CONTENTS

INDEX OF FRAGMENTS

NOTE ON THE SECOND IMPRESSION

Preface

Abbreviations

Introduction

I. The Date of Heraclitus

II. The Life of Heraclitus

III. The Ancient Evidence on Heraclitus' Thought
   (i) Plato
   (ii) Aristotle
   (iii) Theophrastus and the Doxographical Tradition
   (iv) Other Sources
   (v) de vie
   (vi) The False Letters
   (vii) Conclusion

The Cosmic Fragments

Group 1: p. 32
   fr. 1
   [+] 31D
   fr. 114
   [+] 113D
   fr. 2
   [+] 80D
   fr. 50

Group 2:
   fr. 51
   fr. 13
   [+] 37D
   fr. 9
   [+] 4D

Group 3: p. 87
   fr. 58
   fr. 39
   fr. 60
   fr. 103
   fr. 48

Group 4:
   fr. 23

Group 5:
   fr. 88
   fr. 126
   fr. 57
   [+] 106D
   fr. 99

Group 6:
   fr. 134

Group 7:
   fr. 135
   fr. 149
   fr. 153

Group 8:
   fr. 157

Group 9:
   fr. 162
INDEX OF FRAGMENTS OF HERACLITUS

The number of every cosmic fragment, and the page reference of its main treatment, is in bold type.

Fragment numbers followed by the letter b refer to paraphrases or unreliable quotations, accepted by Diels as genuine fragments; except that fragments with numbers higher than 126 were classed by him as doubtful or spurious.

1: pp. 16, 33, 32-46, 48, 69, 56, 12, 69, 46, 188, 189, 209, 229, 311, 301
2: pp. 34, 39, 41, 47, 48, 49, 16, 57, 64, 67, 188, 399
3: pp. 263, 280-2, 292, 294, 293, 304
4: pp. 73, 84-6
5: pp. 5, 791, 158, 188, 189, 238, 390, 394, 393
6: pp. 13, 15, 18, 203, 264-79, 286, 334
7: pp. 16, 131, 220, 232-6
8: pp. 16, 230, 173, 203, 208, 304, 328, 397-4, 328, 327, 329, 330, 316, 622, 327
9: pp. 16, 73, 81-6, 120, 302
11: pp. 217, 238-62, 315
12: pp. 15, 16, 244, 306, 367-80, 382
13: pp. 73, 76-80, 85, 96, 120
14: p. 309
15: pp. 121, 144, 203, 216, 387, 392
16: pp. 382, 396, 362-5
17: pp. 47, 60, 61, 158, 203, 376
18: pp. 136, 150, 231, 284
19: p. 47
20: pp. 67, 203, 213, 308
21: pp. 44, 66, 341, 373
22: p. 231

EPILOGUE

GENERAL INDEX

INDEX OF PASSAGES
ABBREVIATIONS

The following abbreviations may be mentioned; others should be self-evident.

BURNET  J. Burnet, Early Greek Philosophy, 4th ed. 1930 (a reprint with corrections of 3rd ed. 1920).

CHERNISS  H. Cherniss, Aristotle's Criticism of Pre-Socratic Philosophy (Baltimore, 1935).

CQ  Classical Quarterly.

DIELS  Doxographi  H. Diels, Doxographi Graeci (Berlin, 1879).


DK  Die Fragmente der Vorsokratiker, 5th and 6th edns., by H. Diels, edited with additions by W. Kranz. (The 6th ed. is a photographic reprint, 1951-2, of the 5th, with Nachträge by Kranz.)


GIGON  O. Gigon, Untersuchungen zu Heraklit (Leipzig, 1935).


RE  Pauly-Wissowa, Real-Encyclopädie d. Altertumswissenschaft.

Ph.U.  Philologische Untersuchungen.


Rh. M.  Rheinisches Museum.

SB Ber  Sitzungsberichte d. preussischen Akademie d. Wissenschaft.

SCHUSTER  P. Schuster, Heraklit von Ephesos (Leipzig, 1873).

VS  Die Fragmente der Vorsokratiker, 1st–4th edns., by Hermann Diels.
INTRODUCTION

I. THE DATE OF HERACLITUS

According to Diogenes Laertius IX, 1 Heracleitus was at his prime (i.e. aged forty) in Ol. 69 (504/503-501/500 B.C.). This information comes doubtless from Apollodorus, whose arbitrary dating methods are well known (see Jacoby, Apollodorus Chronik (Berlin, 1902); Burnet 38). Heracleitus was traditionally associated with Darius (see the first two false Letters, Diog. L. 19, 13-14) and so, perhaps, was placed in the middle of his reign, approximately at the time of the Ionian revolt. He also comes the traditional forty or so years after the foundation of Elea, with which Xenophanes (his master according to some) was associated, and after Anaximenes (who according to Diog. L. 11, 3 and the Suda was born in 546/545, at the time of the capture of Sardis; but this is probably a mistake for his floruit, which Hippolytus, Ref. 1, 7, 9, placed in Ol. 58, 1; see Burnet 72 and n. 2). There is no need to doubt that Apollodorus’ dating is here approximately correct. In fr. 40 Heracleitus refers to Xenophanes, Hecataeus and Pythagoras (as well as Hesiod) as though their main philosophical activity were over. The fragment does not necessarily mean that the first two were alive and the others dead (as Kranz, Hermes 69 (1934) 115, thought), or that all were dead. Hesiod is the only one of whom we can be certain. According to Timaeus, Xenophanes lived on into the reign of Hieron, which began in 478; but this does not necessarily prove that Heracleitus wrote after that date. Nor does fr. 121: Zeller’s argument that the Ephesians would not have been able to banish Hermasodus until after the liberation is valueless, since the Ionian cities had a great measure of political freedom under the Persian governors. Nor is the contention of Reinhardt (Perennides und die Geschichte der griechischen Philosophie (Bonn, 1916) 177) that ‘let there be no best man among us’ implies the full restoration of democracy, and therefore a date well after 478, much more persuasive. Further, even if the Ephesian Hermasodus who was said by Pliny, N.H. xxxiv, 21, to have had a hand in the drafting of the Twelve Tables at Rome was the Hermasodus of fr. 121 (as Strabo, 14, 644, conjectured), this does not lower the date of the fragment: the Tables
were established about the middle of the century, but a foreigner would scarcely have been called on to assist immediately after his arrival in Rome; indeed, before this happened he might well have lived in exile for thirty years or more. No evidence for date can be derived from the very questionable echoes of Heraclitus in Epi-
diciones (see p. 393). On the other hand, it seems more probable
than not that Parmenides referred to Heraclitus: the emphasis on the
canonical lack of connection between the initial active substances
in the Way of Seeming, although formally part of the view of
mortals, may represent Parmenides' own elaboration of the
promise offered by the Heraclitean opposite-doctrine: fr. 8, 5ff.:
τότε θεός 
η τιμία θεός και ἁμάκε 
τι μνη 
εἰσαγωγα 
ἐν οἰ 
πάντων 
τῶν 
δὲ 
ἐκείνοι ἡ 
πάντων ... On the
other hand, I feel doubtful whether the better known passage
attacking the third 'way' is directed specifically against Heraclitus,
though he no doubt is included; fr. 6, 6ff.: ... εἰ δὲ προσφέροντα
καθος δέως τυπικὲς τι, τεθητείσαι, σκέπησθαι φύσιν. Of the 
πάντων τῶν 
καθος 
προς 
παράνο 
καθε 
καθ 
καθ
Heraclitus certainly never identified being and
and not-being (see p. 373), and the 'backward-turning path' is in
meaning very different from the 'method of joining which operates
in both directions' of fr. 51 (p. 201) or the 'way up and down'
of fr. 60 (p. 107), whatever its interpretation.

Karl Reinhardt in the book already cited attempted to show that
Heraclitus worked not before but about twenty years after Par-
menides, and that the theories of constancy in change were an
attempt to meet the Eleatic dilemma. His arguments are in the main
subjective, e.g. that the antithetical style of Heraclitus belongs later
in the century, and that the repetitions of argument are influenced by
the professedly circular argument of Parmenides. The appeals to
external chronological evidence are no more convincing: for example,
Reinhardt attaches weight both to the early Apollodorean dating of
Parmenides which is refuted by Plato (see Bury 169), and to the
view shared by Eusebius and Hippolytus according to which
Heraclitus was a contemporary of Empedocles (see Table III on
p. 34). The latter is a hopelessly distorted account which was
probably propagated by Heraclides Lemnus. This is not the place to
undertake a detailed refutation of Reinhardt's thesis, which has won

This section is about the life of Heraclitus. The ancient evidence on this subject is thin and unreliable. Plato
tells us no more than that Heraclitus was an Ionian and from Ephesus; Aristotle adds no personal information except the anecdote
at de part. on A 3, 544a17 (DK 22A9), that Heraclitus, 'warming himself before his 'iron', told some hesitating visitors to enter; for
there were gods there, too. If 'iron' here means 'stove' the reference
is to fire; if 'midden', to the tufts of Hesiod and Pythagoras.
Theophrastus of Nicaea indeed contained no personal information
beyond the names of native city, father, and perhaps tribe, of each
philosopher. Peripatetic biography was chiefly represented by
Aristoxenus, whose Περί μεταστασι 
and similar works may have contained
some source-material on Heraclitus which was utilized by some of
the authorities used later by Diogenes Laertius. The Stoic writers
on Heraclitus of whom we know, Cleantus and Sphairos, probably
restricted themselves to his theories. It was in Alexandria that
ancient 'biography' came into its own: all that could be was called
from classical sources, the rest was supplied by the imagination,
whether roaming freely over the traditional semi-mythical patterns
of Famous Lives (Humble origins, strange diets, captures by pirates,
eccentric deaths, and so on) or more strictly confined to the elabora-
tion of themes suggested by the subject's extant writings. The only
substantial ancient biography of Heraclitus, by Diogenes Laertius,
draws freely on this kind of source. Diogenes, who worked in the
third century B.C., bad access to a large number of handbooks
...
INTRODUCTION

(biographical, doxographical, chronological and diachronic) and
summaries, which had been compiled, revised, shortened and recon-
taminated between the early third century BC and his own day. He
often names his sources and sometimes records conflicting accounts;
but it is evident that even if the works of his fuller authorities, like
Diodes of Magnesia and Hermippus of Smyrna, had survived, we
should still know little that was true about Heracleitus' life. Diogenes'
account is translated below, with running commentary:

Diog. L. ix, 1 ff.

Heracleitus son of Blosus (or according to some, of Herakon), of Ephesus.
This man was at his prime in the 6th Olympiad.

The father's name is also given as Blosus, Blyson, Bautor; but
Blosus is the best attested. Herakon might have been his grand-
father's name. Cf. Ἡράκλειτος Ἡράκλειως in IG ii 4, 100, 71, 83.

He grew up to be exceptionally haughty and supercilious, as is clear also
from his book (οὐσίαν κατηγορεῖται), in which he says... [fr. 40, 41, 42]. (5) And
he said also... [fr. 43, 44]. And he attacks the Ephesians too for having sold
his companion Hermocrates, whom he says...[fr. 121].

These quotations are meant to illustrate Heracleitus' conceit. Fr. 43,
44, introduced by the words ὁ οὐσίαν κατηγορεῖται, are probably an addition,
as perhaps is fr. 121 (quoted with slightly greater accuracy by
Strabo); they are not altogether irrelevant, as K. Deichgräber (in his
valuable article 'Bemerkungen zu Diogenes' Bericht über Heraklit',
Philologus 95 (1938-9) 125ff.) has shown.

When he was asked by the Ephesians to establish laws he refused to do so,
because the city was already in the grip of its evil constitution. (5) He used to
retire to the temple of Artemis and play knucklebones with the children; when
the Ephesians seized round him he said: 'Why, villains, do you marvel? is it
not better to do this than to join you in politics?'

At this point begins a series of fictitious stories about Heracleitus,
childishly and often maliciously developed out of sayings of his well
known in later antiquity, many of which are preserved as fragments:
see, as well as Deichgräber, II. Fränkel APF 59 (1938) 309ff. The
refusal of the request to make laws (a standard occupation for early
sages, cf. Xenophon, Pythagoras, etc.) is probably based upon
Heracleitus' interest in οὐσίαν (fr. 44, 114) together with his fierce
criticism of the banishment of Hermocrates (fr. 121); from which it
could be inferred that he was hostile to the régime. The game with
the children is perhaps based upon fr. 52: 'Time? is a child playing,
playing draughts; the kingship is a child's.' The significance here of
the temple is not clear, except that it was known to lie outside the
town and would therefore be an obvious resort for disgruntled
citizens. The remark to the Ephesians is quite commonplace, just the
sort of thing which might be made up: Kranz thinks it genuine.

Finally he became a misanthrope, withdrew from the world, and lived in
the mountains feeding on grasses and plants. However, having fallen, in this way
into a dry spell he came down to town and asked the doctors in a riddle if they
could make a drought out of rainy weather. When they did not understand he
brought himself in a barnyard (βοτάνια, lit. 'cow-stall'), expecting that the
dropsy would be evaporated off by the heat of the manure; but even so he
tried to effect anything, and ended his life at the age of sixty. Here is a little
thing I wrote about him: 'I have often wondered how Heracleitus having stayed
his life to the dregs died in this ill-fated fashion; for an evil sickness watered
his body, quenched the light in his eyes, and brought on darkness.'

The fiction's intensity. Misanthropy is deduced from the many
criticisms of the οὐσίαν, vegetarianism perhaps from fr. 5 (criticism
of blood-purifications). The fatal dry spell is a reflection of fr. 36
('it is death for souls to become water'): cf. also Marcus Aurelius
iii, 5. The expression οὐσίαν κατηγορεῖται (translated above as
'dropping into a dry spell') probably depends on fr. 31, πρὸς
τρόπους τοῦ νομοῦ οὐσίαν... The riddle to the doctors (cf. fr. 56)
illustrates a notorious characteristic—Diogenes below quotes
Timon's description of Heracleitus as 'riddler'. Heracleitus attacked
the doctors in fr. 58: now, because of his wilful obstinacy, they do
nothing for him. The burying in manure is perhaps based on the
mention of dung in connexion with corpses in fr. 96. Fränkel is
undeniably right that the biographers try to subject Heracleitus to
every kind of ignominious situation which could be based upon his
sayings, in reprisal for his contempt for men. The expectation that
the dry spell would be evaporated is based upon the theory that the sun
feeds on evaporation from the sea. Deichgräber suggests that the
age of sixty is from Aristotle, who at Diog. L. viii, 52 is quoted as
saying that Empedocles and Heraclides died at this age: probably
Heracleitus should be read here. But sixty years was a good life-
period when in doubt. Diogenes' deplorable epigram contains
INTRODUCTION

(3) Hermippus says that he questioned the doctors as if anyone can reduce the entrails and draw off the phlegm; when they said 'not', he placed himself in the sun, and told the children to call him with nature; being thus stretched out he died on the second day and was buried in the market-place. Neanthes of Cyzicus says that being unable to break off the mantle he remained, and not being recognized because of the change he was devoured by dogs.

Hermippus of Sicyonia and Neanthes both lived in the third century B.C.; the former wrote an extensive work on the lives of great men, including many philosophers; he concentrated especially on bizarre deaths, following a work of Diocles according to Diels, "Herakleitos" 35. The burial in the market-place was standard in such works, e.g., for example, the pseudo-Herodotean "Life of Homer". Diels read τεταρτον κενος διονυσος, πασην θεον τεταρτον, Γαρμνων, of the spleen, is used by Diostorides, "De Med. 11, 155. In any case the language of Hermippus' version is not graphic, but technical-medical; the graphic version is obviously more appropriate in the context. It occurs in the sixth Letter, and there is perhaps a reminiscence of it in Philostratus "Vita Apollonii" 1, 9 (to a drunken sowing from dropy) διονυσος κενος θεος. How the variant version arose is beyond our knowledge.

(4) He was exceptional from childhood, as a young man he was professed to know nothing; yet on reaching manhood he claimed to know everything. He was no one's pupil, but said that he had searched for himself and learned everything from himself. But Sotion says that Sokrates claimed to be a pupil of the Ionian Xenophanes, and that Aristotle in his "On Heracleitus" said that he was cured of the dropy and died of another disease; Hippobrotus too says this.

That Heracleitus had no master was deduced from fr. 107; 'I sought for myself'; the assertion that he once claimed to know nothing is probably based upon Sokrates. Sotion was an Alexandrian scholar who shortly after 200 B.C. wrote a history of Greek philosophy on the broad assumption that each thinker was a pupil of his chronological predecessor; he also distinguished the Ionian and Italian 'schools'. It is not clear whether he himself believed that Heracleitus was a pupil of Xenophanes; that conjecture is bound to be made by someone, but, in spite of Heracleitus' probable debt to Xenophanes' religious rationalism the critical tone of fr. 40 does not support a master-pupil relationship. The variants on the manner of death are further expanded; they evidently came into being comparatively early, for Hippobrotus too worked before 200 B.C.

INTRODUCTION

The book said to be his is called 'On Nature', from its contents, and is divided into three discourses (ὑμεύς): On the universe, Politics, Theology. He dedicated it and placed it in the temple of Artemis, as some say, having purposely written it rather obscurely so that only those of rank and influence should have access to it, and it should not be easily deciphered by the populace. Tischendorf sketches Hermogenes in these words: Among them kept up crowing, right-rolling, nodding Heracleitus. Theophanes says that out of his lucubrations (ἐξαναγάλυπτος) part of his writings are unfinished, part inconsistent. (Antithenes in his "Successions" quotes as a sign of his arrogance that he assigned the heretical 'kingship' to his brother.) The work had so great a reputation that from it disciples arose, those called Hermogenians.

The Stoics divided philosophy into three parts, logic, ethics and physics; Cleanthes subdivided into dialectic, rhetoric; ethics, politics, physics, theology. It is the last three of these subdivisions which are attributed to Hermocles, as Deecher, loc. cit. 19, pointed out. Hermocles' own words can never have fitted into such a rigid scheme; judging from the extant fragments there was comparatively little about politics and quite a lot about ethics; it must be remembered that on the Peripatetic view these came in one category. The fragments about god cannot be separated from the physical fragments; for Hermocles all branches of knowledge were interconnected. The division is a Stoic one; perhaps some handbook of savings, published in Alexandria, had been given this form. Thus when Diogenes or his sources mention a book (ἐγγράφαι or ἔνδομα) of Hermocles they may have been thinking of a later compilation. It is possible Heracleitus wrote no book, at least in our sense of the word. The fragments, or many of them, have the appearance of being isolated statements, or ἔγκλημα: many of the connecting particles they contain belong to later sources. In other words, shortly after Hermocles' lifetime a collection of these sayings was made, conceivably by a pupil. This was the 'book': originally Hermocles' utterances had been oral, and so were put into an easily memorable form. The generally ascribed title 'On Nature' means nothing; this was a standard title applied to all works by or attributed to those whom the Peripatetics classified as σωσικοι. Of course it cannot be proved that Heracleitus wrote a book, or that he did not; but I shall normally refer to his 'sayings' rather than his book, because in either case this seems to give a true idea of his intentions and methods. The deposition of the book in the temple of Artemis is another biographical commonplace; similar stories were told of
INTRODUCTION

Hesiod, Crantor and others. Wilmottowitsch, Glaube der Hellenen 11, 210 n. 1, suggested that there was truth in the story. This, of course, may be so; but the apparent motive for putting the book in the temple, that only the upper class and not the common people should have access to it, is one which might have been invented on the basis of the fragments (especially, for example, fr. 29); further, any Ephesian would be expected to have some connexion with the famous temple, and one certainly fictitious incident, the game of knuckle-bones with the children, was set there. It is very possible that there was an aetiological motive for the story: if the book was kept in the temple then it would have been destroyed in the fire of 356 B.C., thus explaining the absence of a complete version in the Alexandrian library.

Timon (of Phlius, the silicograph, c. 320-250 B.C.), with his abilities, first summarized what was to become Heraclitus’ chief claim to fame, the obscurity which was later recorded in the almost invariably epithet σκληροτυχóς or “obscurus” (Cicero de fin. 11, 5, 15; Aristotle, de mundo 3, 396b20, etc.). The meaning of the term ἀγαθόκλεια attributed to Heraclitus by Theophrastus is a technical one, as Deichgräber, loc. cit. 215, pointed out, and is given by Aristotle EN 8, 1150b23: “melancholic” are those who διὰ τὸ χρόνον ἐπιτυγχάνοντα οὐκ ἀναξιοῦσιν τὸν λόγον διὰ τὸ ὀλοκληρωμένον ἄνθρωπον. Ancient and some modern critics took the meaning to be simply “melancholy”, and so began the futile legend of the “weeping philosopher”, perhaps with the help of the τετελεσμένον interpretation (Seneca de tranq. 15, 2; Lucian Vit. auct. 14, etc.). Next in the accretion comes a misplaced remark from Aristophanes of Rhodes, the second century B.C. Succession-writer, which tells us that Heraclitus must have belonged to the Androcles family. According to Strabo 14, 652, the descendant of Androclus son of Codrus, the founder of Ephesus, were still called “kings” and had certain ceremonial privileges—a front seat at the games, the right to wear royal purple and to carry a special kind of staff, and the management of the rites of Eleusinian Demeter. Clearly only the senior male member of the family had these privileges, which are scarcely likely to have appealed to Heraclitus. There is no obvious motive for inventing this story, which might provisionally be accepted as true. The remark which follows is important, since it shows that in the opinion of the biographer who is Diogenes’ source at this point the “Heracliteans” had not been members of a “school” of Heraclitus, but were simply devotees of his book. “Heracliteans” were presumably known to later antiquity from the remarks of Plato and Aristotle which will be mentioned later (pp. 14 ff.).

(7) His opinions were in general (κατάστασιν) these: all things are composed from fire and into this they are resolved; everything comes-to be according to fate and existing things are connected through the turning in opposite directions (τοις κοινωνομοποιηθαίς τοῖς κατάλληλοις λόγοις; see Diels, Doxographi 165); and all things are full of souls and demons. He spoke also about all conditions of organism in the world and said that the soul is the size it appears to be. And he said too... (fr. 41), and he called one soul a sacred disease, and so on, being deceived [—fr. 48]. Sometimes in the book he utters transparently and clearly, so that even the chrestestus can understand and receives an elevation of the soul and conscious and weight of his exposition are incomparable. (8) And his detailed opinions (οἷς τίνι μόνον... τίνι δέχομεν) were as follows....

Diogenes Laërtius usually gives a general or summary (καταστάσεις) of a specific (κατά τινα μορφήν) account of the theories of the philosophers he describes. Diels, Doxographi 165, has shown that both accounts are derived from Theophrastus, the specific one from a good doxographical summary and the general one from a careless and trivial biographical work. Deichgräber’s theory (Philologus 93 (1938-9) 23 ff.), that the general account as well as the special one closely follows Theophrastus, is most improbable. The general or summary account of Heraclitus is a good example of the heterogeneous character of these passages. It consists of a little Stoicizing doxography, a more or less arbitrary series of references to sayings, genuine or otherwise, of Heraclitus, patched on with an ἔκρηγμα κατ' άρχον τε, and finally a stylistic judgement after the manner not of Theophrastus (whose criticism of Heraclitus’ exposition is unfavourable) but of the rhetorical-critical school best represented by the author of Πίθηκος. The special doxographical account follows: it is omitted here as irrelevant to the life of Heraclitus, but see pp. 328 and pp. 270 ff.

... And these were his views.—The story about Socrates and his remark on coming across the book when Euripides introduced it, according to Aristotle, I have told in my section on Socrates. (22) However, Scholus the grammarian
INTRODUCTION

says that a certain Crotous relates in his 'The Diver' that a man called Grates first introduced the book into Hellas, and said that it needed a Dalian diver not to be drowned in it. Some give it the title of 'Muses', some 'On Nature', Diototus 'A well-found riddle for the rule of life', others 'A pointer of morals'. 'One order of behaviour among all'. They say that when asked why he was silent he replied 'That you may bubble'. Darius, also, desired to make his acquaintance, and wrote to him as follows: [Here follow the first and second of the collection of letters falsely attributed to Heraclitus; the first purporting to be an invitation to the philosopher, the second an abrupt refusal.] Such was the man even to a king.

The other version of the Dalian diver remark, there attributed to Socrates, is at Diog. L. ii. 22. Kranz in DK, by making the sentence about Seleucus, Crotous and Grates a parenthesis, attempts to retain the attribution to Socrates here, but the infinitive order in this case is difficult, and it is evident that Diogenes is here giving a slightly different version. The rambic rhythm of Δίπλος τοῦ διέσκευον κολομβητήν, δαίμονος ἐποικετήσατο ἐν σώματί (cf. also A.P. ix. 578), and supports the possibility of a dramatic origin. Euphrates was named by Ariston as having introduced the book into Greece (not merely to Socrates), probably because he was the first to own a library and was known as a friend of philosophers. The list of titles or mottoes is largely fictitious—only 'On Nature' has any plausibility, and on this see pp. 7 and 371 n.; 'Muses' is from Plato Sophist 242a3; Diototus (who is mentioned again below) gives a verse summary; the others are quaintly still and obviously of Stoic or Cynic origin. The textual uncertainties need not trouble us. The fictitious letters were probably composed in the first century A.D. (p. 59); these two may not be by the same hand as the others. The origin of the story connecting Heraclitus and Darius is not known; but Saris, which was only three days' journey from Ephesus (Herodotus v. 54), was probably still visited by many Ionians, and the proposal of a meeting, though unlikely and the sort of thing that appealed to an Alexandrian academic, is not impossible.

(15) Demetrius says in his 'Men of the same name' that he seemed the Athenians also, among whom he had the highest reputation, and that although held in despite by the Ephesians he nevertheless preferred his native surroundings. Demetrius of Phalaris, too, mentioned him in his 'Apology of Socrates'. There are very many who wrote commentaries on his book—Antisthenes and Heracleides of Phalana, Cleantus and Sphenus the Stoic, and in addition Panaxius the so-called Heraclist and Nicomedes and Dionysius. Of the grammarians Diototus did so, who says that the book is not about

INTRODUCTION

Nature but about government, and that the physical parts belong in the class of allegory. (16) Hieronymus says that Sphenus too, the author of the Rambic, undertook the expression of Heraclitus' account in the same.

This plenitude of sources may be due in part to a bibliographical index, though there is no reason to doubt that Diogenes, by the medium of handbooks, had access to a large number of authorities. Demetrius of Phalaris, c. 350-323 B.C., was for some time librarian at Alexandria. Antisthenes the Heracleitan is distinguished from the Socratian, also from the Socratian writer already mentioned, by Diogenes at v. 19. Heraclides, the member of the Academy, is said by Diogenes at v. 88 to have written four books of §ιμπας σβος of Heraclitus, and thus was one of the earliest full sources; Cleantus the Stoic also wrote four books of commentary (Diog. L. vii. 174), while Sphenus, the pupil first of Zeno and then of Cleantus, composed five 'studies' (Σεραπας) on Heraclitus (Diog. L. vii. 178). Cleantus' interest is apparent from the extant Hymn to Zeus, and from Euxiporus fr. 391; see on frs. 41 and 12. Of Pausanias the Heracleitan, Nicomedes and Dionysius nothing else is known. Diototus, whose political interpretation is as ridiculous as his verse motto mentioned above, may be of Sidon, brother of the Periopater Boethus and himself a member of the Lyceum in the third century B.C. Hieronymus is presumably the third century B.C. Periopater and literary historian, of Rhodes; Sphenus of Teos is usually put in the fourth century B.C. (Jacoby in RE, s.v., calls him a contemporary of Plato), but his two surviving fragments (the second restored to trochees by Wilmowitz) they are to be found in DK 2223 2) remind one very strongly of Cleantus, and I suggest that Sphenus actually overlapped the Stoic: Hieronymus did not die till 370 B.C., so Sphenus' versions (which were doubtless very rare indeed) could have been composed as late, say, as 240.

He is the subject of many epigrams, among them these one: 'I am Heraclitus: why do you uncharacterized one drag me to the fire (κατά σέ θανάτο) Not for you did I toll, but for those who know me. One man to me is as thirty thousand, the numberless multitude is as no-one: this do I proclaim even in the domain of Persophonia.'—and this other one: 'Do not be in a hurry to unwind to the centre-stick the roll of Heraclitus the Ephesian; the path is hard indeed to traverse. There is gloom and unrelieved darkness; but if an initiate lead you, it shines more brightly than the shining sun.'

The first epigram (= A.P. vii. 128) is of no merit, and drags in Heraclitian clichés much in the manner of the false letters. The
INTRODUCTION

second (= A.P. ix, 140) is of higher poetical quality, and the imagery from the Mysteries (in which the novice was led from darkness into the brilliantly lit scene of revelation) is effective: the suggestion, too, that beneath the obscurity of Heraclitus' style a clear and penetrating thought is concealed, is not a common one. Heraclitus was not much admired, except as a curiosity, outside Stoic circles. Deichgräber indeed (loc. cit. 29 ff) has suggested that the epigram may have stood as Introduction to a commentary on Heraclitus, and has tentatively proposed Cleanthes as author; he wrote such a commentary and was also a competent versifier. This must remain pure speculation: but it is not an impossible one.

(17) There were five men named Heraclitus: first this one; second a lyric poet, author of the exordium of the Twelve Gods; third the elegiac poet of Halicarnassus, to whom Callimachus wrote: 'They told me, Heraclitus, they told me you were dead...'; fourth a man of Lesbos who wrote a history of Macedonia; fifth a historian who adopted this role after having been a lyre-player.

In addition, there was the writer of the Homeric Allegories. As far as we know there was no confusion in antiquity between the philosopher and any of these namesakes, who were all, probably, much later. Diogenes is perhaps dependent here on Demetrius' 'Men of the same name', already cited; with this passage his account of Heraclitus ends.

Other biographical information:

(i) the very brief account in the Suda (DK 22 A 1a) adds to Diogenes another variant to the fable about his death: that it was caused by being buried in sand. It also says that some made Heraclitus a pupil of Hippasus as well as of Xenophanes; and asserts that he wrote much in verse. Aristotle, of course, connected Heraclitus and Hippasus because according to him they both made the first principle; this is the cause of the story. As for the composition in verse, this is either due to confusion with Empedocles or to the existence of verse versions like Scylarchus', and a hexameter version (see Zeller ZN 810 n.). The similarities between the Suda and Diogenes are sometimes due to direct dependence, more often to the use of the same collections and handbooks (Schwartz RE 5, 751 f).

(2) Clement also used the same materials as Diogenes and has some parallel passages (Schwartz RE 5, 750 f); at St. i, 65, 4 (11, p. 41 Stillin; DK 22 A 3) he has a unique piece of information, that 'Heraclitus the son of Byson persuaded Melancomas the tyrant to reject the rulership'. This may be a perversion of the story that Heraclitus himself gave up the hereditary sceptre of the Androcids; possibly Melancomas, otherwise unknown (there was an Ephesian of that name in 214 B.C.: Polybius viii, 15 ff), is the same as Comans who was tyrant in the later sixth century, but who did not as far as is known voluntarily resign the tyranny. Probably the story is a fiction of the common philosopher-influencing-king category.

(3) Plutarch and Themistius (DK 22 A 3b) preserve stories, the same in essence but different in circumstance, that Heraclitus, being asked for advice, silently recommended to the Ephesians a simpler way of life by mixing water and barley, stirring it, and drinking it down. The story seems to be an embellishment of fr. 125 ('The barley-drink, too, separates if it is not stirred'); the act of stirring is irrelevant to the story but is specifically mentioned by Plutarch. Compare the anecdote at Diog. La ix, 12: when asked why he was silent Heraclitus replied, 'That you may babble.'

III. THE ANCIENT EVIDENCE ON HERACLITUS' THOUGHT

(i) PLATO

There is probably no evidence earlier than Plato, except for the fragments themselves and the doubtful references in Parmenides and Epicurus. The Hippocratic de victu (see p. 21) is probably post-Platonic.

Direct quotations

Virtually none. In the Hippias Major (289 a, b) come frs. 82-3 (good surpasses man by as much as man surpasses ape), quoted for their form rather than their content and partly re-worded.

References to or paraphrases of extant fragments

To fr. 6 (the sun is new every day), at Rep. vii, 498 a; to fr. 51, see ii (1) and (2) below; to fr. 12, see i (a) (1) below.
INTRODUCTION

General references

i All things are in flux (Cratylus and Theaetetus).

(a) Attributed to Heraclitus himself.


(2) Theaet. 160b: All things move like streams according to Homer and Heraclitus and all that kind of tribe (semi-jocular).

(3) Theaet. 152b, 8: All the sages—Protagoras, Heraclitus, Empedocles, Homer, Epicharmus—except Parmenides say that everything is the offspring of flux and motion.

(b) Attributed to the Heraclitans.

(1) Crat. 440c, 6: Things are in flux, ‘as those around Heraclitus (οἱ τῶν Ἰσορροπών) say and many others’.

(2) Theaet. 175c–180a (Theodorus speaks): The battle between those who support and deny a stable reality is actually growing fiercer around Ionia (πρὸ τῶν Ἰωνίων), for the companions (τῶν συμμαχῶν) of Heraclitus support the latter view. It is impossible to discuss the Heraclitan (or as Socrates says, Homeric) arguments with those around Ephebus (πρὸ τῶν Ἐφεσίων), because of their eristic methods of evasion. . . . (1850) There is no such thing as master or pupil among them, but they spring up of their own accord. —This last statement suggests strongly that Plato did not intend his earlier local references to a Heraclitan sect in Ephesus to be taken too seriously or literally.

(c) General unattributed comments: Plato’s criticisms.

(1) Brief references to the flux of things at Theaet. 156a, 177c, 181a (τῶν ποιεστός), 182c; Crat. 411b, c (humorous), 419c; Phaedo 93c; Phileb. 43a; Sophist 249b.

(2) Theaet. 181c–e: The believers in flux must believe that things change qualitatively as well as by movement in space. Plato reaches the conclusion that ‘everything moves in every way all the time’, πᾶν ἥν ἔσσει κίνησιν ἐν κινήσει (therefore, he concludes, knowledge cannot be perception).

(3) Theaet. 183b: If all things are moving then every answer to any question is correct.

ii The one is also the many (cf. fr. 51).

(1) Sophist 242b, 5: The Ionian and Sicilian muses (i.e. Heraclitus and Empedocles) say that reality is both one and many, simulta-

necously so according to Heraclitus (βασιλέως γέρας ἄνθρωπος), in turn according to Empedocles.

