.* 384 B, &c.; Welcker, 452), which, even judging from Plato's caricatures of it, must have been preserved after the death of the author. A statement in Themist. *Or.* xxx. 349 b, would seem to imply the existence of a panegyric on

Hippias of Elis[1] seems to have been almost of the same age as Prodicus.[2] After the manner of the Sophists, he also wandered through the Greek cities in order to gain by his orations and lectures fame and money; and he frequently came to Athens, where he likewise assembled round him a circle of admirers.[3]

Agriculture; the imitation in the pseudo-Platonic *Axiochus*, 366 B sqq. (Welcker, 497 sqq.), a discourse on the mitigation of the fear of death, and the story in the *Eryxias*, 397 C sqq., a discussion on the value and use of wealth.

[1] Mähly, *Hippias von Elis, Rhein. Mus. N. F.* xv. 514–535; xvi. 38–49.

[2] In this respect he is mentioned in the *Protagoras* in the same way as Prodicus (vide *supra*, 417, 1). So in the *Hippias Maj.* 282 E, he appears considerably younger than Protagoras, but still old enough to come into conflict with that Sophist. Xenophon, *Mem.* iv. 4, 5 sq., depicts him as an old acquaintance of Socrates, who, at the time of the dialogue, had revisited Athens after a long absence, and Plato's *Apol.* 19 E, presupposes that in 399 B.C. he was one of the foremost Sophists of the time. Against this concurrent testimony of Plato and Xenophon, the statement of the pseudo-Plutarch (*V. X. Orat.* iv. 16, 41) that Isocrates in his old age had married Plathane, the widow of the rhetorician Hippias (Suid. Ἀπαρεύς, first says the Sophist), cannot justify us in supposing (Müller, *Fr. Hist.* ii. 59; Mähly, *l. c.* xv. 520) that Hippias was only a little older than Isocrates; we do not even know whether Hippias the Sophist is intended, and not some other person of the same name; nor what relation the age of Plathane bore to that of her two husbands. If she was several decades younger than the first, but the same age or not much younger than the second, by whom she had no child, the birth of the Sophist (even if he was really her first husband) must be placed about 460 B.C. On the native city of Hippias all authorities are agreed. His supposed instructor Hegesidemus (Suid. Ἱππ.) is wholly unknown, and perhaps is only mentioned through an error. Geel concludes from Athen. xi. 506 sq. that Hippias was a pupil of Lamprus the musician and of the orator Antiphon; but there is not the smallest foundation for the story.

[3] What tradition has told us on the subject is this: Hippias, like other Sophists, offered his instruction in different places for remuneration (Plat. *Apol.* 19 E and other passages); in the *Greater Hippias*, 282 D sq., he boasts of having made more money than any other two Sophists together. The same dialogue, *l. c.* and 281 A, names Sicily, but especially Sparta, as the scene of his activity; whereas, on account of the numerous political embassies to which he was attached, he came less frequently to Athens; on the other hand, Xen. *Mem.* iv. 4, 5,

Preeminent for his vanity, even among the Sophists,[1] he aspired above all things to the reputation of universal knowledge, constantly bringing out of the treasury of his manifold wisdom, according to the taste of his hearers, something new for their instruction and amusement.[2] The same superficial manysidedness

remarks only in a single passage, that after long absence he came to Athens and there met Socrates. The *Lesser Hippias*, 363 C, asserts that he usually at the Olympic games delivered lectures in the temple precincts, and answered any questions that were put to him. Both dialogues (286 B, 363 A) mention epideictic speeches in Athens. (These statements are repeated by Philostr. *V. Soph.* i. 11.) Lastly, in the *Protagoras*, 315 B, 317 D, we see Hippias with other Sophists in the house of Callias (with whom he is also represented as connected in Xenoph. *Symp.* 4, 62), where, surrounded by his followers, he gave information to all questioners concerning natural science and astronomy, and afterwards took part in the proceedings by delivering a short discourse. We cannot, however, deduce with certainty from these statements anything more than is given in the text, since the representation in the *Greater Hippias* is rendered suspicious by the doubtful authenticity of that dialogue (vide *Zeitschr. f. Alterthumsw.* 1851, 256 sqq.), and even the details of the other dialogues are scarcely free from satirical exaggeration; while Philostratus is unmistakeably employing, not independent and historical sources, but merely these Platonic dialogues. Tertullian's assertion, *Apologet.* 46, that Hippias was killed in a treasonable undertaking, deserves no more credence than the other iniquities which Tertullian ascribes to many of the ancient philosophers.

[1] *e.g.* in the matter of the purple robe which Ælian, *V. H.* xii. 32, ascribes to him.

[2] In the *Greater Hippias*, 285 B sqq., Socrates, in ironical admiration of his learning, names, as subjects of his knowledge, astronomy, geometry, arithmetic, the science of letters, syllables, rhythms, and harmonies; he himself adds to these the history of the heroes and founders of cities, and of archæology in general, boasting at the same time of his extraordinary memory. The *Lesser Hippias*, in the introduction, mentions a lecture on Homer, and, at p. 368 B sqq., makes the Sophist boast, not merely of many and multifarious lectures in prose, but also of epics, tragedies, and dithyrambs, of his knowledge of rhythms and harmonies, and of the *ὀρθότης γραμμάτων*, of his art of memory, and of every possible technical art and skill, *e.g.* the fabrication of clothes, shoes, and ornaments. These statements are subsequently repeated by Philostratus *l. c.*; by Cic. *De Orat.* iii. 32, 127; Apul. *Floril. No.* 32; partially also by Themist. *Or.* xxix. 345 C sqq., and on them is founded the treatise of pseudo-Lucian, Ἱππίας ἢ βαλανεῖον,

was no doubt characteristic also of his literary activity.[1]

Of other celebrated Sophists who are known to us, it remains to mention Thrasymachus,[2] of Chalcedon,[3] a

which, however (c. 3, sub init.), itself claims to be a production of the time of Hippias. Meantime it is a question how much fact underlies this story; for if, on the one side, it is impossible to calculate to what point the vanity of a Hippias might be carried; on the other side it is very likely, and the language in which it is clothed favours the supposition, that in Plato's account, a boastful style of expression, not so altogether childish, or, generally speaking, the self-complacent encyclopædic knowledge of the Sophists, may have been parodied in an exaggerated manner. More reliance, in any case, is to be placed on the statement of the *Protagoras*, 315 B (vide previous note), 318 E, that Hippias instructed his pupils in the arts (*τέχναι*), under which may have been included, besides the arts named (arithmetic, astronomy, geometry, and music), encyclopædic lectures on mechanical and plastic art; and on the testimony of the *Memorabilia*, iv. 4, 6, that because of his universal knowledge he aimed at saying always something new. Xen. *Symp.* 4, 62.

[1] The little that we know of his writings, or that has been preserved from them, is to be found in Geel, 190 sq.; Osann. *Der Sophist Hipp. als Archæolog. Rhein. Mus.* ii. (1843) 495 sq.; Müller, *Fragm. Hist. Gr.* ii. 59 sq.; Mähly, *l. c.* xv. 529 sq., xvi. 42 sq. Through these works we learn something about the archæological treatise referred to in the *Greater Hippias*. Hippias himself says in a Fragment ap. Clem. *Strom.* ii. 624 A, that he hopes in this treatise to compose a work collected from earlier poets and prose-writers, Hellenes and barbarians, and agreeable by reason of its novelty and variety. The statement ap. Athen. xiii. 609 a, is taken from another treatise, the title of which, *συναγωγὴ* perhaps, had some more definite addition. In the *Greater Hippias*, 286 A, there is an allusion, doubtless founded on fact, to a discourse containing counsels of practical wisdom for a young man. The lecture on Homer seems to have been distinct from this (*Hipp. Min.* cf. Osann, 509). According to Plutarch, *Numa*. c. 1, end, Hippias made the first catalogue of the victors at Olympus, and we have no reason to doubt this statement, as Osann does. From a treatise of Hippias, of which no exact title is given, a notice is quoted, ap. Prokl. *in Eucl.* 19 (65 *Fr.*), concerning the Mathematician Ameristus, the brother of Stesichorus. Pausan. v. 25, 1, refers to an elegy composed by him. What is said by Philostr. *V. S.* i. 11, of his style is perhaps only an abstract from Plato.

[2] Geel 201 sq.; C. F. Hermann, *De Trasymacho Chalcedonio. Ind. Lect.*, Götting. 1848–49; Spengel, *Τεχν. Συν.* 93 sq., where the various statements as to the writings of Thrasymachus are also to be found.

[3] The Chalcedonian is his constant appellation, but he seems to

younger contemporary of Socrates,[1] who occupies no inconsiderable position as a teacher of rhetoric,[2] but in other respects is unfavourably portrayed by Plato,[3] on account of his boastfulness, his avarice, and the undisguised selfishness of his principles; Euthydemus and Dionysodorus, the two eristic pugilists, described by Plato with exuberant humour, who late in life came forward as professors of disputation, and at the same time as ethical teachers, whereas they had previously only given lectures on the arts of war and forensic oratory;[4] Polus of Agrigentum, a pupil of Gor-

have spent a considerable portion of his life in Athens. From the epitaph in Athen. x. 454 sq., it is probable that he died in his native city.

[1] This is to be conjectured from the relation of the two men in Plato's *Republic*, but on the other hand it seems probable from Theophrast. ap. Dionys. *De vi dic. Demosth.* c. 3, p. 953; Cic. *Orat.* 12, 3 sq., that he considerably preceded Isocrates, who was born in *Ol.* 86, 1 (435 B.C.), and was older than Lysias (Dionys. *Jud. de Lys.* c. 6, p. 464, in opposition to Theophrastus, regards him as younger; but the contrary results from the Platonic representation). As the date of the dialogue in the *Republic* is supposed to be about 408 B.C. (cf. p. 86 sqq. of my treatise, mentioned p. 410, 4), Thrasymachus must have at that time arrived to manhood.

[2] Vide *infra*.

[3] *Rep.* i. cf. especially 336 B, 338 C, 341 C, 343 A sqq., 344 D, 350 C sqq. That this description is not imaginary, we should naturally presuppose, and the opinion is confirmed by Arist. *Rhet.* ii. 23, 1400 b, 19; and in a lesser degree by the θρασυμαχειολπψικέρματος of Ephippus, ap. Athen. xi. 509 c. Thrasymachus, however, in the course of the *Republic* becomes more amenable; cf. i. 354 A; ii. 358 B; v. 450 A.

[4] *Euthyd.* 271 C sqq., 273 C sq. where we are further told that these two Sophists were brothers (this we have no reason to think an invention), that they had emigrated from their home in Chios to Thurii (where they may have formed a connection with Protagoras), that they left the city as fugitives or exiles, and travelled about, remaining mostly in Athens, and that they were about as old, perhaps rather older, than Socrates. Dionysodorus also appears ap. Xen. *Mem.* iii. 1, as a teacher of strategy. The statements of Plato and others concerning both the brothers are collected by Winckelmann in his edition of Euthydemus, p. xxiv. sqq. Grote doubts (*Plato*, i. 536, 541) whether there were two Sophists in Athens corresponding to Plato's description in the

gias,[1] who, like his master in his later years,[2] confined his instructions to rhetoric; the orators Lycophron,[3] Protarchus,[4] and Alcidamas,[5] also belonging to the school

Theætetus; and this is so far true that this description is (as it never attempts to conceal) a satirical parody. In its main features, however, it is confirmed by Aristotle and others, cf. p. 456; 467, 2). Grote further believes (*ibid.* 559) that in the epilogue of the *Euthydemus* (304 C sqq.), the Sophist of that name is treated as the representative of true dialectic and philosophy; but he has entirely misunderstood the design of this portion of the dialogue. Cf. Part II. a, 416, 3. Even *Euthydemus* 305 A D, proves nothing.

[1] He is described as an inhabitant of Agrigentum by the pseudo-Plato, *Theag.* 128 A; Philostr. *V. Soph.* i. 13, and Suidas, *sub voce*; that he was considerably younger than Socrates is plain from Plato, *Gorgias*, 463 E. Philostratus calls him moderately wealthy, a Scholiast on Arist. *Rhet.* ii. 23 (in Geel, 173) παῖς τοῦ Γοργίου, but the former is no doubt inferred from the high price of Gorgias' instructions, and the latter (according to Geel's just observation) from a misunderstanding of *Gorg.* 461 C. There is reference to a historical treatise of Polus in Plato, *Phædr.* 267 C; *Gorg.* 448 C, 462 B sq.; Arist. *Metaph.* i. 1, 981 a, 3 (where, however, we must not, with Geel, 167, consider what follows as an extract from Polus); cf. Spengel, *l. c.* p. 87; Schanz, *l. c.* p. 134 sq.

[2] Plato, *Meno*, 95 C.

[3] Lycophron is called a Sophist by Arist. *Polit.* iii. 9, 1280 b, 10, Alexander, *in Soph. el. Schol.* 310 a, 12; *in Metaph.* p. 533, 18; Bon. and Ps. Plut. *De Nobilit.* 18, 3. What Arist. *Rhet.* iii. 3; Alex. *Top.* 209, 222, relate of his mode of expression, stamps him as a pupil of Gorgias. Also the statements to be discussed, *infra*, pp. 455, 456, 477; 487, 1, coincide with this. A few unimportant sayings are also to be found ap. Arist. *Polit. l. c. Metaph.* viii. 6, 1045 b, 9; cf. Alex. *ad h. l.* Concerning the man himself, vide Vahlen, *Rhein. Mus.* xvi. 143 sqq.

[4] Plato unmistakeably describes Protarchus (to whom in the *Philebus* the principal part after Socrates is assigned), *Phileb.* 58 A, as a pupil of Gorgias, and chiefly indeed in rhetoric, for his recommendation of oratory is here quoted as something which Protagoras had often heard from him. As Plato elsewhere never introduces imaginary persons with names, we must suppose that Gorgias really had a pupil of this name; and in that case, the conjecture (vide Hirzel, *Hermes*, x. 254 sq.) has everything in its favour, that this Protarchus is the same from whom Aristotle, *Phys.* ii. 6, 197 b, 10, quotes a text probably taken from a public oration.

[5] Alcidamas of Elæa in Æolia was the pupil of Gorgias, who after his death undertook the leadership of his rhetorical school (Suid. Γοργίας, Ἀλκιδ. Tzetz. *Chil.* xi. 746; Athen. xiii. 592 c). He was a rival of Isocrates, and bitterly opposed him not only (as Vahlen shows: *D. Rhetor Alkid. Sitzungsberichte der Wiener Akad. Hist.-Phil. Kl.* 1863, p. 491 sqq., cf.

of Gorgias; Xeniades, of Corinth, whose sayings remind us most of Protagoras;[1] Antimœrus, the scholar of Protagoras;[2] Evenus of Paros,[3] the rhetorician and teacher of virtue, and Antiphon, a Sophist of the time of Socrates,[4] not to be confounded with the famous

especially p. 504 sqq.) in his Μεσσηνιακός, but also in the discourses of his that have been preserved, and are probably genuine, against the writers of speeches or Sophists. A second declamation bearing his name, the denunciation of Palamedes by Ulysses, is spurious. All the particulars known of his writings are given by Vahlen; the fragments of them are to be found in *Orat. Attici*, ii. 154 sqq. That he survived the battle of Mantinea (362 B.C.) is proved by his Messenian oration composed subsequently to that battle (Vahlen, 505 sq.).

[1] The only author who mentions him is Sextus, *Math.* vii. 48, 53, 383, 399, viii. 5; *Pyrrh.* ii. 18; according to *Math.* vii. 53, Democritus had already spoken of him, no doubt in the same connection in which he had opposed Protagoras (vide *supra*, 275, 2). As to his sceptical propositions, we shall have to speak further on (956). Grote, *Plato*, iii. 509, refers the statements of Sextus to the well-known Corinthian Xeniades, the master of the Cynic Diogenes; and Rose, *Arist. Libr. Ord.* 79, to a treatise which must have been forged with his name; but the fact of his having been already mentioned by Democritus is here overlooked.

[2] Of this man we know nothing further than what is said in *Prot.* 315 A, that he came from Meude in Macedonia, was regarded as the most distinguished scholar of Protagoras, and intended to make himself a professional Sophist. From the last remark we may infer that he really appeared subsequently as a teacher. The same may perhaps hold good of Archagoras (Diog. ix. 54). Concerning Euathlus, vide p. 409, 2.

[3] Plato, *Apol.* 20 A; *Phædo*, 60 D; *Phædr.* 267 A (cf. Spengel, Συναγ. T. 92 sq.; Schanz, 138). According to these passages, he must have been younger than Socrates, was at once poet, rhetorician, and teacher of ἀρετὴ ἀνθρωπίνη τε καὶ πολιτική, and demanded a fee of five minæ. Further particulars concerning him in Bergk, *Lyrici Gr.* 476, and the writers there quoted. *Ibid.* 474 sq., for the fragments of his poems.

[4] On the personality of this man (concerning whom, according to Athen. xv. 673 e, Adrantus and Hephæstio wrote), cf. Sauppe. *Orat. Att.* ii. 145 sqq.; Spengel, Συναγ. Τεχνῶν, 114 sq.; Welcker, *Kl. Schr.* ii. 422; Wolff, *Porphyr. De Philos. ex orac. haur. Rel.* 59 sq. He is described as σοφιστὴς in Xen. *Memor.* i. 6, and is there represented as seeking to allure to himself the pupils of Socrates, and consequently disputing with him on three occasions; this passage is referred to not only in Ps. Plut. *V. Dec. Orat.* i. 2, p. 832 (where the Sophist of Rhamnus is expressly said to be meant), but

orator. Critias, also, the celebrated leader of the Athenian oligarchs, and Callicles,[1] must be counted among the representatives of the Sophistic culture, although they were far from being Sophists in the narrower sense, *i.e.*, paid and professional teachers,[2] and the Platonic Callicles, from the standpoint of the practical politician,

probably also in Aristotle's statement about Antiphon's jealousy of Socrates (ap. Diog. ii. 46). Aristotle calls him Ἀντ. ὁ τερατοσκόπος, and this agrees with Hermog. *De Id.* ii. 7 (*Rhet. Gr.* iii. 385 W, ii. 414 Sp.), who, quoting Didymus the grammarian, distinguishes him by the appellation ὁ καὶ τερατοσκόπος καὶ ὀνειροκρίτης λεγόμενος from Antiphon the rhetorician of Rhamnus. When Suidas mentions one Antiphon as τερατοσκόπος καὶ ἐποποιὸς καὶ σοφιστής, and a second as ὀνειροκρίτης, he has no doubt erroneously referred to different persons two statements derived from separate sources, but relating to the same person. Tzetzes (in a scholium quoted by Wolff, *l. c.*, from Ruhnken) represents Antiphon ὁ τερατοσκόπος as a contemporary of Alexander; but this cannot weigh against the above more authentic and unanimous testimonies, and does not justify us in distinguishing, as Wolff does, ὁ τερατοσκόπος from the Sophist of the *Memorabilia*. His λόγοι περὶ τῆς ἀληθείας are discussed in Hermog. *l. c.* p. 386, 387 W; a small fragment of the α' Ἀληθείας is given by Suidas, ἀδέσποτος; some other writings, which are ascribed to him in the traditional text of Hermogenes, belong to Antiphon of Rhamnus, as is clear from the subsequent context in Hermogenes, and also from Philostr. *V. Soph.* i. 15; and are only attributed to him through the carelessness of the transcriber, cf. Spengel, T. Σ. 115. In the treatise π. τ. ἀληθείας he no doubt brought forward the mathematical and physical theories to be mentioned later on; no fragments of any system of physics of his (as Wolff supposes) have been handed down to us. The interpretations of dreams, mentioned by Cicero, *Divin.* i. 20, 39, ii. 70, 144; Seneca, *Controv.* 9, p. 148 Bip.; Artemidor. *Oneirocrit.* ii. 14, p. 109, Herch., seem to have been taken from a separate book.

[1] The principal interlocutor in the third part of the Gorgias, from 481 B onwards, of whom we know so little that his very existence has been doubted. In favour of it, however, we have Plato's usual style, as seen in other instances, and the definite statement, 487 C, which seems to be quite of an individual character, whether it be historical or not. Cf. concerning Gorgias, Steinhart, *Pl. Werke*, ii. 352 sq.

[2] Some writers would therefore distinguish Critias the Sophist from the statesman of that name (Alex. ap. Philop. *De An.* C, 8; Simpl. *De An.* 8 a). Vide, on the other hand, Spengel, *l. c.* 120 sq. Dionys. *Jud. de Thuc.* c. 51, and Phrynichus ap. Phot. *Cod.* 158, p. 101 b, reckon Critias among the model writers of the Attic style.

speaks contemptuously of the uselessness[1] of the theorists. On the other hand, in the political rules[2] of the famous Milesian architect, Hippodamus,[3] the peculiarity of the Sophistic view of law and of the state is not discernible, although the multifarious literary activity of the man[4] is suggestive of the character of the Sophists.[5] The communistic theory of Phaleas the Chalcedonian[6] may perhaps with more probability be brought into connection with the Sophistic doctrine; it is at any rate quite in the spirit of Sophistic innovation, and may easily be deduced from the proposition that existing rights are contrary to nature; but we know too little about him, to be able to determine his personal relation to the Sophists. In regard to Diagoras, it has already been shown[7] that we have no right to assume his atheism to have been based on his philosophy; and

[1] *Gorg.* 484 C sqq., 487 C; cf. 515 A and 519 C, where Callicles, as politician, is clearly distinguished from Callicles as Sophist.

[2] Arist. *Polit.* ii. 8.

[3] Concerning the date and personal circumstances of this man, who is mentioned by Arist. *l. c.* and *Polit.* vii. 11, 1330 b, 21, as the first person who attempted to lay out cities artistically, Hermann, *De Hippodamo Milesio* (Marb. 1841), comes to the following conclusions: he may have been twenty-five years old in Ol. 82 or 83, when he made the plan for the Piræus, that he planned the city of Thurii in Ol. 84; and in Ol. 93, 1, when he built Rhodus, was considerably past sixty. Whether Hippodamus, the so-called Pythagorean, of whose treatises, *π. πολιτείας* and *π. εὐδαιμονίας*, some fragments are given by Stobæus, *Floril.* 43, 92–94, 98, 71–103, 26, is the same person (as Hermann believes, p. 33 sqq.), and whether Hippodamus the Sophist really had any connection with the Pythagoreans (*ibid.* 42 sq.), cannot be ascertained.

[4] Arist. *Polit.* ii. 8: *γενόμενος καὶ περὶ τὸν ἄλλον βίον περιττότερος διὰ φιλοτιμίαν . . . λόγιος δὲ καὶ περὶ τὴν ὅλην φύσιν* (in physics, cf. *Metaph.* i. 6, 987 b, 1) *εἶναι βουλόμενος, πρῶτος τῶν μὴ πολιτευομένων ἐνεχείρησέ τι περὶ πολιτείας εἰπεῖν τῆς ἀρίστης.*

[5] Among whom Hermann, p. 18 sqq., includes him.

[6] Arist. *Polit.* ii. 7, where he is mentioned as the first who demanded an equality of goods.

[7] Vide p. 320, 2.

the same holds good of the rhetoricians contemporary with the Sophists, so far as their art is not connected with the Sophistic doctrine by any definite theory of ethics or cognition.

From the beginning of the fourth century, the importance of the Sophists grows less and less, though their name is still in use for teachers of eloquence, and generally for all those who imparted scientific instruction for payment. Plato in his earlier dialogues is constantly at war with the Sophists; in the later, they are only mentioned when occasion specially calls for it.[1] Aristotle alludes to certain Sophistic propositions in the same way that he speaks of the theories of the physicists, as something belonging to the past; that which he treats as permanent is the Eristic disputation which was indeed first introduced by the Sophists, but was not confined to them. We hear of no noteworthy representatives of Sophistic opinion after the time of Polus and Thrasymachus.

3. *The Teaching of the Sophists considered in its General Character.*

Plato himself complains that it is difficult rightly to define the nature of the Sophist.[2] This difficulty lies for us chiefly in the fact that the teaching of the Sophists does not consist in fixed theorems equally acknowledged by all its adherents, but in a scientific mode of thought

[1] *e.g.* in the introduction to the *Republic*, where the connection with fundamental ethical enquiries causes the polemic against sophistic doctrines to be resumed.

[2] *Soph.* 218 C, sq., 226 A, 231 B, 236 C, sq.

and procedure which, in spite of the unmistakeable family likeness between its different branches, is compatible with a multiplicity of starting-points and results. Contemporaries designate by the name of Sophist, generally speaking, a wise man;[1] but more particularly, one who makes wisdom his calling and profession[2]—who, not satisfied with informal and unmethodical influence on fellow-citizens and acquaintances, regards the instruction of others as his profession, and in his wanderings from city to city offers it for payment, to everyone desirous of culture.[3] As to its extent, this

[1] Plato, *Prot.* 312 C: *τί ἡγεῖ εἶναι τὸν σοφιστήν; Ἐγὼ μέν, ἦ δ' ὅς, ὥσπερ τοὔνομα λέγει, τοῦτον εἶναι τὸν τῶν σοφῶν ἐπιστήμονα*, where the validity of the evidence as to the use of language is not affected by the derivation of the last syllables from *ἐπιστήμων*, in the manner of Platonic etymologies. Diog. i. 12: *οἱ δὲ σοφοὶ καὶ σοφισταὶ ἐκαλοῦντο.* In this sense Herodotus, i. 29, iv. 95, calls Solon and Pythagoras, and in ii. 49 the founders of the cult of Dionysus, Sophists. The name is also applied by Cratinus, ap. Diog. i. 12, to Homer and Hesiod, by Sophocles in the fragment ap. *Schol. Pind. Isthm.* v. 36, &c. (Wagner, *Frag. Gr. Fragm.* i. 499, No. 992) to a citharist; by Eupolis (according to the *Schol. Ven. Zu. Il.* O, 410; Eustath. *in h. l.* p. 1023, 13) to a rhapsodist; according to Hesych. *σοφιστ.*, the designation was in use for all musical artists. Androtion ap. Aristid. *Quatuorv. T.* ii. 407 Dind., Aristarchus ap. Plut. *Frat. Am.* i. p. 478 and Isokr. *π. ἀντιδόσ.* 235 apply it to the seven sages; the first of these authors applies it to Socrates also (while on the other hand Æschin. *Adv. Tim.* § 173 describes Socrates as a Sophist in the later sense); Diog. *Apoll.* ap. Simpl. *Phys.* 32 b; Xenoph. *Mem.* i. 1, 11; Ps.-Hippokr. *π. ἀρχ. ἰατρ.* c. 20; Isokr. *l. c.* 268, apply it to the ancient physicists; Æschines the Socratic and Diodorus to Anaxagoras (vide *supra*, p. 325); Plato, *Meno*, 85 B, to the teachers of mathematics; conversely, the Sophists are called *σοφοί*, vide *supra* 418, 3, end; 419, 4; cf. Plato, *Apoll.* 20 D. The explanation of the word as '*teachers* of wisdom' is disputed by Hermann, *Plat. Phil.* i. 308 sq., as it appears to me, rightly; while Steinhart, *Plat. Leben*, 288, 92, defends it.