(2) Symp. 187a: Music also is ordered by the god of love, ‘as perhaps Heraclitus too wishes to say, although he does not express it well in his words: for the One, he says, when in discord is in concord with itself (βασιλέως, ὁτί οὐκ ὁρήκεις συναρπάσεαν), like the harmony of bow and lyre’. —Plato interprets ὁρήκεις here, anachronistically, in a musical sense, as equivalent to συμμαχοῖς. He thinks that Heraclitus must have expressed himself badly, because there cannot be agreement or concord of things which simultaneously differ: perhaps Heraclitus meant that they previously differed. —Here Plato appears to misunderstand Heraclitus’ idea of the coincidence of (relative) opposites, which he himself clearly expressed in the Sophist (ii (i) above). The Sophist was written after the Symposium, which perhaps suggests an improvement in Plato’s understanding of Heraclitus; though the present passage comes in a fantastic speech by Brysonachus, and perhaps should not be taken too seriously.

iii Other references to possibly Heraclitan ideas.

(1) Opposites come from opposites: Theaet. 152d; Phaedo 70b (καὶ ὁ ἐξ ὁμοίων τοῦ ἀντικτίτων).

(2) Crat. 412c–413c: The etymology of ἑκατέρος on the flux-principle. There is something most swift and most subtle, which governs all other things by passing through them (ἐνεκτίτων): some say this is the sun, others fire, others heat. See p. 363.

Conclusion

Plato’s knowledge of Heraclitus was evidently limited, though it should be remembered that he only adduces earlier views where they are relevant to his own conceptions. The references to the flux of things are by far the most common; this was emphasized because of Plato’s own deduction from flux (possibly derived by him from Cratylus) that knowledge of phenomena is therefore impossible. The place of fire in Heraclitus is completely neglected, except possibly in iii (2). He knows about the emphasis on change between opposites, though this was perhaps a commonplace of Ionian thought: more important, in the Sophist (ii (i) above) he interprets Heraclitus’ main contention correctly, that things are simultaneously one and many; in this he well distinguishes him from
INTRODUCTION

Empedocles and thus shows that a periodical cosmogony of the Empedoclean type is impossible for Heraclitus. Many of Plato's references are plainly distorted for humorous purposes; perhaps the descriptions of the "Heracliteans" are mainly derived from his own reflections upon the river-fragment, and his application of it to things in general.

(i) ARISTOTLE

Direct quotations

Fr. 1, first clause only (the Logos); fr. 6 (the sun new every day); fr. 7 (if all turned to smoke); fr. 9 (as she prefer sweeping to gold); fr. 85, slightly abbreviated (difficult to resist desire).

Recognizable paraphrases

Fr. 8d (paraphrase of frs. 51, 80)—joins tend apart, things happen by strife); fr. 12 (modification of Plato's version); see also iii below, which is probably a reasonably close paraphrase of Heraclitus.

General references

i Heraclitus' philosophical method.

(1) ENH 5, 1146b 23: His dogmatism—Heraclitus is an example of someone who believes in conjecture as much as in knowledge.

(2) Phys. A 2, 185a 35: His thesis (either that opposites are the same, or that all things move) is an example of one advanced for the sake of argument.

(3) Rhet. Γ 5, 1407b 13: His style is difficult because of ambiguous connections, as with ἀδικία in fr. 1.

ii His logical fallacy: he denies the law of contradiction.

(1) Top. Θ 5, 159b 30; Phys. A 2, 185b 19: Heraclitus, by saying, for example, that good and bad are the same, invalidates all significant predication.

(2) Met. Γ 3, 1005b 23; Met. K 5, 1062a 31: A man like Heraclitus need not really believe what he says; he could quickly be shown his error by dialectic.

(3) Met. Γ 8, 1012a 33; Met. Γ 3, 1005b 35; Met. K 6, 1063b 24: According to Heraclitus it is impossible to speak the truth one way or the other. Met. Γ 7, 1012a 24, ‘the argument of Heraclitus... makes all things true’, cf. Plato Theat. 183a (if all things are moving every answer is correct); contrast Met. Γ 8, 1012b 26 (see p. 95 n.).

iii Strife and opposition necessary for the continuance of a unified cosmos.

Euth. End. H 11, 1235a 21: Heraclitus rebuked Homer for making Achilles pray that strife would depart from gods and men; for there would be no harmony without high and low, nor living creatures without male and female.—These opposites are necessary for the existence of a consequent unity. The examples from music and the sexes are probably not by Heraclitus, but are supplied either by later elaborators or by Aristotle himself. The remainder probably reproduces an actual rebuke by Heraclitus, which is attested also by Simplicius and Numenius (see DK 22a 22), who give a different consequence, that the world would be destroyed.

iv Change: Aristotle develops the Platonic interpretation.

(1) Met. Γ 5, 1008a 7: The most extreme form of Heracliteanism is exemplified by Cratylus, who blamed Heraclitus for saying that you could not step into the same river twice; for he thought, not even once (ref. to fr. 12).

(2) Met. A 6, 987a 29: Plato was familiar with youth with Cratylus and the Heraclitean opinions that all perceptions are in flux, so that no knowledge of them is possible. Met. M 4, 1078b 12 gives another version of this.

(3) Phys. Θ 3, 253b 9: Some people say that all existing things without exception are moving all the time, and that this escapes our perception.—Compare Plato Theat. 181c 2 (i (c) 2 above): Aristotle simply adds to Plato's conclusion the inference that some types of movement must be invisible. This undoubtedly refers to Heraclitus and the Heracliteans, and as far as the former is concerned may involve some distortion of his real views on change.

(4) Top. A 11, 104b 19: Heraclitus' contention that all things are moving an example of philosophical paradox.

(5) de cæto Γ 1, 298a 25: The first natural philosophers, among others, thought that everything was coming-to-be and in flux, but that there was a single fixed substratum, from which the things in flux were changed in various ways: Heraclitus, among others, must have meant this. This is sheer Aristotelianism; Heraclitus' substratum, of course, is identified by Aristotle as fire.

(6) de cæto A 10, 279b 12: All thinkers assume that the world had a beginning; Empedocles and Heraclitus think that it is in its present
INTRODUCTION

condition, and then perishes, by turns (νεκράς).—This is probably a confusion of the contrast between Heraclitus and Empedocles at Plato Soph. 242r, (1) above. It is not even true, of course, that Heraclitus thought the world to have had a beginning; cf. fr. 30.

v Fire.

(1) Met. A 3, 984a5: Fire is the material principle (ἀρχή) according to Hippasus and Heraclitus. Cf. also de caelo 7, 303b10; GC B1, 328b31, etc.

(2) Met. A 8, 984a1: Fire has the finest parts of all natural bodies (μικροτέρον καὶ λεπτότερον), cf. dēsauron tov dēn kai pev dēl, of the fiery exhalation, at de an. A 2, 405a23.

(3) Phys. 5, 269a3: According to Heraclitus fire at some time becomes all things.—This refers to the basic position of fire in natural changes, cf. fr. 31: it does not suggest of itself that fire becomes all things at the same time, although in view of iv (6) above, an ecpyrosis interpretation cannot be excluded for Aristotle.

(4) de an. A 2, 405a23: Soul is always made out of the ἀρχή, therefore for Heraclitus it was 'the exhalation out of which he compones the other things...which is most incorporeal and ever-flowing...he thought that all things were in motion'.—By this exhalation Aristotle means fire. Cf. the anecdote at de part. anim. A 5, 641a17 (p. 3), in which the point may or may not be the fierceness of the kitchen stove (cf. D. S. Robertson, Proc. Camb. Philos. Soc. 169 (1938) 10).

vi Meteorology.

(1) Meteor. B1, 354b33-355a21: In this passage only fr. 6 (the sun new every day) is specifically attributed to Heraclitus, but the theory that the sun feeds on moisture, and that the solstices are due to its search for food, and the criticism that the sustenance of the stars is neglected, might also refer primarily to him.

(2) [Problems] xiii, 354b33: Some of those who Heraclitize say that from fresh water stones and earth are dried out and condensed, while from seawater the sun draws its nourishment by exhalation.—This might be by Aristotle himself; the distinction is possible for Heraclitus, though in fr. 31 he uses 'sea' for cosmological water in general. [Probi. xiii, 354b33] also refers to Heraclitizers, but its content seems to be influenced by Stoic ideas.

Conclusion.

Aristotle displays a more detailed knowledge of Heraclitus than Plato; the quotations he gives, though few enough, are on varied subjects and suggest that he had access to a good collection of sayings. These quotations are introduced more or less incidentally, to illustrate points of his own; their proper meaning is sometimes distorted. Aristotle seems entirely to misunderstand the opposition doctrine, or at any rate to subject it to a kind of criticism which is really irrelevant to it: by saying that opposites were 'the same' Heraclitus did not mean 'identical' in the strict sense. Yet in iii above Aristotle seems to show greater understanding of the theory. The Platonic ἀρχή interpretation is accepted, and its implications developed, e.g. that some changes are imperceptible. Fire is interpreted as the substratum of changes; this is closer (though by accident) to what Heraclitus meant than it is the more Platonic view. Aristotle's description of fire as the most subtle, least corporeal, and most kinec of substances, though doubtless due to his own deduction, may summarize Heraclitus' real reasons (perhaps never consciously formulated) for the priority of fire, though it neglects the important fact that fire undergoes regular alteration. One passage of Aristotle (Meteor. B3, 357b27, quoted on p. 379 but not above) gives river-water and flame as examples of regularity in natural processes; there is nothing to show that he had Heraclitus in mind, but this is possible, in view of the real significance of the river-statement and the priority of fire; Aristotle himself emphasizes in the Meteorologia that cosmic changes are balanced, and in this he may be following a line initiated by Heraclitus, just as his dual-exhalation theory may be a conscious development of Heraclitus' single exhalation from the sea. Yet the specific references to Heraclitus suggest that Aristotle was, after all, unaware of Heraclitus' emphasis on regularity in change, and that he accepted the ἀρχή interpretation without reservation. It is uncertain whether Aristotle accepted the ecpyrosis; only one passage, iv (6) above, suggests that he did; there seems to be a confusion here with Empedocles (see also Table III on p. 27). Aristotle perhaps originated less misconception about Heraclitus than Plato did, and his distortions are at any rate carried out for a determinable motive, i.e. to reconcile Heraclitus to Aristotle's own theories.
INTRODUCTION

THEOPHRASTUS AND THE DOXOGRAPHICAL TRADITION

Diels showed indisputably that the primary source of all doxographical material was the Θεοφράστου δοξαγωγ of Theophrastus, soon epitomized into two volumes and later transmitted, in a much reduced form and with some Stoic infiltration, through a lost collection of about the first century B.C. which he called the Verina Placita, to the surviving doxographical works, of which Aëtius is the most extensive. In the case of Heraclitus certainly the detailed version of Theophrastus preserved in Diogenes Laertius (ix, 8-11) is of greater value than Aëtius. Both were susceptible to Stoic interpretations, but on the whole we have enough material to gain some idea of Theophrastus' views on Heraclitus. As is to be expected, Theophrastus was heavily influenced by Aristotle's attitude to his predecessors. It is usually maintained that Theophrastus was more objective than Aristotle, that he had more material, and that he used direct quotations to illustrate his judgements. The second point is probably true; but Theophrastus' objectivity, especially over 'metaphysical' problems, is of a very low order, and as for quotations, in the long extant fragment On the Senses quotation is extremely rare, and many of his judgements are no better than conjectures made, one would say, in default of relevant evidence.

It should be unnecessary here to describe in detail the affiliation of the doxographical sources, or the general principles of doxographical methods; this is admirably presented in Diels' great Doxographi Graeci; a useful summary is given in Barnes' 'Note on the Sources', EGP xiv, 31-8. Overleaf (pp. 22 ff.) I have tried to illustrate as concisely as possible, in tabular form, how much Theophrastus depended on Aristotle and how much Theophrastus' successors depended on Theophrastus. An example of the confusion which could eventually result is given in Table III. A great deal of the relevant doxographical material which is not mentioned here is to be found under the appropriate fragments; practically all of importance is collected in the A-section of DK's chapter on Heraclitus (c. 22). There is remarkably little information in the doxography which is not to be had more accurately from the fragments; the most important is the information on Heraclitus' astronomy given in the detailed account of Diogenes (p. 270 f.), and that on the great year and the human generation (DK 22A 13, 18, 19) discussed on pp. 295 ff. To this must be added Sextus' important passage on the soul's contact with the Logos, preceding his quotation of fr. 1 (DK 22A 16; cf. 20); this is relevant to the fragments about men rather than the cosmic ones, and full discussion of it must regrettably be postponed.

OTHER SOURCES

(a) DE VICTU

It has long been recognized that the first book of the Hippocratic treatise de victu, and especially chapters 3-24, 25, 35, contains reminiscences of Heraclitus, and efforts have been made in the past to extract new information on Heraclitus from this source. It may be said from the start that this quest is doomed to failure: not necessarily because no new material on Heraclitus exists in these chapters, but because it cannot be identified as such. So heterogeneous is the style and the source-material of the author of this treatise—a man who professes in the first chapter his intention of using other people's results, where they seem to be the right one—that a particular passage can only be referred to a particular author when a close parallel to it already exists in that author; in this case the evidence of the treatise will be corroborative rather than original. On many of the fragments dealt with in the present work such reminiscences in the de victu are cited. Many other reminiscences, often running to more or less exact quotation, can be found, of Empedocles, Anaxagoras and Archelaus as well as of Heraclitus, even in these particularly Heraclitan chapters. These chapters are 'Heraclitan' mainly because the style consciously imitates the concise and paradoxical style of the fragments; further, the whole work is characterized by the dogmatism which Heraclitus manifested to a large degree. It seems likely that often what appears to be Heraclitan subject-matter will be found on examination to be purely medical (or Empedoclean, or Anaxagorean) substance cloaked in a Heraclitan style. Doubtless the adoption of this style tended to influence the author's thought in the direction of Heraclitan obscurity; in fact there are places in these chapters where I would say that the author (unlike Heraclitus) simply did not know what he meant.
**Table 1. Theophrastus’ dependence on Aristotle’s principles and interpretations**

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<thead>
<tr>
<th>Theophrastus Daed. Soc. fr. 1</th>
<th>Aristotle parallels</th>
<th>Comment</th>
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<tr>
<td>Θεοφραστος Ὁμ. Ὀξ. fr. 1</td>
<td>Μεταφραστεῖς Ὀμ.</td>
<td>Hipparus presumably made fire principle because of its supposed geometrical properties, there is no real similarity with Heracleus, with whom, however, he remained to be connected: cf. Sextus Empir. Adv. math. 4.33; Simp. de causa, p. 615, 23-24; Heidelberg; Dogg. L. viii. 84, 85, etc.</td>
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<tr>
<td>ἦπτοσα τῷ Ἐρείπιῷ καὶ Ἡράκλεα τῷ Ἐρείπιῷ</td>
<td>(i) Μεταφρ. A, 184b3 τῷ πόρῳ ἡ Ἀλκημένη καὶ Ἡράκλεας τῷ Ἐρείπιῳ (εἰς ἄρρητα τόπον).</td>
<td>Theophrastus simply applies the Aristotelian analysis. τοῖς Ὀξ. does not necessarily refer to the waters of interpretation, but applies to all elements (though see Aristotle 1.5. in Table III); this interpretation is otherwise lacking from the Theophrastus fragments as we have it.</td>
</tr>
<tr>
<td>εἰς καὶ αὐτοὶ καὶ κινοῦνται καὶ κτενούνται.</td>
<td>(ii) Phyl. A, 184b3 ἄγχυς ὁ ἄγχυς ἐν τῷ κατά τὸν ἐθελοῦντα, καὶ εἰς καὶ ἀνάμικτον, κατὰ τὸν ἐθελοῦντα ἐδείχθη.</td>
<td>Aristotle names thickening and thinning as one means of differentiation used by the natural philosophers, separation of opposites as the other (Aristarchus, Epicurus, Anaxagoras). Anaximander certainly used τὸ διαφέρειν καὶ τὸ διαφέρειν, as well as earlier, for example, Dioris in fr. 31). Perhaps Simplicius means this, since he is meaningfully wrote (in Phyl. p. 140 Diodo) that Theophrastus attributed the idea to Anaximander about (τοῖς Ὀξ. 1, 11 (Table II)).</td>
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<tr>
<td>βολάκιαν</td>
<td>(iii) Phys. A 4, 185a22: οὐκ ἐν τοῖς ἀσφαλεῖς τῷ ἔθελον καὶ τῷ ἐθελοῦντα, τῷ ἐθελοῦντα παραδείγματι καὶ παραδείγματι τὸν ἐθελοῦντα.</td>
<td>Theophrastus follows the Aristotelian principle that things return to the substratum from which they were originally differentiated. Fire is Homer’s αἴνεσις’, therefore all things are changed back into fire (simultaneously, it is implied, therefore in an epicyclical). For another statement of the principle see Theophrastus’ introduction to the Anaximander-fragments: Υπό εἰς Ὀξ. 1 ἐπὶ ἔκπεφεβότες Πτέρυγα Καρπινός, εἰς τὸ γένος ἐν τοῖς κάτω γενόμενοι “κατα τὰ χρώματα…”. Cf. also Aristotle 1, 5, 11 (Table II).</td>
</tr>
<tr>
<td>εἰς ἄρρητα τόπον τῷ πόρῳ</td>
<td>(iv) Μεταφρ. A, 393b2 ἐν τῷ ψευδῷ ἐπανειλημμένοις διὰ τὸν καταγόντα καὶ τὸν ἐθελοῦντα, τῷ ἐθελοῦντα τῷ κατά τὸν καταγόντα, τῷ κατά τὸν καταγόντα.</td>
<td>Heracleus is here first distinguished from Hipparchus by Theophrastus, who is dependent here directly on fr. 90, which is διά τοῦ Ὀξ. ἐν τῷ τόπῳ τῷ πόρῳ.</td>
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</table>
Table II. (i) The comparative fullness and accuracy of Diogenes’ detailed account; (ii) the close dependence of later doxographical accounts on Thesigerus

<table>
<thead>
<tr>
<th>Thesigerus fr. 1</th>
<th>Dox. L. 19, 7 (summarized account)</th>
<th>Dox. L. 19, 8 (detailed account)</th>
<th>Aristot.</th>
<th>Eusebius P.F. 41, 3, 8</th>
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<td>[Note: for details, see pp. 338-339.]</td>
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Table III. An example of progressive confusion between Heraclitus and Empedocles, initiated perhaps by Aristotle and aggravated by Heraclides Lampas

Heraclitus

Fr. 80: ‘...πέτοιμον έλευθερόν καὶ θεόν ἐμέν...’
Fr. 57: ‘...μεταφοράς ἔχουσαν τα πάντα πάντων πάντων πάντων πάντων...’

Plato

Sophist 240A, 241A: ‘...θάλασσα καὶ ξυλοπλάκες τῶν οἰκτήτων Μοίσιου (i.e. Heraclitus and Empedocles)’

[Aristotle] suggests that the Doxographical accounts have conflated Heraclitus and Empedocles.

Heraclides Lampas (author of a manuscript of the Succession in which Empedocles and Heraclitus were made successors of Pythagoras according to Josephus’ index; cf. Diogenes 149) follows of Pythagoras, holding similar beliefs.

* Cf. Clemens Strom. v. 103, 6, who attributes a purification by fire, of a similar kind, to Empedocles and Heraclitus.
INTRODUCTION

Three particular notions may be mentioned. (i) The reaction between fire and water (3, 3 'fire can move all things throughout, water can feed all things throughout') is accepted by Burnet (150b, after Lassalle ii, 142) as a genuinely Heraclitean concept; but there is no evidence for it in the fragments, in fact there is evidence against—what is to happen about earth, which is a world-mass on an equal footing with sea? Admittedly the idea that fire fed on water is probably present in Heraclitus, but this is a widespread and doubtless almost prehistoric concept. See also on fr. 6. (2) The crafts which are adduced as instances in chapters 12-24 in some cases coincide with specific illustrations used by Heraclitus, whose practical examples of this type may have been expanded by followers to apply in many of the ἐξήγες; one would not deny that some of these chapters are based upon a Heraclitean source. (3) The unusual image of the two men sawing wood (e.g. 1, 6 'the one pulls, the other pushes. They are doing the very same thing but by doing less they are doing more') seems to the present writer to have a more archaic ring than most other Heraclitean instances in this treatise; but this is the most that can be said.

What gave the de vi et et per (special importance as a possible source for Heraclitus, in the eyes of the scholars of the last century, was its supposed early date of around 400 B.C. Zeller, for example, who had at his disposal the results of the investigations of Lassalle, Schuster, Teichmüller, Illerg and others, concluded (ZN 873) that the treatise came from the hand of a doctor of the first decade of the fourth century B.C. In 1899 Carl Fredrich published his Hippokratische Untersuchungen (Ph. U. 15, 1899), which subjected the whole treatise (the non-Heraclitean parts of which had previously suffered neglect) to a detailed examination; he, too, using some new criteria, assumed 400 B.C. as the approximate date of composition. Diels (Heracliota xix) mentioned the end of the fifth century. Further detailed study by A. L. Peck (in his unpublished Cambridge doctoral thesis, 1928, which was not, however, particularly concerned with dating problems) and A. Pauly (Diss. Tübingen, 1933) has not produced any amendment of the traditional date. However, as early as 1839 Petersen (Diss. Hamburg) had suggested that the work should be dated around 322; Schuster also regarded it as post-Aristotelian. This dating was ridiculed by Fredrich and others, but recently Werner Jaeger, Paideia III (Eng. trans., Oxford, 1946), 96ff., has argued in favour of a later date. This question is not, as Zeller maintained, of merely subordinate importance for the study of Heraclitus; for if de vi et et per was composed at the time of Aristotle or shortly afterwards, and not around 400, then it must relinquish its title to an independent testimony written at a time when full Heraclitic materials were available. It becomes probable that it reflects the Platonic and Aristotelian interpretation of Heraclitus, and that its sources for him were no more extensive than those of, for example, Theophrastus, who complained not once only that Heraclitus 'made nothing clear'—a complaint which I take to mean primarily that Theophrastus' sources were inadequate.

My own view, which can only be summarized here, is that the treatise was written after the middle of the fourth century, and probably underwent some Peripatetic influence (contra Jaeger). The conventional date around 400 rests ultimately upon two assumptions: first, that a synthetic physical theory based upon Heraclitus, Parmenides, Empedocles, Anaxagoras, Archelaus and Pythagorean writings, must have been produced in the so-called 'period of eclecticism' at the close of the fifth century; and secondly, that the investigations into diet and the effects of different foods are similar in character to those of Diocles of Carystus, and belong to the same period (cf., for example, Frisch, op. cit. 22). The first assumption is of no value: eclecticism was not restricted to the period of Diogenes of Apollonia or a Hippion. With the second assumption I agree. But Jaeger has now conclusively shown (Diokles v. Karystos, Berlin, 1938; 'Vergessene Fragmente des Peripatetikers Diokles von Karystos', Abh. der Preuss. Akad. der Wissenschaft, 1938 (Phil.-hist. Kl.) 3, 1-46; summarized in Philosophical Review 49 (1940) 393ff.) that Diocles worked much later than was formerly believed, and was in fact a member of the Lyceum and a near contemporary of Theophrastus. The author of de vi et et per may have been a generation older. Thus Diocles seems to have used de vi et et per as a source for his two books on Plistarchus on Hygiene; cereals are named in the same unusual order in each work, and one criticism by Diocles preserved by Galen applies admirably to the author of de vi et et per. The latter, indeed, implied in his opening chapter that a number of works on diet had been written by his time; this fits the later fourth century better than any earlier period, for although the main ideas of the treatise could have been held at the end of the fifth
INTRODUCTION

are certainly the most promising from this point of view, though here again much of what looks like Heraclitean matter is probably merely Stoic (e.g., god as establisher of measure in the world is probably Poseidonian; cf. *de mundo*); in both, the stylistic similarity to the Heraclizing parts of *de vitu* is noticeable; the style is an exaggerated parody of the fragments.

(3) CONCLUSION

The conclusion from the foregoing survey of the ancient evidence is that it is incomplete and unreliable. The closest sources to Heraclitus are Plato and Aristotle, and though they tell us much of value their information is apt to be distorted by the demands of their own context or, in the case of Aristotle, the desire to find predictions of his own conclusions in the works of his predecessors. Theophrastus did not succeed in throwing off Aristotelian presuppositions, and thus the whole of the exegetical tradition (as well, it may be added, as Sceptic and Stoic accounts) is to some extent infected. Cherniss has shown irrefutably in his *Aristotle's Criticism of Pre-socratic Philosophy* the extent and the serious nature of Aristotle's historical pervertions; in the case of Heraclitus it can be seen that Plato too, with his misleading πάντως έπι interpretation (see under Group II, pp. 366 ff.), has done irreparable damage to the whole ancient tradition. The result is that the present-day scholar who wishes to gain the clearest possible idea of what Heraclitus thought must resort in the first instance to the actual surviving fragments, and must base his reconstruction primarily upon these, using the ancient indirect evidence as ancillary. In these circumstances the fragments themselves must be subjected to the most careful possible examination of authenticity and content; hypothetical interpretations must not be given credence until they are adequately corroborated by other fragments. In the pages that follow an attempt is made to subject about half the total number of fragments, those describing the world as a whole rather than men in particular, to this kind of treatment.

THE COSMIC FRAGMENTS

Note. Diels' numbering of fragments is followed; Bywater's number, accepted by Burtt, is given in parentheses in the main heading, as, for example, (13).

In the initial quotation and translation of each fragment, Greek type (Greek) and roman type (English) are intended to distinguish Heraclitus' own words, or a very near equivalent.

Paraphrases formerly accepted as fragments are normally distinguished from their context, if this is quoted, by broken underlining. They are referred to as, for example, Fr. 73 vi, where vi (for Diels) means that the saying in question was treated as a genuine fragment by Diels (except that fragments after 126 were classed by him as doubtful or false), but is here considered as a paraphrase. In the group headings, 'Fr. 1 [+73 vi]', for example, signifies that the paraphrase treated in DK as Fr. 73 is here considered during the discussion of the genuine fragment.

The whole of the relevant context is given for each fragment; where the main extract ends with the fragment itself it means that what follows in the ancient source plainly does not bear on the interpretation of the quotation.
GROUP 1

Fr. 1 [+ 73d], 114 [+ 113d],
2 [+ 89d], 50

The Logos according to which all things come to be is ‘common’ in two senses: it is universal, and it is equally apprehensible by all. Heraclitus explains the nature of this Logos, yet men still fail to recognize it and live as though in a private world—though anyone of sense bases his behaviour on what is universally valid, like Law. The apprehension of the Logos is wisdom, and the chief content of the Logos is that all things are one.

I (2.8)

Sextus Empiricus adv. math. vii, 133. Ἀναχάριστας γοῦν τούς παρὰ προέκυψιν διὰ προερχόμενον αὐτῆς καὶ τρόπον τῆς ἑαυτής τὸ παράκειν εἴρητε τούτως λόγῳ τούτῳ ἕνως δὲ ἐξήνευσιν τοῖς ἐνδόξοις καὶ πράσεσθε ἢ ἀκούσας καὶ δικοῦσάς τις τὸ πράσον. γινομένων γὰρ πάντων τοῖς κατὰ τούς λόγοις τὸν ἐπεξερχόμενον ἐκείνος περιεχόμενοι καὶ ἐπέων καὶ ἐχθρῶν τοιούτων ἔχει ἐγγέμεναι, καθά πρὸς ἑνετέρους ἑκατον καὶ ράδιον οἴκους ἔχει. τοῦτος δὲ ἀλλοις ἀνθρώποις λανθάνει ἕκαστος ἐγερθέντες ποιούσιν ἐκάστης ἐδώκεις ἐπιλαμβάνονται. διὰ τούτων γὰρ ρήματα παρατίθεντα ὡς κατὰ μετοχὴν τοῦ θεοῦ λόγοι πάντα πράσσομεν τε καὶ νοοῦμεν, ὡς Ἀθηναῖος ἐπιφέρει (σερ. fr. 1).


At the beginning of the writings on nature the aforementioned man, in some way indicating the atmosphere, says: Of the Logos which is as I describe it men always prove to be uncomprehending, both before they have heard it and when once they have heard it. For although all things happen according to this Logos, they [men] are like people of no experience, even when they experience such words and deeds as I explain, when I distinguish each thing according to its constitution and declare how it is; but the rest of men fail to notice what they do after they wake up just as they forget what they do when asleep.—Hereby he expressly propounds that we do and think everything by partaking in the divine Logos, and a little further on he adds: (fr. 2 follows).

The first clause of this fragment is reported also by Aristotle, Rhet. ι, 1407b 12 (DK 22A 4), quoted below. Clement, Strom. v, 3, 7 (τι, p. 401 Stahlin), quotes τοῦ λόγου—πράσον. Hippolytus gives the next most complete version after Sextus: Ref. ix, 9, 3 (p. 244).
Wendland) has, with slight variations, all down to Íρων οὐκ ἔχει. Here the quotation is introduced by the words ὅτι τῷ ἄραι; ἦταί δὲ τῷ τῶν καὶ διὰ πάντως οὖν, οὕτως λέγει. This shows that Hippolytus connected δὲ with ἄραι; and not with ἄρον, as also Amelius ap. Eusebium P. E. xi. 19 (= Theodoretus Thes. i. 88; Cyrilix s. 936 Migne) καὶ οὕτως ἦν ὁ λόγος καθος ὁ δὲ οὕτως τα γνώμονα ἐγίνετο, ὅτι διὰ οὐκ ἔχεται. Aristotle in this passage cited above had stated the ambiguity of δὲ: τα γράφεται διαφορά ἐρευνή μεν τὸ ἄραι; εἰς πάντα προέρχεται, τὸν πρότερον ἢ τὸν πρότερον, οἷον ἐν τῷ ἰχθύῃ τῇ συγγραμματίσει φησι γράφεται, "ἄραι; γράφεται" ὁδὸν γαρ τὸ δὲ πρὸς πάντα δὲ διαφορά. Aristotle himself suggests no answer to the problem; modern scholars have for the most part concurred with the view of Hippolytus and Amelius that δὲ qualifies ἄραι;: so Zeller (Z. N. 792), Diels, Capelle (Hermes 53 (1924) 150f.), Gigon (Untersuchungen 1ff.), Verdenius (Menon 13 (7th series, 1947) 279). Recently the other view has been strongly argued, that δὲ goes with ἄρον, so Reinhardt (Parmentier 217), Snell (Hermes 61 (1935) 366), Busse (St. M. 61 (1926) 206ff.), Kranz in DK. I support this latter view, on the ground that δὲ seems to lead up to and include the alternatives which follow, both before they have heard it and when once they have heard it: so Snell. Buss adequately refuted Capelle's objections against this connexion, the chief of which are as follows:

(i) δὲ ἄραι; γράφεται is an unnatural conjunction of positive words; and to express this idea Heracleides would have said οὐκ οὕτως εἰσῆλθεν in fr. 51. — But ἄραι; for Heracleides is in sense, if not in form, a positive attribute of the many.

(ii) διαφορά ἐρευνή το πρότερον restricts the universality of δὲ. — But Capelle failed to see that τὸ πρότερον here means "once", at all, as frequently in Homer (e.g. L. S. 116, 116), and not "for the first time", with the implication that later they will cease to be ἄραι;.

(iii) τοῦ δὲ λόγου τοῦτος ἄραι; δὲ is deliberately balanced with τοῦ λόγου δὲ οὕτως εἰσῆλθεν in fr. 21: so Gigon 32 and G 15 that in each case Heracleides stresses a single attribute of the Logos. — It is unnecessary to assume that the balance of clauses would extend to fr. 2, which Sextus...
however, made the pertinent objection (p. 271) that any general definition of Logos would have been quoted by Sextus, being just as relevant to his purpose as the words which he does in fact preserve; though the opening sentence might have been missing from his source. Great play has been made with δι& in the first sentence of the fragment; it is now clear that the occurrence of the particle need not entail any preceding sentence, or a title descriptive of contents. An inceptive δι& occurred, apparently, at the very beginning of the work of Ion of Chios (fr. 1 ὁδηγεῖ δι& τοιού τοιούτου ...)

and of pseudo-Philo
cius (fr. 1 & ἡπὶ τού ἐν τῷ κόσμῳ ἀριστεύεται).

Verdenius 274ff. adds the occurrence of δι& in the opening sentences of Xenophon's *Apology* and *Oeconomica*; this, however, is probably due to the fact that Xenophon's works were arranged to be read continuously. In the true inceptive uses δι& has no connective sense but some of its original force as a weaker form of ἦ.

Thus there is no need to suppose that it here refers to a lost title containing the word λόγος or λέγει: Zeller, ZS 792, had suggested λόγοι περὶ φύσεως; Wilmott, *Herakleitos* 186, and Diels, something like ἡρακλείτους βλέποντας ἑρημίσας τῷ λέγει. Undoubtedly when the sayings of Herakleitus were first recorded some such introductory identification or 'seal' was made, as in a slightly fuller form, Hecataeus and later Herodotus and Thucydides announced their authorship in the first sentence; but if δι& is to be explained as referring to a preceding use of λόγος or λέγει, then as Reimann pointed out λόγος must refer to Herakleitus' own 'Word' or book. The meaning of λόγος will be discussed below, but it may be said here that such a restriction of sense, even if not totally implied, is highly undesirable. Reimann escapes the difficulty by not reading δι&, which is of course only attested by Hippolytus; but while the particle might naturally have been omitted by Aristotle and Sextus it is difficult to see why it should have been added by Hippolytus, whose context does not require it. On the whole I consider that an ambiguous translation such as that proposed above, 'Of the Logos which is as I describe it', best reproduces the implications of the Greek: Heraclitus' views must have been expressed orally before ever they were committed to writing, whether this last event took place during his lifetime or later; and a backward reference to his already familiar pronouncements on the Logos may well be intended, as well as a forward reference to the description given in frs. 1 and others of this group. Before leaving this particular problem it should be remarked that the genitives of the first phrase depend upon δι& and are clearly not absolute.1

It is now possible to consider the meaning of λόγος in fr. 1; the word has been merely transliterated in the main translation in order to avoid prejudging the issue. Burnet 133 n. 1 translated 'Word'; and held that the λόγος is primarily the discourse of Herakleitus himself; though, as he is a prophet, we may call it his 'Word'.

This view, in all its simplicity, has not won acceptance for the good reason that in fr. 50, where plainly the same kind of λόγος is under discussion, λόγος is formally distinguished from the speaker: ἄλλο τῷ λόγῳ ἀκούσαντος. However, if λόγος could mean not only the book or, better, the discourse of Herakleitus, but also the content of this discourse, then a valid contrast could be made between Herakleitus himself and the Logos. Snell, *Hermes* 54 (1926) 365, ingeniously maintained that this duality of meaning is possible: 'Logos is das Wort, soweit es sinvoll ist; λόγος ist: etwas meinen.'

In other words, 'meaning' is one of the basic senses of the root λγ-; the Logos is Herakleitus' meaning, transmitted through the medium of his words, and his meaning is also the meaning which he sees in things. U. Hölscher, *Varia Variorum: Festgabe f. Kari Reimann* (Münster, 1952) 60ff., developed Snell's idea that the paradoxical truth about things is deliberately reproduced in Herakleitus' own paradoxes; Logos, he thinks, has much of the meaning of 'oracular response'. The inclusive sense of the word was accepted also by Gigon 41f., who took it to mean 'the truth in things as

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1 On the subject of an introductory sentence or title Verdenius 272ff. has tried to prove that πεπερασμένος in Sextus and Diog. L. ix. 5 was an original title, and not as is sometimes thought a convenient form invented by Peripatetic historians for any work on natural philosophy by those whom Aristotle called ἀνθρώπως. His arguments both here and in his thesis, *Parrnetaics. Some Comments on his Poem 73 f.*, are not convincing. On p. 373 of the article he supports a statement that in the 5th and 4th centuries πεπερασμένος was obviously regarded as the authentic title of early philosophical works by citing, among other passages, no more convincing, *Ancient Medicine* 20 ἄνθρωπος ἄνθρωπος πεπερασμένος. This kind of argument will find few supporters.
revealed by my book; by Kranz in DK, who translates the opening words ‘Für der Lehre Sinn aber, wie er hier vorliegt, gewinnen die Menschen nie ein Verständnis . . . ; and by Verdenius 279-8, who well observes that for the early Greek thinkers there was no sharp dividing line between the man who knows and the thing known, this is particularly clear in Parmenides, but it was an assumption shared by Heraclitus in his use of ὁ λόγος. But Verdenius’ translation ‘argument’ does not really suffice. In fact, although Snell’s contention is attractive, I do not believe that there is necessarily any reference implied by the word ὁ λόγος in fr. 1 or any other extant fragment to the actual words or teaching of Heraclitus; and even if there is, it is clearly the meaning of this teaching, the objective sense, which it is important to examine. The real reference to Heraclitus’ own presentation of the truth which he claimed to have discovered lies in the word ὁ λόγος itself. Now the root λόγ- basically implies ‘picking out’ or ‘choosing’, from this comes the sense ‘reckoning’, and so ‘measure’ and ‘proportion’. This group of meanings is at least as primary as the sense ‘account’ or ‘discourse’ taken as basic by Zeller. E. L. Minar (‘The Logos of Heraclitus’, CP 34 (1939) 321 ff.) well suggested that ‘account’ reproduces the ambiguity of ὁ λόγος in its two senses of narrative and accounting. A further development, either directly from ‘reckoning’ or by way of ‘measure’ and ‘proportion’, leads to the sense ‘systematic formula’, hence ‘plan’ and even ‘law’ (as, for example, in ‘physical laws’). Yet by the time of Heraclitus all these senses, and others too, were legitimate, and it is not surprising to find that the word is used by him in at least three different senses; the point only in trying to establish a ‘basic’ sense is that when he uses the word to stand for an undefined abstract concept it is more likely to be a ‘basic’ and unelaborated meaning which he has in mind. An examination of other extant occurrences of the word in Heraclitus, where the meaning can be determined from the context, may show that for him there was

one sense which came to mind more commonly than others. In fr. 2 the meaning of ὁ λόγος is presumably the same as in fr. 1, and similarly cannot be clearly determined from the context; we learn there that ὁ λόγος is ‘common’. In fr. 50 listening to the Logos leads to the acknowledgement that ‘all things are one’. In fr. 108 δικαιοσύνη λόγου ἀληθείας plainly means ‘whose account [or perhaps ‘whose words’] I have heard’, and in fr. 87 the meaning is simply ‘wood’: but it has been shown that this sense would not do in fr. 50, and hardly in fr. 2. In fr. 39 ἐπὶ τὸ πέντε λόγου means something like ‘who was of more account’, or possibly ‘who was of greater measure’. In frs. 31, 45, 115, the sense of ὁ λόγος is undoubtedly that of ‘measure’. This, then, judged by purely statistical criteria, is the most common meaning in the extant fragments; it has already been suggested that this meaning is an early derivative from the root-meaning. Miss E. S. Freeman, Companion to the Presocratics 116, has well stressed that the concept of measure is implicit in the Logos of Heraclitus. But ‘Of the measure, which is as I describe it, men are incomprehending . . .’, the measure being common . . . ‘listening not to me but to the measure . . .’—this makes but little sense. Nevertheless, ‘measure’ is not far from the most plausible sense, and it is mainly a question of finding an English word which would not seem too strained. This may be an impossible task: what we are trying to summarize is an idea like ‘the organized way in which (as Heraclitus had discovered) all things work’; ‘plan’ (in a non-theological sense), ‘rule’, even ‘law’ (as in the laws of force) are possible summaries. ‘Principle’ is too vague; I suggest the less ambiguous if more cumbersome phrase ‘formula of things’ as a translation of ὁ λόγος in frs. 1, 2, 50. In this form the idea of measure is implicit, as will become clear from a consideration of fragments of Groups 10 and 11.

This interpretation of Logos is not new, although the way in which it is reached is not the usual one. Diels in Heraklitose 37 on fr. 1 added the translation ‘Weltgesetz’ to that of ‘Wort’; Capelle 1977 found that ‘dieser Logos das alien Geschehen zugrundeliegende Gesetz meint’, but maintained that this ‘law’ was the law of eternal change—in other words, that the idea of ‘measure’ is not present in Logos; while Busse, RA. M. 75 (1926) 207, who separated δικαιοσύνη from ὁ λόγος in the opening of fr. 1, according to the interpretation advanced here was more correct in asserting that ‘Der Kern der neuen Lehre aber ist der Gedanke des Weltgesetzes, der unverbrich-
lichen Gesetzmäßigkeit des Weltlaufs'. Gigon 41. destroyed the
effects of his own caution that λόγος in fr. 1 must have a specific, and
not a general philosophical, sense, by translating it simply as ‘truth’
as well as Word or book, a meaning which is quite foreign to
Heraclitus; although that the content of the Logos was completely
true cannot be doubted, cf. Jaeger Theology 112. The lack of the
positive content which informs all other Heraclitean uses of the
word must be set against Snell’s interpretation, adopted by Kranz,
of ‘meaning’, and also the ‘argument’ of Verdenius. Demonstrably
false interpretations abound: most surprising is Reinhardt’s ‘Denk-
gesetz’ (Parmenides 61, 217, 219; cf. also M. Wundt, Arch. f. Gesch.
d. Philosoph. 50 (1907) 411), which he assimilates to τύπος ἐν λόγῳ
πολλάκις λεγόντων in Parmenides fr. 7, 5. The interpretation
Logos = Reason occurs in the bizarre treatments of Höhngärtel
(Philosoph. d. Altertums 67f.), Binswanger (Die Antike 11 (1933)
1ff.), and Brecht (Heracl. Ein Versuch über die Ursprünge der
Philosophie passim); its acceptance displays an inability to dissociate
the word from its later implications. Even the much more subtle
examination by E. Hoffmann (Die Sprache u. d. archaische Logik 1ff.)
of the connexion between the organization perceivable in things and
the rational expression of it in words is not perhaps germane to
Heraclitus; while Léon’s supposition that λόγος means ‘abstract idea’
and refers specifically to the λόγος of Parmenides can be dismissed,
quite apart from questions of date.

To proceed to the rest of the fragment: the meaning of γνώσις
in δεῖ ὁδηγέον-γι is admirably explained by Verdenius 280: ‘The
outcome of his [sc. Heraclitus’] experience is expressed by the term
γνώσις: they coming across the λόγος results in incomprension.
Γνώσις often implies the idea of a result...’ (Of the passages
quoted in illustration of this statement the clearest is Thuc. 1, 87, 3
διότι τά γε γεγονότα καὶ τὸ πάντα ἐγένετο ὁι ἐκόπτοντος
καὶ προειρήματος. In the following sentence, Gigon 3 sees in
γνωστέρα γερά πάντων a deliberate contrast with the verb ἦνσεν
applied to the Logos—a contrast which anticipates the Platonic one
between the being of eternal Forms and the becoming of transient
and not fully real phenomena. Now it is undoubtedly true that,
whether or not he attached the word δεῖ to the Logos, Heraclitus
would have agreed that the formula of things is unceasingly valid;
in fr. 30 he states that the κόσμος of things, which must be the
manifestation of this formula, is eternal. Undoubtedly, too, γνωστέρα
is a verb which may be accurately applied to things in general, none
of which does not ultimately change and become something else.
But whether the contrast between ἐνεργεῖν and γνωστέρα was one which
Heraclitus deliberately made, and one which was instrumental in
the further shaping of his ideas, is extremely doubtful; if it was, it is
surprising that no formal statement (rather than accidental examples)
of the contrast has survived.

Certainly γνωστέρα γερά πάντων is concessive, and παράλληλα
may be too, although it could equally well be temporal: ‘even if
(or even when) they experience my words.’ The word-play between
ἐνεργεῖν and γνωστέρα is presumably intentional, as in frs. 2, 28,
48, 114 with other pairs of words; in the present case it is simply
a stylistic trick and can imply no underlying connexion of sense
between the similar word-forms, for the connexion is quite obvious.
The phrase καὶ ἔρχεται καὶ ἔρχεται has been well accounted for by
Schottlander, Hermes 62 (1927) 444, as an epic formula, as in, for
example, Ἐκ νυμφών, 234; Od. 11, 272. In the Homeric poems theformula
ἐρχομένους ἄν γε ἔρχεται ἄν γε ἔρχεται ἄν γε ἔρχεται ἄν γε ἔρχεται ἄν γε ἔρχεται
is used to complete the hexameter, and often only one of the two elements ‘word’ and ‘deed’
is required by the context—usually the latter. In Heraclitus the
formula is only slightly changed, and here too it is not to be taken
too literally: the words are the means of explanation, the deeds or
events are the things which are explained. After ἔρχεται comes
an interesting clause which further defines Heraclitus’ method of
explanation. ἔρχεται means something more than merely ‘judging’,
and implies a process of analysis leading up to a judgement, as in
the literal sense ‘divide up’. Diels, then, was right to translate
‘zerlegen’. In Herodorus ἔρχεται is used twelve times in its literal
sense (e.g. 1, 119, 3 καὶ ἐπιθύμημα 8); four times meaning ‘distribute’;
and six times (twice in the middle voice) meaning ‘judge’; so Powell
Lexicon to Herodotus s.v. The full force of the literal meaning

1 The expression can be treated as polar: see Heinemann Nomos u. Physik 45.
I agree with Gigon 71. contra Leisegang, Der Werfen 71, and Hoffmann, Sprache u.
arch. Logik 1ff., that no significant distinction such as that between single
words and sentences is to be drawn between ἔρχεται and γνωστέρα. In this fragment
Heraclitus obviously used ἔρχεται and not λόγος because the latter had already
occurred in a different and specialized sense; in addition, ἔρχεται belongs to the
formula he had in mind. Heinemann’s attempt (p. 61) to restrict κατὰ τὸν
ὕποκρίνοντος ἔρχεται to ἔρχεται is not convincing.
remains apparent in the last sense: so at τη, 23, 5 of τον διαφορον διαφορον, where the idea is that of 'picking the evidence to pieces' before arriving at a judgement; also at vii, 50, 1 (middle voice) εἰκόνος μοί γε τούτων ἔκτοτε διάφορον, where ἔκτοτε emphasizes the idea of separate treatment of each point in a description of a situation. It is notable that four out of the six instances in Herodotus of διαφόρον meaning 'judge', or rather 'analysis', occur in the seventh book in conversations between Xerxes and an interlocutor, usually Artemisius. This book contains a great number of descriptions, for the benefit of foreigners, of various customs and institutions; it is natural that these descriptions should involve analysis, since the things being described were complex ones; hence the relevance of διαφορον. In the fragment of Heracleitus the analysis is applied to 'each thing' separately, and the analysis is κατεκτων. The meaning of κατεκτων in early philosophical contexts is discussed more fully on pp. 228 ff. Burnet's view that the word means 'material substance' is an extreme one, and the sense has to be much wider to fit all the early contexts. Heidel, after Aristotle Met. Δ 4, 1041 b 16, derived from root πυ- meaning 'grow', but this again is not borne out by the bulk of the early evidence. In fact the distinction between 'growth' and 'essence' is not so great as at first appears: the latter is the result of the former. Nevertheless, the idea of growth is probably absent from nearly all early uses of κατεκτων, and certainly from those in Heracleitus. Gigon 10 (followed by Heinmann 92 f.) chose to regard κατεκτων κατεκτων and κατεκτων κατεκτων as quite distinct processes, 'determining things according to their origin and describing their present state'; his bold announcement that κατεκτων κατεκτων is equivalent to ἔκτοτε ταύτα does not really settle the issue. If we translate κατεκτων as 'real constitution', whether of individual things as here or of all such things as in fr. 123, we shall find this to be a sense which fits the context wherever it occurs in Heracleitus (and indeed in nearly all other early contexts). In the word 'constitution' is implicit the idea of arrangement or organization of parts, and arising out of this the idea of function or behaviour. To 'distinguish each thing according to its real constitution' involves an analysis of a complex object (in this case of 'all things'), the whole sum of one's experience which is carried out by means of the separation and classification of its component parts. κατεκτων κατεκτων does not describe a separate stage in the process, unless κατεκτων is considered to be consequent upon κεκτημένον: but both are grammatically included in διεγέρσαι. As Verdenius 273 observed, ἔκτοτε ταύτα is merely a further description of κατεκτων, and substantiates the interpretation of κατεκτων here as 'constitution'—an interpretation which does not run counter, on this occasion, to the interesting but erratic analysis of R. G. Collingwood, The Idea of Nature 43 f. He stated that 'Nature', for them [sc. the Ionian philosophers], never meant the world or the things which go to make up the world, but something inhering in these things which made them behave as they did. To this I would add that for Heracleitus, at least, the thing which made things behave as they did was some kind of order or scheme, an aspect of the Logos or formula which underlay the working of the sum of things; as will be seen later, an important part of this formula is the fact that things undergo change into each other according to measure. Yet it was not, one may suppose, from the examination of the constitution of individual things that Heracleitus arrived at the idea of a common formula of behaviour: rather an a priori demand for an underlying unity in the world, together with a consideration of the regularity of large-scale natural changes, led him to 'distinguish each thing according to its constitution', and to find the universal formula operating in the behaviour of even the smallest objects. The explanation of all things (ὅτι καὶ ἔγω … διεγέρσαι) involves the consideration and definition of separate instances (κατεκτων κατεκτων), and this suggests that the κατεκτων of a thing, that which governs its behaviour, will testify to the universal application of the Logos; but by the time the examination of individual structure takes place the intuition of the Logos has already occurred.  

The last words of the fragment, τοις δὲ ἐλλειπεὶς ἀναρρήτους κτλ., should be separated from what goes before only by a colon, since τοις δὲ is strongly contrasted with ἔγω in ἔκτοτε ταύτα διεγέρσαι. Heracleitus himself understands the Logos perceptible in things, but...

1 The phrase κατεκτων κατεκτων occurs in fr. 112 a, where I agree with Reinhardt, Parnassus 223 n. 1, against Heinmann 93 that κατεκτων κατεκτων belongs together nor see p. 390. Nietzsche, Hermes 73 (1938) 10 f., mentions the frequent occurrence of κατεκτων κατεκτων in Hippocratic writings; but there the idea of normality, which is quite foreign to the Heracleitan usage, is usually implied. In Plato Laws 72 c. the meaning is similar to that of Hermelius τοις δὲ διεγέρσαι νομίζει κατεκτων.
other men fail to perceive it. πώς διέχουσα should not be interpreted too literally: the Logos is perceptible in what they do in so far as what they do is part of the sum of events in general; there is no event in which the formula is not at work in some way, but it is presumably mainly by the objective consideration of events in general, rather than by a particular examination of their own behaviour, that men are liable to apprehend it. The blindness of the majority of men is compared with their forgetfulness of what goes on in sleep; the choice of words in the Greek here does not fully bring out the parallelism of the analogy, for men while awake fail to recognize an ever-present truth, yet they are said to forget (on waking, presumably) what they did in sleep—that is, their dreams, which Heraclitus considered to be a real if diminished form of activity; cf. frs. 21, 26, 74. The latter fault is that of forgetfulness rather than of imperception. Gigon 6 saw the difficulty, and explained that ἀπεδείχθητε must here mean simply 'do not know'. There is no clear parallel for this sense in extant classical literature (Cebes, first century a.D., used the sense 'disregard'), where the meaning is always 'to let something which one previously knew escape one's notice'. However, it is true that men do not understand the nature of their activity in sleep, while, on the other hand, they do sometimes remember their dreams on waking; possibly the former meaning is intended, yet this would be very involved. Slight inconsistencies in complex images are not uncommon in the archetypal style; the general point of comparison here is the lack of knowledge resulting in each case. At any rate the image seems to have been clear enough and unusual enough to have provoked a paraphrase by the Stoic emperor Marcus Aurelius, which has been generally accepted as an original fragment, fr. 73b (34 B): Marcus Aurel. IV, 46 ημι τοῦ ἦσοδου τὴν μικρήν μολότορα...[fr. 76b], ἐμνήσθησα θάκρι...[fr. 71a], καὶ ἐμνήσθη...[fr. 72a], καὶ ὅτι οὐκ ἔστω καθεσθίσας τούτων καὶ λέγων, καὶ γράφῃ καὶ τόσα δοκεῖν τοῦτο καὶ λέγειν καὶ ἐξ...[fr. 74a]. Marcus is well known for his freedom in quotation from earlier authors, and the string of quotations attributed to Heraclitus is no exception. The first and second (fr. 76b, 71b) are obvious and rather misleading paraphrases; the third and fifth (fr. 72, 74) contain genuine quotations interlarded with Marcus' own comments. It is not surprising then if the fourth, with which we are concerned here, is found on consideration not to be a verbatim report of Heraclitus. οὐδέποτε is probably Marcus' and not Heraclitus' way of introducing a moral prohibition, as in fr. 74; ποιόν καὶ λέγειν occurs in fr. 112b but may well be a reminiscence of ἔγραψον καὶ ἔργαιν in fr. 1 (p. 41 above)—though this phrase was not uncommon, cf. for example λέγειν ἔργον τι πάνων at Sophocles O. T. 864.' The sentence as a whole lacks the pungency and forcefulness of a Heraclitean utterance. The presumed fragment simply repeats in a prohibitive form the criticism of the majority of men in the last sentence of fr. 1, and in view of Marcus' methods is best taken as a rough paraphrase of that criticism; the possibility that this is the case is admitted also by Gigon 16. Another paraphrase of the same words may be implicit in fr. 89b, in Plutarch, discussed under fr. 2.

It will not have escaped the reader's notice that fr. 1 shows a careful balance and subordination of clauses. It is the longest continuous piece of Heraclitus' prose that we possess, and Gigon 8 may be justified in claiming that 'Fr. 1 is ja das Proömium eines redigierten Buches', against the opinion of Diels (HERAKLEITOS XX) and others that the 'book' was simply a collection of γράμματα or aphorisms. Nevertheless, Diels' view is possible: even a verbal exposition may naturally begin with an exceptionally complex pronunciation, or such a pronouncement may later be used as introduction to a collection of sayings. That the fragment was carefully worked out is shown by an analysis of the thought-content in relation to the clauses. Gigon 8ff. made an elaborate attempt at such an analysis, though he seems to have missed the main point; Snell's simpler effort (Fernese 61 (1926) 366 n. 1) is more instructive. There is nothing very obscure: in both the first and second sentence (down to καὶ τὶς ἡμέρας) Heraclitus attacks his fellow-men on two separate but related counts: (1) that the Logos exists, and has the properties he attributes to it (it is 'common', cf. fr. 2), and is that by which all things come-to-be—but in spite of this men do not recognize it in things, though it is there to be recognized by all; (2) that he, Heraclitus, actually describes the Logos in words and shows how it operates in all things, yet men still fail to recognize it. There then follows a short elaboration of the method by which Heraclitus explains the Logos and its manifestations. Finally, he reverts to other men, and by means of a simile reasserts attack no. (1), that men fail to see the meaning or structure of their own experience.
of the outside world. In tabular form this argument may be expressed as follows:

<table>
<thead>
<tr>
<th>Criticism (1)</th>
<th>Actual reproach</th>
<th>Criticism (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>τοῦ δὲ λόγου τούτου λόγος</td>
<td>δὲ δέχεται γίνεται</td>
<td>καὶ πρόθεσιν ἢ δύναται καὶ ἑαυτοῦ τὸ πρῶτον.</td>
</tr>
<tr>
<td>γιανῶμεν γάρ τὸν τόπον κατὰ τὸν λόγον τοῦτο</td>
<td>ἀπερείπησα λέσσις</td>
<td>πεπραγμένοι καὶ ἐπέλεξα καὶ ἑαυτὸν δύναμις,</td>
</tr>
<tr>
<td>τόις ἐλάοις</td>
<td>σφαγάς λοιπὰν</td>
<td>ἐγὼ διηγέμηκα.</td>
</tr>
<tr>
<td>ἀπεφαίτητε τοιαύτῃ (διαστέται ἀπαίτηται ἐπιλογήσωσι)</td>
<td>διαφέρει... φραγάν...</td>
<td>Διαφέρει... φραγάν...</td>
</tr>
</tbody>
</table>

These criticisms of the generality of men occur again and again in the extant fragments; many of those fragments which exemplify them are not treated in detail in the present work, since they add little to our knowledge of the Logos and the outside world and are primarily of interest for Heraclius' ethics and his attitude toward his contemporaries. But the pattern of all these attacks upon men is remarkably consistent, and it is to stress this consistency that the most relevant fragments (in whole or part) are set out in parallel opposite. Fragments not otherwise fully discussed in this book are marked*. 

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* Footnote: For full discussion of these fragments, see [source].
Stobaeus *Florilegium* 1, 179 (111, 129, 15 Hense) *Ἡρακλῆτου*. . . . ἢ ὁ λόγος ἢ λόγοις ὁ λόγος τοῦ θείου, ἢ τὸν ἄθροισθαι τὸν ἁγίον τὸν θείον καὶ τὸν θείον εἰς τὸν θείον καὶ τὸν θείον τὸν θείον καὶ τὸν θείον


By Heracleitus: . . . [frs. 108–13] . . . Those who speak with sense must rely on what is common to all, as a city must rely on its laws, and with much greater reliance: for all the laws of men are nourished by one law, the divine law; for it has as much power as it wishes and is sufficient for all and is still left over.

After quoting fr. 1 Sextus (*adv. math.* viii, 132 E.) went on to quote fr. 2, and implied that these were not quite continuous in the work of Heracleitus: for he says ὁ λόγος τὸν ἄθροισθαι τὸν θείον. Some modern scholars have tried to distinguish an extant fragment, or fragments, which came in this gap. Such an effort is obviously a vain one: a considerable part of Heracleitus' sayings has not survived, and it is more than possible that the transitional matter mentioned by Sextus is among this lost material. However, the object of the present arrangement of the extant fragments is not to attempt to reproduce the actual order of any ancient book or collection of sayings, but to group by subject fragments of the same sort and to arrange these groups in a manner which will best emphasize the structure of Heracleitus' thought, so far as we can determine it: it is therefore permissible to set between frs. 1 and 2 a fragment which will adequately bridge the gap in sense. This involves looking ahead a little, to the opening words of fr. 2, διὸ δίδω τόν λόγον. In view of διὸ it would seem that some mention of τὸν λόγον must have preceded fr. 2; for this reason Bywater in his edition, H. Gomperz, *Wiener St.* 43 (1922–3) 128 ff., and others proposed that the gap was partly filled by fr. 114. This view was supported by Gigon 111, who added that the gap presumably contained no reference to λόγος; such a reference would not have been omitted by Sextus, who was particularly interested in the nature of Logos (which, however, he completely misinterpreted). This requirement is filled by the present fragment, which does indeed appear, in spite of its digression on the nature of Law, to make an adequate transition between frs. 1 and 2; the fact that it contains two examples of word-play, however, does not necessarily connect it with fr. 1, where there is one such example, for this was a favourite device of Heraclitus; similarly, the discursive nature of the fragment does not necessarily assign it to the prooemium, for fr. 121, for example, clearly from a different context, is equally discursive. Also, the argument from the occurrence of διὸ at the start of fr. 2 is not absolutely binding; for the last sentence of fr. 1 might have led on to an announcement of the fallacy of purely private information (as in sleep), and this might lead to the conclusion (διὸ δίδω) that one should follow τὸν λόγον—which, if its opposite had already been to some extent defined, would not require further explanation. However, it remains possible, though no more, that fr. 114 did fill, or partially fill, the gap; for, apart from the connexion with fr. 2 through the mention of τὸν λόγον, its beginning contrasts well enough with the attack on the impertinent majority at the end of fr. 1—referring back, it could be maintained, to the enlightened attitude of Heracleitus himself implied in διὸ τόν λόγον. That this fragment was known to the Stoics, with their interest in θείος νόμος, is indicated by an indubitable reminiscence in Cleanthes' *Hymn to Zeus*, 201:.

οὐτὰ περιβάλλεται καὶ τὸν χρόνον νέους, οὐτα κλάσματι,

ὁ μὲν πειδώλοις οὗτος ύπερ τοῖς ἀθέτουν ξύλοι.

Neustadt, *Hermes* 66 (1931) 387, pointed out that οὗτος νέους in the second of these lines is unnecessary to the sense and therefore points back directly to Heracleitus: Cleanthes retained it even though the Heraclitean word-play with τὸν λόγον had been destroyed by the later form κονὼν. That the fragment was well known in Stoic circles is also suggested by Phutearch, who attributed a paraphrase of the final words to the Stoics: *de Isid.* 45, 369 A οὗτος ἀπὸ τοῦ διημερυγμοῦ ἄλος ἕνα λόγον καὶ μίαν πράξειν [sc. ἤτοι], ὡς το Στοιχεῷ,
On the strength of this paraphrase Diels considered that πάντων should be supplied as object of παραγόντως: this would alter the sense of the Homerian sentence to ‘...and suffices for all and overcomes all’. This, apart from merely repeating the idea of κρατεῖ γὰρ τούτον ὁδοὺς ἔθελεν, makes ἐξερήσῃ πάνω into tolerably weak and in fact almost rolls it of meaning: for how would a thing that ‘overcomes all’ also ‘suffice’ for the same things, except in a very strained sense? On the other hand, it is easy to see how Plutarch or his Stoic source was able to misunderstand παραγόντως: once ἐξερήσῃ πάνω is omitted, as it is in his version, παραγόντως naturally seems to expect an object, just as κρατεῖ has an implied object; for to have power is to have power over something. If παραγόντως is absolute, however, a perfectly good sense is given: the divine law suffices to ‘nourish’ all the particular human laws that exist, and yet is not exhausted by providing this nourishment—on the contrary, it remains unaffected; otherwise, obviously, it could not be described as ‘divine’ (and therefore immortal, imperishable). Burnet’s ‘suffices for all things with something to spare’ requires that the subject of the verb be strictly not the whole of the divine law but only a part of it; for παραγόντως should only mean ‘remain over, survive’, referring to the whole of the grammatical subject. Burnet’s translation would, I take it, imply a situation in which capacity rather than quantitative expenditure is emphasized, as in the case of a strong fighter who can take on three other men and still have something to spare; but apart from the grammatical difficulty involved such an interpretation fails to take account of the presumably quantitative metaphor of παραγόντως. One other linguistic point remains for discussion, namely, Wackernagel’s suggestion of ὑπὸ for the uncontracted υπὸ of the ms. The latter makes the pun with ὑπὸ slightly less exact (a pun which cannot be reproduced in the English translation, though I have tried to retain the force of the more obvious ἔχεισιν ἕπειτα—ἔχεισιν ἕπειτα) and the contracted form may be right; though it occurs only once each in the texts of Homer and Hesiod, and never in Herodotus (but this may be due to archaization in the ms.; cf., for example, Meillet Ἀρετή 3 222). Reinhart, Parmenides 215 f., tried to maintain that of ὑπάρχομεν νῦν does not refer to the νῦν of the city, but to the precepts or habits of mankind in general; thus the sense of νῦν is changed within the limits of the fragment: there is an opposition like the sophistic νῦν—ὅτι, with ὑπάρχομεν νῦν representing νῦν and the ὅτι ὅσον νῦν representing ὅτι. Gign. 14 agreed that ‘laws of men’ are different from the law on which a city-state relies, but maintained that they stand here as a plural form of τῷ ὅτι νῦν and represent ‘the whole genus of common truths and realities’. I agree with Heinnemann, Nomos u. Phys. 66, that this kind of interpretation is unnecessary and misleading: the ‘laws of men’ are not different from the ‘laws of the city’, nor are both of these radically opposed to the ‘one divine law’, though they are greatly inferior to it. The sense of the fragment is quite coherent as it stands, and there is no need to strain the Greek by taking νῦν in different senses. The formal object of discussion does change after the first sentence; Law is introduced as a simile and remains the main subject in what follows, which is strictly an explanation or elaboration of the simile; but since Law is analogous to τῷ ὅτι νῦν the coherence of the sentence as a whole is maintained. The fragment might be paraphrased thus: ‘Men who want to behave intelligently must base their behaviour on the formula or rule which operates in (and can be detected in) all things. So, in the narrower social sphere, citizens base their behaviour on that which is accepted to be of universal application in all local matters, namely the law of their city. But the reason for following the rule underlying all things is even stronger than for obeying city laws: city laws are not shared in common by and applicable to all men absolutely, but only to the citizens of a particular city-state, while “what is common to all” (that is, the Logos of fr. 1) has no such restrictions, but is analogous to the single divine law of which particular codes of law are merely offshoots. Being such, it is even more to be relied on in determining behaviour in its sphere than are city laws in their sphere.’

The last sentence of the fragment is an amplification in very vague metaphorical terms of the precise metaphor of παραγόντως: the particle γὰρ refers back to the immediately preceding clause, παραγόντως—ὅτι; here its causal quality is not to be too strongly stressed, although the fact that the divine law ‘nourishes’ the laws of men is to some extent explained by the omnipotence and all-sufficiency of the former; see Denniston’s general discussion of γὰρ, commonly held to be a fusion of γὰρ ὅτι, in Greek Particles 56f. In the first sentence λέγοντες is paraphrased above as ‘those who
behave...", for it is obviously action as well as speech that is governed by reliance on τοῦ δύνατον; in Greek there is no sharp distinction between the two, at any rate until the development by the Sophists and rhetoricians of the λέγεις-έργοι contrast and the eristic proofs of the impossibility of false utterance. Speech and action are the outcome of the same state of mind. Often, as was seen on fr. 1, this simple identification led to polar expressions like ἐν τῷ αἰτία τοῦ δύναμις or λέγειν καὶ ποιεῖν, where in fact only action or speech may be in question; though sometimes this type of expression is intended to cover all forms of behaviour. Conversely then one term can occasionally be used for both, since there is no rigid differentiation of their application: thus there is no need to assume as Diels did that <κοίτις> is to be supplied.

Heracleitus' assertion that particular laws are 'nourished' by a single divine law is of the greatest interest. Gignon 1a.f. is clearly right in suggesting that such a view must have been prompted by the recent growth of interest in two separate fields, those of ethnography and law-making. Herodotus is our best example for the confusion caused to his contemporaries and predecessors by the discovery, promulgated by curious travellers like Solon, Hecataeus, or Herodotus himself, that human law and custom is not stable or universal but alters radically from community to community. It was the resultant scepticism which gave νόμος its typical content in the φυσικῶν νόμων opposition so common after the middle of the fifth century. A similar result came about through the codification of laws which took place in most city-states from the seventh century onwards: the more detailed the law became, the more it had to depend on human and fallible interpretations of precedent, and the less could it be determined by reference simply to clear-cut (and perhaps absolute) rules of equity. Yet at the same time as these tendencies were destroying the faith in the adequacy and universality of the νόμος of men, the old belief in θεός as an unquestioned guide to behaviour continued. Thus Pindar, though attributing to it arbitrary powers, describes Law as "king of mortals and immortals", fr. 169 Schröder Νόμος ᾧ πάντων βασιλεύουσι τι καὶ θεών τινῶν δυνάμενον τῷ δικάσθεντος ὑπὲρτος φίλην. It was the basis of society, and Heracleitus himself said (fr. 44) that 'the people must fight for the law as they do for the city wall'. Thus the idea of a κοίτις νόμος, which can also be described as ἰθὲς, retains its meaning, as can be seen from the following two passages written when the validity of particular (169a) νόμος was commonly attacked: Gorgias Epitaphios (DK 821 b) ...πολλὰ δὲ νόμου εἰσφέρεις λέγοντας ὁμώνυμος [εἰς. προκρίνεσθαι], τοῦτον νοοῦντας θεότοτον καὶ κοίτιτον νόμον, τὸ δὲ ἐν τῷ δίκαιῳ καὶ λέγειν καὶ συγκαὶ καὶ ποιεῖν... Thucydides ii, 82, 6 (of the effects of στάσις) καὶ τὰς ἔννοιας τῶν πάσης ὑπὸ τὸ θεόν νόμον μᾶλλον ἐκφραστὸν ἢ τῷ κοίτι τι περιερχόμεναι (cf. also Plato Laws 716 a, with which fr. 94 should be compared). In both these passages the divine law is universal, and there is no doubt that this is the sense of the fragment of Heracleitus: it is for this reason that it is described as 'divine', though this is not to say that 'divine' cannot be predicated of other subjects too.