[2] Plato, *Prot.* 315 A (which explains 312 B): *ἐπὶ τέχνῃ μανθάνει, ὡς σοφιστὴς ἐσόμενος*; 316 D: *ἐγὼ δὲ τὴν σοφιστικὴν τέχνην φημὶ μὲν εἶναι παλαιάν*, etc. Epitaph on Thrasymachus in Athen. x. 454 sq. *ἡ δὲ τέχνη* [sc. *αὐτοῦ*] *σοφίη.*

[3] Xenoph. *Mem.* i. 6. 13: *καὶ τὴν σοφίαν ὡσαύτως τοὺς μὲν ἀργυρίου τῷ βουλομένῳ πωλοῦντας σοφιστὰς ἀποκαλοῦσιν· ὅστις δὲ ὃν ἂν γνῷ εὐφυᾶ ὄντα διδάσκων ὅ τι ἂν ἔχῃ ἀγαθὸν φίλον ποιεῖται, τοῦτον νομίζομεν ἃ τῷ καλῷ κἀγαθῷ πολίτῃ προσήκει ταῦτα ποιεῖν*; cf. p. 409, 2; 417, 7; Protagoras ap. Plato, *Prot.* 316 C: *ξένον γὰρ ἄνδρα καὶ ἰόντα εἰς πόλεις μεγάλας καὶ ἐν ταύταις πείθοντα τῶν νέων τοὺς βελτίστους, ἀπολείποντας τὰς τῶν ἄλλων συνουσίας . . . ἑαυτῷ συνεῖναι ὡς βελτίους ἐσομένους διὰ τὴν ἑαυτοῦ συνουσίαν*, etc. (cf. 318 A); *Apol.* 19 E: *παιδεύειν ἀνθρώπους ὥσπερ Γοργίας*, etc. *τούτων γὰρ ἕκαστος . . . ἰὼν εἰς ἑκάστην τῶν πόλεων τοὺς νέους, οἷς ἔξεστι τῶν ἑαυτῶν πολιτῶν προῖκα ξυνεῖναι ᾧ ἂν βούλωνται, τούτους πείθουσι τὰς ἐκείνων ξυνουσίας ἀπολιπόντας σφίσι ξυνεῖναι χρήματα διδόντας καὶ χάριν προσειδέναι.* Similarly *Meno*, 91 B.

[1] Arist. *Eth. N.* vi. 7.

[2] *Inf.* note 5; *sup.* 408, 2; 424, 4; 426, 3. I do not think that the words of Prodicus, ap. Plat. *Euthyd.* 305 C (*οὓς ἔφη Πρόδ. μεθόρια φιλοσόφου τε ἀνδρὸς καὶ πολιτικοῦ*), are intended to describe the position ascribed to himself by that Sophist.

[3] Plato, *Meno*, 95 C; cf. *Phileb.* 58 A. Polus, Lycophron, Thrasymachus, etc., p. 423 sqq.

[4] *Supra*, p. 422, 2.

[5] In *Prot.* 318 D, the Sophist says that it shall not be with his scholars as with those of other Sophists (Hippias), who *τὰς τέχνας αὐτοὺς πεφευγότας ἄκοντας πάλιν αὖ ἀγοντες ἐμβάλλουσιν εἰς τέχνας, λογισμούς τε καὶ ἀστρονομίαν καὶ γεωμετρίαν καὶ μουσικὴν διδάσκοντες*: by him they shall only be taught what suits their purpose: *τὸ δὲ μάθημά ἐστιν εὐβουλία περί τε τῶν οἰκείων, ὅπως ἂν ἄριστα τὴν αὑτοῦ οἰκίαν διοικοῖ, καὶ περὶ τῶν τῆς πόλεως, ὅπως τὰ τῆς πόλεως δυνατώτατος ἂν εἴη καὶ πράττειν καὶ λέγειν*, in a word, therefore, the *πολιτικὴ τέχνη*, the introduction to civic virtue.

instruction might embrace everything included by the Greeks in the comprehensive idea of wisdom,[1] and its task might therefore be variously apprehended: while some Sophists, like Protagoras and Prodicus, Euthydemus and Evenus, boasted of imparting to their pupils intellectual and moral culture, civil and domestic virtue,[2] Gorgias laughs at such a promise, and confines his instructions to rhetoric;[3] while Hippias prides himself on his proficiency in arts of all kinds, on his archæological and physical knowledge,[4] Protagoras, as teacher of politics, feels himself far above this learning of the study.[5] Yet even in the art of politics many different branches were included; for example, the brothers Euthydemus

and Dionysodorus combined with ethics, lectures on strategy and military tactics,[1] and even Protagoras[2] is said to have entered into details of wrestling and other arts, applying them in such a manner as to contradict professional men. When therefore Isocrates, in his speech against the Sophists, includes under that name the Eristic teachers of ethics and the teachers of eloquence, while an opponent[3] applies it to Isocrates himself, on account of his studied and written speeches, this is entirely consonant with the language of the time. Every paid teacher of the arts included under higher culture is called a Sophist. The name relates primarily to the object and external conditions of instruction. In itself it implies no judgment concerning the worth or scientific character of this instruction; it rather admits the possibility that the Sophistic teacher may impart genuine science and morality as well as the reverse. Plato and Aristotle were the first to restrict the idea of the Sophistic doctrine within narrower limits in discriminating it as dialectic Eristic from rhetoric, and as a false appearance of knowledge, arising out of a perversion of the moral sense, from philosophy. The Sophist, according to Plato, is a hunter who, giving himself out as a teacher of virtue, seeks to catch rich young men. He is a merchant, a host, a pedlar, who

[1] P. 424, 4.

[2] Plato, *Soph.* 232 D; Diog. ix. 53; cf. Frei, 191. According to Diogenes, Protagoras wrote a treatise, περὶ πάλης; Frei conjectures that this may be a portion of a more comprehensive work on the arts; but perhaps some later writer may have composed a separate treatise out of the discussions mentioned by Plato, and these discussions may have been really in the Eristic disputations or the contradictions.

[3] Alcidamas, vide p. 425, 5.

traffics in art, a tradesman who makes money by disputation:[1] a person who may no doubt be mistaken for a philosopher, but to whom it would be doing too much honour to ascribe the higher vocation of purifying men by means of the elenchic art, and of freeing them from conceit.[2] The Sophistic teaching is an art of deception: it consists in this—that men without real knowledge of the good and right, and conscious of such a deficiency, can give themselves the appearance of that knowledge, and in conversation with others can involve them in contradictions.[3] It is therefore no art at all, but a flattering shadow of an art—a caricature of the true art of politics, which is related to it only as the art of dress is to gymnastic, and is distinguished from false rhetoric only as the setting up of principles is distinguished from the application of them.[4] Similarly, Aristotle describes the Sophistic doctrine as a science confined to the unessential; as appearance-knowledge,[5] or, more exactly, as the art of gaining money by mere appearance-knowledge.[6] These descriptions are evi-

[1] *Soph.* 221 C, 226 A; cf. *Rep.* vi. 493 A: ἕκαστος τῶν μισθαρνούντων ἰδιωτῶν, οὓς δὴ οὗτοι σοφιστὰς καλοῦσι, etc.

[2] *Soph.* 226 B–231 C.

[3] *Ibid.* 232 A–236 E, 264 C sqq.; cf. *Meno*, 96 A.

[4] *Gorg.* 463 A–465 C; *Rep.* l. c.; cf. Part II. a, 509 sq., 3rd ed.

[5] *Metaph.* vi. 2, 1026 b, 14; xi. 3, 8, p. 1061 b, 7; 1064 b, 26.

[6] *Metaph.* iv. 2, 1004 b, 17; *Soph. El.* c. 1, 165 a, 21: ἔστι γὰρ ἡ σοφιστικὴ φαινομένη σοφία οὖσα δ' οὔ, καὶ ὁ σοφιστὴς χρηματιστὴς ἀπὸ φαινομένης σοφίας ἀλλ' οὐκ οὔσης. *Ibid.* c. 11, 171 b, 27; cf. 33, 183 b, 36: οἱ περὶ τοὺς ἐριστικοὺς λόγους μισθαρνοῦντες. Still stronger language is used by the pseudo-Xenophon, *De Venat.* c. 13: οἱ σοφισταὶ δ' ἐπὶ τῷ ἐξαπατᾶν λέγουσι καὶ γράφουσιν ἐπὶ τῷ ἑαυτῶν κέρδει, καὶ οὐδένα οὐδὲν ὠφελοῦσιν· οὐδὲ γὰρ σοφὸς αὐτῶν ἐγένετο οὐδείς οὐδ' ἔστιν . . . οἱ μὲν γὰρ σοφισταὶ πλουσίους καὶ νέους θηρῶνται, οἱ δὲ φιλόσοφοι πᾶσι κοινοὶ καὶ φίλοι· τύχας (happy circumstances) δὲ ἀνδρῶν οὔτε τιμῶσιν οὔτε ἀτιμάζουσι.

dently in part too narrow, in part too broad, to afford us trustworthy information concerning the peculiar character of the phenomenon we are considering—too narrow, because from the outset the idea of the wrong and untrue is included as an essential characteristic in the conception of the Sophistic doctrine; too broad, because they do not represent that doctrine in its definite historical aspect, as it actually appeared at a certain period, but as a universal category. This is the case, in a still higher degree, with the language of the more ancient accounts. The conception of a public instruction in wisdom tells us nothing as to the content and spirit of this instruction, and whether it was imparted for payment or not, is in itself quite unimportant. If, however, we consider the circumstances under which the Sophists made their appearance, and the earlier customs and culture of their nation, these traits will serve in some degree to explain their peculiar character and significance.

The previous method of education and instruction among the Greeks provided indeed distinct teachers for particular arts and accomplishments, such as writing, arithmetic, music, gymnastic, but left everyone to receive his general training and education simply through intercourse with his family and acquaintance. It sometimes happened, no doubt, that individual youths allied themselves with some man of special reputation, in order to be introduced by him to public affairs;[1] or

[1] Thus Plutarch in his life of Themistocles represents that statesman, in the beginning of his public career, as seeking intercourse with Mnesiphilus, who, as Plutarch observes, belonged neither to the orators, nor to the φυσικοὶ φιλόσοφοι, but aimed at distinguishing

that teachers of music or other arts attained, under certain conditions, to a more extended sphere of personal and political influence.[1] In neither case, however, is there question of any formal instruction, any directions, based on certain rules, for practical activity, but only of such influence as, without any express educational purpose, must naturally result from free personal intercourse.[2] Not one of the ancient Physicists can be supposed to have opened a school of his own, or given instruction in the way that was afterwards customary: the communication of their philosophical

himself by what was then called σοφία, the δεινότης πολιτικὴ καὶ δραστήριος σύνεσις, on the ground of an old family tradition of Solon; ἦν οἱ μετὰ ταῦτα, adds Plutarch, δικανικαῖς μίξαντες τέχναις καὶ μεταγαγόντες ἀπὸ τῶν πράξεων τὴν ἄσκησιν ἐπὶ τοὺς λόγους σοφισταὶ προσηγορεύθησαν.

[1] *e.g.* Damon, cf. Plut. *Per.* 4; Plato, *Lach.* 180 D; *Alcib.* i. 118 C, and Pythoclides, cf. Plut. *l. c.*; Plato, *Prot.* 316 E; *Alcib.* i. 118 C.

[2] Plutarch has drawn this distinction quite correctly (*Them.* 2) when he says that those persons were called Sophists who transferred political training from practical activity to speeches; Sophists in the sense alluded to p. 430, 3, can only be said to exist where the arts and skill, which hitherto had been attained by practice in the treatment of actual cases, are henceforth founded on theoretical instruction (λόγοι) and the universal rules of art which are thus imparted. Plutarch also says, less accurately (*Per.* 4), that Damon being an ἄκρος σοφιστὴς (which in this case, as in Plato, *Symp.* 203 D, seems to designate both the Sophist and the crafty man) concealed his avocation as teacher of Pericles in politics, under the mask of a musician. Similarly, Protagoras, ap. Plat. *Symp.* 203 D, maintains that the art of the Sophists is very ancient, but from fear of the dislike attaching to them, they had all before him concealed it; some having called themselves poets, as Homer, Orpheus, Simonides, &c.; others gymnasts; others again musicians, as Agathocles and Pythoclides. Here it is in fact conceded what *Prot.*, 317 B, expressly declares, and what was of course self-evident in most of the above-mentioned cases, viz., that the distinguishing mark of those who were called Sophists in the special sense—the ὁμολογεῖν σοφιστὴς εἶναι καὶ παιδεύειν ἀνθρώπους—was absent in the predecessors of Protagoras; they are σοφοί, like the seven wise men, but not σοφισταί, according to the meaning of the word in the time of Socrates.

doctrines seems to have been entirely confined to the narrower circle of their acquaintance, and to have been conditioned by the relation of personal friendship. If a Protagoras and his successors departed from this custom, it argues a two-fold change in the popular estimation of science and scientific teaching. On the one hand, such teaching was now declared to be indispensable for everyone who desired to distinguish himself in active life: the previous capability for speech and action attained merely by practice was condemned as unsatisfactory: theoretical study, and the knowledge of universal rules, were announced as necessary.[1] But on the other hand science, so far as the Sophists troubled themselves about it at all, was essentially restricted to this practical problem. It is not in knowledge as such, but simply in its use as a means of action, that its worth and importance are sought.[2] The Sophistic doctrine, therefore, stands on the 'boundary line between Philosophy and Polities';[3] practice is to be supported by theory, and enlightened in regard to its ends and means; but theory is to be merely a help to practice. This science is, in its general aim and purpose, a philosophy of enlightenment and nothing more.

From this point of view alone can we rightly criticise the disputed question concerning the payment accepted by the Sophists. As long as the imparting of philosophic opinions and knowledge was on the same line with all other educational intercourse between friends, there could, of course, be no question of payment for philosophic instruction: the study of philosophy was, like instruction in it, even with those who wholly devoted themselves to philosophy, an affair of free choice. This is the light in which both were regarded by Socrates, Plato and Aristotle, and consequently the idea of remuneration for instruction in philosophy was energetically opposed by these men as a gross indignity. Wisdom, in the opinion of the Socrates of Xenophon, like love, should be bestowed as a free gift, and not sold.[1] He who teaches any other art, says Plato,[2] may take wages in return, for he does not profess to make his pupil just and virtuous; but he who promises to make others better must be able to trust to their gratitude, and should therefore require no money. Aristotle expresses himself in a similar strain.[3] The relation between teacher and pupil is with him no business connexion, but a moral and friendly relation, founded on esteem; the merit of the teacher is not compensated by money—it can only be rewarded by gratitude of the same kind that we feel towards parents and towards the gods. From this point of view we can well understand the harsh judgments that were passed on the earnings of the Sophists by Plato and Aristotle, as we have seen, p. 432 *sq.* That the same judgments, however, should

[1] This fundamental distinction between the instruction of the Sophists, and the purely practical instruction of the previous teachers, is overlooked by Grote, viii. 485 sq., when he maintains that the appearance of the Sophists was nothing new, and that they only differed from Damon and others in the superior amount of knowledge and ability which they brought to the exercise of their profession.

[2] Cf. also p. 430, 3.

[3] Vide *supra*, p. 431, 2.

[1] *Mem.* i. 6. 13; vide *supra*, p. 430, 3.

[2] *Gorg.* 420 C sqq.; cf. *Soph.* 223 D sqq. The same in Isocr. *Adv. Soph.* 5 sq.

[3] *Eth. N.* ix. 1, 1164 a, 32 sqq.

now be repeated, that in an age in which all instruction is usually given by salaried and paid teachers, and by such as on this very account would have been considered Sophists in Greece, the teachers of the fifth century before Christ should, merely because they demanded payment for their instructions, be treated as mean-spirited, self-seeking, avaricious men—is a flagrant injustice, as Grote justly maintains.[1] Where the necessity for scientific instruction is more extensively felt, and in consequence a separate class of professional teachers is formed, there the necessity also arises that these teachers should be able to support themselves by the labour to which they devote their time and strength. Even in Greece this natural demand could not be ignored. A Socrates, in his magnanimous contempt for the necessaries of life, a Plato and an Aristotle, with their ideal theory of the relation between master and teacher—an ideal fostered by their own easy personal circumstances, and by the Hellenic prejudice against all industrial activity—may have disdained all remuneration for their teaching; and the mass of the people may have been the more ready to blame the Sophists for their gains, which were represented, no doubt, as much greater than they actually were; for in this case the universal ill-will of the uncultivated man towards mental work the labour and trouble of which are unknown to him, was combined with the jealousy of natives towards foreigners, of democrats towards the teachers of the upper classes, of the friends of the old against innovators. In point of

[1] *L. c.* 493 sq.

fact, however, as has been well observed,[1] there was no reason why the Sophists, especially in foreign cities, should have given their instructions gratuitously, or should have themselves defrayed the cost of their maintenance and of their journeys. Even Greek custom in no way forbade payment for intellectual possessions—painters, musicians and poets, physicians and rhetors, gymnasiarchs and teachers of all kinds were paid; and the Olympic victors received from their native cities rewards of money as well as prizes, or even themselves collected contributions in their conquerors' wreaths. Nor can the theory of payment for philosophic teaching be condemned without further argument, even from the ideal standpoint of Plato and Aristotle; it does not necessarily follow that the scientific activity of the teacher or his moral relation to his pupil should thereby be corrupted; for, in analogous cases, the love of the wife for her husband is not affected by the judicial obligation of the husband to maintain her, the gratitude of the restored patient to the physician is not deteriorated by his fee, nor that of children to their parents by the circumstance that the parents are bound by law to support and educate them. That the Sophists should have asked payment from their pupils and hearers could only be turned to their disadvantage if they had made exorbitant demands, and had shown themselves generally in the pursuit of their calling to be covetous and dishonourable. But it is only in regard to some of them that this can be proved. Even in antiquity, no doubt very exaggerated notions were rife concerning

[1] Welcker, *Kl. Schr.* ii. 420 sqq.

the payments they claimed, and the riches which they amassed;[1] but Isocrates assures us that not one of them had made any considerable fortune, and that their gains did not exceed a moderate amount.[2] And though it is quite possible that many, especially among the younger Sophists, may have deserved the reproach of selfishness and covetousness,[3] it is a question whether we ought to apply to a Protagoras and a Gorgias the descriptions of sophistic teaching which men, to whom all payment for philosophic instruction appeared at the outset as something vulgar and shameful, had copied from the Sophists of their own time. Protagoras, at any rate, showed great consideration for his pupils[4] when he left the amount of his fee to be decided by themselves in doubtful cases;[5] and that there was a difference in this respect between the founders of Sophistic teaching and their successors, is indicated by Aristotle.[6]

[1] Vide the statements on this subject, p. 409, 2; 410, 1; 415, 3; 418, 1; 421, 3.

[2] Π. ἀντιδόσ. 155: ὅλως μὲν οὖν οὐδεὶς εὑρεθήσεται τῶν καλουμένων σοφιστῶν πολλὰ χρήματα συλλεξάμενος, ἀλλ' οἱ μὲν ἐν ὀλίγοις, οἱ δ' ἐν πάνυ μετρίοις τὸν βίον διαγαγόντες. Vide the statement as to Gorgias (quoted p. 415, 3), who amassed more wealth than any of the Sophists, and had neither public nor family expenses. We must not suppose that the Sophists earned as much as the actors. In later times, the fee for a course of instruction seems to have been 3–5 minæ. Evenus in Plato, *Apol.* 20 B, asks 5; Isocrates who, like other rhetoricians, took 10 minæ (Welcker, 428), ridicules the Eristics (*Adv. Soph.* 3), because the whole of virtue was to be had from them for the absurd price of 3 or 4 minæ; while in *Hel.* 6, he blames them for only caring for the money.

[3] Cf. p. 424, 3; 433 sq.

[4] As Grote (*Hist. of Gr.* viii. 494) rightly observes.

[5] Cf. p. 409, 2.

[6] In the passage quoted by Welcker, *Eth. N.* ix. 1, 1164 a, 22 sq., where this custom of Protagoras as to payment is mentioned, and Aristotle then goes on to say that it was different with the Sophists, *i.e.* with those of his own time: these no doubt were obliged to demand payment in advance, for no one after getting to know their science would have given them anything for it. Xenoph. *De Venat.* 13, is less conclusive: we know no one ὅστιν' οἱ νῦν σοφισταὶ ἀγαθὸν ἐποίησαν; for it is doubtful whether the author intends by the older Sophists with whom he compares the Sophists of his time, Protagoras, &c., or whether he is referring to other philosophers and teachers of virtue, in which case the νῦν σοφισταὶ would coincide with the σοφισταὶ καλούμενοι previously mentioned.

If we consider impartially the circumstances under which these men arose, and the accounts which have been preserved of them, we are not justified in charging the Sophists as a body, and especially those of the earlier generation, with niggardliness and avarice.

But although we must protest, on behalf of the Sophists, or at any rate of many of the most important of them, against a prejudice which for more than two thousand years has done more than all besides to injure their good name, two things must yet be borne in mind. In the first place, the introduction of payment for scientific instruction in that period, whatever we may think of its moral justification, is at any rate a proof of the change already adverted to in the general estimation of the worth and importance of scientific knowledge—a sign that now, instead of honest enquiry, satisfied with the knowledge of the actual, that knowledge only is sought, and regarded as worthy and attainable, which may be employed as a means to other ends, and consists less in general mental culture than in certain practical capabilities. The Sophists claimed to teach the special tricks of eloquence, of worldly prudence, of the management of men; and it is the prospect of the resulting advantage, the possession of political and oratorical trade-secrets, which they, as indispensable guides, hold out before everything else to the youth of the period.[1]

[1] Proof of this will be given in the description of the Sophistic

Secondly, experience shows that it was a most dangerous thing, under the circumstances of that time, to place the higher education and preparation for public life exclusively in the hands of teachers who were dependent for their maintenance on the payments of their pupils. As human nature is constituted, scientific activity would inevitably by such an arrangement become dependent on the wishes and necessities of those who sought instruction, and were in a position to pay for it. These pupils would chiefly estimate its value by the advantage which they might hope from it, for their personal ends; very few would look beyond, and recognise the use of studies, the practical application of which did not lie ready to hand. A nation would require to be penetrated in an unusual degree, and far more than was the case in Greece at that time, with the value of pure and independent enquiry, if science as a whole did not sink, under these conditions, into mere technical skill, and

instruction. Cf. also p. 431, 5, and Plato, *Symp.* 217 A sqq., where Alcibiades treats Socrates as a Sophist when he would give him all he possesses in order πάντ' ἀκοῦσαι ὅσαπερ οὗτος ᾔδει, while Socrates, by his purely moral conception of their relation, makes him feel the difference of his instruction from that of the Sophists. The Sophists, it is true, are not named here, but the way in which Alcibiades at first treated his relation with Socrates shows what pupils of his class were accustomed to seek and to expect from their instructors. The same holds good of the remark of Xenophon, *Mem.* i. 2, 14 sq., that Critias and Alcibiades did not seek intercourse with Socrates in order to become like him in character, but νομίσαντε, εἰ ὁμιλησαίτην ἐκείνῳ, γενέσθαι ἂν ἱκανωτάτω λέγειν τε καὶ πράττειν. The fact that the Sophists announced themselves as teachers of virtue and improvers of men does not alter the case, for it may well be asked wherein virtue (or more properly, ability, fitness, ἀρετή) is to be found: the ἀρετή, for instance, which Euthydemus and Dionysodorus promise to give to their scholars more quickly than all other teachers (Plato, *Euthydem.* 273 D), is entirely different from what *we* call virtue.

become restricted more and more under a long continuance of them to supplying the mass of men with the crafts and knowledge which they considered advantageous, as quickly and easily and pleasantly as possible. In the circumstances under which the Sophistic instruction was given there lay a great danger for the thoroughness of enquiry and the earnestness of the philosophic mind; and this danger was further increased by the fact that most of the Sophists, without any settled abode, and without any interest in the State, were thus without the restraint which citizenship affords to men in respect to their moral life and the moral side of their professional activity.[1] That circumstances themselves led to this result cannot, however, alter the matter. It is undeniably true that, for talented and cultivated citizens of small States, travels, and public lectures, were in those times the only means of obtaining recognition for their attainments and a comprehensive sphere of action, and the discourses of a Gorgias and a Hippias at Olympia are not in themselves more blameworthy than those of an Herodotus; it is also true that it was only possible by means of payment for instruction, to open the profession of teacher to all who were capable of it, and to collect in one place the most multifarious powers; the effects, however, of such an institution are not on that account cancelled. If the Sophistic teaching involved from the

[1] Cf. Plato, *Tim.* 19 E: τὸ δὲ τῶν σοφιστῶν γένος αὖ πολλῶν μὲν λόγων καὶ καλῶν ἄλλων μάλ' ἔμπειρον ἡγήμαι, φοβοῦμαι δὲ, μήπως, ἅ τε πλανητὸν ὂν κατὰ πόλεις οἰκήσεις τε ἰδίας οὐδαμῇ διῳκηκός, ἄστοχον ἅμα φιλοσόφων ἀνδρῶν ᾖ καὶ πολιτικῶν (it is incapable of rightly understanding the old Athenians).

outset the limitation of the scientific interest to the useful and practically advantageous, this one-sidedness was greatly increased by the dependence of the Sophistic teachers upon the wishes and taste of their hearers, and the more deficient in scientific and very soon after in ethical content the Sophistic instruction became, the more inevitable it was that it should speedily be degraded into a mere instrument for the acquirement of money and fame.

Though this disregard of purely scientific enquiry in and for itself presupposes a sceptical temper, yet the most important of the Sophists never expressly declared, and the rest only implied by their general procedure, that they had broken with the previous philosophy because they thought a scientific knowledge of things impossible. When man despairs of knowledge, there remains to him only the satisfaction of activity or enjoyment; for his intellect, which has lost its object, there arises the task of producing an object from itself; its self-confidence now becomes absorption in self, duty; knowledge becomes will.[1] So the Sophistic philosophy of life is entirely based upon doubt of the truth of knowledge. But this makes a fixed scientific and moral attitude impossible to it; it must either follow the old opinions, or, if it criticises them more closely, it must come to the conclusion that a moral law of universal validity is as impossible as a universally

[1] Examples may easily be found in the history of philosophy: it is sufficient for our present purpose to recall the practical tendency of Socrates, and the later eclectics, Cicero, &c., the 'Illumination' of the last century, the connection between Kant's 'Critique of the Reason, and his Morality,' and similar instances.

recognised truth. It cannot therefore claim to instruct men as to the end and aim of their activity, and to furnish moral precepts: its instruction must be limited to the means through which the ends of individuals, of whatever kind those ends may be, can be attained. But for the Greeks all means are comprehended in the art of speech. Rhetoric, as the universal practical art, forms the positive side to the Sophists' negative morality and theory of knowledge. It therefore quits the sphere with which the history of philosophy is concerned. We will now examine more particularly the different aspects of the phenomenon which we are considering.

4. *The Sophistic Theory of Knowledge and Eristic Disputation.*

Even among the most ancient philosophers we find many complaints of the limitations of human knowledge, and from the time of Heracleitus and Parmenides downwards, the uncertainty of the sensible perception was acknowledged from the most opposite points of view. But it was not until the appearance of the Sophists that these germs were developed into a universal scepticism. For the scientific establishment of this scepticism, they took as their starting-point, partly the doctrine of Heracleitus, partly that of the Eleatics; that the same result should have been attained from such opposite presuppositions may be regarded, on the one hand, as a true dialectical induction through which those one-sided presuppositions cancel one another;

but it is at the same time suggestive of the Sophistic doctrine, which was concerned, not with any definite view of the nature of things or of knowledge, but only with the setting aside of objective philosophical enquiries.