The relationship between the one, universal, divine Law and the many, particular laws of men is expressed—or rather disguised—by the verb τρέφεται. I have translated it as 'are nourished', which is as close as possible here to its basic sense 'thicken, clot'. A weaker sense, 'are maintained', is also possible. In either case the word is a surprising one in the context: in other early philosophical writings it is applied solely to solid objects like living creatures, stars, rivers (nourished by Okeanos at H. xxi. 195 f.), or, in Empedocles fr. 36, to the Strife which is equal in bulk to earth, water, air and fire. The explanation of Heracleitus' usage is, in part, that he would have been unable to define any other type of 'being' than corporeal being, and so laws, which undoubtedly exist, might be thought of as corporeal and so maintainable by corporeal processes. On the other hand,

1 On the development of the concept of νόμος, cf. Heinemann 59-89. His treatment of this fragment on pp. 65 ff. is sound until it deals with 'Oracle' parallels. Gignon compares the ὄνομα νόμος of the fragment with the ἄγγελον νόμον first defined by Thucydides ii, 37. 3 ... καὶ διὸ [καὶ νόμον δέ] ἄγγελον δέ μετάλλοιν ἔφθασεν ἐκείνον ἐξαγωγής προσεχόμενον. A distinction of this kind was common in the fourth century; Aristotle makes it very clearly, and it can be seen from the following passage that the basis of the distinction was the old contrast between ἄγαν and κοίτις: Arist. A 13, 1508 b 7 νόμος ἐκ τοῦ δὲ ἐνεχθάνου μὲν ἱεράς καὶ ἰθέων μὲν καὶ ἱεράς καὶ ἰθέων ἵππος ἑτέρους τοῦτον νόμον καὶ δεέσθ' ἐκείνον τούτον νόμον εἰς ἐκείνον δέ. Doubtless the distinction between a κοίτις νόμος and θεοῦ νόμον (rather than between unwritten and written laws) was recognized by Heracleitus and his contemporaries: if this is so, the continuity and coherence of fr. 114 become quite clear.

2 Cf. Bobacq, Dictionnaire Etymologique de la Langue grecque, s.v. The root is the same as that of ἱθέων; cf. γαλήνα ἱθέων at Od. ix. 246.
I think that he would also have been aware that ἵππος was in some degree a metaphor. However we look at it, the usage is a very unusual and striking one; taken with the imaginative imagery of the last sentence it provides a convincing instance of the powerful character of Heraclitus' prose style, and suggests that he was spurred to an unusual intensity of description by the contemplation of the ἴππος, the ἵππος ἱππας, just as Aeschylus or Pindar rose to special heights when dealing with the more venerable aspects of the Olympian Zeus. By this equation of ἵππος ἱππας with τὸ ἴππος it is not suggested that for Heraclitus ἵππος meant nothing more than 'permanent' or 'universal'; the use of ἵππος in frs. 152, 67 shows that he did not entirely dissociate the word from the emotional colouring provided by traditional religion—a fact which is openly recognized in fr. 32, 'One thing, the only truly wise thing, is both unwilling and willing to be called by the name of Zeus'. Just as the author of Metaphysics Α was also the composer of a hymn to Virtue which included a serious reference to Zeus Xenios, so Heraclitus did not reject outright the loftier concepts of Olympianism. In fr. 162 a contrast analogous to that of this fr. 114, between the variability of human decisions and the stability of the universal rule, employs the term ἱππος quite unequivocally: 'To god all things are fair and good and just, but men have supposed some things to be unjust and others just.' At the same time it can be maintained that by ἵππος he meant more or less the same as is meant by the Logos of fr. 1, the ἴππος or ἵππος ἱππας of this fragment. The relationship between the 'one law', the divine law, and the 'laws of men' is somewhat different from that between the ἴππος ἱππας of fr. 2 (identifying the Logos of fr. 1 with the 'that which is common to all' of the first part of this fr. 114) and the ἵππος ἱππας of the same fragment or the sleep-like imperceptibility described in fr. 17 for the 'laws of men' are not entirely cut off from their source. The 'divine law' is perceptible in things, and human laws are effective in so far as they coincide with the one law or formula which controls not merely a particular society of men but the whole complex of existing things, animate and inanimate. Yet the relationship was not simply one of imitation on the part of human laws: divine law played its part in a concrete manner, as is implied by the term ἵππος ἱππας. To revert entirely to later, Platonic, concepts: for Heraclitus the relationship between particular men or things and the one universal

formula or law was both ἴππος and ἱππας; for the native corporealist there is no illogicality in this. But here the discussion goes beyond Heraclitus.

The relationship implied by ἵππος ἱππας is further elucidated by the last sentence, where the attributes of the one divine law are complete power, complete sufficiency for others, and complete self-sufficiency. These attributes are exactly those of ἴππος: ἰππας and ἱππας express the absolute power, ἰππας the immortality, which are the two chief marks of the divine from Homer onwards. The sentient imagery of ἵππος ἱππας is made possible by the previous use of ἵππος, whether one thinks of an anthropomorphic god or of Xenophanes' non-anthropomorphic deity, which however ἵππος ἱππας, ἵππος ἱππας, ἵππος ἱππας ἰππας (fr. 24). The whole sentence is poetical in character and should not be subject to too literal an analysis.

Immediately before fr. 114 in the collection of Stobaeus comes another saying attributed to Heraclitus, accepted by Diels as fr. 113: 

*Florilegium* vol. 1, 179. ἰππας ἰππας ἱππας ἱππας. By water, deceived no doubt by the omission in most ms. of the lemma for this group of excerpts from Heraclitus, took it as the original prelude to fr. 114; this is most improbable, for it spoils by anticipation the pun between ἰππας and ἵππος, the alteration from ἴππος ἱππας to ἰππας ἱππας is pointless and confusing; and ἵππος is used in different senses in each case, which, although a device employed by Heraclitus to emphasize a contrast, would here merely obscure the point. Also, ἰππας must mean 'to all men', while ἵππος in fr. 114 must, from the context and the analogy with law, mean 'all things' (including no doubt all men as well as inanimate objects). In fact, the so-called fragment is suspect whether or not it is connected with fr. 114. Gigon 169, however (followed by W. E. B., *Eratosthenes* ad loc.), was suspicious only of ἰππας; but Reinhardt, *Parmenides* 214, had pointed out that the assertion that sense is within the reach of all does not mean that every imbecile can become a sage; it means that the recognition of the Logos, a recognition which leads to a sensible outlook, is available to all in that the Logos is present, though not obviously so, in all things. 'Common' as applied to the Logos means, primarily, 'operative in all things', just as in fr. 88 it is said to be 'common' in the sense of universal. By inference, since men have the faculties
to perceive all things, the Logos is 'common' to them in the subsidiary sense that it is possible for them all to apprehend it; though but few of them do apprehend it. This is the implication of frs. 1, 114, 2: yet one may well doubt whether Heraclitus would have explicitly used ἡμιος in this subsidiary sense where some other expression would have done equally well; for him it was almost a technical term, and to have used the subsidiary sense except by implication (as in ἐν νην ἡμιος in fr. 2 below) would have diminished the force of the technical sense. Stobaeus collected other weak paraphrases, e.g. frs. 109, 112 D, 116 D; the probability is that this statement is merely a short version of the general sense of fr. 2 in particular. A succinct saying of this sort might well have become a popular one, whether original or not, comparable with those in the collection of apophthegms attributed by Demetrius of Phaleron to the Seven Sages and transmitted by Stobaeus. This would account for its repetition by Plotinus, Enn. vi. 5, το και γαρ και το φρουνν τον τον διον διο και τον τον, ου το μεν δει, το δε δει δεν. In this version ἡμιος has a different sense from any which is likely to have been used by Heraclitus: intelligence is said to be invariable for all, that is, wisdom is not relative. On fr. 113 D see also p. 63.

2

(92a)

 Sextus Empiricus adv. math. vii. 133 (post fr. 1) ... ἡμιος προ- δηλιτευον ἐπιτρέπει δια δει ἕπεσον το (ץου, τουτοτι το) και ἡμιος γαρ 6 καις του λόγου δε ένοντος ζευς τοις πολλας ας ἵδων ἑγεντες φρόνησεις. η δε έτοιν ουκ ἄλλω τι θαλα καθαρίς ποτα της της παραστέ θειας. δια καθ έτοις αν αυτο της μην ζυγώσαναι, ὁμοθεμεναι, α δε ένθεσαναι, γειας ἑκος.

1 προσθετον προι. Bekker. 2 ( ) Bekker; ζου διο καις φιλοπ. Schleiermacher.

(After fr. 1)... A little further on he adds: Therefore it is necessary to follow the common (that is, the universal: for 'common' means 'universal'); but although the Logos is common the many live as though they had a private understanding. This is nothing other than an explanation of the way in which the universe is ruled. Therefore in so far as we share in awareness of this, we speak the truth, but in so far as we remain independent of it, we lie.

ζου διο καις is obviously a gloss by Sextus or his source: καις is the later form of ζου, 2 and one which (though found in Herodotus) Heraclitus would hardly have used; he uses the epic and Ionic form ζου, as we may judge from frs. 80, 105, 114, as well as the later occurrence in this fragment. Nor is this Ionic form in these fragments due to a later process of re-Ionicization, for Sextus' gloss shows that it was not too well known in his time at any rate. The re-establishment of what were considered to be appropriate dialectal forms did not come into vogue much earlier than a century and a half before. It goes without saying that if Sextus or his source had had καις in front of them, then there would have been no need for a gloss at this point. We must either suppose as Schleiermacher did that ζου is to be read for καις, or, with Bekker followed by almost all later scholars, that the original ζου together with an

1 I have translated by 'universal' and 'common' above, not because there is any distinction of meaning in the Greek, but in the absence of an archaic English form of 'common'.
explanatory phrase connecting it with ἐνωφή has been lost from our text of Sextus. In this case the gloss would have been a repetitive one; if any words were to be dropped as redundant they should have been either the words equating ἔνωφή with ἐνωφή (something like Bekker’s conjecture τοιούτου τοῦ ἐνωφῆ) or the phrase ἔνωφή γὰρ ἐν ἐνωφῆ. As it is, the original word, the one that required explanation, is missing from the text, which makes nonsense of the gloss which follows; it is easy to understand, however, how in an effort to simplify the repetitive gloss the wrong word should have been retained. Against the much simpler explanation of Schleiermacher, that an original ἐνωφή has merely been corrupted into the present ἐνωφή from the gloss which follows, is the γάρ of ἔνωφή γὰρ ἐν ἐνωφῆ. This explanatory particle would have been quite unnecessary for a simple equation between the earlier and later form; it implies a definition or restriction that has already been given, and in this case lost.

That Heraclitus’ words were those printed in heavy type above is accepted by most modern commentators, e.g. by Diels, Reindhart, Kranz, Gigon, Walker. Bywater, however, rejected the whole of the first clause as an earlier gloss misunderstood by Sextus; while Burnett at one stage accepted nothing but χωνωνον-φρωνων, and later went to the opposite extreme and attributed to Heraclitus the whole quotation as it stands in Sextus (EGP 139 n. 2).

The fragment draws a conclusion pertaining to human behaviour from some general assertion of the ‘common’ property of the Logos or formula of things: since there is one common rule or law which underlies the behaviour (γνώμαια) of all things, then men are subject to this law and, if they want to live effectively, must ‘follow’ it. Fr. 114, as has been seen, made a general assertion of this sort about τό ἐνωφή, although there the only implied identification of it is as ἄριστος ἐνωφή and not as ἀληθής; as has been observed, the two ideas are complementary. In that fragment the generalization was itself the justification of a preceding assertion that men should rely on that which is common to all; this does not of itself rule out the possibility that fr. 2, as well, develops the implications of the generalization in fr. 114, for an a-b-a structure (‘men must...because the Logos is common...therefore men must...’) suits the naïve architectonic character of Heraclitus’ expositional method, so far as this can be judged from the few extant fragments composed of more than a single sentence. Thus in fr. 1 there is an a-b-a-b arrangement: ‘The Logos is this...but men are incomprehending...all things happen according to the Logos...men are like people of no experience...’. There is a close parallelism in structure between fr. 1 and fr. 2, as Reindhart, Parmenides 61, and Gigon have noted:

Fr. 1 τοῦ δὲ λόγου τοῦ ἐνωφή ἑνωφή | διὰ δέκατον γνώμαιαν ἀληθήναι...
Fr. 2 τοῦ λόγου ἐν ἐνωφῆς ἑνωφή | χωνωνον οἱ πολλοὶ ἐν ἐνωφῆ...

It would be wrong to draw from this parallelism alone the conclusion that these two fragments necessarily came close together in Heraclitus’ own arrangement of his sayings; but the similarity of subject-matter together with Sextus’ information makes such a conjecture a probable one. Fr. 114 may have come between. Fr. 2 contains the only explicit affirmation in the extant fragments that the Logos is ἐνωφή, although this is plainly implied in the words γνώμαιαν γὰρ τὸν κατὰ τὸν λόγον τόδε in fr. 1 and the description of the σαλος νομος in fr. 114. The fact that τό ἐνωφή has just been mentioned makes it permissible to conclude that the phrase refers primarily to the Logos. Nevertheless, in fr. 114 and the first clause of this fr. 2 τό ἐνωφή is not just used as a periphrasis for Logos; rather it is a separate term in an inferential argument which leads to the conclusion that men should ‘follow’ the Logos—an argument which may be cast into syllogistic form as follows: If there is anything which is ‘common to’ all things, then men should not try to escape it in their behaviour; the Logos is common to all things; therefore men should ‘follow’ the Logos. In this argument, which seems to underlie fr. 1, 114, 2, two separate assumptions are made: (1) the Logos is present in all things, or common to all things; (2) men should not contravene a rule which applies to all things. (1) is explicitly stated in the γνώμαιαν...τὸν κατὰ τὸν λόγον τόδε of fr. 1, and more plainly still in the τὸν λόγου τοῦ ἐνωφή of fr. 2; what the Logos is and how it works in a variety of different cases is explained in fr. 50 and the fragments of Groups 2-6. (2) is stated in the first clauses of fr. 114 and 2—but no clarification or explanation of this assumption remains. Perhaps the δόκο which introduces the statement in fr. 2 means that some explanation preceded this fragment, and is now lost; perhaps it merely referred back vaguely to the content of fr. 1; conceivably it referred to the statement in fr. 114, or a similar statement, that the ‘divine Law’ is
all-powerful and all-sufficient. However, the assumption may have been an axiom, requiring no justification or elaboration: if there is one law or formula visible at work in all parts of the changing outside world, and if it is held to apply to men as well as to everything else, then it is self-evident that to use one’s strength and will to work against this formula is to court disaster. This axiom was later accepted in the Stoic ideal of ὑπερυφαναῖς γῆν, an idea which may have been derived from reflection on Heracletus’ doctrine of the Logos. In itself this axiom does not reveal an attitude which differed much from the attitude of Heracletus’ contemporaries to the outside world and the forces which ruled it, though different terms are used. In the terms of traditional religion, all things are ruled by the gods, both men and ‘nature’—winds, sea, sky, crops and so on. The same Zeus who punishes human wrongdoing such as the ill-treatment of a suppliant controls the wind and the rain and the heat of summer. To put to sea in midwinter involves ἐπικεφαλής just as high-handedness in personal relationships does. Heraclitus accepted this kind of view and applied it, perhaps more clearly than it had been applied before, to a new conception of natural order.

The use of ἔστιν in the sense ‘follow, obey’ recalls the Delphic motto ὅτι ἐστιν, which is adapted in the Pythagorean Symbols according to Iamblichus Protepticus 21. Herodorus v, 18, 2 has ἔστιν νόμον (νομος here = ‘custom’); for similar uses cf. also LSI s.v., 1, 7. The word may be held to apply especially, at this period, to obedience of an unquestioned authority. To turn to the last clause of the fragment: ὅτι μὴ ἔλεγχεν the absolute condemnation of τοὺς ἐκ λαῶν ἀνθρώπους in fr. 1, and allows for the possibility that some men as well as Heraclitus have comprehended the truth that confronts them; so perhaps in fr. 17, also in association with the root φρένον. This root has different shades of meaning, from ‘understand’ to ‘perceive’ (see also E. Fraenkel Aeschylus, Agamemnon 11, 103): Aristotle, de an. Ἐ, 3, 477a21 ff., asserted that ‘the old thinkers say that φρένον and ἐφθάνασαν are the same’ and quoted Empedocles fr. 108 to prove his point; cf. ἐπειδὴ fr. 117 καὶ τοῦτον ἐπειδὴ καὶ ἐπειδὴ ἐπειδὴ. That Aristotle’s generalization is misleading is shown by, for example, Parmenides fr. 16, where φρένον is unmistakably associated in sense with νόμος and νόμει. Another aspect of φρένον, φρένος (developed in the compound ὄφθαλμοφρένοις) is ‘good sense’; so, for example, in the injunction attributed to Piticus,
conclusion that λόγος refers to a type of understanding or apprehension. On the contrary, it refers to an object of such a mental process—the primary object, in that it occurs in all things and events without exception. Thus there is sufficient connection between λόγος and φρόνησις to ensure that the opposition between their significant epithets is not lost; but it is a connection of relation rather than of kind. The opposite of ἀθέτητος φρόνησις would not be ἦσθι φρόνησις, which is nonsense (in spite of fr. 1135), but φρόνησις τῆς ἴδιας, which would include the ἴδιος λόγος. We cannot separate φρόνησις from its object any more than from its results (speech or action): it is the objects which are primarily 'private', and hence the process of apprehending and thinking about those objects. There is little need to add that this way of thinking cuts one off from the real world and the chance of recognizing the common formula which permeates that world: one is as though asleep, in the private and delusory world of dreams. For other expressions in the fragments of the idea implicit in ἀθέτητος φρόνησις see p. 47.

Nothing has been said so far, either under this fragment or under fr. 1, about the accuracy of Sextus' interpretation of these statements. Sextus is writing from the point of view of a skeptic, whose main interest is in epistemology; he therefore gives them an epistemological interpretation. On fr. 1 he remarks: 'Hereby he expressly propounds that we do and think everything by partaking in the divine Logos.' His comment on fr. 2 is quoted in the translation above: 'εἰς ὅποιον ὑπὸ ἀλλὰ ἄτονον... cannot mean (as Löw, in the first of the articles cited above, thought it meant) that the φρόνησις of fr. 2 is the 'explanation of the manner of the government of the universe': it is quite obviously attracted by ἀτομοιεῖσθαι from τοῦ, and refers either to the proposition that the Logos is common, or to the whole of frs. 1 and 2. Finally, he concludes by saying (VI, 134, after φρονήθηκα): 'In these words too (i.e. fr. 2) he now most expressly declares the common Logos to be the criterion, and says submission of Löw, to which must be added Löw's article on fr. 1 in the same volume, 456 ff.) advanced the extraordinary view of a quarrel between Heraclitus and Parmenides on epistemological matters, in which Heraclitus attacks Kōron as 'abstract idea'. Reithardt, Parmenides 62 ff. and 117 ff., was also misled by the preconception that Kōron must mean something in the same category in Heraclitus and in Parmenides: he translated it as 'Deinögeszis'. Löw's article on φρονήθηκα and νῦν in H. and P., Phil. Wochenschr. 49 (1929) cols. 426 ff., is visited by the same primary blunder.

that those things which appear in common to all are reliable, as being judged by the common Logos, while those which appear to each man privately are false.' These comments show clearly that Sextus accepts the Stoic interpretation of Logos as the universal Reason, in which men share; on this concept he has grafted the epistemological view that the criterion of truth is its universality. There is nothing in this which corresponds with what Heraclitus appears to have meant by his Kōron. As has been seen, the Logos being common to all things and to all men means for Heraclitus that it is a fact, and a fact of the greatest importance for men; it is also within the reach of all. But there is no explicit epistemology in this beyond the axiom that beliefs which do not correspond with the real state of things are deceptive. Fr. 1135 has already been considered under fr. 114 (to which it has frequently been attached), and the conclusion reached that it is a vague paraphrase, particularly of fr. 2. It looks as though some ingenious interpreter reasoned thus: 'Heraclitus criticized the majority of men for having an ἀθέτητος φρόνησις: therefore he thought that φρονήθηκα should be ἦσθι.' The only adequate interpretation of the sentence as it stands, with or without ἦσθι (which is omitted in Plotinus), depends on giving φρονήθηκα the sense of φρονεῖται or φρονεῖται, which it only carries in Heraclitus in other members of this suspicious group of sayings in Stobaeus, frs. 1120 and 1160.

Another saying attributed to Heraclitus, fr. 89D (595), seems to be a later paraphrase partly of the last clause of fr. 3 and partly of the last sentence of fr. 1: Plutarch de supers. 3, 166c: 'Ἡράκλειτος ἱστομἐ τοῦ ἅγιονος ἅγιον καὶ κακίαν κάκιαν ἄλλα, τὸν ἀκομφύμονον Βιταν βιταν ἀκομφύμονον τῆς ἄρτης αὐτοτρόφα ταῖς. τὸ τι ποιεῖται κάκιαν οὔτε ἄλλο κόσμον οὔτε ἀλυτώ τοῖς ἁγίοις, ἡ ορκομενή χρήσα οὔτε καμίνον ἐπάλληλον τοῦ παρατητοῦ. . . . Diod. accepted only the first clause ("to those who are awake there is one common world") as Heraclitean: so Kranz in DK. However, the choice of words does not support this view: κακίαν instead of ἦσθι may be a single alteration by Plutarch for the sake of clarity; more important, however, is the use of κοσμον here. A full discussion of the early uses of this word can be found under fr. 30 (pp. 311 ff.); there the result is reached that for Heraclitus its sense is the basic one of 'order', rather than the common derived sense of 'world'. In the words attributed to Heraclitus by Plutarch the sum of one's experience is meant, and the sense of 'order' certainly cannot be
stressed. In Plutarch's subsequent comment the interpretation of κόσμος is less sure; what he means is that the superstitious man cannot achieve a same and single view of things, either waking or sleeping; but unless κόσμος is to refer to the order of his thoughts (an interpretation which cannot be applied to the words attributed to Heraclitus) it must be closer to the sense of 'world'. The second part of the quotation also contains signs of wording. Elsewhere (frs. 75, 83; 1, 21, 26) Heraclitus uses κοιμάσθηκαν or κοιμήθηκαν for 'sleep'-not that this is a binding argument, for κοιμέω is a perfectly possible word for him to have used, too. Also, with ἑαυτῷ we must presumably understand κόσμον, which would be equally suspect here as above. Possibly λόγον or οἰκονόμον should be read (see p. 284): οὐκ ὑπὸ τοῦ σώματος ἀναπτύσσεται! is possible archaic Greek, and reminds one of the language (though not the odd sense) of a saying attributed to Pythagoras by Hippolytus, Ref. vi, 26 (p. 153 W.): ἦν ἡ συνεργία τῆς ἐνότητος ἐκ τῆς αὐτής ὁ Εἰρήνης ἕντεκατον ἐν μεταξύ. The last sentence is almost identical with the last sentence of Heraclitus fr. 94, where, however, the context is quite different; and it is impossible to wonder whether the first sentence also is really derived from Heraclitus; see, however, the discussion on p. 285. On the whole I am inclined to hazard the conjecture that ὑπὸ τοῦ σώματος...ἀναπτύσσεται! represented some words of Heraclitus which reproduced more graphically the idea of ἑαυτῷ ἐνοτοπία: perhaps they were, as Plutarch suggests, originally connected with a word for sleepers; though the final part of fr. 1, which was presumably well known, would be quite sufficient in itself to cause the connexion of 'each returns to his private land' with sleep, as an analogy to the condition of most men when awake. The earlier part of Plutarch's attributed sentence, on the other hand, has no claims to originality. Neither part adds materially to what we already know.

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1 ἀναπτύσσεται. D, ἀναπτύσσεται codd. emt. Either reading is possible.
2 It is true that Plutarch's quotations from Heraclitus usually seem to be trustworthy; but most of them are quotations in direct speech, while the indirect speech of this passage leaves the way open for considerable freedom. No other reference to Heraclitus' own words is thus obliquely introduced after ὑπὸ τοῦ σώματος. 30

Hippolytus Refutatio i, 9, 1 (p. 241 Wendland) Ηρακλείτους μὲν οὖν ἁρματικοῖς ἔχει τὰ πᾶν διακρίνει οὖν ἡγεμόνικας, ἔγνωσεν ἡγοῦντος, ὥσπερ τῆς ἁγιωτάτου, λόγου αὐτοῦ, σταυρόν μὲν, δεινόν δικαίον, οὐκ ἐμείδικτον ἡμῖν τὸ λόγον ἓρμηστον ἡμῶν ἐγγεύονται σοφῶν ἐκτὸς ἐκ πάντων εἰς ἣν ἀλλὰ ὁ Ἡρακλείτος φημεῖ καὶ ὅτι τῶν οὐκ ἑαυτῷ πάντως οὐδὲ ἀναπτύσσεται τὸ κόσμον... (seq. fr. 51).

1 ἤρμηστον (ὑπὸ τοῦ σώματος) Beneyas, Diels. 2 δικαίον (ὑπὸ τοῦ σώματος) Diels...θεν δικαίον ὅτι ἐκ αὐτοῦ κάθεται. Bergk, H. Gomperz. 3 μετάφρασι, em. Beneyas. 4 ἑαυτῷ codd., Bergk, Beneyas, H. Gomperz; em. Miller, Reinhold Alkemar commentum.

Hippolytus, then, says that the whole is divisible and indivisible, has come into being and not come into being, is mortal and immortal; that Logos is deon, the Father is the Son, God is Justice: Listening not to me but to the Logos it is wise to agree [homo-log-ei] that all things are one, says Heraclitus: and that they all ignore this and do not agree he complains in words like these:... (fr. 51 follows).

Hippolytus, after affirming that the heresy of Noetus that Father and Son are the same is really derived from Heraclitus and therefore pagan, introduces a series of quotations from Heraclitus in substantiation of this, of which this is the first. Heraclitus held that all apparent opposites are really the same; therefore, Hippolytus concluded, there is no difference between father and son—an identification which Hippolytus believed to be implied in fr. 52. The opposite qualities which Hippolytus here attributed to the Whole, and the identifications of Logos and Aeon, etc. (which seem to be separate identifications, and not necessarily descriptions of the Whole), represent his own ideas and are irrelevant to an objective assessment of Heraclitus; thus it is unnecessary to try to reconcile Hippolytus' anachronistic description of Heraclitus' theory with the actual words quoted, by supplying with Diels 'the whole is one, divisible and indivisible...'. Two of Hippolytus' pairs of words are difficult.

1 Though formally based on fr. 67; cf. also the gloss embedded in that fragment: τὸν ἔξω ἑνὸν ἐφέρεσθα τὸν νέον ἐφέρεσθα.
perhaps, as Kranz in DK suggests, λόγον στίχων means 'the eternal Logos is the same as a lifetime'—but not all the pairs are true opposites, and the reference is probably to Gnosticism, as with the next pair; Valentinus held that the τίμων θεόν produced Noēs, which produced Λόγος and Σωφρ., according to Irenæus adv. heres. 1, 1. The last pair has given rise to much unnecessary speculation; Diels wanted to supply σίφων, but this leaves στίχων in the air, as does the theory of Bergk, adopted by H. Gomperz. (W. Nr. St. 43 (1922–3) 118), that σίφων really belongs to the quotation from Heraclitus. Even more improbable is Heidel's suggestion that the contrast is a reminiscence of Plato Crat. 412B–413A, where both σίφων and Δείκτης are derived from στίχην. Not surprisingly the right solution is supplied by a student of Hippolytus, not of Heraclitus: Wendland, Hippolytus III, 241, explains that there is a common Gnostic antithesis of θεός (the Old Testament Jehovah) and σίφων (the absolute God), especially in Marcion.

The writer of the single extant manuscript of this part of Hippolytus' treatise was obviously unsure whether δύναμις or λογιος was correct in the quotation; we need not hesitate to accept the second since, apart from the facts that only thus does the sentence have any point, and that an opposition between a person and his opinion or teaching is impossible (see on fr. 1), the word δύναμις is not found before the fourth century B.C.

Bergk and H. Gomperz, by trying to retain the ms. reading σίφων, and taking σίφων into the quotation as that on which ἀληθευόντας depends, get into difficulty with ἄληθεν. Apart from this, the one Wise knows all things' or 'Wisdom is one, to know all things', is scarcely what we should expect. I do not believe, as will be shown later under Group 12 (fr. 41, 32, 108), that Heraclitus envisaged an absolute τοῦ στίχου which was identical with the Logos; nor, if στίχου...στίχου here is equivalent to τοῦ στίχου in fr. 41 (it is obvious in any case that the omission of the article is difficult; more difficult, for example, than in fr. 108), does it seem likely that wisdom for men should consist in 'knowing all things'—a difficult task indeed, while the gist of Heraclitus' other remarks is that the truth about things (implying wisdom) is not impossible to find. In fr. 41 wisdom is said to consist in this alone, the understanding of 'how things are controlled'. This is a much smaller subject. The fact that ἀλήθεια occurs in the remark of Hippolytus which follows is, as Gigon commented, no support for σίφων: for the object of στίχου is the same as the object of ἀληθευόντας. The Paris ms. is, by no means impeccable; στίχων is far more tolerable on the grounds of sense, and the emendation may be accepted.

It has already been shown that δύναμις for Heraclitus usually means something outside himself, namely, the formula of all things. The sense 'my Word', even if the content of the 'Word' is read into this as well, has been shown to be unsuitable in most contexts in the fragments, but particularly in this one. A contrast between a speaker and his λόγος is too bizarre, and especially for Heraclitus, who shows no signs of wishing to subdue his own personality in his pronouncement of the truth. The use of ἀληθευόντας does not affect the issue; in fr. 2 τοῦ ἄληθου was the object of οὕτως, which thus has a diminished quasi-metaphorical sense, 'act in accordance with'. So it may be here—ἀληθευόντας might simply imply 'obey'. On the other hand, it may be explained as referring primarily to ὄσον: or the verb is due to the fact that a Logos in another sense is 'heard'. Finally, it is perfectly possible that some degree of personification of Logos is implied: the Logos is present in all things, it is obvious, it 'speaks its presence'. Holscher is surely too literal in asking 'by whom the Logos is spoken' (Varia Variorum. Fests. f. K. Reinh. 71). Heraclitus is trying to say that the truth which he wants to propagate is not just some idea of his own: it can be detected in many different ways, for it is common to all things; his own explanations, however, should make it more readily comprehensible (see fr. 1). oδέ ἄληθος should not of course be taken as prohibiting men from listening to Heraclitus, rather it implies that his words have an absolute authority from outside. Gigon 44 has well suggested that the contrast between ὅσον and λόγου corresponds in some degree with that of ὄσον and ἄληθου in fr. 2; but in Heraclitus himself, it should be added, ἄληθος had been submerged in τοῦ ἄληθου.

In ἀληθευόντας we should recognize a deliberate pun with λόγου; such puns are common in Heraclitus' fragments, cf. fr. 1 (twice), 30, 25, 26, 28, 48, 114 (twice). Some of these puns or word-plays may be mere stylistic devices which seemed attractive at this stage of prose

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1 Gigon 44 compares Parmenides fr. 2, 1 εἰ τοῦ ἄληθου ἐπιτιμάσω, καθαρὰς ἐν τοῖς ἀληθευόνται δύναμισι: but here the speaker and his word are identified, not opposed.

2 Snell, Ph. U. 297 (1924). 49–59, shows that the use of the word ἄληθος implies a similar conception.
writing. Others, however, claim to reveal a real connexion between apparently different things which bear similar (but not necessarily identical) names: the best examples of this are ἀρχή in fr. 35, διαλόγος...διαλογιστής in fr. 28, ὁδός (=φω) in fr. 48, and ἔκκλησι...ἐκκλησία in fr. 114. Thus the manner of one’s death is connected with one’s ‘portion’ afterwards; the most renowned men often have the most illusory opinions; the bow is the instrument of death, though it has a name like ‘life’ (even this connexion by opposition seems to have significance for Heraclitus); to have common sense one must rely on the ‘common’. There is no evidence that Heraclitus went deeper than this into the theory of names, even if Cratylus did: but even from these examples it may be inferred that verbal coincidences were not disregarded by him: cf. Snell Hermes 61 (1926) 369 ff. Just as λόγος in this fr. 50 means something far beyond ‘word’, so does διαλόγος mean more than ‘say the same word as’ or ‘agree’—though it certainly has this sense too. It means ‘be similar to’, in tune with, the Logos’: it means not opposing the Logos by refusing to recognize it; it means ‘assimilation’ of the common formula of things after ‘hearing’ or ‘listening’ to it. In Heraclitus’ time διαλόγος was still, perhaps, a neologism (it might have been used by him in the next fragment 51) quoted by Hippolytus, though probably we should read συμφέρεσις; see p. 224; it was used by no other philosophical writer before the middle of the fifth century (but often by Herodotus). It is not therefore surprising that the reader or hearer should be expected to understand its specialized meaning here, with emphasis on the two component words as well as on the whole.