Protagoras based his scepticism on the physics of Heracleitus. He is not, indeed, an actual adherent of that philosophy in its full extent and original import; what Heracleitus had taught concerning the primitive fire, and its changes and gradations—generally speaking, of the objective constitution of all things—could not be appropriated by a Sceptic as he was. But he at least adopted from the Heracleitean philosophy, in order to use them for his own purposes, the general propositions of the change of all things, and the opposing streams of motion. According to Protagoras, all things are in constant motion;[1] but this motion is not merely of one kind:

[1] Plato, *Theæt.* 152 D, 157 A sq. (vide *sup.* 18, 2), *ib.* 156 A, expresses this in the following manner: ὡς τὸ πᾶν κίνησις ἦν καὶ ἄλλο παρὰ τοῦτο οὐδέν, that he is not thinking, however, of motion without something moved—a 'pure motion'—but only of a motion the subject of which is constantly changing, is clear from 180 D, 181 C, D, where he uses these words, πάντα κινεῖται, τὰ πάντα κινεῖσθαι, πᾶν ἀμφοτέρως κινεῖσθαι, φερόμενόν τε καὶ ἀλλοιούμενον, and also from 156 C sqq.: ταῦτα πάντα μὲν κινεῖται . . . φέρεται γὰρ καὶ ἐν φορᾷ αὐτῶν ἡ κίνησις πέφυκεν, &c. (and the same texts prove that ἦν does not imply, as Vitringa asserts, p. 83, that originally only motion was, but that all is, *according to its essential nature*, motion; cf. Schanz, p. 70). The præterite is used here as in the Aristotelian expression, τί ἦν εἶναι. We can, therefore, neither attribute this pure motion to Prot. (Frei, 79), nor accuse Plato of an invention (Weber, 23 sqq.), justified by Sextus, who declares of Protagoras in Stoical language (*Pyrrh.* i. 217): φησὶν οὖν ὁ ἀνὴρ τὴν ὕλην ῥευστὴν εἶναι, ῥεούσης δὲ αὐτῆς συνεχῶς προσθέσεις ἀντὶ τῶν ἀποῤῥήσεων γίγνεσθαι. In *Theætetus*, 181 B sqq., it is further shown that the motion of all things, assumed by Protagoras, must be defined not merely as φορά, but as ἀλλοίωσις; but it is clear, from the same passage, that Protagoras himself had not explained himself more particularly on the subject.

there are innumerable motions, which, however, may all be reduced to two classes, since they consist either of doing or suffering.[1] Only through their action, or their being acted upon, do things receive their particular qualities; and as doing and suffering can belong to a thing only in relation to other things with which it is brought into contact by motion, we ought not to attribute any quality or definiteness to anything as such: it is only because things move towards each other, mingle, and work upon one another, that they become determinate: we can never say, therefore, that they are something, or, in general, that they are, but only that they become something, and become.[2]

[1] *Theæt.* 156 A, continues: τῆς δὲ κινήσεως δύο εἴδη, πλήθει μὲν ἄπειρον ἑκάτερον, δύναμιν δὲ τὸ μὲν ποιεῖν ἔχον τὸ δὲ πάσχειν. This is further explained at 157 A: neither action nor suffering belongs to a thing absolutely in and for itself; but things act or are acted upon by meeting with others to which they are related in an active or passive manner; the same can therefore be active in relation to one thing, and passive in relation to another. The language in this exposition is for the most part Platonic, but we are not justified in denying altogether to Protagoras the distinction between active and passive motion.

[2] *Theæt.* 152 D, 156 E (*sup.* 18, 2), 157 B: τὸ δ' οὐ δεῖ, ὡς ὁ τῶν σοφῶν λόγος, οὔτε τἀ ξυγχωρεῖν οὔτε τοῦ οὔτ' ἐμοῦ οὔτε τοῦδε οὔτ' ἐκείνο οὔτε ἄλλο οὐδὲν ὄνομα ὅ τι ἂν ἱστῇ, ἀλλὰ κατὰ φύσιν φθέγγεσθαι γιγνόμενα καὶ ποιούμενα καὶ ἀπολλύμενα καὶ ἀλλοιούμενα. (The form of the exposition seems to belong to Plato.) We find the same—no doubt originally taken from these passages—in Philop. *Gen. et Corr.* 4 b, and Ammon. *Categ.* 81 b, *Schol. in Arist.* 60 a, 15, where the proposition οὐκ εἶναι φύσιν ὡρισμένην οὐδενός is ascribed to Protagoras (Frei, p. 92, conjectures, probably erroneously, that these are his very words). It is also expressed in the language of later terminology by Sextus, *l. c.* thus: τοὺς λόγους πάντων τῶν φαινομένων ὑποπεῖσθαι ἐν τῇ ὕλῃ, words which do not seem to me rightly explained either by Petersen (*Phil. Hist. Stud.* 117), Brandis (i. 528), Hermann (*Plat. Phil.* 297, 142), Frei (p. 92 sq.), or Weber (p. 36 sqq.). These words do not assert that the causes of all phenomena lie only in the *material*, but rather the converse, that in matter, in things as such, irrespectively of the manner in which we apprehend them, the germ of *all things*, the equal possibility of the most various phenomena is given, that everything, as Plut. *Adv. Col.* 4, 2,

Through the meeting of these two kinds of motion our presentations of things arise.[1] Where an object comes in contact with our organ of sense in such a manner that the object acts upon the organ, and the organ is acted upon, there arises in the organ a definite sensation, and the object appears endowed with determinate qualities.[2] But these two results occur only in and

says in explaining this theory of Protagoras, is μὴ μᾶλλον τοῖον ἢ τοῖον; and as Sextus himself goes on to explain, δύνασθαι τὴν ὕλην, ὅσον ἐφ' ἑαυτῇ, πάντα εἶναι ὅσα πᾶσι φαίνεται.

[1] It is not quite clear whether he simply identified active motion with that of the αἰσθητὸν and passive with that of the αἴσθησις (as Schanz, p. 72, believes), or whether he regarded the motion of the αἰσθητὸν and the οἴσθησις only as definite kinds of active and passive motion. The latter opinion seems to me the more probable, partly for the reason that if Protagoras ascribed to things an objective existence, independently of our presentative consciousness, as he undoubtedly did, he must also have assumed a reciprocal action of things upon one another, and not merely an action upon ourselves; partly because the remark (157 A, vide *sup.* p. 446, 2) tells the same way, viz., that the identical thing that in relation to one thing is active, in relation to another thing may be passive: for in respect of our αἴσθησις the αἰσθητὸν is always active; it can only be passive in respect of other things.

[2] *Theæt.* 156 A, after what is quoted, p. 446, 2: ἐκ δὲ τῆς τούτων ὁμιλίας τε καὶ τρίψεως πρὸς ἄλληλα γίγνεται ἔκγονα πλήθει μὲν ἄπειρα, δίδυμα δὲ, τὸ μὲν αἰσθητὸν, τὸ δὲ αἴσθησις, ἀεὶ συνεκπίπτουσα καὶ γεννωμένη μετὰ τοῦ αἰσθητοῦ. The αἰσθήσεις are called ὄψεις, ἀκοαί, ὀσφρήσεις, ψύξεις, καύσεις, ἡδοναί, λῦπαι, ἐπιθυμίαι, φόβοι, etc.; to the αἰσθητὸν belong colours, tones, &c. This is then further explained: ἐπειδὰν οὖν ὄμμα καὶ ἄλλο τι τῶν τούτῳ ξυμμέτρων (an object which is so formed as to act upon the eye) πλησιάσαν γεννήσῃ τὴν λευκότητά τε καὶ αἴσθησιν αὐτῇ ξύμφυτον, ἃ οὐκ ἂν ποτε ἐγένετο ἑκατέρου ἐκείνων πρὸς ἄλλο ἐλθόντος, τότε δὴ, μεταξὺ φερομένων τῆς μὲν ὄψεως πρὸς τῶν ὀφθαλμῶν, τῆς δὲ λευκότητος πρὸς τοῦ συναποτίκτοντος τὸ χρῶμα, ὁ μὲν ὀφθαλμὸς ἅρα ὄψεως ἐμπλεως ἐγένετο καὶ ὁρᾷ δὴ τότε καὶ ἐγένετο οὔτι ὄψις ἀλλὰ ὀφθαλμὸς ὁρῶν, τὸ δὲ ξυγγενήσαν τὸ χρῶμα λευκότητος περιεπλήσθη καὶ ἐγένετο οὐ λευκότης αὖ ἀλλὰ λευκόν . . . καὶ τἆλλα δὴ οὕτω, σκληρὸν καὶ θερμὸν καὶ πάντα, τὸν αὐτὸν τρόπον ὑποληπτέον αὐτὸ μὲν καθ' αὑτὸ μηδὲν εἶναι, etc. The various relations in which things stand to the senses seem to have been derived by Protagoras from the greater or lesser swiftness of their motion, for it is said (156 C) that some move slowly, and consequently only attain to what is near, others more quickly, and attain to what is farther. The former would

during this contact; as the eye does not see when it is not affected by some colour, so the object is not coloured, when it is not seen by any eye. Nothing therefore is or becomes, what it is and becomes, in and for itself, but only for the percipient subject;[1] the object, however, will naturally present itself differently to the percipient subject, according to the constitution of the latter: things are for each man, that which they appear to him; and they appear to him, as they must necessarily appear, according to his own state and condition:[2] Man is the measure of all things, of Being that it is; of non-Being that it is not;[3] there is no

answer for example to the perceptions of touch, and the latter to those of sight.

[1] Vide previous note, and *l. c.* 157 A: ὥστε ἐξ ἁπάντων τούτων ὅπερ ἐξ ἀρχῆς ἐλέγομεν, οὐδὲν εἶναι ἓν αὐτὸ καθ' αὑτό, ἀλλὰ τινὶ ἀεὶ γίγνεσθαι, etc. (Vide *supra*, 18, 2; 447 1), 160 B: λείπεται δὴ, οἶμαι, ἡμῖν ἀλλήλοις, εἴτ' ἐσμὲν, εἶναι, εἴτε γιγνόμεθα, γίγνεσθαι, ἐπείπερ ἡμῶν ἡ ἀνάγκη τὴν οὐσίαν συνδεῖ μὲν, συνδεῖ δὲ οὐδενὶ τῶν ἄλλων, οὐδ' αὖ ἡμῖν αὐτοῖς. ἀλλήλοις δὴ λείπεται συνδεδέσθαι, ὥστε εἴτε τις εἶναί τι ὀνομάζει, τινὶ εἶναι ἢ τινὸς ἢ πρός τι ῥητέον αὐτῷ, εἴτε γίγνεσθαι, etc.; cf. *Phædo*, 90 C. Similarly Arist. *Metaph.* ix. 3, 1047 a, 5: αἰσθητὸν οὐδὲν ἔσται μὴ αἰσθανόμενον· ὥστε τὸν Πρωταγόρου λόγον συμβήσεται λέγειν αὐτοῖς. Alex. *ad h. l.* and p. 1010 b, 30; p. 273, 28 Bon.; Hermias, *Irris.* c. 4; Sext. *Pyrrh.* i. 219: τὰ δὲ μηδενὶ τῶν ἀνθρώπων φαινόμενα οὐδὲ ἔστιν. On the other hand, the word φυσιολόγοι, in Arist. *De An.* iii. 2, 426 a, 20, alludes, not to Protagoras (as Philop. *ad h. l.* O 15, and Vitringa, p. 106 believe), but to Democritus.

[2] Plato proves this, 157 E sqq., by the example of dreamers, sick persons and lunatics, and observes that since they are differently constituted from those who are awake and in good health, different perceptions must necessarily result from the contact of things with them. At 158 E, however, he does not seem to refer this answer explicitly to Protagoras, but gives it rather as the necessary completion of his theory. This makes it the more probable that the similar statements and arguments ap. Sext. *Pyrrh.* i. 217 sq.; Ammon. and Philop. in the passages quoted, *sup.* p. 447, 1; David, *Schol. in Arist.* 60 b, 16, were not taken from the treatise of Protagoras, but, like those of the *Theætetus*, are merely the comments and additions of the several writers.

[3] *Theæt.* 152 A: φησὶ γάρ που [Πρωτ.] πάντων χρημάτων μέτρον ἄνθρωπον εἶναι, τῶν μὲν ὄντων ὡς στι, τῶν δὲ μὴ ὄντων, ὡς οὐκ ἔστιν.

The same sentence, sometimes with this addition and sometimes without, is often quoted: by Plato, *Theæt.* 160 C; *Crat.* 385 E; Arist. *Metaph.* x. 1, 1053 a, 35; xi. 6; Sext. *Math.* vii. 60; *Pyrrh.* i. 216; Diog. ix. 51, &c. (vide Frei, 94). According to *Theæt.* 161 C, Protagoras said this, ἀρχόμενος τῆς ἀληθείας. As there is also mention of the ἀλήθεια of Protagoras, 162 A, 170 E; cf. 155 E, 166 B; *Crat.* 386 C, 391 C, it seems probable that the treatise in which the sentence occurred had the title Ἀλήθεια (as the *Schol. ad Theæt.* 161 C maintains). It does not, however, appear impossible that Plato himself first called it so, because Protagoras had therein often and emphatically declared that he would make known the true state of things in opposition to ordinary opinion. According to Sext. *Math.* vii. 60, the words stood at the beginning of the Καταβάλλοντες, and Porph. ap. Eus. *Pr. Ev.* x. 3, 25, says that Protagoras in the λόγος περὶ τοῦ ὄντος opposed the Eleatics, which no doubt was the case in the work from which the words in the *Theætetus* are taken. But perhaps Porphyry designates this work according to its contents, and the proper title was Καταβάλλοντες (sc. λόγοι), or Ἀλήθεια ἢ Καταβ.; possibly the two books of Ἀντιλογίαι ap. Diog. ix. 55, may be only another expression for Καταβάλλοντες. Cf. Frei, 176 sqq.; Weber, 43 sq.; Bernays, *Rh. Mus.* vii. 464 sqq.; Vitringa, 115; Schanz, *Beitr. z. Vorsokr. Phil.* 1 H, 29 sqq.; Bethe, *Vers. einer Würd. d. Sophist. Redekunst*, 29 sqq. The meaning of Protagoras's maxim is usually given thus: οἷα ἂν δοκῇ ἑκάστῳ τοιαῦτα καὶ εἶναι (Plato, *Crat.* 386 C. Similarly *Theæt.* 152 A; cf. Cic. *Acad.* ii. 46, 142), τὸ δοκοῦν ἑκάστῳ τοῦτο καὶ εἶναι παγίως (Arist. *Metaph.* xi. 6; cf. iv. 4, 1007 b, 22; iv. 5; Alex. *ad h. l.* and elsewhere; David, *Schol. in Arist.* 23 a, 4, where, however, what is said in the *Euthydemus*, 287 E, is transferred to Protagoras) πάσας τὰς φαντασίας καὶ τὰς δόξας ἀληθεῖς ὑπάρχειν καὶ τῶν πρός τι εἶναι τὴν ἀλήθειαν (Sext. *Math.* vii. 60; cf. *Schol. in Arist.* 60 b, 16). But here also, if the account is true, the meaning can only be, that what appears to anyone in a certain manner, is *for him* as it appears to him. Plato, *Theæt.* 152 A, expressly says this, and is unjustly censured by Grote (*Plato*, ii. 347, 353, 369), for having left it unnoticed. The expressions made use of by the authors mentioned above are, as is often self-evident, not the expressions of Protagoras. The same may be said of Plato's observation that knowledge according to Protagoras consists in sensation and nothing besides (cf. next note); and of the inference of Aristotle (*l. c. Metaph.* iv.), and his commentator (Alex. p. 194, 16, 228, 10, 247, 10, 258, 12 Bon. 637 a, 16. 653 a, 1. 662 a, 4. 667 a, 34 Br.), that according to Protagoras self-contradictory assertions could at the same time be true. The statement of Diog. ix. 51: ἔλεγέ τε μηδὲν εἶναι ψυχὴν παρὰ τὰς αἰσθήσεις, for which he refers to the *Theætetus*, seems either to have been deduced from the proposition that things exist only in the act of perception, or (as appears to me more probable) to be a mistake for the other proposition that ἐπιστήμη is nothing else than αἴσθησις. What Themistius says, *Analyt. Post.* p. 25 Sp.; *Schol. in Arist.* 207 b, 26, on Protagoras's view of knowledge, is no doubt deduced from the passage in Aristotle, which does not refer to Protagoras at all.

[1] Grote (*Plato*, ii. 322 sqq.) indeed doubts whether Protagoras himself founded his proposition, 'Man is the measure of all things,' in the manner supposed in the text, upon Heracleitus's theory: Schuster goes still further (*Herakl.* 29 sqq.); he not only maintains in connection with his observations on Heracleitus (discussed *supra*, p. 93 sq.), that neither Protagoras nor Heracleitus arrived at a theory of knowledge through metaphysical principles, but he also believes that Protagoras assumed the existence of knowledge, and that it coincided with αἴσθησις and the opinion based upon αἴσθησις. This last statement is destitute of all foundation, and is besides irreconcileable with every tradition concerning Protagoras that we possess. In the first place the proposition (*Theæt.* 151 E, 160 D): οὐκ ἄλλο τί ἐστιν ἐπιστήμη ἢ αἴσθησις, is not (as even Schuster observes) directly attributed to Protagoras by Plato. Plato expressly says (152 A; cf. 159 D), that Protagoras enunciated this in *another* form: (τρόπον τινὰ ἄλλον), in so far as results from his words: πάντων χρημάτων μέτρον ἄνθρωπος, that there can be no knowledge transcending appearance, and consequently (since φαίνεσθαι = αἰσθάνεσθαι, 152 B) transcending αἴσθησις. But in that case, it is clear that this proposition, in the connection in which it stands with Plato, cannot mean that there *is* a knowledge and this knowledge consists of αἴσθησις, but rather the converse: there is *no* objective knowledge, for there is no knowledge that is anything but αἴσθησις, and αἴσθησις is mere appearance and nothing else: this is evident from *Theæt.* 152 A sq., 161 D, 166 A sqq., &c. But all our witnesses without exception say the same: they all declare that, according to Protagoras, that is true for every man which appears to him true, which is directly contrary to the proposition 'that there is an ἐπιστήμη.' We must, if we adopt this, understand by ἐπιστήμη a presentation that is only *subjectively* true, a mere fancy (φαντασία, *Theæt.* 152 C). It would be more reasonable to doubt whether Protagoras had really established his proposition in the manner that Plato supposes. Plato, as I have repeatedly observed, does not seem to have kept strictly to the form of Protagoras's exposition; but we have no reason to deny to Protagoras the essential content of the theory which Plato puts into his mouth, or to doubt its connection with the physics of Heracleitus, even supposing that Sextus, *Pyrrh.* i. 216 sq., *Math.* vii. 60 sqq., is not to be considered an original source, which he certainly is in respect to part of his statements. It is difficult to see how Plato arrived at his exposition, if Protagoras himself had not furnished an occasion for it.

objective truth, but only subjective appearance of truth, no universally valid knowledge, but only opinion.[1]

The same result is attained by Gorgias from the

opposite point of departure. In his treatise on Nature, or the non-existent,[1] he sought to prove three propositions—(1) Nothing exists; (2) If anything be assumed to exist, it is unknowable; (3) If even it is knowable, it cannot be imparted in speech. The proof of the *first* proposition is entirely based on the theories of the Eleatics. 'If anything existed,' said Gorgias, 'it must be either existent or non-existent, or both at once.' But (A) it cannot be non-existent, because nothing can at the same time exist and not exist; and non-Being would then, on the one hand, as non-Being, not exist; but, on the other hand, so far as it *is* non-Being it would exist; further, as Being and non-Being are opposed to each other, we cannot attribute existence to non-Being without denying it to Being; but existence cannot be denied to Being.[2] Just as little, however, (B) can what exists be existent, for the existent must either be derived or underived—it must be either One or Many. (*a*) It cannot be *underived*; for what is not derived, says Gorgias, in agreement with Melissus, has no beginning, and what has no beginning is infinite. But the infinite is nowhere—it cannot be in some other, for in that case

[1] A detailed extract from this treatise, but in his own words, is given by Sext. *Math.* vii. 65–87, a shorter one by the pseudo-Arist. *De Melisso*, c. 5, 6. For its title, *περὶ τοῦ μὴ ὄντος ἢ π. φύσεως*, we are indebted to Sextus. Rose's doubt of its authenticity (*Arist. Libr. Or.* 77 sq.) seems to me not adequately justified either by the silence of Aristotle concerning the scepticism of Gorgias, nor by the fact that Gorgias in his later life confined himself to rhetoric. The statement that nothing exists is ascribed by Isocrates, *Hel.* 3, *π. ἀντιδόσ.*, 268, to his master Gorgias, in the former of these passages, with express reference to the writings of the ancient Sophists.

[2] Sext. 66 sq. and (though somewhat differently, which perhaps is the fault of the text) the treatise on Melissus, c. 5, 979 a, 21 sqq.

it would not be infinite; nor in itself, for what comprehends must be some other than that which is comprehended. But that which is nowhere exists not at all. If, therefore, Being is underived, it is non-existent.[1] If, on the other hand, we suppose it to be *derived*, it must have arisen either from Being or non-Being. But from Being nothing can be derived; for if Being became another, it would be no longer Being: and as little can it have arisen from non-Being: for if non-Being does not exist, the proposition would apply that out of nothing nothing comes; and, if it exists, the same reasons hold good which make a derivation from Being impossible.[2] (*b*) Being can neither be One nor Many. Not One; for what is really One can have no corporeal magnitude: and what has no magnitude is nothing.[3] Not Many; for every plurality is a number of unities: if there is no unity, there is also no plurality.[4] (*c*) If we add to this that Being cannot be *moved* since all motion is change, and, as such, would be the Becoming of non-Being; since, furthermore, all

[1] Cf. Vol. I. p. 638, 1; 618, 2.

[2] Sext. 68–71, *De Mel.* 979 b, 20 sqq. The latter expressly refers to Melissus and Zeno, vide *supra*, Vol. I. 618, 2; 627 sq. Sextus gives the conclusion of the argument more simply: he merely says that from non-Being nothing can come, for that which produces another, must first exist itself; and he adds that Being cannot at the same time be derived and underived, since these terms exclude one another. Perhaps, however, this may be his own addition. Sextus, after refuting the two alternatives of a dilemma, is fond of showing also that they could not both simultaneously be true.

[3] *De Mel.* 979 b, 36 (according to Mullach's supplement: *καὶ ἓν μὲν οὐκ ἂν δύναισθαι εἶναι, ὅτι ἀσώματον ἂν εἴη τὸ ἕν· τὸ γὰρ ἀσώματόν, φησιν, οὐδὲν, ἔχων γνώμην παραπλησίαν τῷ τοῦ Ζήνωνος λόγῳ* (vide *supra*, Vol. I. 615, 1). Gorg. ap. Sextus, 73, proves at greater length that the One can be neither a *ποσὸν*, nor a *συνεχὲς*, nor a *μέγεθος*, nor a *σῶμα*.

[4] Sext. 74; *De Mel.* 979 b, 37 (according to Foss and Mull.); cf. Zeno, *l. c.*; and Melissus, *supra*, Vol. I. p. 638, 2.

motion presupposes a division, and every division is a cancelling of Being,[1] it is evident that Being is as unthinkable as non-Being. (C) But if Being is neither existent nor non-existent, it plainly cannot be both at once;[2] and thus, as Gorgias believes, his first proposition, 'that nothing exists,' is proved.

The proofs of the two other propositions sound simpler. If even something existed it would be unknowable; for the existent is nothing that is thought, and what is thought is nothing that exists, otherwise what everyone imagines for himself must necessarily have an actual existence, and a false presentation would be impossible. But if Being is nothing that is thought, it is neither thought nor known—it is unknowable.[3] If, however, it were even knowable, it could not be imparted in words. For how can intuitions of things be produced by mere tones, when, in fact, words arise conversely, from intuitions? Moreover, how is it possible that the hearer in hearing the words should think the same as the speaker, since one and the same cannot be in different places and different persons?[4] Or if even the same were in several individuals, would it not necessarily appear to them differently, since they are different persons and in different places? These arguments are in part purely sophistical; but, at the same time, real difficulties are touched by them, especially in respect to the third proposition: and the whole might well have been regarded at that period as a formidable attempt to establish doubt as to the possibility of knowledge.[1]

[1] So in the treatise on Melissus, 980 a, 1; cf. *supra*, Vol. I. p. 634. In Sextus this proof is absent, but it is not likely that Gorgias made no use whatever of the arguments of Zeno and Melissus against motion. From his procedure in other cases, we may conjecture that he set up a dilemma, and showed that Being can neither be moved nor unmoved. There seems, therefore, to be a lacuna in this place in our text.

[2] Sext. 75 sq.; cf. the remark *supra*, 453, 2.

[3] *De Mel.* 980 a, 8, where, however, the commencement is mutilated and not satisfactorily amended by Mullach; while Sextus, 77–82, introduces much matter of his own.

[4] Sext. 83–86, who here again no doubt intermingles his own comments; more completely, but with a text that is not altogether certain, *De Melisso*, 980 a, 19 sqq.

No other Sophist seems to have taken such pains about the complete justification of scepticism, at least, there is no tradition of any attempt of the kind. All the more general, however, was the agreement in the result which was common to the Heracleitean and Eleatic scepticism, the denial of any objective truth, and though this denial was in very few instances based upon a developed theory of knowledge, yet the sceptical arguments of a Protagoras or a Gorgias, a Heracleitus or a Zeno, were, notwithstanding, eagerly utilised. The observation which was perhaps first made by Gorgias after the precedent of Zeno, that the One cannot be at the same time Many, and that therefore the union

[1] On the other hand, Grote (*Hist. of Gr.* viii. 503 sq.) is carried too far by his predilection for the Sophists, when he says that the demonstration of Gorgias relates only to the Thing-in-itself of the Eleatics. The Eleatics only recognised as reality the essence lying beyond the phenomenon; as against them, Gorgias (he says) shows with good reason that such a 'Thing-in-itself' ('*ultra-phenomenal Something or Noumenon*') does not exist, and can neither be recognised nor described. Of such a limitation our authorities contain not the slightest hint; Gorgias argues quite generally and unconditionally that nothing can exist or be known or be expressed. The Eleatics themselves, however, did not distinguish between the phenomenon and that which lies behind it; but only between the true theory of things and the false. A double Being, phenomenal and absolute, was first held by Plato, and in a certain sense by Aristotle.

of a predicate with a subject is inadmissible—seems to have found special favour.[1] With the propositions of Protagoras concerning the relativity of our presentations, may be connected the statement of Xeniades that all opinions of mankind are false; and if Xeniades,[2] in contradiction to a presupposition of the physicists, at first latent, but since the time of Parmenides explicitly recognised, regarded generation as a Becoming out of nothing, and decay as pure annihilation, he may have

[1] Cf. Plato, *Soph.* 251 B: ὅθεν γε, οἶμαι, τοῖς τε νέοις καὶ γερόντων τοῖς ὀψιμαθέσι θοίνην παρεσκευάκαμεν· εὐθὺς γὰρ ἀντιλαβέσθαι παντὶ πρόχειρον, ὡς ἀδύνατον τά τε πολλὰ ἓν καὶ τὸ ἓν πολλὰ εἶναι, καὶ δή που χαίρουσιν οὐκ ἐῶντες ἀγαθὸν λέγειν ἄνθρωπον, ἀλλὰ τὸ μὲν ἀγαθὸν ἀγαθόν, τὸν δὲ ἄνθρωπον ἄνθρωπον. Plato here certainly has Antisthenes and his school primarily in view; but that his remark is not confined to them, is clear from *Philebus*, 14 C, 15 D, where he describes it as a common and universal phenomenon that young persons, in their dialectical disputations, used sometimes to convert the One into the Many, and sometimes the Many into the One; and to dispute the possibility of the Many in the One. Aristotle, *Phys.* i. 2, 185 b, 25, is still more explicit: ἐθορυβοῦντο δὲ καὶ οἱ ὕστεροι τῶν ἀρχαίων (Heracleitus was previously named), ὅπως μὴ ἅμα γένηται αὐτοῖς τὸ αὐτὸ ἓν καὶ πολλά. διὸ οἱ μὲν τὸ ἔστιν ἀφεῖλον, ὥσπερ Λυκόφρων, οἱ δὲ τὴν λέξιν μετερρύθμιζον, ὅτι ὁ ἄνθρωπος οὐ λευκός ἐστιν, ἀλλὰ λελεύκωται, etc. If Lycophron alluded to this statement, it probably was not first circulated by Antisthenes, but was borrowed by him from Gorgias, who was the teacher both of Antisthenes and Lycophron; cf. p. 425, 3. Damasc, *De Princ.* c. 126, p. 262, says that the statement was indirectly made by Protagoras, but explicitly by Lycophron; this, however, is no doubt founded merely on an inaccurate reminiscence of the passage in Aristotle.