The result of listening to the Logos is agreement that all things are one. The Greek words could be translated ‘one thing is all things’, but this would not accord with the sense of the rest of the fragments: admittedly fire is in some way primary or basic, and we learn that ‘all things are an exchange for fire’ (fr. 90), ‘fire’s turnings, first sea...’ (fr. 31); in fr. 30 this νόσος is said to be ‘everliving fire’ (but it will be argued that νόσος there is not exactly equivalent to ‘all things’). Yet it is quite clear from the large number of fragments devoted to exemplifying the real unity of apparent opposites, and from the final examination of the sum of Heraclitus’ pronouncements, that the Logos means not that a particular single ἐφιάλτης is all things (which would be implied by taking ἐφιάλτης as the subject), but that all things are connected by an underlying unity. It means this; can we say that it is precisely this? That is a difficult question indeed, for it raises the problem of the kind of reality which Heraclitus was prepared to give to the Logos—which, since it was common to all things, was presumably fully real. It is commonly said that the PreSocratic thinkers were corporealists, and this is indeed the case: both Empedocles and Anaxagoras, for example, were compelled to describe in corporeal terms what we call ‘forces’. However, the fact that Anaxagoras called his Nous, which permeates and provides the motive force for all things, ‘the finest (most subtle) of all’, shows that he was going as far as he could in ridding of gross corporeality a substance which controlled matter. If held down to the point, any Greek physicist before the time of Socrates would have been forced to admit that everything had body and corporeal substance: otherwise it would not ‘exist’. Doubtless Heraclitus would have been no exception. But we have no right to think that he was ever held down to this particular point: it may be suspected that some thinkers carefully avoided defining postulates such as motion or controlling force for the very reason that when expressed in corporeal terms they would lose their plausibility. This is probably the case with Parmenides’ homogenous ‘Being’. It may be the case with the Logos of Heraclitus: the Logos is something which is common to all things, according to which all things happen; that it is not simply a truth about things, determined by human analysis, is shown by the phraseology of fr. 114, where the ‘divine law’ which is akin to the Logos is described in material terms which are probably not just due to personification. The Logos is a component of each different object, yet has a single collective being; it is the component of order or structure or arrangement, not the whole of an object’s structure or shape but that part of it which connects it with everything else. As a component of things it is, it might be inferred, corporeal—some substance which makes things behave in a particular way, just as the ὁδός of Empedocles makes different roots mingle. This is guesswork and goes beyond what Heraclitus tells us; however, I shall try to show under fr. 30 that νόσος there, as elsewhere in the fragments, means ‘order’, and therefore corresponds with the structure of particular objects which in its collective application may be termed the formula of things—a formula being an abstraction from a complex rather than a purely external analysis.
of it, just as \( \text{H}_2\text{O} \) is 'in' a drop of water in that its components are hydrogen atoms and oxygen atoms, the former being twice as numerous as the latter. In fr. 30 \( \xi\acute{\epsilon}\\rho\omicron\omicron\upsilon\varsigma \) is identified with fire, but fire undergoing a process it may not be going too far, therefore, to say that in so far as the Logos, which is closely related to \( \theta\iota\omicron\upsilon\varsigma\sigma\iota\eta\iota\omicron\nu\) is thought of as a material component of the things to which it is 'common', it is thought of as a form of fire; to which should be added that Heraclitus perhaps as far as possible avoided thinking about the Logos in this analytical way. The Logos is the formula, structure, plan, of each thing and all things: this is the important point. As such it results in the fact that 'all things are one' in two ways: they are 'one', first, in that they all have a common component, part of their structure; and secondly, because they all connect up with each other because of this common structure. Heraclitus, here as elsewhere, uses the concept of 'oneness' or identity very loosely. For two objects or events to be caused by the same things, or belong to the same category (absolutely or relatively), or act in the same way, is enough for Heraclitus to say that they are 'one' or 'the same'. However loosely used, that 'all things are one' is not the Logos itself—rather it is the conclusion one would form as a result of apprehending this Logos. This is what the fragment itself suggests: δεικτετος ἔχει ψιλοτρόφα τό ἐν τῷ πάντω καὶ τῷ τοιῷ καὶ τῷ τοῖν οὐκ ἔχει. But this very conclusion is implicit in the Logos without any process of human inference: to say 'all things are one' is itself to suggest this inference, however, for it is a statement that only makes sense in opposition to the unreal supposition that 'all things are not one'.

The reasons for Heraclitus' statement that all things are one become apparent in the fragments of Groups 2–5; these fragments provide examples of the ways in which the \( \mu\upsilon\delta\omicron\sigma\áς \) manifests itself in various objects and events. The fact that Heraclitus induced from these examples the generalization that all things are one is itself of great importance: for he was the first thinker, as far as we know, explicitly to define a connexion between the apparent plurality of the phenomenal world and an underlying unity which, in some form or other, was automatically presupposed by the earlier Presocratics. Aristotle readily detected this common presupposition and put it into the form of a concise and explicit assertion, like \( \eta\upsilon\iota\omicron\nu\delta\sigma\iota\varsigma \theta\iota\omicron\nu \) an assertion which was consequently attributed to many early thinkers in the doxographical accounts. Xenophanes in particular, being wrongly associated with the Eleatics, was credited with this statement: cf. 31 A 20, 31, 33, 34. An interesting form of this assertion occurs in the Hippocratic treatise \( \text{De nat. hom.} \) (1, 32 Liter). This passage shows that the kind of analysis of early theories of nature which we are discussing was made before Aristotle: but in any case it is to the period of criticism from the late fifth century onwards, and not to the period of early physical speculation, that we owe most of the statements of the \( \sigma\iota\nu\acute{\alpha} \nu\llap{a} \) relationship. A relationship different (though not essentially so, one may suppose, in the eyes of Heraclitus: see Group 7) from that of identity is most clearly expounded in Empedocles fr. 17, 11, with which Heraclitus fr. 10 (q.v.) was inevitably confused:

\[ \text{πάντα ἔχουσιν ἀλλ' ἄλλα οὐχὶ ἔχουσιν.} \]

This idea of the growth of many out of one, and of one out of many, was adopted by Aristotle (e.g. \( \text{Met. A} \) 3, 983b 8f.), and thence by Theophrastus (fr. 1, 2) and the doxographers, as an explanation of the identification of one and many (or one and all) by Heraclitus; and this in spite of the distinction clearly drawn by Plato \( \text{Sophist} \) 242d, 6, 8.

The use of the word \( \tau\omicron\upsilon\omega\nu \) emphasizes once again that the apprehension of the Logos, and the perception that all things are really one, is not a philosophical luxury but a pragmatically necessary for men. They themselves are connected with their surroundings, and their relations with those surroundings are obviously improved if this connexion is understood. The use of \( \tau\omicron\upsilon\omega\nu \) by Heraclitus is further described under Group 12: in its human application it always seems to apply to an intellectual and practical accord between men and their environment.

1 The later occurrences of this type of formula cited by Norden, \textit{Agora}, \textit{Teseis} 247 E; Socrates, \textit{Metafysik} d. \textit{Alternus} 82; Gigon 45 f., are totally irrelevant to Heraclitus and are of interest only for a study of doxographical method. Cf. also pseudo-Massar (DK 32 4) and Xenophanes fr. 27, the authenticity of which has been widely and justifiably doubted. Gigon fails to see that the formula of Heraclitus fr. 10 is a special application of the formula in fr. 50, and treats the former as an expression of the real meaning of the latter.
GROUPS 2–8

Reasons for accepting the conclusion, connected with the Logos, that ‘all things are one’; different examples of this principle; general statements of the unity in the world around. Tension and change are necessary to preserve this unity.

The unity of all things is for Heraclitus proved by the essential unity of apparent opposites. This unity expresses itself in different ways: (1) opposites are ‘the same’ relatively to different observers, or to different aspects of the same subject (Groups 2–4). (2) Opposites are ‘the same’ because they inevitably succeed one another: they are different degrees of the same quality, or different poles of the same continuum (Group 5). These different modes of the unity of opposites are illustrated by concrete examples, cf. Philo Qu. in Genes. III, 5, p. 178 Aucher ‘hinc Heracliti libros conscripsit de natura a theolo nostro mututus sententias de contrariis, additis immensus hisque laboriosis argumentis’.

GROUP 2

Fr. 61, 13 [+ 37v], 9 [+ 49]

The same thing is regarded in opposite ways by different types of observer; and has opposite effects on different subjects. A certain food or activity is good for animals but the opposite for men, and vice versa.
Hippolytus Refutatio i, 10, 5 (p. 243 Wendland) καὶ τὸ μικρὸν ὀφεὶ καὶ τὸ κατώτρυν ὅσα, καὶ τὸ τοῦτο ὅσα καὶ τὸ ὀποίου μὲ καὶ τὸ ὀφεὶ μὲν πώς, μὲν ὅσα, διὰ μᾶλλον καθαρύτατον καὶ μικρότατον. Ίσοθύει μὲν πώς καὶ σωτήρων, ἀνθρώπως δὲ ὀποίου καὶ ἰόντων.

And he says that the polluted and the pure are one and the same thing, and that the drinkable and the undrinkable are one and the same thing: Sea, he says, is the most pure and the most polluted water; for fishes it is drinkable and salutary, but for men it is undrinkable and deleterious.

In this fragment Heraclitus' theory that opposites are the same because they can inhere simultaneously in the same subject, in the judgement of observers of a different type, is expressed in its clearest form. Sea water is bad for men to drink, good for fishes: therefore, the implicit conclusion is, in this case good and bad (strictly, salutary and deleterious) are 'the same'. This is a relativist view; but there is no indication in the fragments that Heraclitus based any epistemological conclusions on this view—for him such facts were of interest only because they showed that the opposites were not essentially different, as they appear to be. No doubt the importance which the cosmological opposites, especially the hot and the cold, the dry and the moist, had for his predecessors and contemporaries gave this discovery a special significance. Anaximander, notably, had named the hot and the cold as the first pair of differentiated things to be separated out of the στήριγμα: the discovery, therefore, that pairs of opposites in general were not truly differentiated, vitiated his and similar explanations of the emergence of a number of different things out of a primary unity. It should be unnecessary to say that for both Heraclitus and Anaximander 'the opposites' were opposite things; hot and cold, salutary and deleterious, had a real, corporeal existence of their own, and were actual components of more complex objects with which they

happened to be connected: this view, doubtless never defined in these clear terms by Anaximander and Heraclitus themselves, is the natural predecessor of a concept of quality.

The fragment is quoted by Hippolytus after frs. 50–60, all of which are adduced to illustrate Heraclitus' belief that apparent opposites are the same, a belief which for Hippolytus was an anticipation of Stoicism. The same instance occurs in Sextus Empiricus Pyrrh. hyp. 1, 55 καὶ τὸ 

θάλασσα, 

φισον, 

δὲ 

καθαρώτατον 

καὶ 

μικρότατον. 

This is quoted in a list of examples of the different effects of the same thing on different animals: it is of course an obvious one, and may have been thought of independently in the Sceptic school. Only the fact that it immediately precedes another Heraclitean instance (cf. fr. 13) suggests that there is more than an accidental connexion. With Sextus, of course, all such instances lead to a purely epistemological conclusion: ibid. 58 καὶ τὸ σφυροφὸς τοῦ μὲν ὄπεσθε τοῦ δὲ ήθελε νὰ ἔργον καὶ ἔργον, ἐν φύσεις σεῖται, διὰ τοῦ 

γνώσει 

ταῖς 

ἀπὸ τῶν ὑποκείμενων φαινομεν. 

The same instance occurs at de viventibus 1, 10 (DK 22 c 1; vi, 484 Liddel) ἱχναλάπος ἄνθρωπος, ἄνθρωπον τροφον, θαλαμόν ἐς φθοίρον. Cf. de nutritione 19 (DK 22 d 2; CMG 1, 1, p. 86) ἐν τροφῇ φαγμαθάτῳ ἄρατιν, ἐν τροφῇ φαγμαθάτῳ φαγμαθάτῳ, ἐν φθοίρῳ, ἐς πρός τι. This latter treatise also contains superficial reminiscences of some fragments. Gigon 40 maintained that the form of expression in de viventibus 1, 10 showed this instance to be taken from sophistic rhetoric rather than from Heraclitus: this is by no means certain, but undoubtedly the contrary properties of sea water were notable enough to have struck others as well as Heraclitus. Perhaps he merely took over and adapted some popular saying on the subject.

I should make it clear that the use of 'relative', 'relativist' and so on in the discussion of fragments in this Group is not intended to imply any homos 

materia subjectivism. It was the fact that the relation memmemes-water was in certain respects opposed to fish: sea water that struck Heraclitus as significant. He may not on every occasion have isolated the case of this kind of opposition; but it seems to have possessed objective status in his eyes, not only in the difference between man and fish but also in the complex structure of sea-water itself. See further my article 'Men and opposites in Heraclitus', Mus. Helv. 14 (1957) 155f.
(a) Athenaeus v. 178 B ἀπέτευχε γὰρ ἦν, φησιν Ἀριστοτέλης, ἣς ἐστι τὸ συμπόσιον σου ἵστρωτι πολλάκις καὶ κονίατόκοι. ἐδὲ γὰρ τὸν γερανίον μήτε μπόταν μήτε σψιμάτω ἐντε γραφήμα Δαφνέν καὶ Ἡρακλείδην.

(b) Clement Protrepticus 92, 4 (t. p. 68 Stählin) ... ὡσεὶς τις ἀνθρώπος. ὅπως γάρ, φησίν, ἑσοῦσαν βραδερόμενα πάλλον ἢ καθαρό ἠδώτι καὶ ἐπὶ ἀργυτῷ μεροῦσιν γεμάτα ἡμικράτην.

(c) Columella VIII. 4 (= fr. 37b, 53b) ... si modo credimus Ephesio Heracleoto qui ait sues caera, cohortiares aves pulvere vel cinere lavari.

(a) For it would be unbecoming, says Aristotle, to come to the banquet covered in sweat and dust; for the true gentleman should neither be dirty nor be unwashed nor Rejoice in mire as Heracleitus says.

(b) ... pig-like fellows. For Pigs, he says, delight in mire rather than in clean water, and have a mad greed for rubbish, according to Democritus.

(c) ... if only we believe Ephesian Heraclitus who says that swine wash in mire, farmyard birds in dust or ashes.

This fragment has to be reconstructed from three different elements: (a) gives two words definitely attributed to Heraclitus; (b) appears to be a loose paraphrase of the sentence from which (a) was taken, the whole sentiment being attributed to Heraclitus; (b) gives a corresponding sentence in Greek, but with no attribution. From the evidence of (c) and (a) it seems legitimate to assume that (b), which is distinguished as a quotation, really belongs to Heraclitus. The words may have been slightly changed—indeed, (a) suggests that χαρακτική rather than ἵστρωτα was the verb used. The important thing is the occurrence of 'mire' or 'flith' in all three fragments, and the fact that (b) and (c) suggest clearly that the proper subject of the Heraclitean phrase in (a) was 'swine' rather than (as suggested by the context) 'swinish men'.

In (a) there is no reason to imagine, with Zeller, ZN 911, or Wendland, SE 1898, 788f., that the quotation from Aristotle (= V. Rose, Aristotelis Fragmenta no. 102) extends to the end of the sentence and includes the quotation from Heraclitus. Presumably it ends at κονίατοκι: then the second γάρ marks the resumption of Athenaeus' own comments, and leads to his quotation from Heraclitus which is parallel with that from Aristotle. In (b) φησιν has no definite subject in what precedes; it marks ἑσοῦσαν ... ἠδώτι as a definite quotation and, as all scholars have seen, clearly distinguishes it from the sentiment assigned to Democritus. At Plutarch de sanit. prooe. 11, 129a the same short phrase is also associated with Democritus: see DK 68b 147. (c) shows signs of not being an accurate translation: 'pulvere vel cinere' probably represents a single word of the original, for Heraclitus was not given to meticulous specification of redundant alternatives: moreover, 'pulvis et cinis' is a phrase used by Columella just before. In fact only the first two words correspond closely with what is attributed to Heraclitus in the Greek sources, though 'lavari' (lactari? R. Hackforth) is an easy variation from χαρακτική or ἵστρωτα. The mention of farmyard birds which wash in (or delight in) dust seems to be separate from the statement about pigs. It is hardly likely to be merely an arbitrary expansion by Columella: he has just said that dust or ashes should be placed near the wall of the poultry-enclosure for the birds to clean their feathers in, and then quotes from Heraclitus as evidence for the fact that poultry cleanse themselves in this way. The mention of pigs is not at all relevant to his purpose. It may be presumed therefore that he did find, in one of his sources, the statement about farmyard birds attributed to Heraclitus, as well as the reference to pigs. There is therefore some justification for treating the former as a separate fragment, as, for example, Bywater (fr. 35b) and Diels (fr. 37) did. However, the statement about poultry is clearly very similar to, and presumably comes from, the same context as that about pigs: Columella is not an unimpeachable authority without other support, and it is perhaps wiser to treat the two instances from the farm together.

That the fuller form of (b) is not just due to the addition by

1 Galen, Protrepticus 13, p. 19 Knafl, has a similar observation about certain types of birds, and follows it with a reference to ἄριστοις but there is no sign that he is quoting.
Clement of the words μᾶλλον ἡ καθάρσις ὁδειν is indicated by his repetition of the whole sentence in a different context: Strom. 1, 2, 2 (11, p. 4 St.) ... νῦν λέγεται, ἡ φωνὴ τῶν παρουσιάζοντος, τοῦ πολλῆς ταυτογράφων φωνῆς γοῦν ... ὁδεῖν. It looks as though he is here capping one proverb with another: neither author was known for the second one or his name was too familiar to need mentioning. At Strom. 11, 68, 3 (11, p. 149 St.), however, only the short version of the quotation, with the addition of another noun, is given: χόρος βοσβρέφων ἔρπεται καὶ κέρατον. It is impossible therefore to be sure that the whole of the apparent quotation in (1) is by Heraclitus: I suspect that it is, although καθάρσις might not have been the original word. Three separate interpretations of the fragment have been proposed at different times.

(1) Gigon 121 (after Bernays, Ges. Abh. 1, 96; Zeller Z 911) believes that it refers to the majority of men, who in their ignorance believe like pigs: a similar criticism was certainly made by Heraclitus in the last sentence of fr. 29, c. δὲ παλλόν καθάρισθαι ἀπεκτείνεται. Wendland 789 had remarked long before that if the words of Heraclitus are to be limited to βοσβρέφων χόρον this is a perfectly possible interpretation. H. Frankel in his article ‘A Thought Pattern in Heraclitus’, AJPh 59 (1938) 322, also concludes that (a) is analogous to fr. 29, and that Heraclitus is ‘denouncing the pleasures of the unenlightened’: Frankel includes it among the ‘proportional’ statements of Heraclitus, of which fr. 79 (man child: god:man) is the clearest example. There is no doubt that this proportional form of exposition was dear to Heraclitus, but it is equally plain that Frankel tries to bring under this heading many fragments which are equally susceptible of other explanations, and for the certain interpretation of which there is insufficient evidence. Certainly the context of (a) in Athenaeus, where the student and the quotation is introduced by διбо, does not preclude this kind of interpretation; on the other hand, in another passage where the words of the quotation occur, Plutarch Quaest. conv. 371 a, the context is concerned wholly with pigs and the behaviour of men is not in question. The fact is that the contexts in which short quotations of this type are used are only rarely, and then perhaps by chance, indicative of the original contexts. A much more trustworthy indication of the original context in this case is provided by the expansion of the quotation, albeit unattributed, in (2).

(2) Plotinus, Enym. 1, 6, 6 (1, 91 f. Volkm.), approves of the ‘riddle’ propounded in the mysteries that those who have not been purified in their lifetime will lie in mud in Hades, because the impure like mud, οὐδ' ἐντεφάνη, οὐ καθάρθη ἐν τῷ νόμῳ, χόρον τοῦ καθαρτῆρα [sc. βοσβρέφος]. There is no mention of Heraclitus, but the application of the words of (2) to Orphic beliefs about purification and punishment raises the possibility that Heraclitus had some such idea in mind. Frankel, loc. cit. 311 ff. and 322 f. 32, is inclined to attach this kind of interpretation not to fr. 13 (a), but to a fragment of his own discovering, something like ἐδροφρείων καταρτισθέντων. On the other hand, he does connect fr. 15 (e) with the idea of purification, though not necessarily Orphic purification, by taking it closely with (e), where he throws the emphasis on ‘lavi’ and compares with fr. 5 in which Heraclitus says that trying to cleanse blood with blood is like trying to wash off mud with mud; (e). Frankel holds, ‘implies that those whose horizon is restricted to this world, when trying to cleanse themselves, do nothing but befoul themselves a second time’. Burial in mud in Hades was one of the traditional Orphic punishments, cf. Plato Rep. 363 d; Heraclitus saying, itself perhaps no more than a restatement for a particular purpose of a common

He infers the existence of such a saying from the doxographical stories of Heraclitus burying himself in filth, in his last illness: such stories are usually malicious distortions of well-known sayings by the philosophers. Further, Plato Rep. 557 d refers to the soul being ‘in truth buried in a kind of barbaric mire’. τὸ δὲτα here certainly indicates an oblique quotation or reference—but to the Orphics. I should say, as elsewhere in Plato, and not as Frankel maintains to his supposed fragment of Heraclitus and to fr. 157. The stories of Heraclitus burying himself in filth can be adequately explained, on Frankel’s own principles, by the extant frs. 13 and 96.

1 Wendland, SE Ber. (1898) 792, suggests that διὶ δὲ διὶ in the similar remark by Sextus quoted below, and 6¬γει in another instance, Pliio de agricultura 144, may mean that one of these words or any rate a compound adjective beginning with διὶ stood in the original context. But as neither of these passages is specifically connected with Heraclitus this must remain a remote possibility.
observation that pigs enjoy mud, may easily have become attached to the Orphic belief by the time of the ostraca, some three or four hundred years after his day: the common element 'mud' would account for that, and also for the conflation of the two ideas in Plotinus. There is no other evidence in the fragments for specifically Orphic ideas in Heraclitus, and this kind of interpretation of fr. 13 does not seem very plausible.

(3) The third interpretation, and the one which I accept, is that the statement that pigs rejoice in mud is intended to show that the assessment of mud, which is repulsive to men, is a relative one, just as in fr. 61 sea water was shown to be good for fishes and bad for men. Sextus, *Pyrrh. hyp.* 1, 55, cited that example, though without mentioning Heraclitus; and immediately afterwards he adduced the example of pigs washing in mud rather than in clean water: 

\[ \text{κύνες ἦσσυ βορβόρας λαύστατος καὶ ὃδε ἔχει διαθετικό καὶ καθαρὸς (cf. also Lucr. vi, 956–8).} \]

This introduces the idea of clean water (in which, of course, men like to wash), just as (6) does: the relativistic intention is much plainer once the third element, the object of comparison, is mentioned. If (6) is to be attached to Heraclitus, as it probably should be, then the interpretation of the whole complex of quotations here treated as fr. 13 should plainly be along these relative lines. Sextus, it should be noticed, uses λαύστατος, analogous to 'lavari' in (6), and not χαλαρόν or ἤσσυτα: though the idea of joy is expressed by ἢσσυ. It may be that 'pig wash in mud' was the original assertion: certainly it makes the opposition between pigs and men more graphic and more clear-cut. But whether there were two original statements by Heraclitus, that pigs delight in mud, farmyard birds wash in mud or dust, or only one, that pigs delight or wash (or delight in washing) in mud, the sense of the example is plain enough once the object of comparison, 'rather than in pure water', is supplied: not that men are like pigs, or that because they try to cleanse themselves with mud in this life they will wallow in mud in Hades, but that mud is judged in opposite ways by men and pigs. It is both pleasant and unpleasant—therefore these two apparent opposites are not really different, but 'one and the same'.
therefore preclude the possibility that a corruption occurred in the text of Aristotle before it reached Michael of Ephesus, and that his explanation was simply a shot in the dark—although it has been accepted without question by all modern editors, and on the strength of this one passage the sense 'sweepings, refuse, litter' is given in LSJ s.v. 1, 2. If there was a corruption, it may have been the extremely simple one from σφόενεις' διε, as H.Lloyd-Jones suggests. We only know of σφόενεις (formed regularly from σφοιχο—sweep) from Hesychius' gloss on Rhinthon (= Rhinthon fr. 25 Kaidb): σφόενεια κολλύβων καὶ κόττα ροδικιές πολλῶν. (Diehls' emendation, retained in DK, of σφόξ to σφοῖκα in Herodotus fr. 144 is surely wrong; for a correct explanation of this fragment, retaining ms. σφόξ, see J. McDermid, *AJP* 62 (1941) 492 ff., and P. Friedländer, *AJP* 63 (1942) 336.) The advantage of σφόενεις over σφόενεις is that 'sweepings' makes more sense than 'draggings'.

A remote possibility is that of σφόενεις, the last syllable of which could have been dropped by haplography before διε, after which the change from τι to τι might naturally be made. σφοῖκα means, commonly, the purge-plant: Herodotus, 11, 77, tells us that the Egyptians υποσχέοντο (i.e. purge themselves with σφοῖκα) for three days in every month. In chapter 125 of the same book σφοῖκα is clasped with onions and garlic. At Aristophanes *Peace* 1234 the word has the general sense 'purge, emetic'. The scholiast on the Aristophanes passage, who may depend on Ditylum here, gives as one definition of σφοῖκα 'an Egyptian bine made from radishes, suitable for purging'; similarly perhaps at Hippocrates *Mai. 1, 78* (vii, 186 Littl). Pollux, 1, 247, says that in Herodotus σφοῖκα is a kind of radish, while Ectrion, 54, 110, specifies it as the *κανάρι ροδικία*. Other definitions of the purge were certainly known in antiquity: Hesychius, s.v., does not mention radish, but only a mixture of fat and honey, or salt and water; σπάλα, he says, is 'a vegetable like parsley', and the Suda gives this parsley-like vegetable under the senses of σπάλα. If we read σφοῖκα in the fragment, the word must refer to some sort of plant or food-stuff palatable to donkeys, and one which has emetic properties: radishes are the most plausible choice. But were radishes abhorrent to humans, in view of their special use as a purge? The *δάκρυσσ* was a food favoured by the simple, hard-living men of the past, but evidently despised by the con-

temporaries of Aristophanes. Even so, the fact that radishes were once commonly eaten in Africa, and so perhaps by the Ionian contemporaries of Heraclitus, is a notable obstacle to the hypothesis that σφοῖκα should be read in this fragment. The conjecture would not deserve mention, were it not that it provides a rather close parallelism with fr. 49, discussed overleaf: like bitter vetch, the purge-plant would be eaten by normal men only with reluctance, but each is a favourite food of a species of domestic animal. Even σφοῖκα, which is a simpler restoration and palaeographically preferable, is not certain. This being so, the ms. reading σφόενεις must stand, even though not fully substantiated. The sense of the fragment remains clear whatever the reading of this word.

To turn to the interpretation of the fragment: Zeller, *ZN* 794 f., suggests that men resemble donkeys because they prefer something coarse (conventional assessments of sense-impressions) to something fine (the Logos); H. Frankel, *AJP* 59 (1938) 322, holds that an analogous comparison, though expressed in proportional form, is intended, and Cornford (e.g., *From Religion to Philosophy* 193) evidently held a similar view. I believe that we have here not so much a comparison of the majority of men to animals, as in fr. 59, as part of a statement that σφοῖκα, or the like, are desirable to donkeys and not to men. The mention of gold indicates that another term, i.e., men, is involved: 'Men love gold above all things; donkeys would choose straw (or sweepings) rather than gold; [men dislike straw (or sweepings) as a food].' The conclusion is similar to that of the two previous fragments, that a certain kind of food is pleasant to donkeys, unpleasant to men; conversely, a certain inedible commodity is pleasant to men, unpleasant to donkeys.

1 Aristophanes fr. 253 Kock: the old comic chorus used to carry humble gifts with them as they danced, radishes and bits of beef and sausage.

'Unwashed radish' occurs as crude fare, perhaps characteristic of the past, at *Epict.* fr. 3126, *Pherecr. fr.* 1738, *Choric.* frs. 78, 97 *Athen. iv.* 1738, informs us that the Athenians offered leks, olives and other foods to the Dioscuri, υπό διακυισμον τυρσίων και *ανακαταλης* 1495 f., *Cratin.* fr. 3132, distinguishes radishes from other vegetables. At Aristophanes *Pluce* 544 it is the leaves of radish that are part of a beggarly diet. The low estimation in which radishes were held is perhaps best shown by Apoll. fr. 266 διδυς ἐνεργός ἄνθρωπον...τοῖς ἡμέραις ἑκάστους ἔφαγεν δηλ οὐκ ἐπικοινωνίαν ἑπόδεην ἐπιθυμούειν (τοῦ θρόνου ἀποκρινόμενος).
donkeys: therefore in these cases there is no essential difference between pleasant and unpleasant. As in fr. 13 above, the mention of the human standard alongside the animal one makes it fairly plain that this is the sense intended, especially in view of the analogy of the more complete fr. 61. Fränkel’s explanation, although taking account of the non-animal term, gold, is too complicated to be readily accepted.

It need hardly be added that Aristotle’s use of this quotation from Heraclitus to illustrate a point of his own about the nature of pleasure has no bearing on the original context of the saying. The conclusion drawn by Heraclitus was entirely concerned with the relationship between opposite judgements of the same object, not with comparative aesthetics or the nature of pleasure as such.

A similar reference to pleasure is made in a sentence attributed to Heraclitus in a late authority as Albertus Magnus, De veget. vi, 401 (p. 545 Meyer): ‘Orobus est herba quae a quillsachum vocatur vicia avium . . . et valet contra venenum: est autem delectabilissimus pastus bonum, ita quod hunc cum incidit comedat ipsum; propter quod Heraclitus dicit quod si felicitas esset in delectationibus corporisoves felices dieremus cum inventam orobum ad comedendum.’

This is counted as fr. 4 by Dills and in DK, though with the caution that ‘it is doubtful whether the hypothetical setting and the whole prose is authentic’; the same doubt was expressed by Bywater, who drew attention to the reference to Heraclitus in Albernus and gave a brilliant assessment of its value in Journal of Philology 9 (1880) 230ff. It is extremely unlikely that Heraclitus ever discussed the nature of pleasure in this Socratic way, and I have no hesitation in agreeing that the prothesis and probably the hypothetical form of the sentence, is later than Heraclitus. Gigon 121, however, observes that Albertus is presumably only interested in the botanical qualities of orobus and has no motive for making ethical observations of his own. This is perfectly true: but the conclusion is not that the tradition is ‘relatively dependable’, as Gigon thought, but that Albertus derived the reference to Heraclitus from an earlier source, to which the addition about pleasure was due. Meyer suggested a patristic source, with considerable plausibility, and Bywater added that a Neoplatonic source was also possible; but the immediate origin may have been a Byzantine writer on agriculture or materia medica. Bywater points out that some of the words attributed to Heraclitus have a distinctly Greek ring, suggesting that they were ultimately derived from a Greek source rather than an Arabic version: the use of the Greek-derived ‘orobus’ instead of the more familiar ‘ervum’ or ‘vicia’ indicates this. That Heraclitus should have made some statement about cattle liking bitter vetch is not improbable in view of fr. 61 and 13; Gigon 121 and H. Fränkel, MIP 59 (1938) 322, connect the saying with fr. 29 as a reproach to men for behaving like animals, but as in the case of the other fragments of this group this interpretation seems to be defective. Bywater, op. cit. 231, made the following observation: ‘The statement, however, is not reproduced with logical completeness, for the words ‘est autem delectabilissimus pastus bonum’ imply that something to the effect that “orobus is unfit for human food” has gone before.’ This may have been understood, for we know from ancient sources that apart from its negative value as an antidote the bitter vetch was considered to be repulsive to humans: its bitter taste is remarked by Theophrastus C.P. iv, 2, 2; Demosthenes, xxxii, 598, implied that it was only eaten by men in extreme emergencies. On the other hand, its use as fodder for cattle is attested also by Phanias op. Albernus 406c; while Galen, de aliment. facult. i, 29 (CMG v, 4, 2, p. 257), contrasts the opposing attitudes of men and cattle to this form of food: ei pæs seco seco pescibos epus, ‘hæc te et aliæ totæ cibit pærum, quæ seco seco eldan, ut seco seco ejectionis; ei seco sterco etiam dejectionis, seco seco etiam dejectionis, seco seco etiam dejectionis.’
The context goes on to mention that bitter vetch is sometimes used as a medicine. Since bitter vetch was, it appears, widely known in antiquity to be pleasant to cattle, unpleasant to men, it is probable that this is the contrast which Heraclitus made in his original use of this example. The sentence, then, of which a distorted version was felicitously preserved by Albertus, was akin to relativistic statements such as ftr. 61, 13: the conclusion is that orobus is both good and bad, according to the nature of the assessor, and that good and bad, therefore, are in this case too ‘the same’. Attested as it is by a single very late (early thirteenth century) source, and expressed in a form which cannot be exactly the one which Heraclitus would have used, this saying does not deserve to be classed as an undoubtedly genuine fragment. It is conceivable that the example of bitter vetch was first given general currency in Sceptic speculation—the long list of such examples, designed to prove the subjectivity of sense-impressions, at Sextus Pyrrh. hyp. i, 54f., has already been mentioned. Bywater reminded us that Aenesidemus, Sextus’ main source, was a keen admirer of Heraclitus; two examples in the list are certainly Heraclitean, and although the Sceptics probably expanded it there is no a priori reason for dissociating the present example from Heraclitus.
Hippolytus Refutatio IX, 10, 2-3 (p. 242f. Wendland) says: "οὐδὲ ἐκάθεν ὡς ἑδύνατο μὰςεῖν ἑξίσωσιν ἰδοὺ Ἓν... ἃς ἐξ οἰκετείας διὰ ἡμέρας οὐδὲ ποιήσις τὸν κόσμον ἴδιον ἕργον εἶναι ὅτι Ἰεραλίτας, ἀλλὰ καὶ τὸ σωτήριον... (sec. fr. 57). ...καὶ ἰδοὺ πρῶτον καὶ... [σε. ἀποθέτ.] 4 τοῦ γενοῦς ἣματος ἴδιον ὅτι Ἰεραλίτας. τάξιν, χιλίον, πάντα δισάχεις καὶ... τωρίζοντος, ἐπαναλημμένως τὰ τῶν ἀρχαίων παράδειγμα τῶν ἀρχαίων ἐργασίαν... ἦν ἄγαθον καὶ τῶν νόσσων.

Yet Heraclitus says that neither darkness nor light, neither bad nor good, are different, but are one and the same thing... (fr. 57)... And good and evil are one: at any rate, Doctors, says Heraclitus, who cut and burn and in every way evilly torture the sick, make the accusation that they receive no worthy fee from the sick for doing these things, [the cure having the same effect as the disease].

The text is confused by interpolations by Hippolytus; or more probably by his source, for other quotations from Heraclitus by Hippolytus appear to be remarkably free from unnecessary explanations (but cf. the necessary explanation of an obscure term in fr. 59). Bywater and Diels doubted the originality of βούσωγες-δισάχεις καὶ τῶν ἀρχαίων: they are inessential to the sense, and diminish the forceful conciseness which is the chief mark of Heraclitus' style. καὶ τῶν ἀρχαίων is very weak, and Bywater ad fr. rightly held that βούσωγες in this mock-serious sense suggests post-fifth century Greek: earlier, if the idea of torture is present, it is almost always the torture of slaves for information; the idea of extracting information is certainly present at Thuc. vii, 86. In addition, Kranz in DK assigns γενόσις to Hippolytus and...
exorbitant charges, chiefly implies that the doctor’s work does
deserve some sort of fee—it is, to some degree, good. Gigon 26
supports Diels’ reading on the grounds that it expresses a popular
thought, and that Heraclitus frequently does this (he instances
frz. 43, 96, 119); he then cites a number of passages to show that it
was a popular thought. But these very passages support Bywater’s
version: the ‘popular thought’ was that doctors cut and burn
(often meaning bad things) in order to do good—a simple and appealing
paradox; it was not that doctors are charlatans who only do harm
and then demand to be paid for it. There are only two late sources
which perhaps suggest this, both of which claim to be interpretations
of Heraclitus: the sixth pseudo-Heraclitean letter, which contains an
attack on doctors: ‘...all of them are deceivers, selling tricks of
the trade for money; they killed my uncle Heracleodorus and received
a fee for it...’; and Diogenes Laertius IX, 3 (see p. 5). Clearly
fr. 58 alone, if casually read, could give rise to this kind of inter-
pretation. On the other hand, there are several passages from the
classical period which, although not connected with the name of
Heraclitus, make it clear that παιδός και σεβικός was an almost
technical description, and that this kind of treatment was regarded as a
necessary means of healing certain conditions. So Aeschylus Ag.
848f., ὅτε δὲ καὶ εἰς φορμάνων πάνων ἤτοι κάστανος ἢ τεταβλη-
τόνας εὐφράντως παρακατέθετο πάλιν ἔποντάραξε σώσσιν. Xenophon Mem.
1, 2, 54 (the argument is that men have so little regard for the body
as such that they are prepared to get rid of unnecessary or defective
parts of it; no criticism of doctors is implied) ...τοῖς ἱσταροῖς
παρέχονται [sc. εὐθείας] μετὰ πῶνον τε καὶ ἐλκυθάνων ἐπετέματον
καὶ ἐποκαθαρίσαν καὶ τούτων χάριν ὁμοίως δεόντως δεῖν αὐτῆς καὶ μοῦν τίνων
(cf. Anab. 1, 8, 16). Plato Politicus 2933 τοῖς ἱσταροῖς δὲ σώρον ἰκανό-
νυνικοῖς...τάμωντες καὶ κάστανος τε τῶν ἑλκυθάνων τροφ-
πετώντες... At Gorgias 521a-522a Plato imagines the
argument that a cook would produce against a doctor before a jury of

1 Nestle (Philologus 67 (1908) 5355 ZN 804) showed a way in which the
reading adopted by Diels could lead to an interpretation not strongly critical
of the medical art: there is an equal amount of pain and healing; these balance
each other out; therefore doctors do not deserve to be rewarded (although they
equally do not deserve to be blamed).2 But this does not make for a strong
contrast between good and bad as the interpretation advanced below, nor does
it accord so well with the sense of later versions of the paradox.

children: τοῦς νεατότατος ὑμῶν διαφέρει τῶν πειρατῶν καὶ κάθων, καὶ
τοιχασμῶν καὶ πολυτίμων ἐπέτρεπε ποιεῖ... The doctor, says Plato,
would tell the truth in reply, that he hurts his patients for their own
health, and it is the life of health, that “Τέσσερα πλοῦτα ἔχει ἡθος, ὁ
προβολής, ὃς ἡμών”... Even in a clearly derivative
passage in a Heraclitizing part of the Hippocratic treatise de vieæ,
15, it is made plain that the pain inflicted by doctors is for the
extensive good of the patient: κατακόρυφος δὲ καὶ τοιχασμῶν τὰ σαφὲς
τῶν ἱσταρῶν φύλακας... On the evidence of all these passages
it is surely legitimate to conclude that the paradox that doctors hurt
to cure was well known in the fifth and fourth centuries and later, and
that a more or less standardized expression of this paradox, in which
the verbs τῖμων and κάθων and possibly one or two others of
the same class were an essential part, was widely known.3 Whether
or not Heraclitus himself was the author of this standardized version
(for at least twenty years must have intervened between Heraclitus’
death and the writing of the Agamemnon) is a matter for speculation:
it seems more probable than not that he was, for the quotation from
him consists in little more than a simple statement of the paradox,
which was in itself sufficient to illustrate the point (that in many
cases apparent opposites simultaneously characterize the same object)
which he was presumably trying to make. The fact that all later
versions of the paradox, except two which probably depend on a
single unreliable source, imply no criticism whatsoever of doctors
makes it highly probable that Bywater’s text (which is very nearly
the manuscript text) is correct as against Diels; the evidence of the
de vieæ passage, which may be a reminiscence of this very saying by
Heraclitus, is particularly strong.

The textual difficulties are not yet exhausted: the last seven words of
Hippolytus’s sentence require close examination. Almost all
critics, including Diels, Reinhard, Wilamowitz, Kranz and Gigon,
have accepted Sauppe’s slight change of the ms. τευτόν into τοιχόν,
presumably because this provides a basis for Hippolytus’ introductory
generalization that darkness and light, bad and good, are in καθ’ ἑαυτόν

1 Among later instances cf. Philo de Carth. 15 τοῖς ἱσταροῖς καθαρίς ἢ ταύταν
ὁ καθός ἄνθρωπος ὑπ’ ἐνδικά τοῦ ποιεῖται... 4 Perhaps, too, the fact that doctors receive a ἑδαύος for their activities was
mentioned in the standard version: so in the passage quoted from Xenophon
and in the sixth letter, as well as in the fragment.
Such an explicit identification, in identical terms, was in fact made in another saying of Heraklitus quoted by Hippolytus a few lines later, fr. 60 ὁ δὲ θεὸς ὑποκάτω μὲν καὶ τὸν θεόν. It is quite unnecessary to suppose that fr. 58 must have explicitly affirmed that good and bad (or particular good and bad things or activities) are τοῦτα. Then there is the positive objection that the words which follow—τὰ ἄγαθα καὶ τὰς κακίας—must specify the apparent opposites which are in reality ‘the same’; τὰ ἄγαθα can stand (they achieve good, because they cure by these methods) but τὰς κακίας can scarcely be an object of ἐργαζόμενος. Wilamowitz, Hermes 62 (1927) 278, avoids the necessity of a polar phrase after τοῦτα by emending somewhat drastically τὰ καὶ οἱ κακοί σανις: this gives the meaning ‘doing the same things as the diseases themselves’; but this is rather weak, for if Hippolytus is right what is required is a statement that doctors at the same time do evil (that is, cause suffering) and do good (that is, achieve a cure). Wilamowitz’s version omits the last term, or leaves it to the imagination. In Π 58 Diels accepted the last five words and translated: ‘d.h., durch ihre Gütrenen die Krankheiten nur aufheben’. This does not accord well with the reading ἐνδὲ δὲκαὶ as accepted by Diels, but gives a possible sense otherwise, although it does not succeed in making an adequate translation of the Greek: this last is probably impossible without emendation. In any case most authorities, including Diels, have taken the last five words (or at any rate the last three) to be an addition or gloss, either by Hippolytus himself or his source; this does not alter the fact that they should give a grammatically satisfactory explanation of τοῦτα or some similar word. D. S. Robertson suggests that everything after ἐργαζόμενος, including τοῦτα (or τοῖς ἐργαζόμενοι), is a later expansion. This is attractive; but the obscurity of τὰς ἄγαθας καὶ τὰς κακίας, is only explicable if it is a gloss on τοῦτα or τοῖς ἐργαζόμενοι, which would therefore have to belong to the original. As a straightforward explanation from one hand, τὰ ἄγαθα καὶ τὰς κακίας would be extraordinarily involved as well as partially unnecessary. Of the other emendations mentioned in the apparatus Petersen’s is the only one which is at all plausible, and it gives a very weak sense. I tentatively suggest modifying Wilamowitz’s version so as to keep both terms, good and bad, identified in τοῦτα: τὰ ἄγαθα καὶ τὰς κακίας. But by preference I adhere, with Bywater and Gomperz, to the ms. reading τοῦτα (the manuscript, it has been argued above, is very nearly correct for the central part of the quotation); for if the original word was τοῦτα, then some sort of elucidation must have been given by Heraklitus himself, and τὰ ἄγαθα καὶ τὰς κακίας is more likely to be a distortion of this than a gloss added by a later transmitter. Yet these words look very like a gloss; therefore probably Heraklitus did not give any such elucidation (though such an elucidation could have been lost), and therefore did not write τοῦτα. Why should not τοῦτα simply refer to τὰς κακίας καὶ τὰς κακίας, and ἐργαζόμενος supply the grounds on which the fee is demanded? (the latter verb could be concessive: see Göbel, Die vorsokratische Philosophie 62 f., whose interpretation resembles the present one). It may be that Heraklitus did explain the significance that he attached to this instance of the method of doctors; but if so it is probable that his explanation was clearer than any phrase which can have given rise to the last five words, though the modification of Wilamowitz’s emendation suggested above cannot be left entirely out of account. In fact, though, the significance of the instance is self-apparent, and in the later paraphrases which have already been cited the paradox is usually allowed to speak for itself. If the saying was originally connected with other statements of the relativity of apparent opposition it would require no special explanation. Doctors, as was well known, employed painful methods like cutting and cauterization; by these means they often achieved a cure; therefore what is prior is seen, in the long run, to be good; therefore bad and good are in such cases ‘the same’. Hippolytus, or his source, thought that the matter was not sufficiently clear and decided to expand τοῦτα or τοῖς ἐργαζόμενοι—for either word could have been accepted at any stage in the transmission.¹

There remains the problem whether Heraklitus explicitly stated that good and bad were the same, or whether this was a deduction made later from his general assertions of the real coincidence of opposites. Such a deduction is, of course, a legitimate one providing one remembers that Heraklitus was concerned to demonstrate an underlying connexion or identity, and that ‘identity’ for him did not have the rigid connotation of one-ness and inseparability which it has had since Aristotle. Certainly Heraklitus recognized a practical

¹ Gomperz’s addition ἐργαζόμενος is unsatisfactory because ‘doing good’ and ‘causing the diseases’ are complementary in sense, while any explanation must have mentioned the bad aspect as well as the good.
difference between good and bad, and to argue that if good and bad are 'the same' there is no point in listening to Heraclitus' message and following the Logos, since the nature of behaviour is indifferent, is to show a grave lack of historical sense as well as an over-literal interpretation of Heraclitus' language. As a matter of fact no explicit affirmation that 'good and bad are the same' has survived in the extant fragments. Yet Aristotle directly attributes this sentiment to Heraclitus on more than one occasion, and is followed in this by Simplicius. Hippolytus, too, in the preambles to frs. 57 and 58 quoted in the text above, declares that Heraclitus held the two things to be one and the same. But Hippolytus might merely have been drawing his own conclusions from the sayings which he was about to quote; he might, too, have been indirectly influenced by Aristotle's clear assertions that Heraclitus made this identification. It is apparent, moreover, when one considers the flimsy basis of objective fact which underlay many of Aristotle's judgements on Presocratic thinkers, that Aristotle also was capable of attributing to Heraclitus an explicit identification a conclusion which he himself had drawn, not entirely illegitimately perhaps, from the consideration of other assertions of the coincidence of opposites. The two passages in which Aristotle assigned this identification to Heraclitus are as follows:

Trop. Θ 5, 155 b 30 διό καί οἱ κοιμώμενοι ἠλλοτριὰς δόξας, οἷον ἄγαθον καί κακόν εἶναι ταῦτα, καθάπερ Ἡρακλείτους ἔχει τοὺς δοξάζεις διὸς, νῦν δίδοσι μὴ παραπέμψαι μὲν τὸν κάκων δόξας, εἰς δὲς οὐ δοκεῖν κακῶς ταῦτα, ὅλα ἄρθρα καί Ἡρακλείτους ὑπόστασιν λάμαν.

Phys. A 2, 185 b 19 (referring to the Electae) ἂλλα μὲν εἰ τὸ λόγον τοῦ ἤλλοτρον πῶς λόγον καὶ μόρον τῶν Ἡρακλείτους λόγον συμβαίνει λόγον αὐτῶς ταυτόν γὰρ λέγεται ἄγαθον καί κακός ἀλλὰ καὶ ἀγαθὸς καί μὴ ἄγαθος εἶναι, ὅπως ταῦτα λέγεται ἄγαθον καὶ οὐκ ἀγαθὸν καί ἀνέμοιοκαί ἕπεται, καί οὐ περὶ τοῦ ὕστορον λόγου ἐστὶν ἄλλα περὶ τοῦ μηδέν, καὶ τὸ τοιοῦτο εἶναι καὶ τοιοῦτο ταυτόν.

The charges that Heraclitus denied the law of contradiction, repeated also at Met. Γ 7, 1012a 24, are relevant to the imprecise expression, but not the real intention, of Heraclitus' assertions of the coincidence of opposites; and it is of interest that Aristotle himself admitted, at Met. Γ 3, 1005 b 23, that there was some doubt whether Heraclitus should be interpreted as denying the law of contradiction. It can be seen from the quotations above that the choice of good and bad as a typical pair of opposites may have been made by Aristotle himself, as being a particularly extreme and therefore particularly absurd example; phrases like 'as Heraclitus says' in the Topics passage do not necessarily mean that an exact quotation or even a particularly accurate paraphrase is involved. W. D. Ross, Aristotle, Physics 463, suggests that frs. 53–62, for example, underlie this criticism by Aristotle; we may conclude that they alone could have given rise to the assertion that Heraclitus declared good and bad to be one, though this cannot be proved. On the other hand, one of the two passages of Simplicius' commentary on the Physics in which the identification of good and bad is mentioned suggests that Simplicius, at any rate, knew of no actual saying by Heraclitus to this effect: in Phys. p. 50, to Diels (cf. also ibid. p. 82, 20) τοιοῦτον γὰρ τοῦ θεοῦ, ὡς Ἡρακλείτους ἐξίησεν, τὸ ἄγαθον καὶ τὸ κακόν ἐπὶ ταὐτών λόγων συμβαίνει διὰ τοῦτο καὶ λόγος. Simplicius went on to say that Heraclitus 'demonstrated the harmonious mixture of the opposites in the process of becoming', and to quote Plato Sophist 242 e on the difference between Empedocles and Heraclitus. It is quite clear from this, and from the quotation of the phrase 'in the manner of bow and lyre' from fr. 51, that for Simplicius the identification of good and bad was not specifically asserted by Heraclitus but was implicit in the general assertion of the well-known fr. 51 (which lies behind the Platonic passage too) that 'that which tends apart also tends together; there is a harmonious stretching in both directions, as there is in a bow and a lyre'. If Simplicius did had known of a positive assertion of the identity of good and bad he would have quoted it, and not a mere generalization from which that identity might be deduced. Of course, the fact that Simplicius did not know of such an assertion does not prove that no such assertion was ever made by Heraclitus; it does increase a pre-existing doubt.

1 He added that the whole doctrine of this, in Aristotle's view, probably involved the denial of the law of contradiction: but Chrematia, 36 a, 565, rightly pointed out that as, for example, Met. Γ 9, 1012 b 25 Aristotle held that if everything in motion nothing (not everything) is true; while shortly before, at Γ 7, 1012 a 54, he had said that Heraclitus' argument that things are and are not made everything true. The Physics passage leads to the same conclusion that all things are true (though this results in their being unlike rather than by); therefore in both these cases Aristotle's criticisms of Heraclitus are based upon his doctrine of the relativity of opposites and not upon that of universal change.
To return in conclusion to fr. 58: this fragment, pared of probable additions, merely adds an evident and picturesque instance of a process which can be truthfully described at one and the same time in quite opposed ways, according as the observer takes a long or a short view. These descriptions could be 'harmful-beneficial' or 'painful-pleasant': the simple opposition 'good-bad' could be applied here, as it could be applied to the instances in frs. 61, 13, 91. It has been so applied by whoever added the words τα δυσεν και τα πονεσων, and Hippolytus took this instance to be a useful example of the identification by Heraclitus of good and bad. That Heraclitus believed that from one point of view (and the most sublime one) all differentiations, including moral ones, involved error, is not in doubt; one only has to refer to the words of fr. 102, 'To god all things are beautiful and good and just; but men have supposed some things to be unjust, others just'. But his normal method, where only the human standard is in question, was to rely on concrete instances of the coincidence, in certain circumstances, of various pairs of opposites. In other circumstances the coincidence of a particular pair might not be so marked, or might even be entirely absent; that good and bad were not always the same, for example, is shown by the very fact that Heraclitus saw fit to rebuke his fellow-men for not seeing the truth in the shape of the Logos. Thus the likelihood is that he never made the general assertion of such an identity attributed to him by Aristotle unless it was in terms like those of fr. 102. Aristotle, here as elsewhere, drew his own conclusions, while Hippolytus chose fr. 58 as an apt instance of a doctrine which, after Aristotle, was habitually attributed to Heraclitus.

The text has given rise to a great deal of disagreement, although Bernays' emendations were accepted by Diels and now seem to have gained general approval. The second γραφεω must, I think, be corrected the screw-press was likely enough to be found in the fuller's shop, where it was used for the final pressing of the cloth. Other places where it was commonly employed were the olive-press and the wine-press, no word for which could give rise to the ms. γραφεω: it is also obvious that no word with the root γραφ- could be connected with the κολλας.

On the other hand, the emendation of γραφεω to the first supposed instance of γραφεω is impossible; nor so much because of the omission of ειω (which is itself difficult), or the vagueness of the phrase 'in the fuller's shop' if the reference is to a special machine in that shop, but because the screw-press, of whatever kind, was not invented in Heraclitus' time or indeed until the time of Archimedes at the earliest; and no other conceivable part of the fuller's shop

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1 Such a press is portrayed in a wall-painting in a fuller's shop at Pompeii; see Max Pompeji in Leben u. Kunst (Leipzig, 1900) 388, fig. 359.
except the screw-press (and particularly the screw itself) could be relevant as an example of straight and crooked motions in the same object. Zeller, admittedly, and at first Diels (see his discussion of the fragment in Herakleitos*, to which he referred in all editions of VS, as did Kranz in DK), thought not of the screw-press but of the 'Krempelwalee', that is, a cylinder with spikes or combs on its outer surface which was rolled along the cloth to card it. Unfortunately, there seems to be no evidence that cylindrical carding combs were used in the Greek fuller's shop—normally these combs were flat, and were rubbed along the surface of the cloth, held in the hand. Hesychius gives Καβερον Sticken against Καβερον, but, as Diels noted, this is by no means decisive, and in any case says nothing about cylinders. Finally, it is significant that whoever added the explanation in parentheses, whether Hippolytus or a predecessor, definitely took γεραστία to refer to the καβερνα (which here must be the screw-press) and not to any kind of roller. Nor did any activity of fullers themselves obviously exemplify a 'straight and crooked way'; D. S. Robertson suggests that some movement of their arm is meant, but though γεραστία is a simple restoration this does not seem quite adequate; for one thing no such movement can be imagined.

The evidence that the screw in general and the screw-press in particular was not known to Heracleitus is well summed up by A. G. Drachmann in his article in RE, Suppl. vi, s.v. Schraube. The invention of the γεραστία is attributed to Archimedes by Moschion apo Athenaeum 3, 2088 Κείσρ和服务 3, 257 (cf. Strabo 17, 569 and 319); Diodorus 3, 34; 3, 37. These authorities tell how Archimedes used his γεραστία for raising water for irrigation purposes in Egypt; Moschon adds that by means of a screw windlass the inventor by himself shifted the ship of Heron. Thus what Archimedes invented was not simply an applied form of the screw, it was the screw itself—as is unmistakably suggested by the use of the unqualified word γεραστία in the above passages. It was the so-called 'endless' screw, which turns on a gear-

* γεραστία is used for a simple roller by Bux, p. 47, 4. Wescher; but this is a very loose usage, and not one likely to be known by a layman like our glossator. γεραστία, originally meaning a spiral, is come to be used for any kind of spiral, but especially the mechanical screw; it is extraordinary if it was only used to describe a shape that is not spiral in some way.

wheel and not inside a nut or female screw. The female screw was not invented until later, and Heron described a method for making it in terms which show that it was something new in his time: Mechan. i, 11, 19, 21. The key passage on the use of screw-presses, in which the male screw must work in a fixed female screw, is Pliny N.H., xviii, 317 (transl. after Drachmann, 'Ancient Oil Mills and Presses', Danish Vidensk. Selskab. Archaeol. Meddel. 1, 1 (1932) 50f): 'Our forefathers drew them [i.e. the press-frames] down by means of ropes and leaden thongs and handspikes. Within the last 100 years there have come into use presses invented in Greece, spars with furrows running round them in a spiral, some people putting handles on the spar, others making the spar lift up chests of stones, which is very much praised. Within the last 22 years it has been discovered how to press with shorter presses and smaller press-houses, with a shorter spar straight in the middle, bearing down with full weight from above on the lid laid on the grapes... The three stages noted here are the windlass-and-lever press; the screw-and-lever press; and the direct-screw press. According to Pliny, then, the first use of the screw in Italian presses was a. 25 a.c., and the invention of the idea in Greece cannot have long preceded this; the direct-screw press (as in the Pompeian wall-painting mentioned above, p. 97 n. 1) was first used about a.d. 50. This type of press necessitated a proper female screw, and is the only type which could be described by the single word γεραστία: for in a lever press the screw was not an essential or indeed very noticeable part of the machine. (Naturally the fuller's press is of the same type as the wine-presses described by Pliny. Drachmann 85 remarks that the direct screw appears to have been used in antiquity only for oil, wine, and fuller's presses.)

Tannery, Pour l'Histoire de la Science Hellène 304, pointed out in a single line that no screw mechanism was known before Archimedes; it is extraordinary that this point has been so often neglected. Tannery's own explanation of the passage, however, is far from...
plausible: he thought that Heracitus had simply said ἐξελληνίζω καὶ κοινῆ ἔνταυ καὶ ἡ συλλήμμα, and that some copyist wrote γράφων or perhaps even γράφη λον (most unlikely), meaning 'writing as follows', as a variation of ἐξελληνίζω and to show that Heracitus' actual words are to follow: ἐξελληνίζω somehow was left in the text as well. The parentheses contain two stages of gloss or commentary, both subsequent to the original copyist who wrote γράφων or γράφη λον. The first interpolator misinterpreted γράφη λον as being the genitive plural of γράφων, and introduced γράφη λον to account for this, thinking that Heracitus was thinking of the motion of a pencil; the second interpolator could make nothing of ἐν τῷ γραφή λον καὶ... and so added his own explanation, ἔνταυ ἐν τῷ ἐξελληνίζων τοῦ κοινῆ ἔνταυ χόρλον: whether or not he read γράφων he certainly thought that the screw was meant. This whole account with its three separate stages of confusion is too complex to be readily acceptable, although it contains useful suggestions; but Tannery’s interpretation of the words he assigns to Heracitus as referring to the physical exchanges of matter, the straight path being, for example, the direct change fire-earth, the crooked path being the indirect change into earth by the intermediate stage of water, is quite untenable; see on the next fragment, where it is shown that even the interpretation of the much simpler ‘way up and down’ in terms of physical exchanges is probably wrong.

It is quite unlike Heracitus to have said that ‘the straight and crooked way is the same’, with purely general application: in other fragments he either limits the identification of particular opposites to a special instance, or, as in fr. 67, 88, he gives a list of several opposites and then adds a reason for considering them to be really the same. It is true that in fr. 60 he appears to have asserted simply that ἐξελληνίζω καὶ κοινῆ is one and the same; but here the specification of ἐξελληνίζω limits the identification of καὶ κοινῆ to one particular opposition or group of instances: the path (straight line) between a higher and a lower point (or a nearer and a farther one) is the same, whichever way it is traversed. In the present fragment, on the other hand, the crooked path and the straight path must follow a different course; they are the same in so far as they are followed concurrently by the same thing. In short, Heracitus must here have qualified ἐξελληνίζω in some way, and presumably the word γράφη λον in our ms. represents this qualification. It has been seen that emendation to
the verb, and refer to the actual record in letters engraved on stone (though cf. γραψάν γράφεται in Attic, where γραψάν means 'indictment'). In the other instances γράφεσ does mean 'law' or 'decree', as in 1157, 5 above: κατ' αυτον από το γράφεσ. Now the difficulty of accepting γραψάν as the genitive plural of γράφεσ, in the fragment, is obviously that this word is only found in Peloponnesian inscriptions and looks like being a Peloponnesian dialect-form. But the fact is that all the early instances of it come from Olympia, where as it happens a great number of archaic bronze tablets were found; no such find of early inscriptions has been made anywhere in Ionia, and it is perfectly possible that the word was used also in Ionia; from its form there is no reason to suppose that it is particularly Peloponnesian. The absence of Ionia evidence does not seem a sufficient reason for rejecting it from the fragment of Heraclitus.

With the meaning 'letters' or 'things written' γραψάν gives an excellent sense: the pen proceeds in a mean course along a straight line, but on the way it makes many convolutions in the construction of the separate letters; thus the 'way' or 'path' of letters can be said to be both straight and crooked. This is almost identical, indeed, with the sense given if γραψάν means 'of writers': in the one case the object, in the other the agent is specified; that is all. Neither interpretation is free from difficulty, but each is preferable to any interpretation possible with any other reading, and I believe that the manuscript reading is certainly correct. In this case what Heraclitus wrote was utterly misunderstood by some later transmitters, who instead of γραψάν understood γραψάν or γραψάν. In the parentheses there seems to be little doubt that the fuller's screw is in question; but it seems unnecessary to postulate two separate interpolators, as Tannery does. Mullahic ad loc. seemed to think that the instance of writing was understood by the interpolator, who added on his own account the different instance from the fuller's press; this is again improbable. Thus all we can say is that at some time

after the invention of the screw-press, therefore after c. 50 B.C. in the earliest, and before the writing of the Paris ms. of Hippolytus, this interpolation was made. The probability is, one might suppose, that Hippolytus himself was responsible for it. As for the retention in our ms. of γραψάν, which we take to be the original and correct reading, either the interpolator's version of Heraclitus' saying already contained the corruption γραψάν or γραψάν as first word, and his interpolation was later incorporated in a version which also had access to the correct reading; or the interpolator simply ignored γραψάν and gave his own interpretation of what Heraclitus had in mind.

A dubious corroboration of Heraclitus' identification of straight and crooked occurs in Apuleius' version of the pseudo-Aristotelian de mundo, 21 (p. 337 Thomas) 'namque [sc. natura] uvulis arida et glauculibus flammis, velocius pigra, directis obliqua confudit unumque ex omnibus et ex uno omnium iuxta Heraclitum constitut'. This passage follows fr. 10, but the Greek text lacks the second reference to Heraclitus, which is probably due to Apuleius. Before the quotation of that fragment there occurred, not attributed to Heraclitus, a number of practical instances of the way in which Nature achieves agreement out of opposites. These instances may be derived from a follower of Heraclitus, for some of them also occur in de viciu i, 12-24, the author of which uses some unmistakably Heraclitan material. In both places (de mundo 5, 396b 17; de viciu i, 23) the instance of γραψάν occurs, but in each case the point exemplified is not the presence of both straight and crooked motions in the act of writing but the fact that a single τεχνη depends on the combination of opposites (in this case, opposite shapes). This gives no help in determining further what particular case Heraclitus had in mind when he said that straight and crooked were the same. That these were commonly thought of as obvious opposites is indicated by their presence (τεχνη και κοιμωνον) in the Pythogorean table of ten basic oppositions given by Aristotle at Met. A 5, 986a 21ff.

It could reasonably be doubted whether γραψάν και γραψάν really belongs to Heraclitus, or whether these words were supplied by Hippolytus from fr. 69, which he quotes immediately afterwards;

1 At de viciu i, 14 γραψάν are mentioned; not for their use of the press or the Knepitsiakhe, but because 'by ill-treating they make stronger'.
there the Ionic form ὄμηρη suggests that the whole phrase 'one and the same' is original, and indeed the sentence would be incomplete without it. In fr. 59, however, the only Ionic form is ὄμηρη, and the statement γραφεῖν ὄμηρη καὶ ὁμαλῆ [sc. ὄμηρη] would be complete in itself. The fact that Hippolytus interpolated ὄμηρη in the doubtful phrase is no indication of authenticity: he frequently uses ὄμηρη to introduce obvious paraphrases, as in his introductory paraphrase: καὶ εἶπεν ἐκεῖ ὃμηρη καὶ ἐπερεῖν... (cf. also Reinhardt Hermes 77 (1942) 22 n. 3). Since the doubtful phrase is formally assigned to Heraclitus, and there is no special reason for rejecting it, I have retained it in the text; I prefer, however, to punctuate strongly after ὁμαλῆ and make the first clause complete in itself. The parallelism in form between frs. 59 and 60 as they stand in Hippolytus has led to the assumption that the two ὄμηρη are 'the same' in the same way; but there is a slight difference, as will be shown under fr. 60. In the case of fr. 59 there can be no doubt that the argument is relative; the saying presents yet another example of how, in a special case, what are conventionally counted as irreconcilable opposites are found to inhere at one and the same moment in the same activity. The writing instrument follows an actual course which is twisted and irregular; its mean course, however, is a straight line. Even if the reading γραφεῖν or γραφεῖτο were right and the reference were to a carding-roller or even a screw-press, the import of the fragment would remain roughly the same. The example may not be thought to provide very strong support for the theory of the underlying unity of opposites; but to Heraclitus and his contemporaries the observation was fresher than it is to us.
were offered by ancient critics, of which three were not strictly ‘physical’ at all.

(1) Tertullian adv. Marcionen. 11, 24 ‘Quid enim sit Heraclitus ille tenebrosus? eadem via sursum et desertura.’—Tertullian, perhaps not very seriously, takes this to imply that the same argument can be used in two different ways.

(2) Philo de somm. 1, 24, 146 καὶ δῆδες τις τῆς ἀνθρωποείας προμηθεια, ἀντίκτων καὶ ἀνθρώπου χρωματική συντριβής... Cf. idem, de vi. Mos. 1, 6, 31. By Phileo the way up and down is applied to the variability of human fortunes; Heraclitus is not mentioned by name, but the δῆδες occurs in the first passage, while the second has a possible reminiscence of fr. 12, τύχης... καὶ κάτω τοῖς ἀνθρώποις παραπόμολος. Perhaps this interpretation derives from Plato Philebus 45a... λέγοις σοφοῖς σαμων' ἐδε γέρα ἀπεστάλη ἄνω τε καὶ κάτω ταῖς (of changes of feeling); so also ibid. 43b. There is no mention of the δῆδες, but ταῖς could refer specifically to Heraclitus.

(3) The Neoplatonists, recalling perhaps Plato Rep. 517b πάντως ἡ γυμνός καὶ ὄγκος ἡ γυμνός, and Gorg. 493a μεταφέρεται ἄνω κάτω (of the soul), evidently took the ‘way up and down’ to refer to the journeys of the soul. So Iamblichus ep. Stobaeum Ecl. 1, 39 (3, 378 Wachsmuth) in explanation of Plotinus Enn. iv, 8 (see fn. 84): 'Ἡρακλείτος... δῆδες τε ἄνω καὶ κάτω διατροφοδοτήσας τοὺς γυμνοὺς ὑπελαβε...’

(4) We know from Theophrastus Phys. op. fr. 1 that Theophrastus attributed to Heraclitus successive processes of world-becoming and world-destruction: ποιήσατε καὶ τάξατε παντὸς καὶ χρόνου ἀρχαιότητος τῆς τῶν κόσμων μεταβολῆς κατὰ τὰ πρότερον ἀνέγυρτα. But nothing is said there which confirms that dēdē counter involved a δῆδες ἄνω κάτω. Here we must scrutinise Diog. L. ix, 8–9 (part of Diogenes’ detailed, Theophrastean account), which is printed on p. 328. It is hard to determine how far καὶ τὴν μεταβολὴν δῆδεν ἄνω κάτω, τῶν τὰ κόσμων γένεσις κατ’ αὐτίν is related to cosmological, and not to cosmological changes. What precedes these words (cf. pp. 328, 34) certainly refers to cosmology and ephorosism; while γένεσις καὶ ἀναρρυξίας κατ’ αὐτίν (p. 290 f.) certainly describes cosmological-meteorological processes. The answer is, I think, that the kind of change which leads to γένεσις continues in the world of our experience. In other words, τῶν τὰ κόσμων γένεσις κατ’ αὐτίν (sc. δῆδεν ἄνω κάτω, rather than μεταβολής) applies to the cosmological continuation of the cosmogonical process.
two sayings of slightly different application, persuaded modern readers to take ‘the same’ in an identical sense in each case, just as Hippolytus himself appears to have thought that Heracletus was identifying ἓν-ἀνα with τὸ κόσμον. It was noted on fr. 59 above that the words ποτὲ οὐκ ἐστὶν ἢ ἄτομα there might belong to Hippolytus (after the model of this fr. 60) rather than to Heracletus. It was also pointed out that while in that fragment the limitation of the identification of opposites to one particular case, which one expects in these single instances, was provided by the word ἐπετέλθω, here it is implicit in the word ἵππος itself: it is not ‘up’ and ‘down’ as such which are being identified, but the ἵππος (in the singular, not which connects these two extremes.

It was Reinhard, Hermes 77 (1942) 161 ff., who, after pointing out the diversity of the ancient interpretations of fr. 60 and the shortsightedness of modern critics in clinging to merely one or two of these interpretations, asked the question: Ist der “Weg“ ein Bild, ein Gleichnis, oder eine Lehre? Hippolytus quotes the saying by himself, as an example of the coincidence for Heracletus of a particular pair of opposites. So too in the Heracletizing late Hippocratic work de nutrimento 45 a similar statement stands by itself and not in relation to cosmological changes; it is conceivable that Marc. Aurel. vi, 46 refers to the same saying, although the passage mentions neither Heracletus nor the ἵππος. Certainly it is ‘up’ and ‘down’ in general, and not in reference to any particular process, which are identified together with other contraries in Lucian’s parody of Heracletus, Vit. aurel. 24 ...καὶ τὸν τότε τὸν τέρμαν ἀπέτρεψεν, γνώσας ἰθυμάντιον, μέγα συγγένειαν, ἰσοτιμίαν κόσμου. These parallels, inconclusive in themselves, added to the fact that Hippolytus (and so, presumably, his reliable source) quotes fr. 60 among other fragments which clearly have as their only purpose the assertion that in certain cases, and perhaps for differing reasons, apparent opposites are really connected as extremes of the same continuum, persuade me to accept Reinhard’s contention that the fragment is complete in itself as a relativistic statement devoid of general physical application.

1 That they do not exemplify for Gigon, if not the kind of ‘identity’ that he requires, at least equivalence (cf. G. Vlastos CP 42 (1947) 165 n. 98), is due to difficulties of his own making in the interpretation of the final, i.e. the fiery, stage of the transformations of matter.