[2] Cf. p. 426, 1. This is to be found ap. Sext. *M.* vii. 53: Ξενιάδης δὲ ὁ Κορίνθιος, οὗ καὶ Δημόκριτος μέμνηται, πάντ' εἰπὼν ψευδῆ καὶ πᾶσαν φαντασίαν καὶ δόξαν ψεύδεσθαι, καὶ ἐκ τοῦ μὴ ὄντος πᾶν τὸ γινόμενον γίνεσθαι, καὶ εἰς τὸ μὴ ὂν πᾶν τὸ φθειρόμενον φθείρεσθαι, δυνάμει τῆς αὐτῆς ἔχεται τῷ Ξενοφάνει στάσεως. The latter, however, relates only to the supposed scepticism of Xenophanes: we cannot deduce from it that Xeniades' point of departure was the Eleatic doctrine. The statement as to generation and decay is only compatible with that doctrine, if Xeniades used it to prove that generation and decay are altogether impossible. The proposition that all opinions are false, is also mentioned by Sextus, vii. 388, 389; viii. 5: he reckons Xeniades among those who admitted no criterion, *M.* vii. 48; *P.* ii. 18.

been moved to it by Heracleitus's doctrine of the flux of all things. Perhaps, however, he asserted this only hypothetically, to show that generation and decay are as unthinkable as a Becoming out of nothing and into nothing. Others, like Euthydemus, no doubt intermingled the theories of Heracleitus and the Eleatics. This Sophist maintained on the one hand, in the spirit of Protagoras, that all qualities belong to all things at all times equally and simultaneously;[1] on the other, he deduced, from the propositions of Parmenides,[2] the conclusion that no one can err or say what is false, and that it is consequently impossible to contradict oneself, for the non-existent can be neither imagined nor uttered.[3] This statement, however, we meet with elsewhere, partly in combination with the Heracleito-Protagorean Scep-

[1] Plato, *Crat.* 386 D, after the citation of Protagoras's proposition, 'Man is the measure of all things:' ἀλλὰ μὴν οὐδὲ κατ' Εὐθύδημόν γε, οἶμαι, σοὶ δοκεῖ πᾶσι πάντα ὁμοίως εἶναι καὶ ἀεί. οὐδὲ γὰρ ἂν οὕτως εἶεν οἱ μὲν χρηστοὶ, οἱ δὲ πονηροὶ, εἰ ὁμοίως ἅπασι καὶ ἀεὶ ἀρετὴ καὶ κακία εἴη. Sextus, *Math.* vii. 64, couples Protagoras with Euthydemus and Dionysodorus: τῶν γὰρ πρός τι καὶ οὕτοι τό τε ὂν καὶ τὸ ἀληθὲς ἀπολελοίπασι, whereas Proclus, in *Crat.* § 41, repeating the assertions in Plato, remarks that Protagoras and Euthydemus agree indeed as to their result, but not in their points of departure. This, however, is scarcely true; cf. what is quoted, p. 447, 2, on Protagoras, with the proposition of Euthydemus.

[2] *Parm.* v. 39 sq., 64 sq., vide *sup.* Vol. I. 584, 1; 585, 3.

[3] In Plato's *Euthyd.* 283 E sqq., Euthydemus argues that it is not possible to tell a lie, for he who says something, always says what is, and he who says what is, says the truth; what is not, cannot be said, for nothing can be done with that which is not. The same thesis is shortly summed up, 286 C, thus: ψευδῆ λέγειν οὐκ ἔστι . . . οὐδὲ δοξάζειν; after Dionysodorus has previously demonstrated that as one cannot say what is not, it is likewise impossible that different persons should say different things of the same object; for if one says something different from the other, they cannot be speaking of the same object. This statement also appears in Isocr. *Hel.* 1, where, however, it seems to relate to Antisthenes (concerning whom, cf. Part II. a, 256, 1, 3rd ed.), for the elder sophists are expressly contrasted with the upholders of this opinion.

ticism;[1] and thus we may with probability assume that observations of different kinds and starting from different standpoints may have been employed without any strict logical connection, in order to justify the general distaste for scientific enquiries and the sceptical temper of the time.

The practical application of this scepticism is Eristic disputation. If no opinion is true in itself and for all men, but each is true for those only to whom it appears to be true, then every statement may with equal right be opposed by another; there is no proposition the contrary of which would not be equally true. Protagoras himself deduced this fundamental principle from his theory of knowledge,[2] and though we are not told that others stated it so broadly, yet the nature of their procedure throughout presupposed it. Serious physical or metaphysical enquiries are not ascribed by tradition to any of the Sophists. Hippias, indeed, loved to make a display of his physical, mathematical and astronomical acquirements,[3] but a thorough enquiry into the subject-

[1] Thus Cratylus (vide *sup.* p. 113 sq.) says in the Platonic dialogue bearing his name, 429 D, that we can say nothing false: πῶς γὰρ ἂν . . . λέγων γέ τις τοῦτο, ὃ λέγει, μὴ τὸ ὂν λέγοι; ἢ οὐ τοῦτό ἐστι τὸ ψευδῆ λέγειν, τὸ μὴ τὰ ὄντα λέγειν; and in *Euthyd.* 286 C, we read, in reference to the previously quoted statement of Dionysodorus: καὶ γὰρ οἱ ἀμφὶ Πρωταγόραν σφόδρα ἐχρῶντο αὐτῷ καὶ οἱ ἔτι παλαιότεροι (cf. also Diog. ix. 53). Cf. Ammon. *in Categ. Schol. in Ar.* 60 a, 17. In *Soph.* 241 A, 260 D, the statement that there is no untruth is ascribed to the Sophists generally: τὸ γὰρ μὴ ὂν οὔτε διανοεῖσθαί τινα οὔτε λέγειν· οὐσίας γὰρ οὐδὲν οὐδαμῇ τὸ μὴ ὂν μετέχειν.

[2] Diog. ix. 51: πρῶτος ἔφη δύο λόγους εἶναι περὶ παντὸς πράγματος ἀντικειμένους ἀλλήλοις· οἷς καὶ συνηρώτα (he used them in dialectical questions) πρῶτος τοῦτο πράξας. Clem. *Strom.* vi. 647 A: Ἕλληνές φασι Πρωταγόρου προκατάρξαντος, παντὶ λόγῳ λόγον ἀντικείμενον παρεσκευάσθαι. Sen. *Ep.* 88, 43: *Protagoras ait, de omni re in utramque partem disputari posse ex æquo et de hac ipsa, an omnis res in utramque partem disputabilis sit.*

[3] Vide *sup.* p. 421 sq.

matter of these sciences could not be expected of him, and though Antiphon, in his two books upon Truth,[1] alluded also to physical subjects, his attempt to square the circle[2] shows that he had no special knowledge of these subjects. What is related of him in this connection is either borrowed from others, or else falls short of the general level of natural science at that time.[3] Protagoras not only himself refrained from giving instruction in physics, but Plato describes him as ridiculing that of Hippias;[4] and Aristotle tells us that, true to

[1] On which, cf. p. 426, 4.

[2] This attempt is mentioned by Aristotle, *Phys.* i. 1, 185 a, 17; *Soph. El.* c. 11, 172 a, 2 sqq., but is expressly described as that of a dilettante. According to Simpl. *Phys.* 12 a, which Eudemus here seems to follow (Alexander *in h. l.* confuses the solution of Antiphon with another; in the text in the *Physics* he seems to have apprehended it rightly), it simply consisted in drawing a polygon in the circle and measuring the superficial content of the polygon; for he thought that if only sides enough were given to the polygon, it would coincide with the circle.

[3] The *Placita*, ii. 28, 2 (Stob. *Ecl.* i. 556; Galen, *H. Ph.* c. 15, p. 281; Joh. Lyd. De Mens. iii. 8, p. 39), ascribe to him the opinion (which was also held by Anaxagoras, vide *sup.* p. 361) that the moon shines with her own light, and that when we do not see this, or see it imperfectly, it is because the light of the sun overpowers that of the moon. According to Stob. *Ecl.* i. 524, he thought the sun was a fire, nourished (as Anaximander and Diogenes also held, vide *sup.* Vol. I. 253, 295 sqq.) by the vapours of the atmosphere; and its diurnal course is the result of its constantly seeking fresh nourishment instead of that which has been consumed. According to the same authority, i. 558, he explained lunar eclipses (in agreement with Heracleitus, vide *sup.* p. 58, 2) as the inversion of the boat in which the fire of the moon is kept. According to the *Placita*, iii. 16, 4 (Galen, *H. Ph.* c. 22, p. 299), he said the sea was formed by the exudation of the earth caused by heat (according to the opinion of Anaxagoras, vide *sup.* p. 357, 1). Galen, *in Hippocr. Epidem.* T. xvii. a, 681, quotes a passage from the treatise named above, in which a meteorological phenomenon (it is not quite clear what phenomenon it is) is explained.

[4] Vide *supra*, p. 431, 5. When therefore Tertullian (*De An.* 15, towards the end) ascribes to Protagoras the opinion that the seat of the soul is in the breast, this must refer to some incidental remark, and not to an anthropological theory.

his sceptical standpoint, he found fault with astronomy because the actual positions and courses of the stars do not coincide with the figures of the astronomers;[1] if, therefore, he wrote upon mathematics,[2] he must have taken the line of denying its scientific certainty and confining its practical application within narrow limits.[3] Gorgias may have employed certain physical theories occasionally for his own purposes,[4] but his scepticism likewise must have deterred him from independent enquiry in this sphere, and such enquiry is never ascribed to him. Nor do we hear anything of natural science in connection with Prodicus, Thrasymachus, or other famous Sophists.[5] Instead of an objective interest in

[1] *Metaph.* iii. a, 2, which is repeated by Alexander, *ad h. l.*, and amplified probably on his own authority by Asclepius (*Schol. in Ar.* 619 b, 3). This statement is referred to by Syrian, *Metaph.* 21, *l. c.*, Bagol.

[2] Περὶ μαθημάτων, Diog. ix. 55; cf. Frei, 189 sq.

[3] He may easily have admitted such an application, and even have given positive instruction in regard to it. According to Diog. *l. c.* and Plato, *Soph.* 232 D (*infra*, 461, 1), he also wrote about the art of wrestling; according to Aristotle (vide *supra*, 411, 2) he invented a pad for porters.

[4] Sopater, Διαίρ. ζητ. *Rhet. Gr.* viii. 23: Γοργ. μύδρον εἶναι λέγων τὸν ἥλιον (where there is perhaps, however, a confusion with Anaxagoras). Plato, *Meno*, 76 C: Βούλει οὖν σοι κατὰ Γοργίαν ἀποκρίνωμαι; . . . Οὐκοῦν λέγετε ἀπορροάς τινας τῶν ὄντων κατ' Ἐμπεδοκλέα . . . καὶ πόρους, etc. The definition of colours, on the other hand, which is combined with this, is given by Socrates in his own name.

[5] A treatise of Prodicus is named indeed by Galen, *De Elem.* i. 9; T. i. 417 K; *De Virt. Phys.* ii. 9; T. ii. 130, under the title: περὶ φύσεως or π. φύσεως ἀνθρώπου; and Cicero says, *De Orat.* iii. 32, 128: *Quid de Prodico Chio? quid de Thrasymacho Chalcedonio, de Protagora Abderita loquar? quorum unusquisque plurimum temporibus illis etiam de natura rerum et disseruit et scripsit.* But that this treatise of Prodicus really contained physical enquiries is not proved by the title. Cicero in the passage quoted only wants to show *veteres doctores auctoresque dicendi nullum genus disputationis a se alienum putasse semperque esse in omni orationis ratione versatos*, and for this purpose he instances, besides those just mentioned, not only the example of the universal artist, Hippias, but the offer of Gorgias to give lectures on any given theme. Here, therefore, we

the knowledge of things, there is only the subjective interest in the exercise of a formal art of thought and speech, and this must find its sole task in the confuting of others, when once any positive conviction of its own is renounced. Eristic disputation, therefore, was directly involved in the Sophistic teaching; Zeno having prepared the way, we find in Gorgias a demonstration which is thoroughly eristic; at the same time, Protagoras distinctly brings forward Eristic as a separate art, for which he himself wrote an introduction;[1] and it finally becomes so inseparable from the Sophistic doctrine, that the Sophists are shortly designated by their contemporaries as Eristics; and their doctrine is defined as the art of making everything doubtful, and of contradicting every statement.[2] In this, however, the Sophistic

have to do, not with natural philosophy, but with orations; it is, moreover, a question how far Cicero's own knowledge of the subject extended, and whether he may not have inferred too much from titles such as περὶ φύσεως, περὶ τοῦ ὄντος, or still more probably from the ambiguous remark of a predecessor on the difference between forensic and epideictic oratory. (Cf. Welcker, 522 sq.) Moreover the fact that Critias (according to Arist. *De An.* i. 2, 405 b, 5, which statement the commentators merely repeat) supposed the soul to be blood, inasmuch as sensation has its seat there, does not justify us in the conclusion that he occupied himself systematically with natural philosophy.

[1] Diog. ix. 52: καὶ τὴν διάνοιαν ἀφεὶς πρὸς τοὔνομα διελέχθη καὶ τὸ νῦν ἐπιπολάζον γένος τῶν ἐριστικῶν ἐγέννησεν (these words seem to have been taken from some tolerably ancient authority), for which reason Timon says of him, ἐριζέμεναι εὖ εἰδώς. In § 55 Diogenes mentions a τέχνη ἐριστικῶν, the nature of which we may see from the passage quoted from Aristotle (*infra*, p. 462, 1); and Plato says (*Soph.* 232 D) that from the writings of Sophists we may learn τὰ περὶ πασῶν τε καὶ κατὰ μίαν ἑκάστην τέχνην, ἃ δεῖ πρὸς ἕκαστον αὐτὸν τὸν δημιουργὸν ἀντειπεῖν . . . τὰ Πρωταγόρεια περί τε πάλης καὶ τῶν ἄλλων τεχνῶν.

[2] Plato, *Soph.* 225 C: τὸ δέ γε ἔντεχνον (sc. τοῦ ἀντιλογικοῦ μέρος) καὶ περὶ δικαίων αὐτῶν καὶ ἀδίκων καὶ περὶ τῶν ἄλλων ὅλως ἀμφισβητοῦν ἆρ' οὐκ ἐριστικὸν αὖ λέγειν εἰθίσμεθα. The Sophistic doctrine then consists in applying this art of disputation in such a manner as

teachers proceeded very unmethodically. The different artifices which they employed were collected from all sides, just as they presented themselves; and the attempt was never made to combine these various tactics into a theory, and to arrange them according to fixed points of view. The Sophists cared nothing for any scientific consciousness about their method, but only for its direct application to particular cases, and they therefore made their disciples learn quite mechanically the questions and fallacies which most commonly came before them.[1]

We get a vivid picture of the Sophistic art of disputation, as it was constituted in later times, in Plato's dialogue of Euthydemus, and in Aristotle's Treatise on

to earn money. Similarly it is maintained further on (232 B sqq.) to be the general characteristic of the Sophist that he is ἀντιλογικὸς περὶ πάντων πρὸς ἀμφισβήτησιν, and consequently it is said, 230 D sqq., that the art of the Sophists resembles the Elenchic art of Socrates, if only as the wolf resembles the dog. Cf. 216 B, where the expressions θεὸς ἐλεγκτικὸς and τῶν περὶ τὰς ἔριδας ἐσπουδακότων are intended for the Sophists perhaps in conjunction with Megarian and Cynic Eristics. Similarly Isocrates designates them as τῶν περὶ τὰς ἔριδας διατριβόντων, τῶν π. τ. ἔρ. καλινδουμένων (c. *Soph.* 1, 20, cf. Hel. 1), and Aristotle (vide following note) as οἱ περὶ τοὺς ἐριστικοὺς λόγους μισθαρνοῦντες (cf. Plato, *supra*, p. 433, 1). Even Democritus complains of the disputatious people and their fallacies, *supra*, p. 275, 3.

[1] Arist. *Soph. El.* 33, 183 b, 15. As to other enquiries, he says, he has only had to complete what others had begun; rhetoric, for example, had from small beginnings gradually developed to a considerable extent, through the instrumentality of a Tisias, a Thrasymachus, a Theodorus: ταύτης δὲ τῆς πραγματείας οὐ τὸ μὲν ἦν τὸ δ' οὐκ ἦν προεξειργασμένον, ἀλλ' οὐδὲν παντελῶς ὑπῆρχεν. καὶ γὰρ τῶν περὶ τοὺς ἐριστικοὺς λόγους μισθαρνούντων ὁμοία τις ἦν ἡ παίδευσις τῇ Γοργίου πραγματεία. λόγους γὰρ οἱ μὲν δητορικοὺς οἱ δὲ ἐρωτητικοὺς ἐδίδοσαν ἐκμανθάνειν, εἰς οὓς πλειστάκις ἐμπίπτειν ᾠήθησαν ἑκάτεροι τοὺς ἀλλήλων λόγους· διόπερ ταχεῖα μὲν ἄτεχνος δ' ἦν ἡ διδασκαλία τοῖς μανθάνουσι παρ' αὐτῶν, οὐ γὰρ τέχνην ἀλλὰ τὰ ἀπὸ τῆς τέχνης διδόντες παιδεύειν ὑπελάμβανον, as if a shoemaker (says Aristotle) were to give his pupil a number of ready-made shoes instead of instruction in his trade.

Fallacies;[1] and though we must not forget that the one is a satire written with all poetic freedom, and the other a universal theory which there is no reason to restrict to the Sophists in the narrower sense, or to anything historical, yet the harmony of these descriptions one with the other, and with other accounts, shows that we are justified in applying them in all their essential features to the Sophistic teaching. What they tell us is certainly not much to its advantage. The Eristics were not concerned about any scientific result; their object was to involve their adversary or interlocutor in confusion and difficulties from which he could find no way of escape, so that every answer that he gave seemed incorrect;[2] and whether this object was attained by legitimate inferences, or surreptitiously by means of fallacies, whether the interlocutor was really or only apparently vanquished, whether he felt himself vanquished, or only seemed to the auditors to be so, whether he was merely silenced or made ridiculous, it did not matter in the least.[3] If a discussion is uncomfortable to the Sophist, he evades it;[4] if an answer is

[1] Properly the ninth book of the *Topica*, vide Waitz, *Aristot. Org.* ii. 528. As to particular fallacies quoted by Aristotle, cf. Alexander in the *Scholia*; Waitz, in his Commentary; Prantl, *Gesch. d. Log.* i. 20 sqq.

[2] The ἄφυκτα ἐρωτήματα, of which the Sophist boasts, *Euthydem.* 275 E, 276 E.

[3] Cf. the whole of the *Euthydemus*, and Arist. *Soph. El.* c. 1 (cf. c. 8, 169 b, 20), where the Sophistic demonstration is shortly defined as συλλογισμὸς καὶ ἔλεγχος φαινόμενος μὲν οὐκ ὢν δέ.

[4] In *Soph. El.* c. 15, 174 b, 28, Aristotle gives the rule from the standpoint of the Sophists: δεῖ δὲ καὶ ἀφισταμένους τοῦ λόγου τὰ λοιπὰ τῶν ἐπιχειρημάτων ἐπιτέμνειν . . . ἐπιχειρητέον δ' ἐνίοτε καὶ πρὸς ἄλλο τοῦ εἰρημένου, ἐκεῖνο ἐκλαβόντας, ἐὰν μὴ πρὸς τὸ κείμενον ἔχῃ τις ἐπιχειρεῖν· ὅπερ ὁ Λυκόφρων ἐποίησε, προβληθέντος λύραν ἐγκωμιάζειν. Examples are given in *Euthydem.* 287 B sqq., 297 B, 299 A, etc.

desired of him, he insists on asking questions;[1] if anyone tries to escape from ambiguous questions by closer definition, he demands yes or no;[2] if he thinks his adversary knows of an answer, he begins by deprecating all that can possibly be said on that side;[3] if he is accused of contradicting himself, he protests against bringing forward things that are done with long ago:[4] if he has no other resource, he stupifies his adversaries with speeches, the absurdity of which precludes any reply.[5] He tries to hoodwink the diffident man by a swaggering mode of address,[6] to surprise the thoughtful man by hasty infer-

[1] *Euthyd.* 287 B sq., 295 B sqq.

[2] *Soph. El. C.* 17, 175 b, 8: ὅ τ' ἐπιζητοῦσι νῦν μὲν ἧττον πρότερον δὲ μᾶλλον οἱ ἐριστικοί, τὸ ἢ ναὶ ἢ οὔ ἀποκρίνεσθαι. Cf. *Euthyd.* 295 E sq., 297 D sqq.

[3] Thus Thrasymachus in Plat. *Rep.* i. 336 C, challenges Socrates to say what is justice: καὶ ὅπως μοι μὴ ἐρεῖς, ὅτι τὸ δέον ἐστὶ μηδ' ὅτι τὸ ὠφέλιμον μηδ' ὅτι τὸ λυσιτελοῦν μηδ' ὅτι τὸ κερδαλέον μηδ' ὅτι τὸ ξυμφέρον, ἀλλὰ σαφῶς μοι καὶ ἀκριβῶς λέγε ὅ τι ἂν λέγῃς· ὡς ἐγὼ οὐκ ἀποδέξομαι, ἐὰν ὕθλους τοιούτους λέγῃς, with which cf. the answer of Socrates, 337 A.

[4] This is done with the most delightful naïveté in *Euthydem.* 287 B: εἶτ', ἔφη, ὦ Σώκρατες, Διονυσόδωρος ὑπολαβών, οὕτως εἰ Κρόνος, ὥστε ἃ τὸ πρῶτον εἴπομεν, νῦν ἀναμμνήσκει, καὶ εἴ τι πέρυσιν εἶπον, νῦν ἀναμνησθήσει, τοῖς δ' ἐν τῷ παρόντι λεγομένοις οὐχ ἕξεις ὅ τι χρῇ; Similarly Hippias ap. Xen. *Mem.* iv. 4, 6, says ironically to Socrates: ἔτι γὰρ σὺ ἐκεῖνα τὰ αὐτὰ λέγεις, ἃ ἐγὼ πάλαι ποτέ σου ἤκουσα; to which Socrates replies: ὃ δέ γε τούτου δεινότερον, ὦ Ἱππία, οὐ μόνον ἀεὶ τὰ αὐτὰ λέγω, ἀλλὰ καὶ περὶ τῶν αὐτῶν. σὺ δ' ἴσως διὰ τὸ πολυμαθὴς εἶναι περὶ τῶν αὐτῶν οὐδέποτε τὰ αὐτὰ λέγεις. Plato, *Gorg.* 490, puts the same into the mouth of Socrates and Callicles; so perhaps it may actually have been said by the historic Socrates.

[5] For example in the *Euthydemus*, where the Sophists at last admit that they know and understand all things, and even as little children understood how to count the stars, mend shoes, &c. (293 D); that puppies and sucking pigs are their brothers (298 D); and the finale, when the adversary lays down his arms and all break forth in wild excitement, Ctesippus exclaims, πυπποῖ, ὦ Ἡράκλεις! and Dionysodorus answers: πότερον οὖν ὁ Ἡρακλῆς πυππάξ ἐστιν ἢ ὁ πυππὰξ Ἡρακλῆς.

[6] In *Rep.* 336 C, Thrasymachus introduces himself into the conversation with the words: τίς ὑμᾶς πάλαι φλυαρία ἔχει, ὦ Σώκρατες, καὶ τί εὐηθίζεσθε πρὸς ἀλλήλους ὑποκατακλινδούμενοι ὑμῖν αὐτοῖς; in the *Euthydemus*, 283 B, Dionysodorus begins thus: ὦ Σώκρατές τε καὶ

ences,[1] to betray the inexperienced man into surprising statements[2] and clumsy expressions.[3] Assertions that were only intended to have a relative meaning and a limited application, are taken absolutely; that which holds good of the subject is transferred to the predicate; from superficial analogies are deduced the most extravagant conclusions. It is maintained, for instance, that it is impossible to learn anything, for a man cannot learn what he already knows; and he cannot seek for that of which he knows nothing: the wise man can learn nothing, because he already knows, and the foolish man nothing, because he does not understand;[4] moreover, he who knows anything knows all things, for the man who knows cannot be also ignorant;[5] he who is the father or the brother of anyone, must be the father and brother of everyone; for a father cannot be not

ὑμεῖς οἱ ἄλλοι . . . πότερον παίζετε ταῦτα λέγοντες, ἢ . . . σπουδάζετε (similarly Callicles, *Gorg.* 481 B); and when Socrates has said that he is in earnest, Dionysodorus still warns him: σκόπει μήν, ὦ Σώκρατες, ὅπως μὴ ἔξαρνος ἔσει ἃ νῦν λέγεις.

[1] *Soph. El.* c. 15, 174 b, 8: σφόδρα δὲ καὶ πολλάκις ποιεῖ δοκεῖν ἐληλέγχθαι τὸ μάλιστα σοφιστικὸν συνοφάντημα τῶν ἐρωτώντων, τὸ μηδὲν συλλογισαμένους μὴ ἐρώτημα ποιεῖν τὸ τελευταῖον, ἀλλὰ συμπεραντικῶς εἰπεῖν, ὡς συλλελογισμένους, "οὐκ ἄρα τὸ καὶ τό."

[2] Vide *Soph. El.* c. 12, where various artifices are suggested by which the interlocutor might be entrapped into false or paradoxical assertions.

[3] Among the Sophistic devices which Aristotle mentions is the Solecism (this was to mislead the adversary into wrong expressions, or if he expressed himself rightly, into the opinion that he was committing faults), *Soph. El.* c. 14, 32, and the ποιῆσαι ἀσθλεσχεῖν, *ibid.* c. 13, 31. The latter consisted in obliging the enemy to repeat the idea of the subject in the predicate: *e.g.* τὸ σιμὸν κοιλότης ῥινός ἐστιν, ἔστι δὲ ῥὶς σιμή, ἔστιν ἄρα ῥὶς ῥὶς κοίλη.

[4] This seems to have been a favourite fallacy of the Sophists, and many different applications of it are quoted: by Plato, *Meno*, 80 E; *Euthyd.* 275 D sq., 276 D sq.; by Aristotle, *Soph. El.* c. 4, 165 b, 30; cf. *Metaph.* ix. 8, 1049 b, 33; and Prantl, *Gesch. d. Log.* i. 23.

[5] *Euthyd.* 293 B sqq., where the most absurd consequences are deduced from this.

a father, or a brother not a brother.[1] If A is not B and B is a human being, A is not a human being.[2] If the negro is black, he cannot be white, even as to his teeth.[3] If I sat yesterday in a certain place, but to-day sit there no longer, it is at the same time true and not true, that I sit there.[4] If a bottle of medicine does a sick man good, a cart-load of the remedy will make him still better.[5] Questions were raised such as that of the veiled person,[6] and difficult cases imagined, such as the oath to swear falsely,[7] and the like. The most fruitful mine, however, for Sophistic art was afforded by the ambiguity of language;[8] and the less the Sophists were concerned with real knowledge, and the smaller the advance in that period towards the grammatical definition of words and propositions, and towards the logical distinction of the various categories, the more unrestrainedly could the intellect run riot in so wide a sphere, especially among a people so expert in speech, and so accustomed to linguistic catches and riddles, as the Greeks.[9] Equivocal expressions were

[1] *Euthyd.* 297 D sqq., with the same argumentative exaggeration.

[2] *Soph. El.* c. 5, 166 b, 32.

[3] *Ibid.* 167 a, 7; cf. Plato, *Phileb.* 14 D.

[4] *Soph. El.* c. 22, 178 b, 24; C. 4, 165 b, 30 sq.

[5] *Euthyd.* 299 A sq., where there are others of the same kind.

[6] A veiled person is shown, and one of his acquaintances is asked whether he knows him; if he says yes, he says what is untrue, for he cannot know who is hidden behind the veil; if he says no, he equally says an untruth, for he does know the veiled person. These and similar catches are mentioned by Aristotle, *Soph. El.* c. 24.

[7] Some one has sworn to commit a perjury; if he actually commits it, is this εὐορκεῖν or ἐπιορκεῖν? *Soph. El.* c. 25, 180 a, 34 sqq.

[8] Arist. *Soph. El.* c. 1, 165 a, 4: εἷς τόπος εὐφυέστατός ἐστι καὶ δημοσιώτατος ὁ διὰ τῶν ὀνομάτων, because words, being universal designations, are necessarily ambiguous, cf. Plato, *Rep.* 454 A, where Dialectic is characterised as the διαιρεῖν κατ' εἴδη, and Eristic as the custom κατ' αὐτὸ τὸ ὄνομα διώκειν τοῦ λεχθέντος τὴν ἐναντίωσιν.

[9] Examples are numerous, not

taken in one sense in the first proposition, and in another in the second;[1] that which gave a right meaning only in combination was separated;[2] that which ought to be separated was united;[3] the inconsistency

only in the comic poets, but also in the common proverbial expressions. Aristotle speaking of the Sophistical play on words alludes to those λόγοι γελοῖοι, which are quite according to Greek popular taste, *e.g.*: ποτέρα τῶν βοῶν ἔμπροσθεν τέξεται; οὐδετέρα, ἀλλ' ὄπισθεν ἄμφω. Similarly Arist. *Rhet.* ii. 24, 1401 a, 12 quotes: σπουδαῖον εἶναι μῦν, for from it come the μυστήρια.

[1] For example: τὰ κακὰ ἀγαθά· τὰ γὰρ δέοντα ἀγαθά, τὰ δὲ κακὰ δέοντα (*Soph. El.* 4, 165 b, 34).—ἆρα ὃ ὁρᾷ τις, τοῦτο ὁρᾷ; ὁρᾷ δὲ τὸν κίονα, ὥστε ὁρᾷ ὁ κίων.—ἆρα ὃ σὺ φῂς εἶναι, τοῦτο σὺ φῂς εἶναι; φῂς δὲ λίθον εἶναι, σὺ ἄρα φῂς λίθος εἶναι.—ἆρ' ἔστι σιγῶντα λέγειν, etc. —(*Ibid.* 166 b, 9, and c. 22, 178 b, 29 sqq.). Of the same calibre, and partly identical with these, are the fallacies in the *Euthydemus*, 287 A, D, 300 A, D, 301 C sqq.).—ἆρα ταῦτα ἡγεῖ σὰ εἶναι, ὧν ἂν ἄρξῃς καὶ ἐξῇ σοι αὐτοῖς χρῆσθαι ὅ τι ἂν βούλῃ; ἐπειδὴ σὸν ὁμολογεῖς εἶναι τὸν Δία καὶ τοὺς ἄλλους θεούς, ἆρα ἔξεστί σοι αὐτοὺς ἀποδόσθαι, etc. (*Euth.* 301 E sq.; *Soph. El.* c. 17, 176 b, 1: ὁ ἄνθρωπός ἐστι τῶν ζῴων; ναί. κτῆμα ἄρα ὁ ἄνθρωπος τῶν ζῴων). 'What someone has had, and has no longer, he has lost; therefore if of five stones he lose one, he has lost ten, for he has ten no longer.' 'If a man who has several dice, gives me one of them, he has given me what he had not, for he has not only one' (*Soph. El.* c. 22, 178 b, 29 sqq.). Τοῦ κακοῦ σπουδαῖον τὸ μάθημα· σπουδαῖον ἄρα μάθημα τὸ κακόν. *Euthydem.* ap. Arist. *Soph. El.* c. 20, 177 b, 46: the ambiguity lies here in μάθημα, which may either mean knowledge in the subjective sense, or the object of knowledge.

[2] So in the *Euthyd.* 295 A sqq. 'Thou knowest all things always with it (the soul), therefore thou knowest all things always.' *Soph. El.* c. 4, 5, 166 a, 168 a: 'Two and three are five, therefore two is five, and three is five;' 'A and B is a person, whoever, therefore, strikes A and B has struck one person and not several,' and the like. *Ibid.* c. 24, 180 a, 8: τὸ εἶναι τῶν κακῶν τι ἀγαθόν· ἡ γὰρ φρόνησίς ἐστιν ἐπιστήμη τῶν κακῶν, but if it be (so the conclusion must have run) ἐπιστήμη τῶν κακῶν, it is also τι τῶν κακῶν.

[3] *E.g. Euthyd.* 298 D sq. (cf. *Soph. El.* c. 24, 179 a, 34): 'You have a dog, and the dog has puppies': οὐκοῦν πατὴρ ὢν σός ἐστιν, ὥστε σὸς πατὴρ γίγνεται. *Soph. El.* c. 4, 166 a, 23 sq.: δυνατὸν καθήμενον βαδίζειν καὶ μὴ γράφοντα γράφειν, and the like. *Ibid.* c. 20, 177 b, 12 sqq., where the following are given as fallacies of Euthydemus: ἆρ' οἶδας σὺ νῦν οὖσας ἐν Πειραιεῖ τριήρεις ἐν Σικελίᾳ ὤν; ('Do you know, being in Sicily, that there are ships in the Piræus;' or: 'Do you know in Sicily, the ships that are in the Piræus?' This last interpretation results from Arist. *Rhet.* ii. 24, 1401 a, 26. Alexander's explana-

of language in the use of words was employed for small witticisms and railleries,[1] &c. In all these things the Sophists knew neither measure nor bounds. On the contrary, the more glaring the extravagance, the more laughable the statement, the more exquisite the absurdity in which the interlocutor was involved, the greater was the amusement, the higher the renown of the dialectic pugilist, and the louder the applause of the listeners. Of the great Sophists of the first generation, indeed, we may with certainty assume, even judging from Plato's descriptions, that they never descended to this level of charlatanism and buffoonery

tion of the passage does not seem to me correct): ἆρ' ἔστιν, ἀγαθὸν ὄντα σκυτέα μοχθηρὸν εἶναι;—ἆρ' ἀληθὲς εἰπεῖν νῦν ὅτι σὺ γέγονας;—οὐ κιθαρίζων ἔχεις δύναμιν τοῦ κιθαρίζειν· κιθαρίσαις ἂν ἄρα οὐ κιθαρίζων. Aristotle, in all these cases, ascribes the fallacy to the σύνθεσις, the false combination of words, and this is quite right; the ambiguity is based upon the fact that the words: πατὴρ ὢν σός ἐστιν, may either mean 'he is, being a father, yours,' or 'it is he who is your father;' that καθήμενον βαδίζειν δύνασθαι means 'to be as a person sitting in a position to go,' and also 'to be in a position to go sitting;' that ἀγαθὸν ὄντα σκυτέα μοχθηρὸν εἶναι means 'to be a good cobbler and a bad (man)' and 'to be a good cobbler and a bad cobbler;' that εἰπεῖν νῦν ὅτι σὺ γέγονας means 'to say now that you came into the world' and also 'to say that you now came into the world,' &c.

[1] *Soph. El.* c. 4, 166 b, 10 c. 22; Aristotle calls this παρὰ τὸ σχῆμα τῆς λέξεως, and quotes as an example, ἆρ' ἐνδέχεται τὸ αὐτὸ ἅμα ποιεῖν τε καὶ πεποιηκέναι; οὐ. ἀλλὰ μὴν ὁρᾶν γέ τι ἅμα καὶ ἑωρακέναι τὸ αὐτὸ καὶ κατὰ ταὐτὸ ἐνδέχεται, for the fallacy here arises from the analogy of ποιεῖν τι being applied, on account of the similarity of the grammatical form, to ὁρᾶν τι. To the same class belong the statements of Protagoras, caricatured by Aristophanes (*Clouds*, 601 sqq.), on the gender of words, that according to the analogy we must say ὁ μῆνις and ὁ πήληξ (*Soph. El.* 14, 173 b, 19). Concerning another kind of grammatical paralogism, the play upon words which are distinguished only by their pronunciation and accents, as οὐ and οὗ, δίδομεν and διδόμεν (*Soph. El.* c. 4, 166 b, o. c. 21), Aristotle himself says that examples of it never came across him either in the writings of the Sophists, or in oral tradition, because these fallacies are always detected in speech, to which the arts of the Sophists always had reference.

and childish delight in foolish witticisms; but their immediate successors, from all that we know, appear to have done so, and they themselves at any rate prepared the way for this degeneracy. For they were incontestibly the founders of Eristic disputation.[1] If, however, we once enter on the downward path of a dialectic which cares not for truth of fact, but only for the display of personal prowess, it is no longer possible to halt at will: pugnacity and vanity have full sway, and allow themselves all the advantage which this standpoint affords; and such a dialectic will claim the right to exercise this principle until it is refuted by a higher principle. The Eristic off-shoots of the Sophistic teaching are, therefore, as little accidental as the insipid formalities of Scholasticism in later times, and if we are bound to discriminate between the quibbling of a Dionysodorus and the argumentation of a Protagoras, we ought not to forget that the one is the lineal descendant of the other.

5. *The opinions of the Sophists concerning Virtue and Justice, Politics and Religion. The Sophistic Rhetoric.*

THE remarks at the conclusion of the last chapter may also be applied to the Ethics of the Sophist. The founders of the Sophistic doctrine did not proclaim the theory of life corresponding with their scientific standpoint so unreservedly as their successors—in some cases they did not proclaim it at all; but they scattered the seeds from which by a historical necessity it could not fail to be developed. Although, therefore, we must

[1] Cf. p. 461 sq.

always distinguish between the beginnings of Sophistic Ethics and the later and more completed form, yet we must not on that account overlook their mutual interdependence and their common presuppositions.

The Sophists professed to be teachers of virtue, and they regarded this as their peculiar task, because they did not believe in the scientific knowledge of things and had no taste for it. The conception of duty seems to have been accepted by the elder Sophists in the same sense, and with the same indeterminateness, as by their compatriots generally at that time. They included under this name all that according to Greek ideas constituted the capable man; on the one side all practical and useful arts, including bodily activity, but especially all that is of value in domestic and civil life;[1] on the other side, ability and uprightness of character. That the latter was not excluded, and that the Sophistic teachers of the first generation were far from opposing on principle the prevailing moral theories, is clear from all that we know of their Ethics. Protagoras, in Plato's dialogue, promises his pupil that every day that he passes in his company he shall become better, he will make him a good father of a family and a brave citizen;[2] he calls duty the most beautiful of all things;

[1] Cf. p. 431 sq. Now, therefore, we meet with attempts at political theories, *e.g.* the treatise of Protagoras, περὶ πολιτείας (Diog. ix. 55) and the works mentioned, *supra*, p. 428, of Hippodamus and Phaleas, of whom the former, according to Aristotle, opens the series of theoretical politicians in Greece. To these also the famous exposition of Herodotus (iii. 80–82) belongs which, though somewhat more detailed, might well form part of an independent theoretical discussion such as the Sophists loved, in historical language, concerning the value of the three forms of government (cf. p. 473, 1; 473, 6); possibly it may have been actually taken from a discussion of this kind.

[2] *Prot.* 318 A, E, sq. (*sup.* p. 430, 3; 431 5).

he does not regard every pleasure as a good, but only pleasure in the beautiful; nor is all pain an evil.[1] In the mythus[2] which Plato has chiefly taken from a treatise of Protagoras[3] we read: 'The beasts have their natural means of defence; to men, the gods have given for their protection the sense of justice and the abhorrence of wrong (δίκη and αἰδὼς); these qualities are implanted in every man by nature, and if they should be wanting in anyone, that person could not be tolerated in any commonwealth: in political questions, therefore, all have a voice, and all take part, by means of instruction and admonition, in the moral education of youth.' Justice appears here as a law of nature, the subsequent distinction of natural and positive right is still alien to the orator. The natural disposition requires to be cultivated, Protagoras says, by instruction, but on the other hand instruction can only attain its end when nature and habit come to its aid.[4] Gorgias declined, indeed, both the name and the responsibility

[1] *Prot.* 349 E, 351 B sqq. In what is said 349 B, on the parts of virtue, there can scarcely be anything really derived from Protagoras.

[2] *l. c.* 320 C sqq.

[3] Steinhart, *Pl. Werke*, i. 422, doubts this, because the mythus is quite worthy of Plato, but why should it be too good for Protagoras? The language has a peculiar colouring, and the thoughts and their investiture are quite in the style of the Sophists. From what work it is taken it is impossible to discover; Frei, 182 sqq., thinks, and others agree with him, that it is from the treatise, περὶ τῆς ἐν ἀρχῇ καταστάσεως; Bernays, on the other hand, *Rh. Mus.* vii. 466, believes that this is the title of a rhetorical work. I am inclined to refer it to the *Politeia*.

[4] Vide the words from the μέγας λόγος of Protagoras, in Cramer, *Anecd.* Paris. i. 171 (Mullach, *Fr. Philos.* ii. 134, 9): φύσεως καὶ ἀσκήσεως διδασκαλίας δεῖται· καὶ ἀπὸ νεότητος δὲ ἀρξαμένους δεῖ μανθάνειν. Here the question is already suggested, which Plato asks at the beginning of the *Meno*, and with which philosophy has so greatly occupied itself ever since the time of Socrates, viz. how instruction is related on the one hand to natural disposition, and on the other to moral practice?

of a teacher of virtue; at any rate, in his later life;[1] but this does not hinder him from speaking about virtue. He did not, however, attempt any general definition of its nature, but described in detail wherein consisted the virtue of the man and of the woman, of the old man and of the boy, of the freeman and of the slave, without departing from the prevailing opinion.[2] Plato does not accuse him of immoral principles; Gorgias rather hesitates about proceeding to the inferences of a Callicles.[3] Nor did Hippias, in that discourse in

[1] Plato, *Meno*, 95 B: *τί δαὶ δή; οἱ σοφισταί σοι οὗτοι, οἵπερ μόνοι ἐπαγγέλλονται, δοκοῦσι διδάσκαλοι εἶναι ἀρετῆς;—καὶ Γοργίου μάλιστα, ὦ Σώκρατες, ταῦτα ἄγαμαι, ὅτι οὐκ ἄν ποτε αὐτοῦ τοῦτο ἀκούσαις ὑπισχνουμένου, ἀλλὰ καὶ τῶν ἄλλων καταγελᾷ, ὅταν ἀκούσῃ ὑπισχνουμένων· ἀλλὰ λέγειν οἴεται δεῖν ποιεῖν δεινούς.* Cf. *Gorg.* 449 A; *Phileb.* 58 A.

[2] Arist. *Polit.* i. 13, 1260 a, 27: The moral problem is not the same for different persons; we ought not, therefore, to define virtue universally as Socrates does: *πολὺ γὰρ ἄμεινον λέγουσιν οἱ ἐξαριθμοῦντες τὰς ἀρετάς, ὥσπερ Γοργίας.* After this evidence we may the more readily ascribe to Gorgias himself what Plato in the *Meno*, 71 D sq., puts into the mouth of the disciple of Gorgias, with express reference to his master: *τί φῂς ἀρετὴν εἶναι; . . . Ἀλλ' οὐ χαλεπόν, ὦ Σώκρατες, εἰπεῖν. πρῶτον μέν, εἰ βούλει, ἀνδρὸς ἀρετήν, ῥᾴδιον, ὅτι αὕτη ἐστὶν ἀνδρὸς ἀρετή, ἱκανὸν εἶναι τὰ τῆς πόλεως πράττειν καὶ πράττοντα τοὺς μὲν φίλους εὖ ποιεῖν τοὺς δ' ἐχθροὺς κακῶς, καὶ αὐτὸν εὐλαβεῖσθαι μηδὲν τοιοῦτον παθεῖν.* (Cf., in regard to this principle, Welcker, *Kl. Schriften*, ii. 522 sq.) *εἰ δὲ βούλει γυναικὸς ἀρετὴν, οὐ χαλεπὸν διελθεῖν, ὅτι δεῖ αὐτὴν τὴν οἰκίαν εὖ οἰκεῖν σώζουσάν τε τὰ ἔνδον καὶ κατήκοον οὖσαν τοῦ ἀνδρός. καὶ ἄλλη ἐστὶ παιδὸς ἀρετὴ καὶ θηλείας καὶ ἄῤῥενος καὶ πρεσβυτέρου ἀνδρὸς, εἰ μὲν βούλει ἐλευθέρου, εἰ δὲ βούλει δούλου. καὶ ἄλλαι πάμπολλαι ἀρεταὶ εἰσιν, ὥστε οὐκ ἀπορία εἰπεῖν ἀρετῆς πέρι ὅ τι ἔστι· καθ' ἑκάστην γὰρ τῶν πράξεων καὶ τῶν ἡλικιῶν πρὸς ἕκαστον ἔργον ἑκάστῳ ἡμῶν ἡ ἀρετή ἐστιν, ὡσαύτως δὲ, οἶμαι, ὦ Σώκρατες, καὶ ἡ κακία.* The more general definitions which are extorted from *Meno* (73 C, 77 B) cannot with certainty be ascribed to Gorgias, though some isolated expressions of his may perhaps be employed in them. Plutarch, *Mul. Virt.* p. 242, quotes a few words from him on female virtue. Foss, p. 47, rightly applies to virtue the apophthegm ap. *Procl. ad Hesiod. Opp.* 340, Gaisford, on Being and appearance.

[3] *Gorg.* 459 E sq., cf. 482 C, 456 C sqq. Likewise what Plutarch quotes from him, *De Adulat. et Am.* 23, p. 64: 'We must not, indeed, require from our friends wrong-doing, but we must be ready

which he imparted rules of life to Neoptolemus through Nestor,[1] set himself in opposition to the customs and opinions of his countrymen.[2] As to Prodicus, it is well known that his doctrine of virtue was approved, even by those who, in other respects, had no leaning to the Sophists. His *Heracles*,[3] which gained for him so much praise, portrayed the worth and the happiness of virtue, and the pitifulness of an effeminate life, given over to the pleasures of the senses. In a discourse on wealth he seems to have taught that riches in themselves are not a good, but that all depends upon their employment; for the licentious and intemperate it is a misfortune to possess the means of satisfying their passions.[4] Lastly, a discourse upon death is mentioned, in which he described the ills of life, praised death as the deliverer from these ills, and silenced the fear of death with the reflection that death can affect neither the living nor the dead; not the living, for they are still alive, and not the dead, for they exist no more.[5] In all this, there is little to be found in the way of new thoughts and scientific definitions,[6] but as little on the

to do wrong for them,' hardly contradicts the prevailing moral notions, while it presupposes in a general manner the idea of right.

[1] The substance of these is given in the *Greater Hippias*, 286 A, no doubt correctly: Neoptolemus asks Nestor: *ποῖά ἐστι καλὰ ἐπιτηδεύματα, ἃ ἄν τις ἐπιτηδεύσας νέος ἂν εὐδοκιμάτατος γένοιτο· μετὰ ταῦτα δὴ λέγων ἐστὶν ὁ Νέστωρ καὶ ὑποτιθέμενος αὐτῷ πάμπολλα νόμιμα καὶ πάγκαλα.*

[2] He there boasts of the success of his lectures in Sparta.

[3] Ap. Xen. *Mem.* ii. 1, 21 sqq.

[4] *Eryxias*, 395 E, 396 E, 397 D.

[5] *Axiochus*, 366 C, 369 C. That what follows, especially the arguments for the belief in immortality, 370 C sqq., is likewise borrowed from Prodicus seems to me improbable; and the author does not in any way assert it. This very circumstance, however, speaks for the credibility of the previous references to that Sophist.

[6] Heracles at the cross-ways is only a new investiture of thoughts which Hesiod had already brought

other hand of Sophistic cavilling at moral principles.[1] Prodicus appears here rather as a panegyrist of the old customs and theory of life,[2] as an adherent of the school of the practical sages and gnomic poets, of Hesiod and Solon, Simonides and Theognis. If, therefore, the Sophistic morality were to be judged of from the relation in which the first Sophists placed themselves to the thought of their nation, there would be no ground for any distinction between them and the ancient sages.

This, however, is not the true state of the case. Although the founders of the Sophistic teaching may have been unconscious of raising an opposition to the prevailing principles, their whole point of view must have tended in that direction. Sophistic opinion is in itself a transcending of the previous moral tradition: by its very existence it proclaims this tradition to be inadequate. If we had simply to follow common habits and customs, special teachers of virtue would be unnecessary, every man would learn by intercourse with his family and acquaintance what he had to do. If, on the contrary, virtue is made the object of special in-

forward in the well-known passage on the path of virtue and of vice. Ἐ. κ. Ἡη. 285 sqq. With the passage of the *Eryxias* Welcker, p. 493, justly compares sayings of Solon (vide *sup.* Vol. I. p. 116, 2), and Theognis (vide v. 145 sqq., 280 sqq., 315 sqq., 719 sqq., 1155). The same author shows (p. 502 sqq.) that the euthanasia of Axiochus is specially grounded upon Cean customs and theories of life; and at p. 434 he makes this general remark: 'The wisdom of Prodicus (in Plato) might be said to be older than Simonides, if it did not transcend the simple notions of the poets, and were deficient in philosophic definiteness and importance.'

[1] I agree with Welcker (p. 532) that the semi-eudæmonistic basis of the moral admonitions in the discourse on Heracles are not far removed from the standpoint of ordinary Greek morality (which Plato frequently censures for this reason, *e.g.* in the *Phædo*, 68 D sqq.).

[2] His *Praise of Agriculture* is rightly brought into connection with this, by Welcker, p. 496 sq.

struction, it can neither be asked nor expected that this instruction should be limited to the mere tradition of ancient usage, or to the imparting of rules of life which do not affect moral conduct: the teachers of virtue must do as the Sophists did from the first—they must enquire wherein virtue consists, why it deserves to be preferred to vice, &c. To this question, however, on the presupposition of the Sophistic standpoint, only one logical answer was possible. If there is no truth of universal validity, there can be no universally valid law; if man in his opinions is the measure of all things, he is so also in his actions: if for each man that is true which appears to him true, that which seems to each right and good, must be right and good. In other words, everyone has the natural right to follow his caprice and inclinations, and if he is hindered from doing so by law and custom, it is an infringement of this natural right, a constraint with which no one is bound to comply, if he has the power to break through or evade it.

These inferences were very soon, indeed, actually drawn. Though we may not consider as an adequate proof of this the words which Plato puts into the mouth of Protagoras on the subject,[1] since they probably exaggerate that Sophist's own declarations,[2] yet the promise to make the weaker case the stronger[3] has a suspicious sound; for, if the orator can venture to boast that he is in a position to help wrong to gain

[1] *Theæt.* 167 C: οἷά γ' ἂν ἑκάστῃ πόλει δίκαια καὶ καλὰ δοκῇ ταῦτα καὶ εἶναι αὐτῇ ἕως ἂν αὐτὰ νομίζῃ.

[2] Vide *sup.* p. 470.

[3] On the meaning of this promise, vide *inf.* 488, 1.

the victory, faith in the inviolability of right must necessarily be shaken. It was still more endangered by the discrimination and opposition of natural and positive right, that favourite theorem of the later Sophistic ethics which we hear first clearly and definitely enunciated by Hippias. Xenophon represents this Sophist as disputing the moral obligation of laws, because they so often change,[1] while he acknowledges as divine or natural law only that which is everywhere equally observed;[2] but how little of such law exists, his archæological enquiries might have been sufficient to show him. In Plato[3] he says that law, like a tyrant, compels men to do much that is contrary to nature. These principles soon appear as the Sophists' general confession of faith. In Xenophon,[4] the young Alcibiades, the friend of the Sophistic doctrine, already expresses himself in the same manner as Hippias, and Aristotle[5]

[1] *Mem.* iv. 4, 14, after Socrates has reduced the conception of justice to that of lawfulness: *νόμους δ', ἔφη, ὦ Σώκρατες, πῶς ἂν τις ἡγήσαιτο σπουδαῖον πρᾶγμα εἶναι ἢ τὸ πείθεσθαι αὐτοῖς, οὓς γε πολλάκις αὐτοὶ οἱ θέμενοι ἀποδοκιμάσαντες μετατίθενται;*

[2] *l. c.* 19 sqq., Hippias allows that there are also unwritten laws, which proceed from the gods; but among these he will only reckon those which are everywhere recognised, such as veneration of the gods and of parents; while on the other hand, for example, the prohibition of incest, being against the custom of many nations, is not included in the number.

[3] *Prot.* 237 C.

[4] *Mem.* i. 2, 40 sqq.

[5] *Soph. El.* c. 12, 173 a, 7: *πλεῖστος δὲ τόπος ἐστὶ τοῦ ποιεῖν παράδοξα λέγειν ὥσπερ καὶ ὁ Καλλικλῆς ἐν τῷ Γοργίᾳ γέγραπται λέγων, καὶ οἱ ἀρχαῖοι δὲ πάντες ᾤοντο συμβαίνειν, παρὰ τὸ κατὰ φύσιν καὶ κατὰ τὸν νόμον, ἐναντία γὰρ εἶναι φύσιν καὶ νόμον, καὶ τὴν δικαιοσύνην κατὰ νόμον μὲν εἶναι καλὸν κατὰ φύσιν δ' οὐ καλόν.* Similarly, Plato, *Theæt.* 172 B: *ἐν τοῖς δικαίοις καὶ ἀδίκοις καὶ ὁσίοις καὶ ἀνοσίοις ἐθέλουσιν ἰσχυρίζεσθαι, ὡς οὐκ ἔστι φύσει αὐτῶν οὐδὲν οὐσίαν ἑαυτοῦ ἔχον, ἀλλὰ τὸ κοινῇ δόξαν τοῦτο γίγνεται ἀληθὲς ὅταν δόξῃ καὶ ὅσον ἂν δοκῇ χρόνον·* καὶ ὅσοι γε δὴ μὴ παντάπασι τὸν Πρωταγόρου λόγου λέγουσιν ὧδέ πως τὴν σοφίαν ἄγουσι.

describes as one of the most popular Sophistic commonplaces the assertion of the Platonic Callicles[1] that nature and custom stand in most cases in contradiction. Now it would not unconditionally follow from this that universal moral principles are founded only on ancient custom, and not on nature; for the contradiction may in itself arise from the positive law being behind the strict requirements of the law of nature. And examples are not wanting where the independence of ancient custom, claimed by the Sophists, moved them to attacks upon institutions which we can only regard as prejudices or imperfections of the laws of that time. Lycophron declares nobility to be an imaginary advantage;[2] Alcidamas points out that the contrast of slave and freeman is unknown to nature, and others go so far as to impugn slavery as an institution contrary to nature.[3] But we can easily see that their attacks upon

[1] *Gorg.* 482 E sqq. The fact that Callicles was not a Sophist in the narrower sense, but a politician, who sometimes spoke with considerable contempt of this fruitless argumentation (vide *sup.* p. 427), is unimportant. Plato certainly intends us to regard him as a representative of the Sophistic culture, who does not hesitate to push it to its extreme consequences. It is evidently of the Sophists and their disciples of whom Plato is chiefly thinking, when, in the *Laws*, x. 889 D, he tells us of people who maintain *τὴν νομοθεσίαν πᾶσαν οὐ φύσει, τέχνῃ δέ· ἧς οὐκ ἀληθεῖς εἶναι τὰς θέσεις . . . τὰ καλὰ φύσει μὲν ἄλλα εἶναι, νόμῳ δὲ ἕτερα, τὰ δὲ δίκαια οὐδ' εἶναι τοπαράπαν φύσει, ἀλλ' ἀμφισβητοῦντας διατελεῖν ἀλλήλοις καὶ μετατιθεμένους ἀεὶ ταῦτα· & δ' ἂν μετάθωνται καὶ ὅταν, τότε κύρια ἕκαστα εἶναι, γιγνόμενα τέχνῃ καὶ τοῖς νόμοις, ἀλλ' οὐ δή τινι φύσει* (exactly the same argument which, according to 476, 1, Hippias had employed).