1 One might add as an argumentum ex silentio against the physical interpretation of the ‘way up and down’ the fact that, if material change had been described in this way by Heracletus, one would have expected Aristotle to have mentioned it at Phys. 9 3, 213 b 9, where the reference is to the supporters of universal and perpetual motion—particularly, it may be assumed, the
Yet even though it is perfectly possible that ἄρης ἀνω κατέω in the fragment means ‘way from and to’, it remains clear that ἀνω and κατέω could at any time bear their primary sense of ‘up’ and ‘down’; and there is nothing to show that they do not do so here. Each critic is at liberty to place upon the words whichever of these two interpretations he thinks best, and in so doing he will not alter the primary import of the saying. What he will alter is the image by means of which this import is transmitted; for the evidence of the other extant fragments shows that in these short statements of the coincidence of a single pair of opposites Heraclitus preferred the practical, perceptible example to the abstract generalization. It is a priori more probable that, if the words of this fragment are susceptible of either a concrete or an abstract meaning, then the former is the one that Heraclitus had in mind. Now a concrete interpretation is possible whether the words ἄρης κατέω mean ‘up and down’ or ‘from and to’. In the latter case one thinks of expressions like those quoted above from Herodotus; cf. Xenophon Anab. 1, 1, 8, and kindred usages in LSJ s.v. ἄρης, 11, 1f. (On the other hand, at Plato Rep. 613b ἄρης ἀνω means ‘the upward road’ (here, of the soul), not ‘the road inland’ or ‘the road away’.) Presumably the ‘inland’ meaning depended on the fact that up river meant away from the coast. It was only in Asia Minor that the rivers were large enough and the hinterland sufficiently unknown (to the Greeks) to make this kind of geographical direction a common one; thus it occurs most frequently in Herodotus, and in parts dealing with Asia Minor—so too in the Anabasis. Obviously, then, the Ionian Heraclitus might have adopted the same usage; but two considerations weigh against this possibility here: (1) since ἄρης and κατέω could also mean ‘north’ and ‘south’ it is unlikely that they would be used by themselves in a purely directional sense, for this would lead to ambiguity; (2) it may be the case (though there is not enough evidence for proof) that while ἄρης ἀνω ἄρης could mean ‘the inland road’, ἄρης ἀνω or simply ἄρης ἀνω would tend to mean ‘the upward road’. The double expression ἄρης κατέω, with its separate established sense of ‘to and fro’, complicates the final decision.

My own feeling is that the expression means, in this fragment, ‘the road up and the road down’ (to abandon, for the sake of clarity,
the striking brevity of the original—"road up down, one and the same"). Calogero, op. cit. 212-15, has pointed out that there are many modern examples of the same hill being called opposite things by the people who live at opposite ends of it: to those who live on top it is "the road down", to those at the bottom it is "the road up". Italian, for example, distinguishes the two aspects of "slope", and so in the same city some parts of the same hill are named "discesa", others "salita", depending entirely on who did the naming. That there were such paths in the Ephesus of Heraclitus, connecting two separate communities and having two separate names, is probable enough (although Calogero’s examples from late Ephesian inscriptions, 214 n. 1, are not good evidence). It may be that Heraclitus noticed the opposition in name and the identity of the thing named, and deduced from this that the opposition was a relative one—relative to observers in different circumstances. More simply he may have noticed that any road up becomes a road down when one walks in the opposite direction. This fragment, then, is another statement of an instance in which apparent opposites are only relatively opposed.

1 H. Gomperz, Tesarakmonasteres Theophili Boreas (Athens, 1940) 51, suggested that the image is of "an upper path" and "a lower path", running parallel to each other along a mountain-side. This presupposes an unusual usage of ἄνω and κάτω, and in addition it may be objected that such paths are not, even in Heraclitus' sense, "the same"; also, for two separate paths or ways the singular would hardly have been used. Yet Gomperz was correct in trying to think of a concrete instance of ἄνω.

Porphyrius Qu. Hom. ad II. xiv. 200 (p. 190 Schrader) τῆς θεότητος τοῦ κόσμου περιπτέρας εὐθέτη [sc. ἐπὶ τὸ πάντα παῖ] τῶν γὰρ ὁμοιότατόν ἐστιν ἄρχη τῇ ἑκτὶ καὶ πέρας ἐξουν γὰρ ἄρχη καὶ πέρας ἐπὶ κόσμου περιπτέρας κατὰ τὴν Ἡρακλείδον.

But there is no such thing as a start and a finish of the whole circumference of a circle: for every point one can think of is a beginning and an end; for Beginning and end in a circle's circumference are common according to Heraclitus.

Wilamowitz, Hermes 62 (1927) 276, held that the words ἐν τῷ κόσμῳ περιπτέρας could not have belonged to the quotation since Heraclitus was not interested in geometrical expressions, and terms like περιπτέρας would be unknown to him. The last statement must be true: the word is not otherwise known before Aristotle, and the fact that Porphyrius himself used it just before the quotation makes its explanatory use here quite understandable. On the other hand, the adjective περιπτέρας occurs in the possible imitation by Hermippus cited below. Bywater too thought it so obvious that ἐν τῷ... περιπτέρας were not by Heraclitus that he gave the fragment as χωρίς ἀρχή καὶ πέρας, without further comment. Gigon 190, however, followed by Walzer, observed that there is no linguistic objection against the words ἐν τῷ κόσμῳ: indeed without some such qualification the quotation becomes a generalization so unsubstantiated and so vague as to be almost meaningless. Porphyrius is the source of one other fragment, 102, which gives the impression of having been to some extent remoulded in the language of a later age; in fr. 103 the form ἐν τῷ, if it has not been restored by a copyist, indicates that some attempt at exact quotation was made: but this can hardly be expected to have prevented Porphyrius from adding a word which seemed to him to clarify the sense.

A possible reminiscence of the fragment occurs in Hermippus fr. 4 Kock... Εἰκαστός, ὅλη περιπτέρας τελευτήν συνειδήσεως ὑπάρχη ἐπίτηδε. For other parallels one must turn to the medical literature.
change can be read into Heraclitus; there is only one so-called fragment which suggests it, Maximus' fr. 114, 4, the first of the three passages cited as fr. 76D. Here each change to fire, fire to air, air to water, water to earth—but the presence of air shows that we are dealing with a Stoicizing version of Heraclitus. Fr. 31, which is certainly genuine, presents a very different state of affairs: physical change is rectilinear (though Aristotle sometimes loosely describes these changes as cyclical), that is, fire changes to sea, sea to earth, earth to sea (not to fire, which is the next move in a true cyclical process), sea to fire. Even if we do not read ἐν κόσμῳ it is difficult to see how fr. 105 expresses any truth relevant to this process. Fr. 56, to which Gigon wrongly resorted for the interpretation of the 'way up and down' (fr. 60), exemplifies the same rectilinear scheme, and so do the other Stoicizing paraphrases which form the rest of fr. 76D.

What we have before us is the simple assertion that beginning and end in a circle are 'common', that is, coincident. There is no evidence to show that Heraclitus was interested in circular processes either in nature or in thought. As it stands, the fragment announces that two things which are normally opposed, especially when applied to the rectilinear course of human life, are in a special case coincident; there is no distinction between them. This is the essence of the other fragments assigned to this group, and there seems to be no reason to doubt that this fragment, too, is a statement that apparent opposites are, in certain cases and from certain aspects, the same. Gigon objected to this interpretation that if it were the real one Heraclitus would have said τὰ οὐκέτα, as in frs. 59, 60, instead of τὸν οὐκέτα. This odd argument presupposes that Heraclitus always expressed the same sort of thought in exactly the same language. Apart from the doubt as to whether ἐν κόσμῳ in fr. 31 was added by Hippolytus from fr. 60 (pp. 103 f.), and the fact that there are other statements of the coincidence of opposites which do not include the word οὐκέτα, an examination of Heraclitus' prose shows that he often aimed at variation of diction. The most simple interpretation seems, in the lack of other evidence, to demand provisional acceptance.

1 Parmenides fr. 5, οὖσα δὲ μὴ ἐστιν ἑαυτῷ τοῦ ἀληθεύοντος τὸν γὰρ παλαιὸν τοὺς ἀληθέοις, presents a superficial resemblance which may have no significance except, perhaps, as an indication that the observation of 'circularity' was a common one. However, οὖσα is used in a very similar manner in each case; the possibility that Parmenides is consciously echoing Heraclitus cannot be denied.
All modern editors and commentators have drawn attention to a similar antithesis of name and function in the Heraclitzing treatise de nutritimento, 21 (DK 22 C.2) τρωφής οὐ τρωφή, ἵνα μὴ ἔχωντο, οὔτε οὐκ ἔχων τε ἤ τρέχειν. οὖν οὐκ ἔχων, τρωφής οὐκ ἔχων δὲ οὐκ ἔχων τρωφής, οὖν οὐκ ἔχων (Diels' text). This treatise has been assigned to about the middle of the first century A.D. by H. Diller (Arch. f. Gesch. d. Medizin 29 (1937) 178f. and especially 190f.), who detected in it some of the views of the Pneumatic school of medicine, as well as Stoic ideas. Too much prominence has probably been given to its Heraclitean character, which is mainly restricted to a slavish imitation of the style of some of Heraclitus’ more oracular antithetical assertions together with the repetition of a few well-known words and phrases (e.g. ἐσσός ἄνω κάτω, οὖν δὲ οὐκέτα πάντα πάσιν). F. Heinemann, however, in his excellent treatment of the ὄνομα-ἔργον antithesis in Greek thought (Nomos und Physik 46ff.), claims (p. 53) that the antithesis in de nutritimento 21 must derive from the school of Heraclitus since it does not seem to be Stoic: thus it appears to provide support for fr. 48. This unconvincing argument may be supplemented by that based upon a similar use, by Heraclitus and the medical gnomologist, of the ἐργον-ὄνομα antithesis. What the later author maintains is that the essence of a thing is determined by its function or activity, not by its name. If a certain type of food does not, in a particular case, nourish, then it does not deserve the name of ‘food’. It has been wrongly identified.

The contrast is not the Sophistic one between conventional (or accidental) and natural characteristics—a contrast which appeared as early as Xenophanes (cf. fr. 32) but is not found in Heraclitus; that contrast is expressed by ὄνομα... ἔργον, not ὄνομα... ἔργον: Calogero (Gnom. Crit. della Filos. Ital. 17 (1935) 205 n. 2; cf. Gnomon 17 (1941) 201) has well emphasized that ἔργον (= in reality) is very different from ἔργον (= function). The emphasis of the de nutritimento passage upon name and function may suggest that the author had retained a memory of the contrast in Heraclitus fr. 48; but even if this is so (and it is very hypothetical), the application of the contrast in the later work can tell us little or nothing about its application by Heraclitus which is not immediately apparent from the fragment itself.

For Heraclitus, however, ὄνομα as opposed to ἔργον did not represent a merely accidental attribute of a thing, unconnected with
its real nature; in other fragments he uses verbal similarities in such a way as to suggest that for him they had a real significance; cf. frs. 1, 25, 26, 28, 32, 114. It could be maintained that this was merely a trick of style, and that the connection of, for example, ψέπων and ψέπος in fr. 25 was due not to a belief that they were really connected because of their similar names but to the feeling that the assertion intended in this fragment is stronger and more striking if expressed in this form. However, Snell (Hermes 61 (1925), esp. 357ff.) has made out a convincing case for assigning a more than stylistic motive to the use of word-similarities by Heraclitus. He suggests that for him the names of things give some indication of their nature, just as, in fr. 93, the Delphic Apollo is said neither to speak outright, not to hide, but to give an indication through the enigmatic words of the prophecy. For this question fr. 67 is of the greatest importance: there we learn that ‘God is day night, winter summer, war peace, satiety hunger; he is changed in the way that fire, whenever it is mixed with spices, is named according to the savour of each’. Snell 368 comments that ‘der Name hebt nur eine Erscheinung gesondert heraus und zerstört darum das Wesentliche’. But ‘destroys’ is too strong a word to use, unless it is meant that anything which does not describe the whole essence of a thing destroys that essence as a whole. For just as when myrrh is cast into the flames of a sacrificial fire it is wrong to describe the mixture simply as ‘myrrh’, yet it remains true that myrrh forms a part of the mixture, so when god is described simply as ‘day’ or ‘peace’, without any mention of the corresponding contraries, he is only being described in part; such a description would be misleading, because incomplete, but it would not be untrue in the sense of being entirely false. Thus the name which is given to a complex cannot be entirely ignored, for it will tell us something about the complex, even if only about one of its constituents. So too in fr. 32 Heraclitus talks of something which ‘is unwilling and willing to be called by the name of Zeus’; whatever is the reference of this remark, it is clear that this name does not to some extent correspond with the true nature of the subject, and to this extent it is approved; hence it may be deduced that Heraclitus was not surprised to find some real correspondence between the name and the thing named, even if this correspondence is usually far from complete.

In the past it has often been suggested that Heraclitus’ views on the nature of names are revealed in the Cratylos of Plato, throughout which Cratylos is seen to uphold the  ὄνομα ἴδεσ toς of all names. But Cratylos was, at the most, a ‘Heraclitean’, and as such does not necessarily represent the ideas of Heraclitus himself; indeed Reinhards, Parmerides 241ff. (cf. also Wachter, N. Philolog. Unters. 5 (1929) 3ff.; Henning, Nomos und Physik 37ff.), has clearly shown that Plato commonly used the ‘Heracliteans’ as representatives of the theories prevalent in sophist circles, theories which perhaps had no connexion either with Heraclitus or with any specific followers of his. To this I would add that the evidence that Cratylos was, in fact, a habitual follower of Heraclitus needs careful consideration, and that this is not a legitimate conclusion at any rate from the Platonic dialogue: see my article ‘The Problem of Cratylos’, AJPh 72 (1951) 225ff.

A much more cogent indication of the fact that for Heraclitus names bore some essential relation to objects, and were capable of revealing a truth about them which might not be otherwise obvious, is provided by the not uncommon instances of etymology in the tragedians and especially in Aeschylus—whose Agamemnon, produced in 478, cannot have been written more than twenty years after Heraclitus’ death. At Ag. 681ff. the chorus ask, à proposito of the name ‘Δήν’ explained as Δήνω, ἐν τῷ ποτὲ δύναμιν ὁδόλον ἐγέρεται καὶ ἔχεται τὸν ἔπτυχον; Compare the similar significant etymologies of ‘Ἀρίστας’ and ‘ἵδιός’ at lines 1108ff., 699ff. of the same play. The same sort of reference to the ‘true’ or ‘correct’ character of certain names, not always proper names, occurs at Cho. 948 (also ἐπίσκοπος); Suppl. 315 (ἄνδρος); Sept. 829 (ὄρθος); fr. 6, 3 Nau, τὸ λόγος; Suppl. 505 (ἀνδρίστος); see Edward Fraenkel Aeschylus, Agamemnon ii, p. 259 (n. on l. 682), and the article of R. Pfeiffer cited there. Instances from the other tragedians, in whom this interest in the ὄνομα ἴδεσ is perhaps less striking than in Aeschylus, are collected by M. Wachtur, N. Philolog. Unters. 5 (1929) 700ff. It is well treated, in relation to Heraclitus and Aeschylus in particular, by Calogero op. cit. 206ff. This belief that names can indicate the real character of an object, evidently shared to a high degree by Heraclitus and Aeschylus in spite of their different aims and background, supplies a possible motive for the graphic devices beloved of both authors: the real ambiguity in things and events is sometimes reflected in their names, and correct behaviour in relation to these
that the opposites which appear to be connected, in the particular case of the bow of which the name is also 'life', are a pair of which the essential unity perhaps had a special significance for Heraclitus. The identity of life and death (more strictly, of living and dead) is explicitly asserted in fr. 88, together with that of the waking and the sleeping, young and old: τιμίνι τι πάντως καὶ πεπληρώθηκε... The reason for this 'identity' is that 'these change round and are those and those change round and are these'—in other words, because these extremes inevitably succeed one another (or one inevitably passes into the other), they are essentially connected and so, in Heraclitus' terms, 'the same': see on Group 5, pp. 134 ff. Fr. 62 states that 'immortals [are] mortal'—mortals immortal—again, there seems to be a basic unity underlying life and death, because the first inevitably gives way to the second (and perhaps, for Heraclitus, vice versa). But both these cases might be intended merely as further examples of a general truth which Heraclitus was trying to prove, that things which inevitably succeed one another are essentially connected. At fr. 15 occurs an assertion that 'Hades and Dionysus are the same', where the two deities may represent death and life, and where there is certainly no argument from succession. It is conceivable, though unlikely, that in fr. 32 the subject 'does not wish to be called by the name of Zeus' because the stem of this name, πάλιν, suggests 'life', and life is associated with death. This is the sum of the evidence from the extant fragments that Heraclitus attached special importance to the equation of life with death: it is evident that for the most part 'equation', strictly speaking, is not in question. The conclusion must be that the evidence for a positive doctrine of the identity of life and death is not strong enough to justify the interpretation of a fragment which only incidentally involves these terms, like this fr. 48, as specifically aimed at the general restatement of such an identity. Nevertheless Zeller, ZNW 809 ff.; Diels, N. Jahrb. 25 (1910) 3; Gigon, 92 and 124, have accepted this kind of interpretation without question. Gigon further remarked that the image reminds one of fr. 41, where the bow and the lyre are said to have a παράλληλα δοκειαν; Heinemann, Nomina und Physica 55, refers to this remark with approval. In fact, however, the use of the same word πάλιν in two apparently different contexts lacks all significance, and does not deserve comment unless we are prepared to accept a rather complex interpretation of the same

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ambiguities depends upon the exercise of intelligence and discretion in the resolution of the verbal crises. No doubt a more direct and concrete motive was supplied by the traditional ὅτι-τοι style of the Delphic oracle.'

Having established that Heraclitus, while not having any such thing as a 'Sprachtheorie', did appear to believe that names tended to reveal some part of the truth about the character of the objects to which they were attached, we may now consider the particular significance for him of the similarity between a possible Greek word for 'bow' and the regular Greek word for 'life'. Is this fragment intended as nothing more than a further specific example of a connexion, from a certain point of view, between two apparent opposites? It might well be so: the words τὸ τόδε (the article, of course, might have been added after Heraclitus) stand at the beginning of the sentence to define the particular sphere in which the connexion between opposites applies, as γραφεῖον stands at the beginning of fr. 59. In the instances of the connexion of opposites so far considered the opposites in question have been comparatively trivial, except for the very general concepts 'harmful' and 'beneficial' or 'unpleasant' and 'pleasant' in frs. 13, 9, 58. In this fr. 48 it happens

1 Heraclitus has frequently been called the first thinker to construct a theory of language. This can only be termed grossly misleading. The desire to show that such and such a man was 'the father of' history or philosophy or any other pursuit has been the cause of more than one serious misinterpretation of the development of Greek culture. Nestle, Philologus 64 (1901) 382 ff., asserted that Heraclitus was influenced by Orphic etymologies like πεθανός from πέθανε (fr. 54 Kern), ἐφανερώθη from ἐφανερωθεῖ (fr. 773). There is no evidence whatsoever that any of these etymologies in specifically Orphic contexts belongs to a period as early as the fifth century B.C.

2 Calogero, op. cit. 104, made the extraordinary remark that the similarity between 895 and 915 was not yet diminished, as it is for us, by the use of the written accent and the phonetic transposition of the musical accent into the stress accent. Admittedly there was no written accent, but the difference between the two words was just as marked, in speech, whether the phonetic accent was one of pitch or stress. However, the other examples of word-similarities in Heraclitus demonstrate that he did not demand anything like exact correspondence. It is true that in this case there is an exact correspondence in the written form of the two words: were it not for the fact emphasized in the previous sentence, it would be tempting to take this fragment as a positive indication—and the only one in the exact fragment—that Heraclitus wrote his aphorisms, rather than uttering them so frequently that a standard version became known and eventually recorded.
of fr. 48: that not only does the name πάος suggest life, as well as the
proper function of the bow which is death, but the instrument as
a whole, because of the tension of the string and the frame which
while pulling against each other nevertheless present an appearance
of stability, suggests the principle of παλαιος or ἐρις which, as can be
learnt from the fragments of Group 8, maintains the structure of the
phenomenal world. The removal of war and strife—the relaxation of
the tension—would result in the destruction of the ἡσομος: thus the
bow, whether it be called τὸ θεόν or βιος, exemplifies the principle of
life in the way outlined in fr. 51.

In my view such interpretations, while they cannot be rejected
absolutely, do not carry conviction. What is quite clear is that the
bow is yet another example of the concurrence in a particular concrete
instance of two states normally counted as radically opposed to each
other. In this instance the name of the implement in question is
almost identical with the name of the opposite of the implement’s
chief function. If names were considered by Heraclitus to have no
real connexion with things, then this instance would be utterly
worthless; as it is, he considered that there was some real connexion,
that the name could indicate an otherwise obscure truth about the
thing to which it was attached; therefore this opposition between
name and function, while not meaning that the bow was life or
anything of this sort, had enough force to support a case demon-
strated at greater length and with fuller documentation elsewhere.
Only if this interpretation is accepted does the fragment have any
real point; and point is something which all of Heraclitus’ sayings
seem pre-eminently to have had.

GROUP 4

FR. 23, III

The fact that men recognize some conditions and
sensations to be desirable and good shows that within
this sphere of human judgement opposites exist and are
complementary to each other: it would be impossible
to qualify anything as ‘good’ if the opposite, which is
known to be ‘bad’, did not exist. The fact of differen-
tiation within each category, and the possibility of change,
shows that there must be two opposite extremes in each
type of predicate; yet these extremes are comple-
mentary, and, together with the intervening stages,
form a single nexus. That one extreme cannot be
imagined without the other is a further proof of the
unity of opposites.
was made for the bad, not for the good. This last sentiment is unmistakably expressed in the quotations that precede and follow the saying of Heraclitus, and it must be assumed that in Clement's opinion at any rate this saying had a similar import. By this point Clement has advanced beyond the consideration of fear. In these circumstances Syllburg's conjecture, ήδεσαν, may be provisionally accepted. The subject of this verb lies, of course, outside the quotation: the context in Clement suggests, if anything, that it was not 'men' in general, but 'good men'; yet Clement would not have hesitated to use the quotation even if he did not know its proper context, or if this context did not exactly accord with his own; in addition, the more general subject may the more easily have fallen out of the tradition. Thus the subject may well have been simply δικαιοσύνη.

Since it is certain that the subject of the main verb lay outside the quotation, it is quite possible that τὸ δικαίον refers to a substantive which also was not quoted: attempts to emend τὸ δικαίον, therefore, in order to make the fragment complete in sense, are unnecessary and unjustified. The context in Clement gives little help in the determination of the reference of τὸ δικαίον. The main topic, admitted, is Law; Zeller assumed that the pronoun referred to the 'laws', and quoted the interpretation of Schuster 184, that the fragment is a criticism of men for having no appreciation of justice without the aid of laws. This is possible; the objections against it are, first, that if in its original context the fragment formed part of a clear attack on the Many it is strange that it was not more widely known in later antiquity; Heraclitus' criticisms of men were popular, supporting as they did his character as ὑπολογιστής. Secondly, whatever δικαίον implies here it cannot imply exactly 'justice'; and only, perhaps, if δικαίον represents some kind of positive virtue is Schuster's interpretation possible—see the discussion of the word below. But this interpretation is unnecessary: the intention of the fragment could be to praise Nomos (cf. I r. 114, 44). Further, some support for taking τὸ δικαίον to refer to Law or laws is apparently provided by the last two sentences of the seventh pseudo-Heraclean letter (Bemars Die heraklitischen Briefe 68; Bywater p. 76) τὰ μὲν δὲ δικαία δικαίωσιν ἐνδεικνύεται, οἵ νομοί, ἀδικίαι δὲ πολλάκις γέρα μὲ νομοῖς, ἀδικίαι δὲ πολλάκις ἐνδεικνύεται. Τὰ δ' ἐν τῷ καὶ μικρῷ ἐπιτεθεὶσε καλόσκοπος, κοτέσχεθε εἰς πόλεως ἀδικίαν. This...
particular letter is otherwise deficient in references to extant fragments, and for its Heraclitean character depends on occasional parodies of Heraclitus' antithetical style and the fact that it purports to be written by Heraclitus to Hermodorus. Yet the words έλ γάρ μη ίππησε, referring to ίππησεν, certainly look as though they are a reminiscence of έλ ταύτα μη ίππησεν in the fragment, where the reference may well be the same. It is probably accidental that the words which immediately follow the protasis in the epistle, ἀπόπειρα κατατεθήκας, only differ by a single letter from the unacceptable ms. reading in Clement of the words which precede the protasis there, ἀπόδεικται. Yet the subject is the same in both contexts, namely, law, and the letter mentions a double concept, using the same words, which had been employed by Clement shortly before the quotation from Heraclitus—φωτίζεται καταστάσεως; the coincidences are serious enough to promote the possibility that Clement and the author of the seventh letter used the same or related sources at this point. Clement of Alexandria was a man of immensely wide learning who evidently had access to impressive collections and summaries of Greek authors, of which he made full use. The author of this letter, on the other hand, is a shadowy figure: the whole collection originated probably in the first century A.D. (Clement's Stromates were written around A.D. 202.) Not all are by the same hand, though they may be the product of different pupils in a single school of rhetoric. It is possible, though no more, that the letter was written in Alexandria itself, some hundred years before Clement; but even if not it may have had as source some Cynic-Stoic compendium which was also used in the composition of the Stromates.

This speculation, indefinite as it must be, appears to support the view that in the fragment of Heraclitus the proper antecedent of ταύτα is something like διαβάζει. It is possible, however, that the hypothetical single source of Clement and the author of the seventh letter was responsible for giving the saying this reference: if the antecedent of the pronoun disappeared quite early in the tradition then all sorts of false interpretations may have arisen, and this may be one of them. If that were the case, then the attempt to retrieve the meaning of Heraclitus himself would have to be based, after all, upon the quotation itself, on the one hand, and our knowledge of the sort of thing that Heraclitus might have said, derived from the assessment of other extant fragments, on the other.

1 Teichmüller, N. Stud. z. Gesch. d. Bergziele (1876) 1, 131f., took ταύτα to refer to evil actions of men: only because of the existence of such actions and the weakness of character which gives rise to them is it necessary for men to have heard of Dike. Diels favoured emendation to ταυτικός, and thus supported the same view; Kranz in DK suggested ταύτων as an alternative emendation. It has already been remarked that such emendations are unnecessary. If the fragment has the sense suggested, then it is probable that the word which lay outside the quotation by Clement, and to which ταύτα refers, was διαβάζει; for the point would presumably be that the one extreme would not be known, or exist, were it not for the existence of the other—in other words, we should expect a mention of formal opposites. Διαβάζει and διαβάζει are opposites of this sort, whatever the exact significance of the former word here; their morphological opposition is sufficient to meet Heraclitus' requirements. It is necessary here the less to examine the meaning of διαβάζει. The translation of, for example, Burnet 137, 'the name of justice', is to some extent misleading: for διαβάζει is not identical with the later διαφανέσθην, implying an abstract principle (though at Plato Protag. 322b-323a both words are used for the same concept). The etymology of διαβάζει is debated; the present writer is content to accept that it is connected with διαφανεία and developed from a Sanskrit root dhī meaning 'indication' or 'direction' (see now L. R. Palmer, Trans. Philol. Soc. (1930) 149ff.). Jaeger, Paideia 1 (Eng. trans., Oxford, 1946) 442 n. 16, was surely right in rejecting the derivation from διαβάζει meaning 'to throw'. The extant usages of the word in Greek can be divided according to meaning into the following classes: (1) 'approved custom' or 'established order'; (2) 'judgment'; (3) 'lawsuit' or 'trial'; (4) 'punishment' or 'penalty'. (1) and (3) are not found in the Homeric poems. (1) and (3) are easily explained as 'the right direction'; (2) and (4) are derivative, perhaps from (2) in particular: but it may be that a slightly different sense of the root is stressed in (4) at any rate, not so much the pointing out of the right direction among two opposed ones as the marking of the guilty party. The above analysis of usages is based on the article in

126
LSI, although differing in emphasis: a consideration of the Pre-
ocratic occurrences (see the word-index in DX, s.v. δίκη) shows that
these did not diverge from the general pattern. Even under Kranz’s
heading ‘oppp. δίκη u. άθική’, there is no instance where the word
means abstract justice; it is only opposed to δίκη where the latter
word means ‘wrongdoing’ in a concrete sense, e.g. in Democritus
fr. 215. The distinction in meaning is blunted for us because
‘injustice’ in English can mean either the abstract principle or
the concrete instance (e.g. ‘You do me an injustice’), while ‘justice’
nearly always refers to the abstract principle. In English, however,
as in post-Homeric Greek, ‘justice’ can stand for ‘punishment’ or
‘legal decision’. In Heraclitus the word occurs in three instances
apart from the one under discussion: in fr. 94 it is clearly a personi-
fication (Ερώτης . . . Δίκη τρίκλωρας); Jaeger, Theology 116, remarks
that ‘here Dike serves as an embodiment of the inviolable order
of nature’. In fr. 28 the use is similar ( . . . Δίκη μακαρισμένη για τον
τάκτονα . . . ). In fr. 80 ‘it is necessary to know that war is common
and Dike is . . .’ Here the reference may be to Anaximander fr. 1
(presumably of the opposites), δίκη γάρ οὐκ δίκη καὶ τὸν
διανοητόν τῷ δόκοντας; but in the Heraclitus fragment the meaning
cannot mean ‘punishment’ or ‘amends’, but must be ‘the right way’,
‘the proper course of events’; in other words, it is analogous to one
extension of the meaning in frs. 94, 28, where the personified Dike
represents conflation of this ‘right way’ with the idea of punishment
for infringement. Both ideas are expressed in Jaeger’s phrase ‘the
inviolable order of nature’. It is reasonable to suppose that the
sense of δίκη in this fr. 23 accords with the sense which Heraclitus
has certainly assigned to the word in the other three fragments:
that it means ‘the right, or established, way’. The idea of punish-
ment for infringement present too, as in frs. 94, 28? A firm
answer to this question is impossible; in those two fragments
the context shows clearly that the negative aspect of Dike, the
idea of a force which cannot be opposed without disaster, cannot
be disregarded; in the present fragment, however, the context
(which is to some extent incomplete) gives no such information.
But there is certainly no specific adjunct like Ερώτης or καρα-
νίμερος: this being the case it may be considered that Dike,
by itself, is more likely to call to the mind of the hearer the
positive and perhaps prior idea of the right way for people and
things to behave, rather than the negative idea of correction
consequent upon departures from that way.
If the idea of correction is indeed absent from the use of the word
in this fragment, then the Teichmüller-Diels view that τάκτονα refers
to unjust acts is strengthened, as against the Schuster-Zeller view
that it refers to law or laws. Zeller was surely mistaken in holding
that the former view demanded the interpretation of δίκη here as
Δίκη τοικόπαρος (cf.Parmenides fr. 1, 14). I accept that view,
chiefly because Heraclitus is unlikely to have justified Law (the
existence of which he certainly assumed, cf. fr. 114) by reference
to specific man-made laws, to which the plural τάκτονα must, on
the Schuster-Zeller interpretation, refer. The argument is, then, that
men only recognize a ‘right’ way because of the examples that they
have of the existence of a ‘wrong’ way. In an undifferentiated world
there would be no such thing as a proper way of behaving. For
Heraclitus things in the world happen according to a definite plan,
to a rule or measure: this is Dike. Yet were it not for the occurrence
of occasional anomalies, of events contrary to Dike, then this Dike
would not be known and appreciated. The absence of injustice, in
this sense, might not destroy the τάκτονα (though it is impossible to
be sure that Dike does not of itself imply the existence of an opposi-
tion, for in fr. 80 it is said to be άτοκες: the world would not exist
without an element of strife and opposition); but what we are
concerned with here is the human view of Dike rather than its
abstract essence. This is shown by the word τάκτονα. Dike was in fact
a widely shared human concept, and this is enough for Heraclitus’
argument: this concept would not exist at all were it not for the
existence of its opposite. According to this interpretation, then, the
fragment presents another indication of the essential connexion of
certain apparent opposites: but here the discovery of identity (of
a kind) is applied not to the more or less trivial sphere of sensation
or opinion, but to the commonly accepted structure of moral life.
This interpretation must naturally remain speculative: in addition to
the considerations already adduced, the analogy of fr. 111, which
contains a similar intention, helps to turn the balance in its favour.

\[1\] It is impossible to determine how far Heraclitus in this fragment is thinking
of Dike as a personification. In fr. 94 he certainly is, and in fr. 28 probably;
so I have given the word a capital letter in the main text. In any case some
degree of personification is involved.
gives the uncontracted forms of verbs; in frs. 110, 111 little is told by ephelestic -v; in fr. 110 they give the dative plural in -os, not -ανω. On the other hand, first declension nouns are regularly given the Ionic termination in -εν. These inconsistencies are typical of the sometimes ignorant re-Ionicization of texts which was a favourite occupation of Byzantine scholars in particular; that we are not dealing here with the remnants of original dialect-forms, seen in the process of being superseded by Attic or Koine forms, is perhaps well shown by a consideration of the word printed as υγεῖαν above. Only Tr.MPA have this extract; in this order (which is also the order of trustworthiness, A being particularly fallacious) they give υγεῖαν υγεῖαν υγεῖαν. Thus the best established root is υγε-, not υγε-; but υγε- (like, for example, ψήφει) is a late Hellenistic form not found before the second century B.C.; an Ionic form υγεία is also found after this time. The Herodotean form (e.g. π. 77) was evidently υγεῖαν, and this is presumably how the word as used by Herodotus was first recorded: that A has it is probably accidental. The result of this examination is that in no fragment quoted by Stobaeus can the presence of a common Ionic form be counted as a criterion of genuineness.

There is no reason, however, to doubt the genuineness of this fragment. The aorist ἐρώτησεν may be compared with the aorists in fr. 13, τότε τοῦ θεοῦ ἔρωτας τοῦ θεοῦ ἐρώτησα... where the tenses are probably gnomic (the sense could be ‘War... has shown, once and for all, some as gods and some as men’; but since the continuity of θεοῦ is stressed here and elsewhere it is more probable that the aorist has a present sense). Here too it could be argued that disease long ago in the past gave health the reputation, which it still has, of being pleasant; but again it is more probable that ἐρώτησεν represents an abiding truth. Attempts to emend τοῦ θεοῦ to υγεῖαν are misguided; the phrase οὗτος ἐρώτησα δύοσθαι appears in Hdt. iii, 80 and is a reasonable enough combination of epithets, even if it strikes us as being a little weak and uncorrect in the present context. Indeed, perhaps its length is its virtue: for either τοῦ θεοῦ or δύοσθαι alone would fail to support the weight of οὗτος υγεῖαν ἐρώτησα, words which form a single rhythmic group. Gign 111 (cf. Wilmanns, Hermes 62 (1927) 278) made a more important point: καθὼς δύοσθαι, the new pair of opposites obtained by Diels’ emendation (accepted by Reinhardt, Pannides
204 n. 2), is of an entirely different character from the other pairs mentioned here, which are all of a more concrete nature and all affections of the body. It is thus quite out of place; it may be added that, although most modern scholars accept without question that Heraclitus specifically proclaimed the identity of good and evil, there is no evidence for this (apart from the special case of fr. 102) before Aristotle, who may have drawn this conclusion himself from other statements of Heraclitus: see pp. 93ff. Kranz in DK has rightly reverted to the ms. reading.