[2] Ps.-Plut. *De Nobilit.* 18. 2. Is the *εὐγένεια τῶν τιμίων καὶ σπουδαίων, ἢ καθάπερ Λυκόφρων ὁ σοφιστὴς ἔγραψε καινόν* [κενόν, cf. Meineke, *ad Stob. Flor.* 86, 24] *τι πάμπαν; ἐκεῖνος γὰρ ἀντιπαραβάλλων ἑτέροις ἀγαθοῖς αὐτὴν, εὐγενείας μὲν οὖν, φησὶν, ἀφανὲς τὸ κάλλος, ἐν λόγῳ δὲ τὸ σεμνόν.*

[3] Arist. says, *Pol.* i. 3, 1250 b, 20: *τοῖς δὲ παρὰ φύσιν* [δοκεῖ εἶναι] *τὸ δεσπόζειν. νόμῳ γὰρ τὸν μὲν δοῦλον εἶναι τὸν δ' ἐλεύθερον, φύσει δ' οὐθὲν διαφέρειν. διόπερ οὐδὲ δίκαιον· βίαιον γάρ.* Alcidamas expressed himself in a similar manner, as

positive laws would not be confined to such cases. Law and ancient usage had been hitherto the only moral authority; if this authority were no longer binding, all moral obligation was open to question, belief in its inviolability was declared to be a prejudice, and so long as no new basis of moral life was indicated, there remained only the negative result that every moral and judicial law is an unjust and unnatural restriction of

Vahlen proves (p. 504 sq. of the treatise quoted *supra*, p. 425, 5), from Arist. *Rhet.* i. 13, 1373 b, 18, where Aristotle appeals in support of the theory of a universal natural law to his Μεσσηνιακός; and the Scholion (*Orat. Attici*, ii. 154) quotes from that work these words, which originally appear to have stood in the Aristotelean text: ἐλευθέρους ἀφῆκε πάντας θεὸς, οὐδένα δοῦλον ἡ φύσις πεποίηκεν. Yet Aristotle does not seem to be thinking specially of him in the passage quoted above from the *Politics*. For the Μεσσηνιακὸς (as Vahlen has conclusively shown, p. 504 sqq.) had a definite practical purpose—that of effecting the recognition of the restored Messenians after the battle of Mantinea; and as in this it ran counter to the feelings of the Spartans, who strongly disliked having their Helots (intermingled with the Messenians) for independent neighbours (as Isocrates says, *Archid.* 28, cf. 8, 87, 96)—it was quite fitting to remind them that the opposition of slaves and freemen was not absolute, that all men are by nature free-born. On the other hand, an attack on the principles and the whole institution of slavery, such as is presupposed in the *Politics*, the declaration that this social arrangement, which throughout Hellas constituted a lawful right, was a wrong—such an attack could only damage the effect of the discourse. Aristotle, however, speaks in *Polit.* i. 6, 1255 a, 7, of πολλοὶ τῶν ἐν τοῖς νόμοις, who accuse slavery of injustice; and in c. 3, either he or the adversary whom he has primarily in view, sums up these accusations (as the trimeter: νόμῳ γὰρ ὃς μὲν δοῦλος, ὃς δ' ἐλεύθερος shows, which also betrays itself, c. 6, 1255 b, 5) in the words of a tragic poet, possibly Euripides (from whom Oncken, *Staatsl. d. Arist.* ii. 33 sq., has collected similar statements), or Agathon, the pupil of Gorgias. But even if the passage in the *Politics* has no special reference to Alcidamas, it is probably concerned with a theory which, by the application of the Sophistic distinction between νόμος and φύσις, laid bare the most vulnerable part of ancient society. Among the adherents of this theory may have been the Cynics, who were connected with Gorgias through their founder, and who made great use of this distinction, if they were not (as I conjectured, Part II. a, 276, 3rd ed.) its first assertors.

human freedom. Hippias, in the application which he makes of his proposition, approximates closely to this principle; others do not hesitate to avow it openly.[1] Natural right is, as Callicles says (*l.c.*), only and solely the right of the stronger; and if the prevailing opinions and laws do not recognise this, the reason is to be found in the weakness of the majority of men: the mass of the weak found it more advantageous to protect themselves against the strong by an equality of rights; but stronger natures will not therefore be hindered from following the true law of nature—the law of private interest. All positive laws therefore appear from this point of view as arbitrary enactments, set up by those who have the power of making them for their own advantage; the rulers, as Thrasymachus says,[2] make that a law which is useful to themselves; right is nothing else than the advantage of the ruler. Only fools and weaklings consequently will believe that they are bound by those laws; the enlightened man knows how little such is the case. The Sophistic ideal is unlimited authority, even though attained by the most unscrupulous means, and in Plato, Polus[3] considers none

[1] Cf. the quotations, p. 476, 2, 5; 277, 1, from Hippias, Plato, and Aristotle, and remark especially, in the last mentioned, the expression οἱ ἀρχαῖοι πάντες, which, though not to be taken literally, bears witness to the wide diffusion of this mode of thought; and which we may suppose to be founded, not on Plato's statements, but on Aristotle's own independent knowledge, since he had an intimate acquaintance with the Sophistic rhetoricians.

[2] According to Plato, *Rep.* i. 338 C sqq., who no doubt has good reason for putting these principles into the mouth of the Chalcedonian rhetorician: also what is quoted *inf.* p. 481, 2, agrees herewith. Thrasymachus there admits that justice would be a great good, but he denies that it is to be found among men, because all laws are made by those in power for their own advantage.

[3] *Gorg.* 470 C sqq. Similarly Thrasymachus, *Rep.* i. 344 A; cf. *Laws* ii. 661 B; Isocr. *Panath.* 243 sq.

happier than the King of Persia, or Archelaus the Macedonian, who rose to the throne through innumerable treacheries and deeds of blood. The final result is thus the same as in the theoretic view of the world, unlimited subjectivity; the moral world like the natural world is recognised as the work of man, who, by his imagination, produces phenomena, and by his will, laws and customs, but who is in neither case bound by nature and the necessity of things.[1]

[1] The above result does not seem to me to be contravened, even by Grote's animated defence of the Sophistic ethics (*Hist. of Greece*, viii. 504 sqq., vii. 51 sq.; similarly Lewes' *Hist. of Phil.* i. 108 sqq.), full as it is of weighty and pertinent suggestions in justification of the errors and extravagancies which had previously prevented any unprejudiced historical representation of Sophistic. It would certainly be very precipitate to charge the Sophists in general, and without distinction of individuals, with principles dangerous to morals, or with immorality of life. But, it is no less precipitate to maintain, with Grote (viii. 527 sq., 532 sq.) and Lewes, *l. c.*, that such principles as Plato puts into the mouth of his Callicles and Thrasymachus could never have been brought forward by any Sophist in Athens, because the hearers on whose applause the Sophists depended, would thereby have been roused to the most violent opposition against them. On this ground it might also be proved that Protagoras did not express those doubts in the existence of the gods which occasioned his condemnation; and that many other Sophists could not have said various things which gave offence to people. But how do we know that a Thrasymachus and his like would have aroused among those who chiefly sought Sophistic instruction—the ambitious young politicians, the aristocratic youths, whose prototypes were Alcibiades and Critias—the same opposition by the views Plato ascribes to them, which they certainly aroused in the democratic community which adhered to the ancient forms of religion, politics, and morality? Grote, moreover (viii. 495 sqq.), defends Protagoras for his offer to make the weaker argument appear the stronger (cf. *inf.* 488), by observing that Socrates, Isocrates, and others, were also accused of the same principle; but this is to misstate the question. Protagoras was not falsely accused of the principle, but himself set it up. Grote goes on to say that no one would blame an advocate for lending his eloquence to the side of wrong as well as of right; but this again is only half true: the advocate must certainly urge on behalf of the criminal whatever he can say for him with a good conscience, but if he were to make a trade of his art of helping the wrong to conquer, everybody would call him a perverter of justice. This is what is offensive in the promise of Protagoras: he is not blameworthy, nor did his contemporaries blame him, for teaching an art which might be abused, but for recommending this art precisely from that point of view. The disquisitions of Hippias on *νόμος* and *φύσις* are entirely passed over by Grote and Lewes.

Among human prejudices and arbitrary rules, the Sophists necessarily assigned a prominent place to the religious faith of their nation. If no knowledge be possible, a knowledge about the hidden causes of things must be doubly impossible; and if all positive institutions and laws are the products of human caprice and calculation, the worship of the gods, which in Greece belonged entirely to public jurisdiction, must come under the same category. This was expressed in plain terms by some of the leading Sophists. 'Of the gods,' says Protagoras, 'I can know nothing, neither that they are, nor that they are not.'[1] Thrasymachus is mentioned as entertaining doubts of Divine Providence;[2] Critias maintains[3] that in the beginning men lived without

[1] The famous opening words of this treatise for which he was compelled to leave Athens, according to Diog. ix. 51, &c. (also Plato, *Theæt.* 162 D) ran thus: *περὶ μὲν θεῶν οὐκ ἔχω εἰδέναι οὔθ' ὡς εἰσὶν οὔθ' ὡς οὐκ εἰσίν. πολλὰ γὰρ τὰ κωλύοντα εἰδέναι, ἥ τε ἀδηλότης καὶ βραχὺς ὢν ὁ βίος τοῦ ἀνθρώπου.* Others give the first proposition, less correctly, thus: *περὶ θεῶν οὔτε εἰ εἰσὶν οὔθ' ὁποῖοί τινές εἰσι δύναμαι λέγειν.* Vide Frei, 96 sq., and especially Krische, *Forsch.* 132 sqq.

[2] Hermias, in the *Phædrus*, p. 192 Ast.: (Θρασύμ.) *ἔγραψεν ἐν λόγῳ ἑαυτοῦ τοιοῦτόν τι, ὅτι οἱ θεοὶ οὐχ ὁρῶσι τὰ ἀνθρώπινα· οὐ γὰρ τὸ μέγιστον τῶν ἐν ἀνθρώποις ἀγαθῶν παρεῖδον, τὴν δικαιοσύνην· ὁρῶμεν γὰρ τοὺς ἀνθρώπους ταύτῃ μὴ χρωμένους.*

[3] In the verses given by Sext. *Math.* ix. 54, and on account of which Sextus, *Pyrrh.* iii. 218, and Plutarch, *De Superstit.* 13, p. 17, reckon Critias as an atheist with Diagoras. The same verses, however, are ascribed in the *Placita*, i. 7, 2 *parall.*; cf. *ibid.* 6, 7 to Euripides, who is there said to have placed them in the mouth of Sisyphus in the drama bearing his name. That such a drama composed by Euripides existed, cannot be doubted after the positive statements of Ælian, *V. H.* ii. 8; but Critias may likewise have written a *Sisyphus*, and it may have been uncertain at a later period whether

law and order, like the animals, that penal laws were given for protection against tyranny; but as these could only prevent open crimes, it occurred to some clever and imaginative man to provide a protection against secret wrong-doing, by relating that there are gods who are mighty and immortal, and see all hidden things; and, to increase the fear of them, he placed their abode in heaven. In proof of this theory, the Sophists no doubt appealed to the variety of religions: if the belief in gods were based upon nature, they said, men would all adore the same god; the variety of gods shows most clearly that the worship of them merely originates from human invention and consent.[1] That which holds good of positive institutions in general, must also hold good of positive religions; because religions are different in different nations, they can only be regarded as arbitrary inventions. Prodicus explained the rise of religious belief in a more naturalistic manner. The men of old time, he says,[2] held the sun and moon, floods and streams, and all things that are of use to us, to be gods, just as the Egyptians do the Nile; and therefore bread is revered as Demeter, wine as Dionysus, water as Poseidon, fire as Hephæstus.[3] The popular gods,

the verses belonged to him or to Euripides; moreover, a drama is mentioned by Athen. xi. 496 b, the authorship of which lay in doubt between Critias and Euripides; cf. Fabricius *ad Sext. Math. l. c.*; Bayle, *Dict.* Critias, *Rem. H.* Whoever may have written the verses, and in the mouth of whomsoever they may have been placed, they are at any rate a monument of the Sophistic view of religion.

[1] Plato, *Laws*, x. 889 E: *θεοὺς, ὦ μακάριε, εἶναι πρῶτόν φασιν οὗτοι* [the *σοφοὶ*] *τέχνῃ, οὐ φύσει, ἀλλά τισι νόμοις, καὶ τούτους ἄλλους ἄλλη, ὅπῃ ἕκαστοι ἑαυτοῖσι συνωμολόγησαν νομοθετούμενοι.* Cf. pp. 476, 2, 5; 477, 1.

[2] Sext. *Math.* ix. 18, 51 sq.; Cic. *N. D.* i. 42, 118; cf. Epiph. *Exp. Fid.* 1088 C.

[3] We may bring into connection with this the importance which Prodicus, according to Themist. *Or.* xxx. 349 b, ascribes to agriculture in the origin of religion: *ἱερουργίαν πᾶσαν ἀνθρώπων καὶ μυστήρια καὶ πανηγύρεις καὶ τελετὰς τῶν γεωργίας καλῶν ἐξάπτει, νομίζων καὶ θεῶν εὔνοιαν* [*ἔνν.*] *ἐντεῦθεν ἐς ἀνθρώπους ἐλθεῖν καὶ πᾶσαν εὐσέβειαν ἐγγυώμενος.* The autumn and harvest festivals might especially seem to have given rise to the worship of the gods, since they were particularly concerned with the products of the field; a view which was certainly countenanced by the cult of Demeter and Dionysus.

however, as such, are upon this theory likewise denied;[1] for though Prodicus mentions them in the usual manner in his discourse upon Heracles,[2] this proves no more than the corresponding appropriation of their names in the myth of Protagoras;[3] and that he distinguished the one natural or true God from the many popular gods,[4] there is no evidence to certify. The statements also of Hippias, who referred the unwritten laws in Xenophon,[5] agreeably to the prevailing opinion, to the gods, are unimportant, and merely show that this Sophist was too inconsistent to make the obvious application of his theory concerning the laws to religion. The Sophistic teaching as a whole could only logically assume towards the popular religion the position of a Protagoras and a Critias. If even the things that we see are for us merely what we make them, this must still more be the case with those we do not see: the object is only the counterpart of the subject, man is not the creature, but the creator of his gods.

The rhetoric of the Sophists stands to their ethical theory of life in the same relation that their Eristic disputation stands to their theory of knowledge. To

[1] Consequently Cicero and Sextus reckon Prodicus among the atheists, in the ancient acceptation of the word.

[2] Xen. *Mem.* ii. 1, 28.

[3] Plato, *Prot.* 320 C, 322 A.

[4] As Welcker, *l. c.* 521, is disposed to assume.

[5] *Mem.* iv. 4, 19 sqq. vide *sup.* 476, 2.

the man who denies an objective wisdom, there remains only the appearance of wisdom in the sight of others; and similarly, to the man who denies an objective right, there remain only the appearance of right in the sight of others, and the art of producing such an appearance. But this art is the art of oratory.[1] For oratory was not only the best means, under the conditions of that period, of attaining power and influence in the State; but it is, speaking generally, the instrument by which the superiority of the cultivated maintains itself over the uncultivated. Where therefore a high value is set upon mental culture, as it was by the Sophists and their whole epoch, there the art of oratory will be fostered; and where this culture is deficient in any deeper, scientific, and moral basis, not only will the importance of eloquence be over-estimated,[2] but it will itself become negligent of its content, and concern itself in a one-sided manner merely with its immediate success and external form. The same will inevitably happen as in

[1] The task of rhetoric is thus defined by the Platonic Gorgias, *Gorg.* 454 B (cf. 452 E): Rhetoric is the art *ταύτης τῆς πειθοῦς, τῆς ἐν τοῖς δικαστηρίοις καὶ τοῖς ἄλλοις ὄχλοις καὶ περὶ τούτων ἃ ἐστι δίκαιά τε καὶ ἄδικα*, and therefore Socrates, 455 A, with the consent of the Sophist, defines it as *πειθοῦς δημιουργὸς πιστευτικῆς, ἀλλ' οὐ διδασκαλικῆς, περὶ τὸ δικαιόν τε καὶ ἄδικον*. That the essence of Sophistic rhetoric is rightly described in these words will be clear from the rest of our chapter. When, however, Doxopater, *In Aphthon. Rhet. Gr.* ed. Walz, ii. 104, attributes this definition to Gorgias himself, he is certainly quoting only from the passage in Plato, and the same passage is doubtless also the source of that other definition quoted in the anonymous introduction to the *στάσεις* of Hermogenes ap. Walz. *Rhet. Gr.* vii. 33; Spengel, *Συν.* T. 35, from Plutarch, the Neo-platonist's Commentary on the *Gorgias*, as *ὅρος ῥητορικῆς κατὰ Γοργίαν*.

[2] Cf. Plato, *Phileb.* 58 A, where Protarchus says he has often heard of Gorgias, *ὡς ἡ τοῦ πείθειν πολὺ διαφέροι πασῶν τεχνῶν· πάντα γὰρ ὑφ' αὑτῇ δοῦλα δι' ἑκόντων καὶ οὐ διὰ βίας ποιοῖτο*, etc.; similarly *Gorg.* 452 E, 456 A sqq.

the exclusive application of dialectic forms to Eristic argumentation. The form which has no corresponding content becomes an external, false and empty formalism, and the greater the skill with which this formalism is managed, the more quickly must follow the ruin of a culture which is limited to it.

These observations may serve to explain the meaning and specific character of Sophistic rhetoric. In regard to most of the Sophists we know, and of the rest there is scarcely a doubt, that they practised and taught this art, sometimes setting up general rules and theories, sometimes models for imitation, or furnishing ready-made speeches for immediate use;[1] while not a few even

[1] We are acquainted with theoretical works on rhetorical subjects by Protagoras (vide *infra* and Frei, 187 sq.), by Prodicus (vide *supra*, p. 420, 3), by Hippias (vide *infra*, Spengel, p. 60), by Thrasymachus (vide on his *Ἔλεοι*, Arist. *Soph. El.* c. 33, 183 b, 22; *Rhet.* iii. 1, 1404 a, 13; Plato, *Phædr.* 267 C. According to Suidas, *sub voce*, and the Scholia on Aristophanes, *Birds*, v. 881, he also wrote a *τέχνη* of which the *Ἔλεοι* perhaps formed a part; vide Spengel, 96 sqq.; Hermann, *De Thras.* 12; Schanz, p. 1 1 sq.); by Polus (vide *supra*, p. 425, 1), and by Evenus (Plato, *Phædr.* 267 A, vide *supra*, p. 426, 3). That Gorgias at his death left a *τέχνη*, is asserted by Diog. viii. 58, and by the author of Prolegomena to Hermogenes quoted by Spengel, *Συναγ. Τεχν.* 82. Quintilian includes him among the *Artium Scriptores* (Quintil. iii. 1, 8). Dionysius observes in the fragment given by a scholion on Hermogenes (ap. Spengel, *Σ.* T. 78): *δημηγορικοῖς δὲ ὀλίγοις (Γοργίου περέτυχον λόγοις) καί τισι καὶ τέχναις*. The same author mentions (*De Compos. Verb.* c. 12, p. 68 R) a discussion of Gorgias *περὶ καιροῦ*, with the remark that he was the first who ever wrote on the subject. Spengel, *l. c.* 81 sqq., however, thinks that on account of the passages from Aristotle, quoted p. 462, 1, and Cic. *Brut.* 12, 46, we are justified in denying the existence of any work on the rhetorical art by Gorgias. But as Schanz (p. 131) pertinently observes, neither of these passages is decisive: Cicero, following Aristotle, names Corax and Tisias as the first authors of rhetorical technology; Protagoras and Gorgias as the first who made speeches concerning commonplaces; this, however, would not prevent their having also written about the rules of art: from the language of the treatise against the Sophists, it would certainly seem that Aristotle did not place Gorgias on a par with Tisias and Thrasymachus

made rhetoric the chief object of their instructions.[1] Their own lectures were rhetorical displays;[2] besides the speeches which they had prepared,[3] they plumed themselves on never being at a loss, even at a moment's notice, for specious answers to all possible questions:[4]

as a cultivator of rhetoric; it does not imply that he was unacquainted with any rhetorical work of Gorgias. On the other hand, Plato, *Phædr.* 261 B, 267 A, expressly alludes to technical treatises on rhetoric by this Sophist; these, however, probably consisted not of one complete theory of the rhetorical art, but of dissertations on particular questions: at least the expression τέχναι τινές in the work of Dionysius (cited *supra*) indicates this (vide also Weleker, *Kl. Schr.* ii. 456, 176). Still more important than their writings, however, were the example and practical teaching of the Sophistic rhetoricians (Protagoras ap. Stob. *Floril.* 29, 80, equally repudiates μελέτη ἄνευ τέχνης and τέχνη ἄνευ μελέτης), and especially those discourses on general themes ascribed to Protagoras, Gorgias, Thrasymachus, and Prodicus (θέσεις or *loci communes*, as distinguished from the particular cases on which the periodical and political discourses turned; these were ὑποθέσεις or *causæ*; cf. Cic. *Top.* 21, 79; Quintil. iii. 5, 5 sq., and others cited in Frei, *Quæst. Prot.* 150 sqq.; the only point in which I disagree with Frei is in his distinction of *theses* from *loci communes*). Vide on this subject, Aristotle ap. Cic. *Brut.* 12, 46; Diog. ix. 53 (Protagoras πρῶτος κατέδειξε τὰς πρὸς τὰς θέσεις ἐπιχειρήσεις); Quintil. iii. 1, 12, and on Thrasymachus individually, Suidas, *sub voce*, who attributes to the Chalcedonian Sophist, ἀφορμαὶ ῥητορικαί, according to Welcker's conjecture (*Kl. Schr.* ii. 457), identical with the ὑπερβάλλοντες cited by Plutarch, *Sympos.* i. 2, 3; and Athen. x. 416 a, who quotes something from his proœmia. Quintilian merely ascribes to Prodicus the cultivation of *loci communes*, which looks as if he had not, like the three others, developed them for the purposes of instruction; but speeches in the larger sense like those cited from him (*sup.* p. 473), and also the lectures of Hippias (*l. c.*), might possibly have been reckoned as *loci communes*. The employment of such commonplaces was even with Gorgias very mechanical, vide *supra*, p. 462, 1.

[1] Cf. besides what follows, p. 425, 472, 1.

[2] Ἐπίδειξις, ἐπιδείκνυσθαι are, as is well known, the standing expressions for these. Cf. *e.g.* Plato, *Gorg. sub init. Protag.* 320 C., 347 A.

[3] Such as the *Heracles* of Prodicus, the displays of Hippias, *Prot.* 347 A, and *supra*, p. 423, 1; and the speeches of Gorgias (vide *supra*, 415, 2; 416, 3), especially the celebrated speech at Olympia.

[4] Gorgias is mentioned as the first who displayed his art in these impromptu speeches. Plato, *Gorg.* 447, C: καὶ γὰρ αὐτῷ ἐν τοῦτ' ἦν τῆς ἐπιδείξεως· ἐκέλευε γοῦν νῦν δὴ ἐρωτᾶν ὅ τι τις βούλοιτο τῶν ἔνδον

besides the rhetorical exuberance which allowed them all possible expansion of their subject, they boasted of having the art of compressing their meaning into the tersest language;[1] besides independent discussion, they considered the explanation of the poets as part of their task;[2] along with the great and noble, they thought it

ὄντων καὶ πρὸς ἅπαντα ἕφη ἀποκρινεῖσθαι. Cic. *De Orat.* i. 22, 103; *quod primum ferunt Leontinum fecisse Gorgiam: qui permagnum quiddam suscipere ac profiteri videbatur, cum se ad omnia, de quibus quisque audire vellet, esse paratum denuntiaret. Ibid.* iii. 32, 129 (hence Valer. viii. 15, ext. 2). *Fin.* ii. 1, 1; Quintil. *Inst.* ii. 21, 21; Philostr. *V. Soph.* 482, no doubt only through a misunderstanding, represents him as coming forward in this manner in the Athenian theatre. Cf. Foss 45, similarly on Hippias, *sup.* p. 421, 3.

[1] *e.g.* Protagoras, ap. Plat. *Prot.* 329 B, 334 E sqq., where we read of him: ὅτι σὺ οἷός τ' εἶ καὶ αὐτὸς καὶ ἄλλον διδάξαι περὶ τῶν αὐτῶν καὶ μακρὰ λέγειν ἐὰν βούλῃ, οὕτως, ὥστε τὸν λόγον μηδέποτε ἐπιλιπεῖν, καὶ αὖ βραχέα οὕτως, ὥστε μηδένα σου ἐν βραχυτέροις εἰπεῖν. The same occurs in the *Phædrus*, 267 B, where it is said of Gorgias and Tisias: συντομίαν τε λόγων καὶ ἄπειρα μήκη περὶ πάντων ἀνεῦρον, and Gorgias himself says, *Gorg.* 449 C: καὶ γὰρ αὖ καὶ τοῦτο ἓν ἐστιν ὧν φημί, μηδεν' ἂν ἐν βραχυτέροις ἐμοῦ τὰ αὐτὰ εἰπεῖν, on which Socrates requests him, as he requests Protagoras in *Prot.* 335 A, &c., to use shortness of speech in the discourse. But that he was addicted to diffusiveness of language we also see from Arist. *Rhet.* iii. 17, 1418 a, 34, for he went into every possible detail connected with his theme. The same was the case with his scholar Lycophron, ap. Arist. *Soph. El.* 15, 174 b, 32; and Alex. *ad h. l. Schol. in Arist.* 310 a, 12. Hippias in the *Protagoras*, 337 E sq., makes a conciliatory proposition to Socrates and Protagoras, that the former shall not insist severely on the conciseness of the dialogue, and that the latter shall bridle his eloquence, so that his speeches shall not exceed due measure; and Prodicus is ridiculed in the *Phædrus*, 267 B, because he, like Hippias, prided himself on this: μόνος αὐτὸς εὑρηκέναι ὧν δεῖ λόγων τέχνην· δεῖν δὲ οὔτε μακρῶν οὔτε βραχέων, ἀλλὰ μετρίων.

Plato, *Prot.* 338 E: ἡγοῦμαι, ἔφη [Πρωτ.], ὦ Σώκρατες, ἐγὼ ἀνδρὶ παιδείας μέγιστον μέρος εἶναι περὶ ἐπῶν δεινὸν εἶναι· ἔστι δὲ τοῦτο τὰ ὑπὸ τῶν ποιητῶν λεγόμενα οἷόν τ' εἶναι συνιέναι ἃ τε ὀρθῶς καὶ ἃ μή, καὶ ἐπίστασθαι διελεῖν τε καὶ ἐρωτώμενον λόγον δοῦναι, on which follows the well-known discussion of the poem of Simonides. Hippias similarly, at the commencement of the *Lesser Hippias*, treats of Homer and other poets; and Isocrates (*Panath.* 18, 33) makes an attack on the Sophists, who, having no original thoughts of their own, chatter about Homer and Hesiod.

showed intelligence to praise for a change the insignificant, the commonplace, and the unpleasant.[1] Protagoras had already announced the highest triumph of rhetoric to be this: that it could convert the weaker into the stronger, and represent the improbable as the probable;[2]

[1] Thus Plato, *Symp.* 177 B, and Isocr. *Hel.* 12, mention eulogies on salt and silkworms; Alcidamas, according to Menander, *π. ἐπιδεικτ. Rhet. Gr.* ix. 163. Tzetz. *Chil.* ix. 746 sq. wrote in praise of death and of poverty: and Polycrates, whose art of rhetoric is closely allied to that of the Sophists, composed eulogies on Busiris and Clytemnestra, and an accusation of Socrates (Isocr. *Bus.* 4 *Quintil.* ii. 17, 4), a speech in praise of mice (Arist. *Rhet.* ii. 24, 1401 b, 16), of pots and of pebbles. (Alex. *π. ἀφορμ. ῥητ. Rhet. Gr.* ix. 334 to iii. 3 Sp.) To the same class belong the *Busiris* of Isocrates, and Antiphon's discourse (Welcker, *Kl. Schr.* ii. 427, conjectures him to have been the Sophist mentioned p. 426, 4, not Antiphon of Rhamnus, to whom it is ascribed by Athen. ix. 397, 3 c., and others) upon peacocks.

[2] That Protagoras promised his pupils to teach them how the *ἥττων λόγος* could be made the *κρείττων*, is attested by Aristotle, *Rhet.* ii. 24, end. After he has been speaking of the tricks by which the improbable can be made probable, he adds, *καὶ τὸ τὸν ἥττω δὲ λόγον κρείττω ποιεῖν τοῦτ' ἐστίν, καὶ ἐντεῦθεν δικαίως ἐδυσχέραινον οἱ ἄνθρωποι τὸ Πρωταγόρου ἐπάγγελμα. ψευδός τε γάρ ἐστι, καὶ οὐκ ἀληθὲς ἀλλὰ φαινόμενον εἰκὸς, καὶ ἐν οὐδεμιᾷ τέχνῃ ἀλλ' ἐν ῥητορικῇ καὶ ἐριστικῇ.* It is obvious that Aristotle here describes that promise as actually given by Protagoras, and that he is not (as Grote, *Hist. of Greece*, viii. 495, represents the case) merely expressing his own judgment on rhetoric; consequently Gellius, *N. A.* v. 3, 7, entirely agrees with him when he says, *pollicebatur se id docere, quanam verborum industria causa infirmior fieret fortior, quam rem graece ita dicebat: τὸν ἥττω λόγον κρείττω ποιεῖν.* (Similarly Steph. of Byzantium Ἄβδηρα appealing to Eudoxus, and the Scholion on the *Clouds*, v. 113; cf. Frei, *Qu. Prot.* 142 sq.) At the same time we see from these passages the meaning of this promise; the *ἥττων λόγος* is the cause which in reason, and consequently in law, is the weaker; and this by the art of the orator is to be made the stronger. It is therefore not altogether untrue when Xenophon, *Qu.* 11, 25. says in explanation of Protagoras's expression, *τὸ ψεῦδος ἀληθὲς ποιεῖν*, also Isocr. *π. ἀντιδόσ.* 15, 30; *ψευδόμενον τἀληθῆ λέγοντος ἐπικρατεῖν*, and: *παρὰ τὸ δίκαιον ἐν τοῖς ἀγῶσι πλεονεκτεῖν*; nor even when Aristophanes with malicious explicitness makes out of *ἥττων λόγος* an *ἄδικος λόγος*. Protagoras certainly did not profess in actual words that he would teach the art of helping the *unjust* cause to triumph; but he undoubtedly promised that people should learn from him how to help any possible cause to conquer, even when in itself it did not deserve to conquer. The same thing was afterwards repeated by many others. Aristophanes accuses Socrates not only of meteorosophy, but also of the art of making the *ἥττων λόγος* the *κρείττων*. In Plato, Socrates, while defending himself against this charge (*Apol.* 18 B, 19 B), describes it as a common accusation against all philosophers (*l. c.* 23 D, *τὰ κατὰ πάντων τῶν φιλοσοφούντων πρόχειρα ταῦτα λέγουσιν, ὅτι . . . τὸν ἥττω λόγον κρείττω ποιεῖν*), and Isocrates has also *l. c.* to ward off the same censure. Only we cannot infer from its being wrongly imputed to some that it was also wrongly imputed to Protagoras. Grote himself does not conclude from *Apol.* 26 D, that Anaxagoras did not teach what is there falsely ascribed to Socrates.

and in a similar sense Plato says of Gorgias[1] that he made the discovery that appearance is of more value than truth, and understood in his speeches how to make the great appear small, and the small great. But the more indifferent the orator thus became to the contents of his orations, the higher grew the value of the technical instruments of language and expression: on these consequently the rhetorical instructions of the Sophists almost exclusively turned; as was the case at this time, quite independently of philosophy, in the rhetorical schools of Corax and Tisias in Sicily.[2] Protagoras and Prodicus occupied themselves with the grammatical and lexigraphical aspects of language, and thus became the founders of scientific linguistic enquiry among the Greeks.[3] Protagoras[4] doubtless was the first to distinguish the three genders of nouns,[5] the tenses of

[1] *Phædr.* 267 A; cf. *Gorg.* 456 A sqq.; 455 A (vide *supra* 483). There is a similar statement of an anonymous writer concerning Prodicus and Hippias in Spengel, *Συναγ. τεχν.* 213 (*Rhet. Gr. v.* Walz. vii. 9), but Welcker, *l. c.* 450, justly attaches no importance to it.

[2] Spengel, *l. c.* 22–39.

[3] Cf. for the following remarks, Lersch, *Die Sprachphilosophie der Alten*, i. 15 sqq.; Alberti, *Die Sprachphilosophie von Platon* (Philologus xi. 1856, p. 681 sqq.), 699 sq.

[4] Vide, concerning Protagoras, Frei, 120 sqq.; Spengel, 40 sqq.; Schanz, 141 sq.

[5] Arist. *Rhet.* iii. 5, 1407 b, 6. He remarks on this subject that language treats as masculine many

verbs,[1] the different kinds of propositions;[2] he also gave instruction concerning the right use of language.[3] Prodicus is famous for his distinctions between words of similar meaning, which he taught for large fees in one of his lectures;[4] the satire which Plato pours forth upon this discovery[5] seems to show that his distinctions and

things that should really be feminine (*Id. Soph. El.* c. 14, and repeated by Alex. *ad h. l. Schol.* 308 a, 32; vide *supra*, 467, 3): Aristophanes, who, in his *Clouds*, transfers this and much besides from Protagoras to Socrates, makes it the occasion of many pleasantries, v. 651 sqq.

[1] *μέρη χρόνου*, Diog. ix. 52.

[2] *εὐχωλή, ἐρώτησις, ἀπόκρισις, ἐντολή*, Diog. ix. 53. As Quintil. *Inst.* iii. 4, 10, mentions this classification in his chapter on the different kinds of speeches (political, forensic, and so forth), Spengel conjectures (p. 44) that it has reference, not to the grammatical form of sentences, but to the rhetorical character of the discourses and their parts; that it primarily, however, refers to grammar is clear from the statement (Arist. *Poët.* c. 19, 1456 b, 15) that Protagoras blamed Homer because he did not commence the *Iliad* with a command to the muse instead of a prayer in the words *μῆνιν ἄειδε*.

[3] Plato, *Phædr.* 267 C: *Πρωταγόρεια δὲ, ὦ Σώκρατες, οὐκ ἦν μέντοι τοιαῦτ' ἄττα;—Ὀρθοέπειά γέ τις, ὦ παῖ, καὶ ἄλλα πολλὰ καὶ καλά.* Cf. Crat. 391 C: *διδάξαι σε τὴν ὀρθότητα περὶ τῶν τοιούτων* (*ὀνόματα*, generally speaking, language) *ἣν ἔμαθε παρὰ Πρωταγόρου.* From these passages (to which *Prot.* 339 a, Plut. *Per.* c. 36, might be added), and from Aristotle, *l. c.*, it has been reasonably inferred that Protagoras, in his discussions, was accustomed to make use of the expressions *ὀρθὸς, ὀρθότης*. On the other hand, ap Themist. *Or.* xxiii. 289 D, *ὀρθοέπεια* and *ὀρθορρημοσύνη* are not (as Lersch supposes, p. 18) ascribed to Protagoras, but to Prodicus.

[4] The fifty-drachma course, *περὶ ὀνομάτων ὀρθότητος*, which has already been mentioned, p. 418, 1. I feel myself obliged, on account of the passage in Plato's *Euthydemus*, 277 E, to agree with Welcker (p. 453) and most writers that the subject of this course was not the question whether speech is *φύσει* or *νόμῳ*, but concerning the right use of words and the differences between apparently equivalent expressions. The *διαιρεῖν περὶ ὀνομάτων*, *Charmid.* 163 D, at any rate, can only relate to these verbal distinctions; and if Prodicus founded his rules upon the same statement that Plato, *Crat.* 383 A, ascribes to Cratylus: *ὀνόματος ὀρθότητα εἶναι ἑκάστῳ τῶν ὄντων φύσει πεφυκυῖαν*, we should have to seek the chief content of this course (which evidently embraced the quintessence of Prodicus's whole linguistic science) in the *διαίρεσις ὀνομάτων*.

[5] Cf. in regard to this knowledge of words, without which he (Welcker, 454) 'never speaks, and is hardly ever mentioned in the

definitions were set forth with a good deal of self-complacency, and no doubt very often in an ill-timed manner. Hippias too gave rules for the treatment of speech,[1] but they were probably limited to metre and euphony. The discourses of Protagoras, judging from Plato's representations, besides their general clearness and simplicity of expression, appear to have been characterised by a suave dignity, an ease and copiousness of language, and a delicate poetical colouring, although they were not unfrequently too long.[2] Prodicus, if we may trust the narrative of Xenophon,[3] made use of choicer language, in which the subtle distinctions of words were carefully attended to; but which from all accounts was not very forcible, nor free from the errors for which Plato censures it. Hippias does not seem to have disdained pompous display in his expositions; Plato at any rate, in the short example which he gives,[4] represents him as full of extravagant bombast and

Platonic dialogues.' *Prot.* 337 A, 339 E; *Meno*, 75 E; *Crat.* 384 B; *Euthyd.* 277 E; cf. *Charm.* 163 A, D; *Lach.* 197 D. The first of these passages, especially, caricatures the manner of the Sophists with the most humourous exaggeration. Cf. Arist. *Top.* ii. 6, 112 b, 22; Prantl, *Gesch. d. Log.* i. 16.

[1] *περὶ ῥυθμῶν καὶ ἁρμονιῶν καὶ γραμμάτων ὀρθότητος*. Plato, *Hipp. Min.* 368 D: *π. γραμμάτων δυνάμεως καὶ συλλαβῶν καὶ ῥυθμῶν καὶ ἁρμονιῶν, Hipp. Maj.* 285 C. From Xen. *Mem.* iv. 4, 7, nothing can be inferred. What Mähly, *l. c.* xvi. 39, Alberti, *l. c.* 701, and others find in the passage is much too far-fetched. The question is simply this—'Of how many letters, and of what kind of letters, does the word Socrates consist?'

[2] The *σεμνότης* of his exposition is noticed by Philostr. *V. Soph.* i. 10, end, no doubt, however, only after Plato; and its *κυριολεξία* by Hermias *in Phædr.* 192. According to the fragment in Plut. *Consol. ad Apoll.* 33, he used his native dialect, like Democritus, Herodotus and Hippocrates.

[3] That we are justified in doing so, though the representation of Xenophon is not literally true (*Mem.* ii. 1, 34), is shown by Spengel, 57 sq.

[4] *Prot.* 337 C sqq.; cf. *Hipp. Maj.* 286 A. With this exception, neither of the dialogues called Hippias contains any of this mimicry.

redundant metaphors. That he should seek to impart a special charm to his discourses, through the multifariousness of their subject-matter and contents, might be expected from a man of such varied learning, and so vain of the many-sidedness of his knowledge; and so much the more value must he have set upon his art of memory, especially as a help in his rhetorical orations.[1] Gorgias, however, of all the Sophists attained the greatest renown,[2] and exercised the most important influence on Greek style. He was both witty and intellectual, and managed to transplant with brilliant success the rich ornamental imagery, the play upon words and thoughts, of the Sicilian oratory into Greece proper. At the same time it is in him and his school that the weak side of this rhetoric is most clearly apparent. The adroitness with which Gorgias could adapt his lectures to particular objects and circumstances, and pass from jest to earnest, and *vice versâ*, as occasion required it, could impart a new charm to what was already admitted, and soften down what was startling, in unfamiliar statements,[3]—the adornments and brilliancy which he gave to language through un-

[1] As to this art, as well as the varied learning of Hippias, cf. p. 422, 2; on the art of memory in particular, cf. Mahly, xvi. 40 sq.

[2] Vide p. 413 sq. The character of the eloquence of Gorgias is examined by Geel, 62 sqq., and more thoroughly by Schönborn, *De Auth. Declamat. Gorg.* 15 sqq.; Spengel, 63 sqq., and Foss, 50 sqq.

[3] Plato says in the *Phædrus* (*supra*, 490, 3) of him and Tisias: *τά τε αὖ σμικρὰ μεγάλα καὶ τὰ μεγάλα σμικρὰ φαίνεσθαι ποιοῦσι διὰ ῥώμην λόγου, καινά τε ἀρχαίως τά τ' ἐναντία καινῶς*; Arist., *Rhet.* iii. 18, 1419 b, 3, quotes from him this rule: *δεῖν τὴν μὲν σπουδὴν διαφθείρειν τῶν ἐναντίων γέλωτι, τὸν δὲ γέλωτα σπουδῇ*; and according to Dionysius (vide *supra*, 485, 1) he was the first who wrote upon the necessity of the orator's bestowing attention on the circumstances of the case (*περὶ καιροῦ*), though in the opinion of his critic, he did not handle the matter satisfactorily.

expected and emphatic applications, through elevated and almost poetical expression, through elegant figures of speech, rhythmical construction,[1] and symmetrically connected propositions,—all this is acknowledged even

[1] Arist. *Rhet.* iii. 1, 1404 a, 25: *ποιητικὴ πρώτη ἐγένετο ἡ λέξις, οἷον ἡ Γοργίου*. Dionys. *Ep. ad Pomp.* 764: *τὸν ὄγκον τῆς ποιητικῆς παρασκευῆς*. *De Vi dic. Dem.* 963: *Θουκυδίδου καὶ Γοργίου τὴν μεγαλοπρέπειαν καὶ σεμνότητα καὶ καλλιλογίαν*. Cf. *ibid.* 968; *Ep. ad Pomp.* 762; Diodor. xii. 53, when Gorgias came to Athens: *τῷ ξενίζοντι τῆς λέξεως ἐξέπληξε τοὺς Ἀθηναίους* (similarly Dion. *Jud. de Lys.* 458) . . . *πρῶτος γὰρ ἐχρήσατο τῆς λέξεως σχηματισμοῖς περιττοτέροις καὶ τῇ φιλοτεχνίᾳ διαφέρουσιν, ἀντιθέτοις καὶ ἰσοκώλοις καὶ παρίσοις καὶ ὁμοιοτελεύτοις καί τισιν ἑτέροις τοιούτοις, ἃ τότε μὲν διὰ τὸ ξένον τῆς κατασκευῆς ἀποδοχῆς ἠξιοῦτο, νῦν δὲ περιεργίαν ἔχειν δοκεῖ καὶ φαίνεται καταγελαστον πλεονάκις καὶ κατακόρως τιθέμενον*. Philostr. *V. Soph.* i. 9, 1 (cf. *Ep.* 73 [13], 3): *ὁρμῆς τε γὰρ τοῖς σοφισταῖς ἦρξε καὶ παραδοξολογίας καὶ πνεύματος καὶ τοῦ τὰ μεγάλα μεγάλως ἑρμηνεύειν, ἀποστάσεών τε* (the emphatic interruption by the commencement of a new proposition. Vide Frei, *Rh. Mus.* 534 sqq.) *καὶ προσβολῶν* (no doubt, of a limited kind, vide Foss, 52) *ὑφ' ὧν ὁ λόγος ἡδίων ἑαυτοῦ γίνεται καὶ σοβαράτερος*, on which account Philostratus compares him, in an exaggerated manner, with Æschylus. As figures of speech which Gorgias invented, *i.e.*, which he was the first to use consciously and designedly, there are especially mentioned *πάρισα* or *παρισώσεις* (*paria paribus adjuncta*, the repetition of the same expressions, the equality of syntactic construction and of the members in two sentences); *παρόμοια* or *παρομοίωσεις* (a play upon words of similar sound, *ὁμοιοτέλευτα* and *ὁμοιοκάταρκτα*), and antitheses, cf. Cic. *Orat.* 12, 38 sq., 52, 175, 49, 165; Dionys. *Ep.* ii. *ad Amm.* p. 792, 808; *Jud. de Thuc.* 889; *De Vi dic. Dem.* 963, 1014, 1033; Arist. *Rhet.* iii. 9, 1410 a, 22 sqq. The figures mentioned by Diodorus are included in these; *ἀποστάσεις* and *προσβολαί*, named by Philostratus, were perhaps employed by Gorgias without giving any express rules concerning them: in no case can we argue from Arist. *l. c.* that he was unacquainted with them; for Aristotle is then speaking only of figures which arise out of the relation of the parts of the sentence. In the sharply pointed antitheses and propositions of equal members, rhythm was directly involved, as Cicero observes, *loc. cit.* Similar arts are ascribed to Polus by Plato, *Phædr.* 267 C: *τὰ δὲ Πώλου πῶς φράσομεν αὖ μουσεῖα λόγων, ὡς διπλασιολογίαν καὶ γνωμολογίαν καὶ εἰκονολογίαν, ὀνομάτων τε Λικυμνείων ἃ ἐκείνῳ ἐδωρήσατο πρὸς ποίησιν εὐεπείας* (on the passage itself, the text of which appears to be somewhat mutilated, and Licymnius, the rhetorician, mentioned in it, vide Spengel, 84 sqq. and Schanz, p. 134 sq.). To this belongs what is said in the *Phædr.* 267 A of Evenus.

by those who, in other respects, are not too favourable in their judgment of him. But at the same time later critics unanimously agree that he and his pupils, in applying these expedients, far exceeded the limits of good taste. Their expositions were overladen with unusual expressions, with tropes and metaphors,[1] with pompous epithets and synonyms, with cunningly turned antitheses, with plays upon words and sounds; their style moved with fatiguing symmetry in short propositions consisting of two members; the thoughts bore no proportion to the expenditure of rhetorical devices, and the whole system could only produce, upon the purer taste of a subsequent period, the impression of frigidity and affectation.[2] Thrasymachus introduced a better method. Theophrastus praises him[3] for having

[1] For this reason Aristotle says of Alcidamas (*Rhet.* iii. 3, 1406 a, 18), that epithets with him were not a seasoning of speech, ἡδυσμα, but the principal fare (ἔδεσμα).

[2] Abundant authority for what is said above is to be found, not only in the fragment from the funeral oration of Gorgias, but in the unequalled imitation of Gorgias's rhetoric, *Symp.* 194 E sqq.; cf. 198 B sqq., and in the ordinary judgments of the ancients based on examples; see the quotations on p. 498, 1; also in Plato, *Phædr.* 267 A, C; *Gorg.* 467 B, 448 C (cf. the Scholia in Spengel, p. 87); Xenoph. *Conv.* 2, 26; Arist. *Rhet.* iii. 3 (the whole chapter); *Id. Rhet.* ii. 19, 24, 1392 b, 8, 1402 a, 10; *Eth. N.* vi. 4, 1140 a, 19, concerning Agathon (the fragments of whose writings ap. Athen. v. 185 a, 211 c, xiii. 584 a); Dionys. *Jud. de Lys.* 458; *Jud. de Isæo*, 625; *De Vi Dic. in Dem.* 963, 1033; Longin. *π. ὑψ.* c. 3, 2; Hermog. *π. ἰδ.* ii. 9; *Rhet. Gr.* iii. 362 (ii. 398 Speng.); Planud. *in Hermog. ibid.* v. 444, 446, 499, 514 sq.; Demetr. *De Interpret.* c. 12, 15, 29; *ibid.* ix. 8, 10, 18 (iii. 263, 264, 268 Sp.); Doxopater, *in Aphth. ibid.* ii. 32, 240; Joseph. *Rhavendyt. Synops.* c 15; *ibid.* iii. 562, 521; Jo. Sicel. *in Hermog.*; *ibid.* vi. 197; Suid. Γοργ.; Synes. *Ep.* 82, 133 τὶ ψυχρὸν καὶ Γοργιαῖον, Quintil. ix. 3, 74; cf. also the apophthegms in Plut. *Aud. Po.* c. i. p. 15 (*Glor. Ath.* c. 5); Cimon, c. 10; *Mul. Virt.* i. p. 242 E; *Qu. Conv.* viii. 7, 2, 4, and what Alex. *Top.* 209 (*Schol.* 287, 6, 16) quotes from Lycophron; and Philostr. *Ep.* 73, 3, from Æschines.

[3] Ap. Dionys. *Jud. Lys.* 464; *De Vi Dic. Lys.* 958. Dion even regards Lysias as the first who

been the first to adopt the middle kind of speech; for having enlivened the barrenness of ordinary language by more copious adornments, without therefore falling into the exaggerations of the school of Gorgias. Dionysius also[1] allows that his exposition had this merit; and we see from other accounts that he enriched the art of rhetoric with well-considered rules for working on the minds and emotions of the audience,[2] and with discussions on the formation of sentences,[3] rhythm,[4] and external action[5] and delivery. Nevertheless we cannot say that Plato[6] and Aristotle[7] are in the wrong when they accuse him even here of a want of solidity and thoroughness. With him, as with the other Sophists, it is only the technical education of the orator that is regarded; there is no attempt to construct his art on a deeper basis, by means of psychology and logic, in the manner that these philosophers justly require. The Sophistic doctrine here also remains true to its character; having destroyed faith in an objective truth,

introduced the middle kind of oratory; but Spengel, 94 sq. and Hermann, *De Thrasym.* 10, rightly follow Theophrastus.

[1] *Loc. cit.*, and *Jud. de Isæo*, 627. Dionysius, however, observes that the exposition of Thrasym. only partially answered to his design, and Cicero, *Orat.* 12, 39, censures his small verse-like sentences. A considerable fragment of Thrasymachus is given by Dionysius, *De Demosth. loc. cit.*, and a smaller fragment by Clemens, *Strom.* vi. 624 C.

[2] Plato, *Phædr.* 267 C. Concerning his Ἔλεοι, vide *supra*, p. 485, 1.

[3] Suid. *sub voc. πρῶτος περίοδον καὶ κῶλον κατέδειξε.*

[4] Arist. *Rhet.* iii. 1, 1409 a, 1; Cic. *Orator*, 52, 175; Quintil. ix. 4, 87.

[5] Arist. *Rhet.* iii. 1, 1404 a, 13.

[6] *Phædr.* 267 C, 269 A, D, 271 A.

[7] Arist. *Rhet.* iii. 1, 1354 a, 11 sqq., where Thrasymachus is not indeed named, but is certainly included in Aristotle's general remarks on his predecessors; the more so, as he speaks expressly of those arts in which the peculiar strength of Thrasymachus lay—*e.g.* διαβολὴ, ὀργὴ, ἔλεος, &c., as Spengel justly observes.

and renounced science which is concerned with this truth, the only end that remains for its instruction is a formal versatility to which it can give neither scientific foundation, nor a higher moral significance.

6. *The value and historical importance of the Sophistic Doctrine. The various tendencies included in it.*

In attempting to form a general opinion as to the character and historical position of the Sophistic doctrine, the first consideration that arrests us is this: that originally not merely teachers of different arts, but men of various habits of thoughts, were called Sophists. How are we justified in selecting certain individuals from the number, and describing them exclusively as Sophists, in contradistinction from all the rest, or in speaking of their teaching as a definite doctrine or tendency of mind, while in point of fact there were no definite tenets or methods which all who were called Sophists recognised as their own? This difficulty has been much insisted on in modern times, as is well known, by Grote.[1] The Sophists, he says, were not a school, but a class, in whose members the most various opinions and characters were represented; and if an Athenian at the time of the Peloponnesian War had been asked concerning the most famous Sophists of his native city, he would unquestionably have mentioned Socrates in the foremost rank. From this the immediate inference is merely that the name of Sophist has acquired in our language a narrower

[1] *Hist. of Gr.* viii. 505 sqq., 483.

signification than at first belonged to it. But that signification can only be regarded as inadmissible, if no common peculiarity can be pointed out which corresponds to the name as at present understood. Such, however, is not the case. Although the men whom we are accustomed to reckon as Sophists are not united by any common doctrines recognised by them all, there is a certain similarity of character among them which is unmistakable, and this peculiarity shows itself not merely in their coming forward as teachers, but in their whole attitude towards the science of their epoch, in their repudiation of physical, and generally speaking, of all merely theoretical enquiry, in the restriction of their sphere to arts of practical utility, in the Scepticism explicitly avowed by the majority, and the most important, of the Sophists; in the art of disputation, which most of them are said to have taught and practised, in the formal, technical treatment of rhetoric, in the free criticism and naturalistic explanation of the belief in gods, in the opinions concerning right and custom, the seeds of which were sown by the scepticism of Protagoras and Gorgias, though these opinions themselves only appear in a definite form at a subsequent period. Though all these traits may not be discoverable in all the Sophists, yet some of them are to be found in each case; and they all lie so much in one direction, that while we cannot overlook the individual differences among these men, we are nevertheless justified in regarding them collectively as the representatives of the same form of culture.

What judgment then are we to pronounce respect-

ing the value, character, and historical importance of this phenomenon?

If we take into account all the strange and perverted notions attaching to Sophistic culture and teaching, we might be inclined to adopt the view which was formerly quite universal, and which even in modern times[1] has had many advocates, viz., that it was absolutely nothing but confusion and corruption, a perversion of philosophy into an empty appearance of wisdom, and a mercenary art of disputation—a systematised immorality and frivolity—devoid of all scientific earnestness and all sense of truth, and springing from the lowest and meanest motives. It shows an unmistakable advance in historical intelligence that in modern times historians have begun to abandon this view, and not merely to exonerate the Sophists from unjust accusations, but also to recognise, even in what is really one-sided and wrong in them, a basis originally justifiable, and a natural product of historical development.[2] The unbounded

[1] *e.g.* Schleiermacher, *Gesch. d. Phil.* 70 sqq.; Brandis, i. 516; but especially Ritter, i. 575 sqq., 628 (preface to the 2nd edition, xiv. sqq.); and Baumhauer, in the treatise mentioned p. 394. 1. Similarly Waddington, *Séances et Travaux de l'Acad. des Sciences Morales*, C V. (1876) 105. Brandis, *Gesch. d. Entw.* i. 217 sq., is less severe in his judgment of the Sophists.

[2] Meiners, *Gesch. d. Wissensch.* ii. 175 sqq., had already recognised the services of the Sophists in the spread of culture and knowledge; but Hegel (*Gesch d. Phil.* ii. 3 sqq.) was the first to pave the way for a deeper comprehension of their doctrine and its historical position; these discussions were completed by Hermann (vide *supra*, p. 394. 1) with sound and learned arguments, in which the importance of the Sophists in regard to culture, and their close relation with their epoch, are especially emphasised; cf. also Wendt, *Zu Tennemann*, i. 459 sq.; Marbach, *Gesch. d. Phil.* i. 152, 157; Braniss, *Gesch. d. Phil. s. Kant*, i. 144 sq.; Schwegler, *Gesch. d. Phil.* 21 sq. (and for a somewhat more unfavourable view, *Griech. Phil.* 84 sq.); Haym, *Allg. Encycl.* Sect. iii. B, xxiv. 39 sq.; Ueberweg, *Grundr.* i. § 27. The side of the Sophists is taken still more decidedly, but with somewhat of the partiality of apologists, by Grote and Lewes in the works to which we have so often referred. Bethe, *Versuch einer sittlichen Würdigung d. Sophist. Redekunst* (Stade, 1873), agrees with Grote, but throws no new light on the matter.

influence of these men, and the high reputation in which many of them are asserted, even by their enemies, to have been held, should of itself be sufficient to prevent us from stigmatising them as empty babblers and vain pseudo-philosophers in the manner once usual. For whatever may be said of the evil of a degenerate period which found its truest expression in the Sophists, just because of its own shallowness and want of fixed opinions; whoever in any period of history, even the most corrupt, utters the watchword of the time, and takes the lead in its spiritual movement, we may perhaps consider as wicked, but in no case as unimportant. But the period which admired the Sophists was not merely a period of degeneracy and decline, it was also a period of a higher culture, unique in its kind—the period of Pericles and Thucydides, of Sophocles and Pheidias, of Euripides and Aristophanes; and those who sought out the Sophistic leaders and made use of them for their own purposes were not the worst and most insignificant of that generation, but the great and noble of the first rank. If these Sophists had had nothing to communicate but a deceptive show of wisdom, and an empty rhetoric, they would never have exerted this influence upon their epoch, nor have brought about this great revolution in the Greek mind and mode of thought; the grave and highly cultured intellect of a Pericles would hardly

have taken pleasure in their society, a Euripides would not have valued it, a Thucydides would not have sought instruction from them, a Socrates would not have sent them pupils: even over the degenerate but gifted contemporaries of these great men their power of attraction could scarcely have been permanent. Whatever it may have been on which the charm of the Sophistic instruction and lectures depended, we may justly infer from these considerations that it was something new and important, at least for that period.

In what it more particularly consisted we shall see from our present discussions. The Sophists are the 'Illuminators' of their time, the Encyclopædists of Greece, and they share in the advantages as well as the defects of that position. It is true that the lofty speculation, the moral earnestness, the sober scientific temperament entirely absorbed in its object, which we have such frequent occasion to admire both in ancient and modern philosophers, all this is wanting in the Sophists. Their whole bearing seems pretentious and assuming, their unsettled, wandering life, their money-making, their greediness for scholars and applause, their petty jealousies among themselves, their vain-gloriousness, often carried to the most ridiculous lengths, form a striking contrast to the scientific devotion of an Anaxagoras or a Democritus, to the unassuming greatness of a Socrates, or the noble pride of a Plato; their scepticism destroys all scientific endeavour at the very root, their Eristic disputation has as its final result only the bewilderment of the interlocutor; their rhetoric is calculated for display, and is employed in the cause of

wrong as well as truth; its views of science are low, its moral principles dangerous. Even the best and greatest representatives of the Sophists cannot be altogether acquitted of these faults; if Protagoras and Gorgias did not assume a position of hostility towards the prevailing customs, they both prepared the ground for scientific scepticism, for sophistic argumentation and rhetoric, and consequently, in an indirect manner, for the denial of universally valid moral laws; if Prodicus praised virtue in eloquent words, his whole appearance is too closely allied with that of a Protagoras, a Gorgias and a Hippias, to allow of our separating him from the ranks of the Sophists, or calling him a precursor of Socrates, in any essentially different sense from that in which the rest were so.[1] In others, like Thrasymachus, Euthy-

[1] Such was the opinion I expressed concerning Prodicus in the first edition of this work, p. 263, and even after Welcker's counter observations, *Klein. Schr.* ii. 528 sqq., I cannot depart from it. I am far from crediting Prodicus with all that ordinary opinion has indiscriminately ascribed to the Sophists, or with what is really reprehensible in many of them, nor do I deny his affinity and relation to Socrates. But neither do we find in Protagoras, Gorgias, and Hippias all the faults and one-sidedness of Sophisticism; they too conceived virtue, the teachers of which they proclaimed themselves to be, primarily according to the usual acceptation, and the later theory of self-interest was not attributed to either of them; though Protagoras and Gorgias prepared the way for it by their scepticism, Protagoras by his treatment of rhetoric, and Hippias by his distinction between positive and natural law. These men may all in a certain sense be regarded as the precursors of Socrates, and the importance of Protagoras and Gorgias is, in this respect, far greater than that of Prodicus. For they anticipated him in the attempt to found a class of teachers who should work, by instruction, upon the moral improvement of man (Welcker, 535); the content of their moral theory, as has been already remarked, was in essential agreement with that of Prodicus, and with the prevailing opinions, and was not further removed from the new and peculiar theory of the Socratic ethics than were the popular moral maxims of Prodicus. But in the treatment of this subject-matter, Gorgias, by his discussions

demus, Dionysodorus, in the whole crowd of attendant

concerning the duties of particular classes of men, comes much nearer to a scientific definition than Prodicus with his universal and popular glorification of virtue; and the mythus which Plato puts into the mouth of Protagoras, and the remarks connected with it, on the teachableness of virtue, stand, in respect to the thoughts contained in them, far above the apologue of Prodicus. In regard to other achievements, the verbal distinctions introduced by the sage of Ceos, may certainly have had an influence on the Socratic method of determining the concept: they may also have contributed not a little to the enquiries concerning the various meanings of words, which subsequently became so important in the Aristotelian metaphysics; but in the first place, Protagoras preceded Prodicus in this respect; and secondly, these verbal distinctions, which Plato held cheaply enough, cannot be compared for their influence upon the later and especially upon the Socratic science, with the dialectical discussions, and the discussions on the theory of knowledge, of Protagoras and Gorgias, which precisely through their sceptical results led up to the discrimination of essence from the sensible phenomenon, and to the introduction of a philosophy of conceptions. At the same time, however, the limitation of the discussions of Prodicus to verbal expression, and the exaggerated importance ascribed to this subject, show that we are here concerned with something that lay exclusively in the formal and one-sided rhetorical direction. Further, in respect to the moral theory of Prodicus, we must concede to Welcker that its Eudæmonistic basis is no proof of its Sophistic character; but on the other hand, we must remember that of the distinctive peculiarities of the Socratic ethics, of the great principle of self-knowledge, of the reduction of virtue to knowledge, of the derivation of moral prescripts from universal conceptions, we find in Prodicus not a trace. Lastly, what we know of his views about the gods is quite in the spirit of the Sophistic culture. Although therefore Prodicus may be called 'the most innocent of the Sophists' (Spengel, 59), inasmuch as we are acquainted with no principles of his dangerous to morality and science, it is not merely an external similarity, but also the internal affinity of his scientific character and procedure with those of the Sophists, which makes me hold to the precedent of the ancient writers, who unanimously counted him in the Sophistic ranks. (Vide *supra*, p. 419, 3.) The disputing of moral principles does not necessarily belong to the conception of the Sophist, and even theoretical scepticism is not inseparable from it, though both were included no doubt in the consequences of the Sophistic point of view: a Sophist is one who comes forward with the claim to be a teacher of wisdom, whereas he is not concerned with the scientific investigation of the object, but only with the formal and practical culture of the subject; and these characteristics are applicable even to Prodicus. Cf. with the foregoing remarks, Schanz, *loc. cit.* p. 41 sqq.

scholars and imitators, we see the one-sided narrownesses and exaggerations of the Sophistic stand-point exhibited in all their nakedness. We must not, however, forget that these defects are only in the main the reverse side, the degradation of a movement that was both important and justifiable; and that we equally fail to recognise the true character of the Sophists, or to do justice to their real services, whether we regard them merely as destroyers of the ancient Greek theory of life, or with Grote, as its representatives. The previous period had confined itself in its practical conduct to the moral and religious tradition, and in its science to the contemplation of nature; such at any rate was its predominant character, though isolated phenomena, as is always the case, announced and prepared the way for the later form of culture. Now people awoke to the consciousness that this is not sufficient, that nothing can be of real worth or value for a man that is not approved by his personal conviction, or that has not attained a personal interest for him. In a word, the validity of the principle of subjectivity is asserted. Man loses his reverence for the actual as such, he will accept nothing as true which he has not proved, he will occupy himself with nothing, the advantage of which for himself he does not see: he will act upon his own knowledge, use all that offers for himself, be everywhere at home, discuss and decide everything. The demand for universal culture is aroused, and philosophy makes itself subservient to that demand. But, because this road is opened for the first time, it is not so easy to find the way upon it; man has not yet discovered in himself the

point at which he must place himself, in order to see the world in the right light, and not to lose his balance in his actions. The previous science no longer satisfies his mental needs; he finds its scope too limited, its fundamental conceptions uncertain and contradictory. The considerations by which the Sophists made men conscious of this ought not to be undervalued, nor especially the importance of the Protagorean scepticism in regard to questions about the theory of knowledge; but instead of completing physics by a system of ethics, physics are now entirely set aside; instead of seeking a new scientific method, the possibility of wisdom is denied. The same is the case with the sphere of morals; the Sophists are right in acknowledging that the truth of a principle, the binding nature of a law, is not demonstrated by its validity as a matter of fact; that ancient usage as such is no proof of the necessity of a thing; but instead of proceeding to seek for the internal grounds of obligation in the nature of moral activities and relations, they are satisfied with the negative result, with the invalidity of existing laws, with the abandonment of traditional customs and opinions; and, as the positive side of this negation, there remains only the fortuitous action of the individual regulated by no law and no general principle—only caprice and personal advantage. Nor is it otherwise with the attitude adopted by the Sophists towards religion. That they doubted the gods of their nation and saw in them creations of the human mind will never be a reproach to them, nor should the historical significance of this scepticism be lightly esteemed. They erred in not supplementing their denial with any

positive affirmation, in losing, with the belief in gods, religion altogether. The Sophistic 'Illumination' is certainly therefore superficial and one-sided in its nature, and unscientific and dangerous in its results. But all that is trivial in our eyes was not trivial to the contemporaries of the first Sophists, and everything that experience has since shown to be pernicious was not therefore a thing to be avoided from its commencement. The Sophistic movement is the fruit and the organ of the most complete revolution that had hitherto taken place in the thought and intellectual life of the Greeks. This nation stood on the threshold of a new period; there opened before it a view into a previously unknown world of freedom and culture: can we wonder if it became giddy on the height so quickly climbed, if its self-confidence transcended the due limits; if man thought himself no longer bound by laws when he had once recognised their source in human will; and regarded all things as subjective phenomena, because we see all things in the mirror of our own consciousness? The way of the old science had been lost, a new science had not yet been discovered; the moral powers that existed could not prove their claim to authority, the higher law within a man was not as yet acknowledged; there was a straining to get beyond natural philosophy, natural religion, and a morality which was the natural growth of custom, but there was nothing to set in their place but Empirical subjectivity, dependent upon external impressions and sensuous impulses. Thus, in the desire to render himself independent of the actual, man again directly sank back

into a state of dependence upon it; and an attempt, which was justifiable in its general tendency, on account of its one-sidedness bore dangerous fruits for science and for life.[1] But this one-sidedness was not to be avoided, and in the history of philosophy, it is not even to be deplored. The fermentation of the time to which the Sophists belong brought many turbid and impure substances to the surface, but it was necessary that the Greek mind should pass through this fermentation before it attained the clarified stage of the Socratic wisdom; and as the Germans would scarcely have had a Kant without the '*Aufklärungsperiode*,' so the Greeks would scarcely have had a Socrates and a Socratic philosophy without the Sophists.

The relation of the Sophists to the previous philosophy was, on the one side, as we have already seen, hostile, inasmuch as they opposed themselves, not merely to its results, but to its whole tendency, and denied the possibility of any scientific knowledge whatever; at the same time, however, they made use of the points of

[1] That the Sophists were not indeed the only, or the chief cause, of the moral disorganisation which prevailed during the Peloponnesian war; that the aberrations of their Ethics were rather an evidence than a reason of this disorganisation, is evident and has already been shown, p. 401 sq. Grote (vii. 51 sq.; viii. 544 sq.) appeals, with justice, to Plato's assertion (*Rep.* vi. 492 A sq.): we ought not to think that it is the Sophists who corrupt youth, the public itself is the greatest of all Sophists, tolerating nothing that differs from its own opinions and inclinations; the Sophists are merely persons who know how to manage the public adroitly, to flatter its prejudices and wishes, and to teach others the same art. But there is no occasion therefore to deny, as Grote does (viii. 508 sqq.), in opposition to the most express statements of Thucydides (iii. 82 sq.; iii. 52), and the unequivocal testimony of history, that in this period generally a disorganisation of moral ideas, and a decline of political virtue and of the regard for law, took place.

contact afforded them by the older philosophy;[1] and founded their scepticism partly upon the physics of Heracleitus, and partly upon the dialectical arguments of the Eleatics. But we are scarcely justified in recognising on this account Eleatic, as distinct from Protagorean, Sophists;[2] for Protagoras and Gorgias attain essentially the same result, the impossibility of knowledge; and as regards the practical side of Sophistic teaching—Eristic disputation, Ethics, and Rhetoric—it makes little difference whether this result be deduced from Heracleitean or Eleatic presuppositions. Most of the Sophists, moreover, take no further account of this diversity of scientific starting-points, and trouble themselves little about the origin of the sceptical arguments which they employ according as the need of them arises. It would be difficult to say in the case of several very important Sophists, *e.g.*, Prodicus, Hippias, Thrasymachus, to which of the two classes they belong. If to these classes be added the Atomistic doctrine, as a degenerate form of the Empedoclean and Anaxagorean physics,[3] it has been already shown (p. 294 sqq.) that the Atomists do not belong to the Sophistic Schools; and we should be unjust, moreover, to the Sophists, and ignore what is new and characteristic in the movement, if we were to treat it merely as the deterioration of the previous philo-

[1] Cf. p. 398 sq., 404 sqq.

[2] Schleiermacher, *Gesch. d. Phil.* 71 sq., defines this difference in the following hair-splitting, and we might almost say, Sophistic formula: In Magna Græcia, he says, Sophistic teaching was δοξοσοφία, in Ionia, universal knowledge, knowledge about appearance, σοφοδοξία (both words, however, mean exactly the same); Ritter, i. 589 sq., Brandis and Hermann, vide *infra*, Ast. *Gesch. d. Phil.* 96 sq., had already drawn a distinction between the Ionian and Italian Sophists.

[3] Schleiermacher and Ritter, *loc. cit.*

sophy, or even as the deterioration of particular branches of that philosophy. The same may be said of Ritter's observation, that the later Pythagoreanism was likewise a kind of Sophistic doctrine. Finally, when Hermann[1] distinguishes an Eleatic, Heracleitean and Abderite Sophisticism, and says the first is represented by Gorgias, the second by Euthydemus, the third by Protagoras, we may urge in reply that no clear result is obtained from the division of the leading Sophists into these three classes, and that the division itself is not in agreement with historical fact. For Protagoras bases his theory of knowledge, not on Atomistic, but exclusively on Heracleitean conceptions, and Euthydemus is distinguished from him, not by his adopting the theories of Heracleitus in greater purity, but on the contrary, by his supplementing them with certain propositions borrowed from the Eleatics.[2] Democritus and Protagoras certainly

[1] *Zeitschr. f. Alterthumsw.* 1834, 369 sq. cf. 295 sq.; *Plat. Phil.* 190, 299, 151; *De Philos. Jon. Ætatt.* 17; cf. Petersen, *Philol.-Histor. Stud.* 36, who derives Protagoras from Heracleitus and Democritus conjointly.

[2] Hermann urges in support of his theory that Democritus, like Protagoras, declared the phenomenal to be the true: we have already seen, however, p. 272 sq., that this is only an inference drawn by Aristotle from his sensualistic teaching, but which Democritus himself was far from entertaining. Hermann further says that as Democritus held that like was only known by like, so Protagoras maintained that the knowing subject must be moved, as much as the thing known; whereas, according to Heracleitus, unlike is known by unlike. Hermann, however, has here confounded two very different things. Theophrastus (vide *supra*, p. 89, 2) says of Heracleitus, that, like Anaxagoras subsequently, he supposed in regard to the sense-perception (for to this only the proposition relates, and to this only it is referred by Theophrastus: the reason external to us, the primitive fire, we know, according to Heracleitus, by means of the rational and fiery element within us) that contraries are known by contraries, warm by cold, &c. Protagoras is so far from contradicting this statement that he rather derives, *with Heracleitus*, the sense-perception from the encounter of opposite motions, an active and a passive motion (vide *sup.* 445 sqq., cf. 88 sq.). On the other hand, that the knowing subject and the thing known must equally be moved, was not only admitted by Heracleitus, but he was the first among the ancient physicists to assert it, and Protagoras borrowed the statement, as we have shown, *l. c.*, according to Plato and others, from him alone. Lastly it is said that Cratylus the Heracleitean, maintains, in Plato, the direct contrary of Protagoras's theorem; this I cannot find; it rather seems to me that the statements that language is the work of the maker of names, that all names are equally true and that one cannot utter anything false, (*Crat.* 429 B, D), are entirely in harmony with the standpoint of Protagoras, and when Proclus (in *Crat.* 41) opposes to Euthydemus's theorem that 'all is at the same time true to all,' the famous Protagorean proposition, I can see no great difference between them. Cf. the proofs given, p. 456 sq. Moreover, as all our authorities, and Plato himself, derive the Protagorean theory of knowledge primarily from the physics of Heracleitus, and as no trace of an Atomistic doctrine is discernible in Protagoras, and even the possibility of such a doctrine is excluded by his theory, history must abide by the usual opinion concerning the relation of Protagoras to Heracleitus. This judgment is endorsed by Frei, *Quæst. Prot.* 105 sqq.; *Rhein. Mus.* viii. 273, &c. When Vitringa, *De Prot.* 188 sqq. urges in favour of Protagoras's connection with Democritus, that Democritus (like Protagoras, vide *supra*, p. 445 sq.) maintained a motion without beginning, a doing and a suffering, he relies on points of comparison that are much too indefinite: the question is, whether we are to derive a theory which starts from the presupposition that there is no unchangeable Being, from a system which is based upon this very theorem; or from another system which denies all change of original Being: from Democritus in fact, rather than Heracleitus. What Vitringa further adduces has little weight.

[1] Lange, *Gesch. d. Mater.* i. 131 sq., is indeed of opinion that the subjective tendency of Protagoras in his theory of knowledge, the cancelling of sensible qualities in subjective impressions, cannot be explained from Heracleitus alone; and that the *νόμῳ γλυκὺ*, &c. of Democritus forms the natural transition from Physics to Sophisticism. In case, therefore, Protagoras was really twenty years older than Democritus, we must suppose that, having been originally merely an orator and a teacher of politics, he subsequently formed his system under the influence of Democritus. But it is not easy to see why the assertion of the philosophers (so often repeated from Heracleitus and Parmenides onwards) that the

agree in the assertion, that the sensible qualities of things merely describe the manner in which things affect us; but this agreement is rather to be explained by the influence of Protagoras on Democritus, than by that of Democritus or Protagoras.[1] Neither of these

classifications, therefore, appears either true or satisfactory.

Nor do the internal differences between individual Sophists seem important enough to constitute a basis for the theory of separate schools. When, for instance,

senses are untrustworthy—was not sufficient to lead Protagoras to the conclusion that since it *is* through the senses alone we have any knowledge of things, if *they* are untrustworthy, we can know absolutely nothing, and why Heracleitus's statement that everything perceptible to sense is only a passing phenomenon, and what the senses tell us is merely delusive appearance (vide p. 88), might not have caused him (Protagoras) to adopt the theory which Plato and Sextus ascribe to him (cf. p. 445 sq.). It was only necessary that, on the one hand, Heracleitus's propositions of the flux of all things, and of the opposite course of motions, should have been expressly applied to the question concerning the origin of perceptions, in order to explain the untrustworthiness of perceptions already maintained by Heracleitus; and that on the other hand, rational perception, in which Heracleitus found truth, should have been overlooked (cf. pp. 113, 114). But this latter must have occurred (as Lange himself remarks) even with the doctrine of Democritus, if a scepticism like that of Protagoras was to result from it; and in the former case, *Heracleitus alone* could have furnishe the presuppositions with which Protagoras is actually connected: whereas, as has been already shown, it is impossible to deduce his theory, as represented to us in history, from the Atomistic philosophy. The philosopher who sees in bodies combinations of unchangeable substances, may complain of the senses because they do not show us these fundamental constituents of bodies, and consequently make the Becoming and Decay of the composite appear as an absolute Becoming and Decay; but he cannot complain of them, as Protagoras did, because nothing permanent, speaking generally, corresponds with the phenomena which they show us, and because the objects perceived only exist in the moment of perception. The only thing in which Protagoras reminds us of Democritus is the proposition (p. 448, 1), that things are white, warm, hard, &c., only in so far and for so long as our senses are affected by them. This has, no doubt, a similarity with the statement attributed by Theophrastus (*sup.* p. 231, 3) to Democritus (in the *νόμῳ γλυκὺ*, &c., p. 219, 3, it is not as yet to be found): *τῶν ἄλλων αἰσθητῶν* (besides weight, hardness, &c.) *οὐδενὸς εἶναι φύσιν, ἀλλὰ πάντα πάθη τῆς αἰσθήσεως ἀλλοιουμένης.* But if Democritus really said this, and it was not merely a comment of Theophrastus on some utterance of his, and if his coincidence with Protagoras is not merely fortuitous, it is still a question which of these men first asserted the proposition. In favour of Protagoras, there is the fact that he was not only much older than Democritus, but that Democritus (according to p. 275) opposed his scepticism; for in spite of Lange, the relation of age between the two is beyond a doubt. It is also very improbable that Protagoras only arrived at his sceptical theory, and his doctrine, 'Man is the measure of all things,' several years after his first appearance as a teacher; for this doctrine was of radical importance for him, and was essentially connected with his art of disputation, his repudiation of physics, and his restriction to the practical sphere.

[1] Wendt, *Zu Tennemann*, i. 467. Similarly Tennemann himself, *l. c.*, discriminates those Sophists who were also orators, and those who separated sophistic teaching from rhetoric. But in the second class he places only Euthydemus and Dionysodorus; and these do not belong to it, strictly speaking; for they likewise taught judicial oratory, which they never, even subsequently, quite abandoned: Plato, *Euthyd.* 271 D sq., 273 C sq.

[2] Wendt reckons in the first class, besides Tisias—who was only a rhetorician and not a sophist—Gorgias, Meno, Polus, Thrasymachus; in the second, Protagoras, Cratylus, Prodicus, Hippias, Euthydemus. But Gorgias is also of importance as a teacher of virtue, especially because of his sceptical enquiries, and Protagoras, Prodicus, Euthydemus occupied themselves much in their instructions and their writings with rhetoric.

[3] *Philos. Histor. Studien*, 35 sqq.

Wendt[1] divides the Sophists into those who came forward chiefly as orators, and those who were more especially known as teachers of wisdom and virtue, we can see by the use of the word 'more' how uncertain such a division must be; and if we try to apportion the known historical names to the two classes, we immediately fall into confusion.[2] Instruction in rhetoric was not usually, with the Sophists, separated from their teaching of virtue; eloquence was regarded by them as the most important instrument of political power, and the theoretical side of their teaching, which, in reference to philosophy, is precisely of most consequence, is passed over in this classification. The classification of Petersen[3] is no better: he makes a distinction between the subjective scepticism of Protagoras, the objective scepticism of Gorgias, the moral scepticism of Thrasymachus, and the religious scepticism of Critias. What is here described

as peculiar to Thrasymachus and Critias is common to them and to the majority of the Sophists, at any rate, of the later Sophists; Protagoras and Gorgias also are closely allied to each other in their conclusions and general tendency; lastly, Hippias and Prodicus find in these categories no special place. Against the exposition of Brandis,[1] likewise, much may be urged. Brandis observes that the Heracleitean Sophisticism of Protagoras and the Eleatic Sophisticism of Gorgias very soon became united in an extensive school, which branched off in different directions. Among these branches two classes are primarily distinguished: the dialectical sceptics and those who attacked morality and religion. Among the former, Brandis reckons Euthydemus, Dionysodorus and Lycophron; with the latter, Critias, Polus, Callicles, Thrasymachus, Diagoras. In addition to these, he mentions Hippias and Prodicus; of whom Hippias enriched his rhetoric with multifarious knowledge, and Prodicus, by his linguistic discussions and his didactic discourses, sowed the seeds of more serious thought. But though this theory is right in asserting that the Sophisticism of Protagoras and that of Gorgias were very soon united, yet the discrimination of dialectic and ethical scepticism affords no good dividing line; for this reason, that they are in their nature mutually dependent, and the one is merely the direct application of the other; if, therefore, in particular details they do not always coincide, this is not the result of any essential difference of scientific tendency. We know, however, too little of most of the Sophists to be able to

[1] *Gr.-Röm. Phil.* i. 523, 541, 543.

judge with certainty how they stood in respect to this matter; even Brandis does not place Prodicus and Hippias in either of the two categories. Vitringa[1] names them with Protagoras and Gorgias as the heads of the four Sophistic schools which he assumes; he designates the school of Protagoras as sensualistic, that of Prodicus as ethical, that of Hippias as physical, that of Gorgias as politico-rhetorical; but in this way we do not obtain a true representation of the individual character and mutual relation of these men;[2] nor does history give us any warrant for dividing all the Sophists with whom we are acquainted, even if it were possible to do so, into the four schools just mentioned.[3]

[1] *De Sophistarum scholis quæ Socratis ætate Athenis floruerunt*, Mnemosyne, ii. (1853) 223–237.

[2] Vitringa calls the doctrine of Protagoras 'absolute sensualism;' but his theory of knowledge is rather a scepticism, starting no doubt from sensualistic presuppositions; and his ethico-political views, on the other hand, are brought into connection by Vitringa (*l. c.* 226) with this sensualism in a very arbitrary manner; moreover his rhetoric, which constituted a chief part of his activity, is in harmony with his scepticism, but not at all with sensualism. Prodicus, likewise, is not merely a moralist, but also a rhetorician: in Plato his discussions on language are placed decidedly in the foreground. Still less can Hippias be described as a physicist merely: he is a man of universal knowledge; indeed, it would seem that the greater part of his speeches and writings were of an historical and moral nature. Lastly, if Gorgias, at a later period, professed to teach rhetoric only, we cannot, in estimating his scientific character, pass over either his sceptical demonstrations or his doctrine of virtue.

[3] In the school of Protagoras Vitringa includes Euthydemus and Dionysodorus, in that of Gorgias, Thrasymachus; but the two former were not exclusively allied with Protagoras, as has been already shown pp. 456, 457; and that Thrasymachus belonged to the Gorgian school there is no evidence to prove. The character of his rhetoric (vide *supra*, p. 494) is against the supposition. On the other hand, Agathon, who was not, however, a Sophist, must have been designated as a disciple of Gorgias and not of Prodicus (cf. p. 494, 2). He is represented in Plato, *Prot.* 315 D, as a hearer of Gorgias, but that proves nothing.

If we possessed more of the writings of the Sophists, and had tradition informed us more perfectly as to their opinions, it might, however, have been possible to follow up the characteristics of the different schools somewhat further. But our accounts are very scanty, and indeed any fixed boundaries between the schools seem to be excluded by the very nature of Sophisticism; for its purpose was not to guarantee objective knowledge, but only subjective readiness of thought and practical versatility. This form of culture is tied to no scientific system and principle, its distinctive character appears far more in the ease with which it takes from the most various theories whatever may be useful for its temporary purpose; and for this reason it propagates itself not in separate and exclusive schools, but in a freer manner, by mental infection of different kinds.[1] Although therefore it may be true that one Sophist arrived at his results through the Eleatic presuppositions, and another through those of Heracleitus; that one gave the preference to Eristic disputation, and another to rhetoric, that one confined himself to the practical arts of the Sophists, and another adopted their theories also; that one paid greater attention to ethical and another to dialectical enquiries; that one desired to be called a rhetorician, and another a teacher of virtue or a Sophist; and that the first Sophists transmitted in these respects their own characteristics to their scholars; yet all these distinctions are fluctuating; they cannot be regarded as essentially different conceptions of the Sophistic principle, but only as separate manifestations

[1] As Brandis well observes.

of that principle according to individual tendency and temperament.

There is more to be said for the division of the earlier Sophists from the later. Exhibitions like those which Plato describes in so masterly a manner in the *Euthydemus*, are as far removed from the important personalities of a Protagoras and a Gorgias as the virtue of a Diogenes from that of a Socrates; and the later Sophists, as a rule, bear unmistakable marks of degeneracy and decline. The moral principles especially, which in the sequel justly gave so much offence, are alien to the Sophistic teachers of the first period. But we must not overlook the fact that even the later form of Sophisticism was not accidental, but an inevitable consequence of the Sophistic standpoint, and that therefore its premonitory symptoms begin even with its most celebrated representatives. Where belief in a truth of universal validity is abandoned, and all science is dissipated in Eristic argumentation and rhetoric, as is the case here, everything will in the end be dependent on the caprice and advantage of the individual; and even scientific activity will be degraded from a striving after truth, concerned solely with its object, into an instrument for the satisfaction of self-interest and vanity. The first authors of such a mode of thought generally hesitate to draw these inferences simply and logically, because their own culture still partly belongs to an earlier time; those on the other hand who have grown up in the new culture, and are bound by no antagonistic reminiscences, cannot avoid such inferences, and having once set out upon the new road, must declare them-

selves more decidedly with each fresh step. But a simple return to the old faith and morality, such as Aristophanes demands, could not have taken place, nor would it have satisfied men who more deeply understood their own times. The true way of transcending the Sophistic teaching was shown by Socrates alone, who sought to gain in thought itself, the power of which had been proved by the destruction of the previous convictions, a deeper basis for science and morality.

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