The three pairs of opposites mentioned all recur in other fragments: sickness-health in fr. 58 (though not exactly: the real opposition is between hurting and curing); hunger-satiety in fr. 67 (same words used) and fr. 65 (χορήγησις–κόψης); weariness-rest, probably, in fr. 84. Fr. 58 is an example of the coincidence of apparent opposites in a special instance; fr. 67 incidently asserts the identity of a number of pairs of opposites, as different aspects of ὁδός. Fr. 65 and 84 may not be intended particularly to illustrate the coincidence of opposites; but does not the analogy of frs. 58 and 67 suggest that in fr. 111 also the intention is primarily to assert the unity of opposites—this time on the ground that man’s approval of desirable conditions of the body depends on their knowledge of the existence of possible undesirable conditions? The fragment is a practical statement of human experience, not a theoretical excursion into the metaphysics of ethics. ἡδονή shows that the human standard is the important one; from the absolute point of view, indeed, there is no difference at all between such opposites (fr. 102). Heraclitus took his indications of the identity of opposites from the world as men experience it: there both disease and health undeniably exist, and men would not derive so much satisfaction from being well if they did not know what it was like to be ill. This empirical argument is sufficient to indicate the essential connection between disease and health. Gigon, however, took an entirely different view (p. 111): ‘Der Gedanke ist rein ethisch: Eine Rechtfertigung des Übels.’

This, of course, is much more extreme than the ethical sense given to the fragment by Bywater and Gomperz when they connected it with fr. 112. Were there really, at the beginning of the fifth century, Greeks who were already attempting to explain, in an almost metaphysical way, the existence of evil? The contrary, rather, is the case, that evil was something unquestioningly accepted; or, more strictly, certain things were accepted as θαλάσσα—for even to talk of ‘evil’ in this way, as a single abstract category, is to reveal the influence of later speculation. Thus in the Pythagorean συντομία, θεσπόρον and κόσμον formed one of the ten basic oppositions: κόσμον was accepted as naturally and readily as κατάφθανον, σωτηρία, θεόν. Like them, it came in the column headed by ἀστραφή—‘but’ unlimted itself was accepted as a necessary component of the world as we see it; there was no need to justify its existence as the Christian tries to justify the existence of Evil. This kind of dualism, like the mythological dualism of stories like that of Kronos and Ophion, was the result, not of an attempt to justify an apparent defect in a world that should be perfect, but of a simple realistic analysis.

Even if the kind of ethical interpretation proposed by Gigon involves a grave anachronism (being more suitable to the period of the later Plato), the Bywater-Gomperz solution remains a possible one. The chief argument for an original ethical context for the fragment is its preservation by Stobaeus along with others which are unmistakably ethical, or at least applicable to human behaviour. Yet all that this shows is that fr. 111 found its way into some collection of ethical sayings, made perhaps many centuries after Heraclitus, which Stobaeus used as a source. Once isolated from its proper context the fragment might easily seem to a superficial judge to have a primarily ethical force: the word θαλάσσα alone might suggest this. And in fact it is true that both fr. 111 and fr. 23, which are counted here as forming Group 4, could have had the primarily ethical purpose of reconciling men to the ‘bad’ things of life. Nevertheless, in all other assessable cases where pairs of opposites are mentioned the idea of their connexion and essential unity is paramount: the chances are, then, that this is the paramount idea in these fragments too, and that they form yet another proof of this connexion, a proof based this time upon human assessments of the correctness (fr. 23) and the desirability (fr. 111) of different types of activity and sensation.
Some opposites are ‘the same’ (that is, are essentially connected as extremes of a single process) because they invariably succeed each other. These opposites are all apparent in the course of nature: in inevitable cosmic cycles, like day-night; in human cycles, like sleep-waking (and by analogy, life-death); and in the constant variations of matter, like those between the hot and the cold. Groups 2–4 demonstrated the underlying unity of apparent opposites by showing that the appearance of opposition was often relative to varying standards of judgement: this group takes a different category of opposites and demonstrates their essential unity without reference to an animate standard. Even within the group the character of the succession of opposites differs slightly in different fragments; and in fr. 88 the main intention may have been the assertion of a truth about human conditions, as much as the illustration of the underlying logical assumption.

[Plutarch] Consolation ad Apollonium 10, 106ε οτιτε γιο τη εν ύμιν αυτοις ουκ εστιν ο θεοτετος; και ο φησιν Ηρακλειτος, τοδε τ' ενι ζων και τεθνηκος και το έγγυς θος και το θεος καθαρος και το νεος και γηραιος τάδε γιο μεταπετανα εκεινα ητοι πολλα μεταπετανα τατα. 1 οτι γιο δι τωσ αυτοις πηλοι διενεκετο της πλατης χωρι ουνχης και παλαι πλατης και ουνχης και τεσσερα εν παιρ εν τοις αδιαλειπτοσ, ουσι και ο φυσις δι της αυτης ολης οιων μιας προβληματικης ημιου ανοικεν, εις ανωτερα αυτοις ηγενεσαι τους πατερας, εις' θυμος, εις' άλλους εις' άλλους ενοποιησας. και ο της γενεσεως ποταμους ουτος ενδελεχος έμαν αυτες στησας, και παλαι δι εν αορατα αυτο δε της φορεσιν εις' άλλους εις Καμποτος καλομηνους υπο των πιεστων. η πρακτικα αυτων αυτες δεξιας ημι δι του ημιου φως, η αυτη και τον χορευον Ειδην άντει, και μιποτε τοδε εκεον η δε περι ημιου έμη, εν παιρ εν ημαιρεο και νικαι των, έπαισαντος δε τον και θεαλαν και υπνου και γενιγορεος.

1 τ' ον Φι, γ' ον κοιν δεικτη, ποιμανωνος, γα' ον κοιν. Hellenic 2 το κοιν., Diels και Kranke. 3 το κοιν. 40η εκκ τον Hellenic 5 εκκ τον Hellenic, και ουκ εκκ τους Diels και Kranke. 6 και νικαι των, έπαισαντος Β. Paton, έπαισαντος Δ. και Ερευνας, Β. Kranke και Ερευνας κοιν. 7 και νικαι των, έπαισαντος Β. Paton, έπαισαντος Δ. και Ερευνας, Β. Kranke και Ερευνας κοιν.

For when is death not in our own selves? and as Heraclides says, And as the same thing there exists in us living and dead and the waking and the sleeping and young and old, for these things having changed round are those, and those things having changed round again are those. For as a man, when he is moulding living creatures out of the same clay, can destroy one and again mould another and then destroy that, and can do this incessantly one after the other, so also from the same material Nature once put forth our ancestors, then having destroyed them she produced our fathers, then us, then others on top of others in a circular process. And this continuously flowing river of becoming will never stop, and again neither will its opposite, the river of destruction, whether it be
called by the poet Achelous or Cocytus. Now the first cause which showed to us the light of the sun, the same brings dark Hades too. And perhaps the air around us is an image of this, making day and night one after the other, bringing on life and death and sleep and waking.

Zeller, ZN 805, followed Bernays in thinking that the content of the whole passage printed above derived from Heraklitus. In fact the idea of personified Nature as an objective force moulding successive generations like a moulder in clay has nothing whatever in common with what we know of Heraklitus. The continuous rivers of becoming and destruction may be a reminiscence of Plato’s ὄρθρον ἔφη interpretation of Heraklitus’ theory of natural change, an interpretation followed by Plutarch at, for example, de E 18, 392b, where fr. 91 is quoted; the poetical proper names are even more foreign to Heraklitus himself. The next sentence, which postulates a single cause for night and day, may betray a knowledge of frs. 57, 62, or 106, or the belief which they express; but the last sentence, while recapitulating the connexion between the two pairs of opposites mentioned in the actual quotation from Heraklitus, introduces a completely different substance, air, in a way which reminds the reader rather of Diogenes of Apollonia. Thus whatever ‘Herakлитian’ ideas are shown in the context subsequent to the quotation are completely derivative and valueless; they are what might arise out of certain dialogues of Plato, especially the Theaetetus, where Herakлитean and Orphic ideas are combined with many others to form a mixture which was never intended to be serious. Plutarch himself, of course, was a great admirer of Plato, and this sort of thing is what we should expect from him; but most authorities (e.g. Paton and Pohlenz; Ziegler in RE) now believe that the Consolatio is spurious and was written by a singularly stupid imitator of Plutarch, one, however, who had access to good collections of earlier material and may also have been acquainted with some of the Platonic dialogues. There is no reason to doubt the genuineness of the actual quotation from Heraklitus, although, as will be seen, there might be some doubt about where it ends.

The first three words of the fragment present considerable difficulties. The majority manuscript evidence is for τὸν ἐν τῷ ἀνθρώπῳ φύσιν γὰρ ἐπίθετον.  

1 There is probably a reminiscence here of the story of Prometheus moulding men out of clay; cf. e.g. Pausanias x, 4, 4.
wanted ἐστὶ to mean just ‘is’. This would be very convenient, but I know of no case in which it is used merely in a copulative sense. Bernays, like Diels, felt that ἐστὶ must have a dative, and emended to τὸν ἄνθρωπον: I agree with Zeller that this does not accord well with τὸς γὰρ οὐκ ἔμελλοντας κατα. On which see below. Other proposed emendations, including Bywater’s τὸν ἄνθρωπον, have been somewhat futile.

The next textual difficulty is the occurrence of the article in all mss. before ἐγγύηγερος, and in some mss. before κόσμων, but before no other of the neuter participles. Zeller and Diels boldly printed τὸ before these two participles and not before the four others: this is indeed what the ms. tradition suggests. Admittedly Θ and Η (except for E) omit the article in the second case; but the evidence of the Planudean group is by no means always the most reliable. It is, of course, quite out of the question for Heraclitus to have used the article before one opposite of a pair, and not before the other one: the fact that the article is found in all mss. before one opposite suggests strongly that it also occurred before the other, and we must accept the evidence of the mss. which preserve τὸ here as well.

There was, of course, no incentive for a copyist to supply articles for one pair of opposites and not the others; nor can the first and universally testified τὸ easily be a corruption from any other word. But can Heraclitus have used the article for one pair of participles, and not for the others? Most editors now think not, and, like Kranz in DK, drop the τὸ before ἐγγύηγερος. Yet if one considers Heraclitus’ use of the article in other fragments it seems possible that he did not apply it consistently in this case: some anomalies may be due to an inaccurate tradition, but this cannot account for all. Thus in fr. 115, 118, no article is used before ψυχή, but in fr. 98 we find τὸ μακάρι δέμομενος. In fr. 120 we should expect an article before τάσης, which is parallel with ἄνθρωπος. Other variations of usage in the same sentence are fr. 90 (probably), τυρός δεμῆρ τὸ τότε καὶ τῷ ἄνθρωπῳ, and fr. 101, ὁ δεμῆρ γὰρ τῷ ἄνθρωπῳ. In two startling cases the article is omitted before an adjective used as a substantive: fr. 19 ...ἀναπιετόντον ὅν δεμῆρον, and fr. 108 ...οὕτων ὅπι τῶν κεραυνῶν. But perhaps the closest parallel with the present case is provided by fr. 126 (see p. 150), which seems to be preserved in an original form, though only by Tzetzes: τὸ ψυχρὸν θέτεται, θερμὸν ψύχων, ψύρον αὐτοῖσιν.
If Melissus fr. 8 does refer to Heraclitus the genuineness of τόδε γὰρ μετατρέπομαι κτλ. in fr. 88 receives some confirmation. Reinhart, Hermes 77 (1942) 242 n. 2, argued that the author of the Consolatio would not have supplied these words: for his introduction of the quotation shows that he was thinking of opposites being immanent in the same subject, not succeeding and replacing each other; the kind of succession implied in the image of the successively moulded clay models, or the rivers of birth and destruction, is the succession of immanent forms in a common substratum rather than the naïvely conceived changes implied by μετατρέπομαι. In addition, Gigon 90 is probably right in maintaining that γὰρ would not be found in the following sentence in pseudo-Plutarch, as well as in τόδε γὰρ μετατρέπομαι κτλ., if both sentences alike were by the same author: not that γὰρ in successive clauses is of itself unusual provided that the clauses have the same reference (Dennison Greek Particles 64f.; cf. e.g., Heraclitus fr. 114), but here the introduction of the not entirely relevant image of the clay figures is completely different in character from the concise explanation of the previous assertion offered by τόδε γὰρ μετατρέπομαι κτλ. The addition may, however, have been made before the Consolatio. Gigon observes that the present case is a rare example, at an early stage of prose, of a simple and deliberate logical explanation of the grounds on which a preceding general assertion has been made. Heraclitus does not elsewhere, it is true, give such a plain indication of the justification for his generalizations (fr. 83, for example, is not a completely parallel case): whether this in itself is enough reason for denying the authenticity of the γὰρ clause must be decided by each reader for himself; I have conservatively accepted it as part of the fragment, since I do not consider Heraclitus incapable of such logical schematization, rare though it may have been in his day.

The three pairs of opposites named (the living—the dead, the waking—the sleeping, the young—the old) are all conditions of living creatures—in this case, presumably, of human beings in particular. The substantial use of the participles does not simply imply the distinction of certain qualities; rather, Heraclitus is looking at man simply as an object of a certain kind at a certain time, to the exclusion of other possible aspects. Thus, whether or not the definite article is accepted for the middle pair, it is strictly correct to translate 'the
living thing and the dead thing, the waking thing and the sleeping thing', and so on. Perhaps, rather than of man regarded solely as a living object, the concept is that of the living element, the sleeping element, and so on: the important point being that the neuter participles should be taken to represent objects fully existent in their own right, and not merely (as young and old are for us) relative qualities. Certainly γιόν καὶ παριμένοντος κτά cannot be predicated: this would make sense—'the same thing is present (persists) as living and dead, waking and sleeping, young and old'—, but asserts that there is a common substratum of change, and makes no explicit identification or unification of opposites which attach themselves to this substratum. This does not accord at all with the explanation which follows (which is an explanation of why the opposites themselves are the same), nor indeed is the assertion of a persistent substratum likely to have been made in this somewhat indirect way by Heraclitus. The nearest he approaches to such an assertion is fr. 67. The acceptance of Bernay's reading ταρώσει would involve a similar sense, although here the participles would be (as they surely are) substantival. If ιττ is correct, as we take it to be, then ταρώσει is best explained as predicative, and the full sense will be something like this: 'As the same thing is present [in the same object, a man, at different times] the living element and the dead element, the waking element and the sleeping element, the young element and the old element: these seemingly opposite things are the same, because they replace one another, and can be replaced by no other kind of thing.' ιττ does certainly imply a subject (which need not be specified) in which, and in no other, each extreme occurs. Logically this implication is necessary—not so much in the case of the examples quoted in this fragment, which are by their nature restricted to a single genus, namely, living creatures, but in the case of other pairs of opposites which are connected by the same rule of inevitable succession. For example, wet and dry are opposites of this type (cf. fr. 136 below), but their connexion would not, for Heraclitus, be adequately demonstrated by observing that dry and hot weather tends to produce undue moisture in the human body. Apart from this, the simple copula ιττ would have achieved the same results in a more direct manner.

In the case of the middle pair of opposites, waking and sleeping, the sense of the fragment is plain enough. Man alternates continuously, during his lifetime, between these two states; there are no others of the same category; and the transition between them is more or less direct. These opposite states are inextricably connected; they are really different poles of a single continuum, waking-sleeping. They are by no means 'the same' in the sense of 'identical'; but it has already been shown that ταρώσει, for Heraclitus, does not necessarily imply absolute identity, but rather unity. Some opposites—those which depend on varying standards of judgement, like 'the way up' and 'the way down'—are, in themselves, identical, and ταρώσει (or ταρώσει) in these cases has a different connotation. But Heraclitus' general intention is to show not that all differentiations in the sum of human experience are illusory, but that they are all connected, so that there is an underlying unity. In this group and preceding ones all that is shown is that there is an essential connexion between opposites of the same genus, and not that separate genera are themselves connected. This connexion of the different genera is necessary if an over-all unity is to be demonstrated; it will be seen that Heraclitus neglects to establish this kind of connexion except in one important fragment, 67, and it is difficult to avoid the conclusion that he believed the demonstration of unity in things which were apparently most opposed to each other—that is, in opposites of the same genus—to be almost sufficient proof of an all-embracing unity: if waking and sleeping are 'the same' and hot and cold are 'the same', then surely there will be no lack of essential connexion between waking and the hot. To modern logicians this is an intolerable deduction. Yet it is the kind of logical leap that tended to be made, at any rate before Plato or Pythagoras, or his immediate followers probably made it when, having observed that number was an essential element of such an influential and (to the naive judgement) such an unnumerical thing as music, they proceeded to the conclusion that number was an essential element of all things. However, fr. 67 (and the possibility that other assertions of the connexion between other classes of opposites have not survived) prevents us from definitely attributing this error to Heraclitus; though it will be shown in the discussion of fr. 67 (pp. 199ff.) that the linking together of different classes of opposites was not made in the same methodological way as the many demonstrations of the connexions between opposites of the same category.

So far we have considered only the opposition waking-sleeping. Here it is obviously true that 'this extreme changes round and is
that; that one changes round and is this’. In the course of a lifetime men have many opportunities to learn this, and it becomes obvious that these two opposed states are variations in a single continuum which we should call consciousness. The other oppositions specified in the fragment are different in one important respect: the change from one extreme to the other is commonly acknowledged and confirmed by experience, but the change in the reverse direction is not. Death appears to precede life, and the old upon the young; but it is not the case that, in the same obvious manner and in the same subject, death is followed by life and the old by the young. Perhaps Heraclitus intended these two oppositions to be different in kind from the waking-sleeping opposition; the inevitable succession of one extreme by the other, even if the reverse process does not take place, indicates quite well enough for Heraclitus’ purposes that the two extremes are inextricably connected. The objection to this simple explanation is provided by the γάρ clause, which asserts quite definitely, of all the opposites mentioned, that the change takes place in both directions: the living, for example, changes round and becomes the dead, and the dead likewise becomes the living. It is true that Wilamowitz doubted the authenticity of this clause, perhaps with reason; yet it is unnecessary to rely entirely upon this clause alone, for there are some other extant fragments which assert some kind of reciprocal movement between death and life. Frs. 15 and 48 may hint at this connexion, but they do so in symbolical terms. Frs. 36 and 760 (of which the latter, as will be seen, is probably only a later conflation of the former with fr. 62) use the word δεικτης to describe the passage of one basic form of material into the other, e.g. (from fr. 36) ... δεικτης δείκτης γάρ γενεσθαι, τι γάρ εἰς ἄνθρωπον γίνεται... It is difficult to make a precise analysis of this strange pronouncement, but the second clause quoted seems to imply that water ‘is born’ from the material into which it passes on ‘death’, and thus that the change from ‘life’ to ‘death’, in the case of water and of other forms of matter, including ψυκή, is a reciprocal one. In fr. 62 the same reciprocity is outlined still more clearly. Hippolytus’ version, certainly the most accurate of the many extant ones, is as follows: ἀνέκδοτοι δεικτής, δεικτής ἀνέκδοτος, γιόντας τοῦ ἄνθρωπον, ὁμοίως τοῦ ἄνθρωπον, τῶν εἰς ἄνθρωπον ὑπὲρ πεπεστέναις. On the face of it this fragment refers not to the changes of matter, and ‘death’ of this kind, but to human creatures and divinities: ‘living their death, dying their life’ (of which the subject is apparently both ‘mortals’ and ‘immortal’), though it may not be entirely comprehensible, at any rate implies that life follows death as death follows life. Although the fragment involves an inevitable succession, and although it is possible that the adjacent epithets of opposite sense with which it opens are intended to be identified with each other, it clearly involves special conceptions of the nature of the soul or life-principle which place it outside the class of simple assertions of the unity of opposites which succeed one another. The whole question of Heraclitus’ view of the soul as fire, and of the way in which it passes from ‘life’ to ‘death’ and vice versa, lies outside the range of this study and must be postponed until a later occasion; but see in the meantime my article in AJP 70 (1949), 384 ff., and the brief reference to popular beliefs on p. 147 f. below. Enough has been said here to show that he could have assumed in this fr. 88 that living and dead were reciprocal extremes of the type of waking and sleeping. Such a reciprocity is added to illustrate a quite different truth, namely, the unity of opposites in general; it would be misleading to treat the fragment, as, for example, Gigen does, as a primarily anthropological assertion.

That the ‘dead’ and ‘living’ referred to in this fragment may be intended to apply to the changes of material in the living human body, or perhaps in fr. 36, might conceivably be indicated by Plutarch de E 18, 392 e (a passage cited as relevant to fr. 88 by, for example, Zeller, ZN 806 n., and Walser) ἐκ τοῦ ἀνθρώπου ἐν κυμάσια ἀντίθετης τιμής καὶ θρησκείας. οἱ γὰρ οὕτως, ὅσον Ἰμακλέατος ἔλεγεν, πάντως δὲν αὐτοὶ ἔρχονται καὶ ἀπέναντι δέντος ἐκτὸς γένεσις (= one version of fr. 758), διὰ τῆς συνεργείας ἐκ τῶν ἄνθρωπων ἔχειν, ἀπόκειται ὅσον καίνησαν. οἱ δὲ καὶ τὸν νεόν ἐν τῷ κορμῷ, καὶ τὸν νεόν ἐν τῷ νεόν, ὡς ἐν τῷ νεόν τῷ νεόνι τῷ νεόνι. οἱ δὲ καὶ τὸν νεόν ἐν τῷ κωμῷ τῇ τακτικῇ, ὡς ὁ κωμῷ ἐκ τῶν κωμῶν ἐκ τῶν κωμῶν ἐκ τῶν κωμῶν ἐκ τῶν κωμῶν. ὡς δὲ καὶ τὸν νεόν καὶ τὴν τεκτικὴν, ὡς τῇ τεκτικῇ καί τῶν κωμῶν. The latter part of this may reproduce the ideas of Heraclitus; the chief reason for thinking so is that the instance of ‘today’ and ‘tomorrow’ occurs in a passage of Schmitz cited by Schlieben, Ebd. 1, 8, 43 (1 p. 108 Wachsmuth) τὸ γὰρ κύριον ἢ τὸν τῆς θεοῦ ἄρητον, τὸ θεὸς κύριον τῶν, τὸ θεὸς κύριον. These and the preceding words have been remodelled into trochaic verse by Wilamowitz, and classified by Diels and Kranz as an imitation of Heraclitus (DK 2203, 2). It
is true that Diog. L. ix, 16 states that the lambic poet Scythius attempted to express the argument of Heraclitus in metre; but there is no reason to think that these particular words as quoted by Stobaeus refer particularly to a Heraclitean doctrine, except that they appear also in the passage of Plutarch quoted above, just after a sentence specifically attributed to Heraclitus. The argument has thus become circular. It must be added, though, that a statement to the effect that our bodies change from day to day occurs in Epicharmus (fr. 2 in DK), who possibly referred to beliefs of Heraclitus (though this is intrinsically improbable, and Heraclitus is certainly never mentioned by name). The idea that the material of our body is constantly being renewed and that part of it is being destroyed or 'dying' all the time may well have been a common one at quite an early period in Greece, and have become a popular vitriolic trope. It appears doubtful whether it should be connected specifically with Heraclitus, though it would not be surprising if it were so connected in the fourth century B.C. and later, for it fits in well with the νεοψιαυτής interpretation of Heraclitus' views on natural change, which was certainly accepted by Plutarch (see on fr. 91, p. 381). Nevertheless, it cannot be denied that the Plutarch passage explains how the young could succeed the old, and the dead the living, especially if 'dead' and 'living' are taken to refer to changes of material and not changes involving the whole organism. Specific objections against this interpretation, in addition to the general objection of lack of evidence, are twofold. First, the opposition waking-sleeping undoubtedly refers to the whole organism and not to separate constituents. Secondly, the kind of change involved in this idea of the continuous 'death' of the material of the body is continuous and gradual change, while the changes referred to in the fragment are more probably to be regarded as sudden ones, in the sense of the German 'unschlagen'. So much perhaps is indicated by the use of the verb περσπερήσαν, which tends to emphasize the accomplished change and not the process; an object is first in one state, then (after a period of which the length is here irrelevant) in a completely different state. In words like περσπερήσαν, περσπερήσαν, the prepositional prefix περσατερα produces an idea of 'reversal': whether this is derived from the original sense of περσατερα, perhaps 'in company with' or 'between', or from the derived temporal idea of succession, need not be discussed here. In these cases, of course, the verbal roots themselves add to the idea of change from one extreme to the other: περσατερα, as much as περσατερα and περσατερα, implies a sudden and immediate rather than a gradual motion; but in the last two cases a change of direction is more explicit. When Heraclitus used the word περσατερα in fr. 31, to describe the separate stages of transformation of fire, he was evidently not thinking of the process of these changes (rain, evaporation, etc.), so much as of the end-results, sea or earth; see p. 329. That περσατερα is habitually used with this sense of sudden complete reversal is indicated especially by phrases like μετεπερεστη το πράγματος (Lyssias 20, 14; cf. Thuc. viii, 68, Plato Epistle 7, 325 a), meaning 'a revolution had occurred', and, at Plato Phaedrus 241 b, διπου καταρρευσαμενοι, meaning 'when the ship had fallen with the other side up'.

Two other possible explanations of the reciprocal change between the dead and the living, the young and the old, still remain: or rather, two variations on the same explanation. Plato in the Phaedo (90c-f) refers to a παλιος λεγόμενος (by which phrase he usually characterizes those beliefs about the soul which are associated with the names of Pythagoras and Orpheus), to the effect that παλιος γεννάς και παλιος ανεφοδότης τους γονείς. Plato goes on to generalize this belief into the assertion that all opposites come into being from and pass away into opposites—a conclusion with which Heraclitus would not have quarrelled. One of the instances adduced by Plato is that it was sleeping and waking, which inevitably make way for each other and for nothing else. It is possible that Heraclitus was thinking of some such quasi-religious belief about the soul when he made this statement. On the other hand, a similar belief, but one devoid of religious associations and not connected with ideas of purification and merit, was evidently held by ordinary people in Greece as it still is in many undeveloped societies today: the belief that the grandchild is in some way a continuation of the life of the grandparent, after whom he is often named. In this simple way life may be said to succeed death, and the infant the old man. Or simpler still: from whence are babies born?—from nothing, from a condition of not-life, which could be named 'death'. This idea alone may explain the fragment. It must not be forgotten that Melissus fr. 8, quoted above, mentions the same succession without special comment: το γενναναι και το γενναναι γενναναι. This, like other parts of that fragment, may be a direct reminiscence
of Heraclitus; but Melissus is describing illusions common to mankind in general—note the first person plural—and would scarcely cite a technical theory held by Heraclitus alone. Of course, he may have read a general sense into what was originally intended to have special significance.

There is one other fragment in which two of the pairs of opposites specified in fr. 88 recur: this is fr. 26. Here the motive is not to demonstrate that these opposites are the same, but to show how a man, when he is asleep, is 'in contact with' death though he is still living: ...ζῶν δὲ ἐπηκεῖαι τιθεῖται οὐκοῦν, ἔγγυρος ἄπεσεν ἀνθρώπου (Wilamowitz’s text). Sleep resembles death in many ways, and to Heraclitus was an intermediate stage towards it. If it were a question in fr. 88 of these two oppositions alone, then we should be justified in explaining that fragment in terms of fr. 26—a form of death (sleep) succeeds the fully living (waking) state, and vice versa, even when we are alive. But the opposition of the young and the old cannot possibly be interpreted along these lines. This being the case it must be accepted that fr. 88 refers on the one hand to observed successive states of the living body, namely, sleeping and waking, and on the other to a conviction that the soul, after death, becomes 'alive' and young again. The reference is most probably to popular belief, for example, that children and especially grandchildren continue one's own life and renew it; or to the Orphic particularization of this belief, or to Heraclitus' own views of διακομή as involving merely the change from one kind of material to another. The primary point of the fragment is not in doubt: that the oscillation between these opposed states in the anthropological sphere indicates that the opposition, in each genus, is in fact a connexion and a unity.

1 The soul itself is a form of fire, and its 'death', in the above sense, involves a new becoming—either as water (cf. Fr. 36), or, in the case of souls of which the fiery nature has not been impaired by death, as another form of fire: cf. especially fr. 24 and the account of it in AHP 70 (1949): 384 ff.
according to Melissaus fr. 8 (see pp. 139ff.), . . . sokei de epi to te theri men phwo phwil naokos ou to phwo phwi theri men. It has been said that in this fragment Melissaus may have been thinking especially of Heraclitus.

ανάφορα is not the most conspicuous word in the fragment: κοπάσεσω, which is found in Homer, occurs in prose only in the Ionia writings of the Hippocratic corpus, where it appears in two of the undoubtedly earlier (fifth century) treatises at Απερίας γ 71 and Ποιματικός 23; and in Galen, doubtless in imitation of the Hippocratic usage. In poetry it occurs as late as Bion or (A.P. 10, 272). vorvare is first used, apart from the present case, in Aeschylus fr. 441; it occurs in Plato (Τίμων 74C), in Aristotle, and frequently in the Anthology. ισαλος is a Homeric word, and is not otherwise found in prose before Plato except in a probable quotation by Plotinus (de primo frigido 21, 554E) from Archelaus. Again, in Alexandrian and later poetry it is not uncommon. Thus three out of the four verbs used are relatively rare, and very rare in fifth-century prose: two are used in Homer. These are just the kind of words that Heraclitus preferred—unusual and picturesque, but not in themselves obscure (in spite of Tzetzes) or exclusively poetical in feeling. All of them were artificially revived in the Hellenistic period; but it is inconceivable that they are not authentic, or that any later redactor would falsify so skillfully. Further evidence for the originality of this saying is provided by the archaic inconsistency in the use of adjectives as substantives: in the first clause the adjective is in the plural with a definite article, while in the succeeding clauses the singular with no article is maintained. It is possible of course that this anomaly is not ‘archaic’, but is due to a faulty tradition; but fr. 83 provided evidence that Heraclitus was by no means consistent in his use of the article, while frs. 18 and 108 show that he was quite prepared to use neuter adjectives, without the article, as substantives. For the arbitrary change of number cf. fr. 10 (which, however, does not provide a complete parallel, and according to one possible interpretation does not involve such a change). That Tzetzes himself was not inclined to make up ‘archaic’ quotations from Heraclitus?

1 Snell, Hermes 61 (1926) 357 n. 1, makes the strange comment that 'kαπακεί (σ. 409 u. 359) ist der Prosa sonst ganz fremd'. This is reproduced by Walker ad fr. In fact, the earliest Hippocratic treatises provide important parallels for the language of Heraclitus.

(which he was quite well qualified to do) is shown by his scholiast on Aristophanes Plutus 88: ὅπως καὶ Ἑρακλείτως ὁ Ἐρατος ἐρμώνος Ἐρατος, εἰς ἑπαχθήματα, μή ἐπείπτει μάτη πλοῦτος, ἔπι, Ἐρατος, ἔν ἐλεφαντεύεται ποιηματωμεν. Wilamowitz correctly observed that this is 'an apophthegm in quite modern speech' (Hermes 62 (1927) 196): yet this 'quotation', based perhaps on the kind of silly biographical accounts used by Diogenes in his chapter on Heraclitus, is suitable material for archaization. Did this, followed by Kranz in DK, strangely accepted this as a genuine fragment (135 a); Bywater wisely omitted it. Wilamowitz continued by saying that this late apophthegm is worth no more than the Lettres, and it is indeed closely reproduced (but with τοῦτο as subject in place of τοῖς νομίστοι) in the eighth letter. Fr. 126 too, as we saw, is quoted in full by Tzetzes and probably referred to in one of the Lettres, and it begins to look as though Tzetzes used a common source with the composer or compositors of some of the epistles, but a thousand years later. This source seems, not unexpectedly, to have been very mixed, for fr. 126 appears to be as authentic as fr. 125a (Diels) is evidently spurious.

Snell, Hermes 61 (1926) 356ff., strongly contended that these oppositions are not stated in an abstract way, but that the epic words show that here as elsewhere in Heraclitus the connexion between opposites is chiefly derived from the realm of personal experience. Words which describe the behaviour of things, and which were invented before abstract thought was practised, tend to describe those things in terms of the individual's reactions to them. Thus Heraclitus had himself observed that his body varied between hot and cold, and so on; from this he derived, not a logical principle, but a generalization about the behaviour of things, regarded as living entities with the power of self-change. A great deal of this is correct, and especially this warning: 'Gar zu leicht überhöhren wir, wie sehr seine Worte von dem Erleben ihre Kraft erhalten, und sind immer wieder versucht, seine Gegenüberstellungen als nur logische Gegensätze aufzufassen.' Strictly, perhaps, Diels' translation (now revised by Kranz to meet Snell's criticism), 'Das Kalte wird warm, Warnet kalten', was too abstract and conceptual and wrongly suggested that 'the warm', etc., were, in our sense, mere qualities. Snell's own translation of the first clause, 'Das Kalte erwärmt sich', suggests better the vital nature of the process. The middle voice of the verb ἔρημεσσαι occurs in the anecdote related by Aristotle (de
part. anim. A 5, 645 a17) about Heraclitus warming himself at the

irivpos. It is doubtful whether αναριστον is middle or passive; only

one middle use is otherwise known (Vfugum εναριστον at Sophocles

Ph. 954). Snell also maintains that all the opposites of Heraclitus are

'reving' opposites. The list which he quotes does not include any

which are not human affections or activities; but certainly winter-

summer (fr. 67) and day-night (fr. 67, 57) do not come in quite the

same class, not to mention the way up - the way down (fr. 60),

concordant-discordant (fr. 15). Many of the most specific examples,

it is true, are drawn from the field of human experience, and this is a

valuable observation; yet it should not be applied beyond its due limits.

The two pairs of opposites which, as a matter of common

experience, change into each other are given by themselves without

comment. It must be the reciprocity of such changes that is

primarily stressed, though it is conceivable that the fragment asserts

the generality of change: some things are growing warmer, others

colder, all the time; this indicates the constancy and balance of

change in the cosmos. It will be seen later that Heraclitus empha-

sized the importance of αναριστον in physical change: it could be that

the balance of one process against the opposite one, in these

instances, is part of an illustration of this measure (so also Vlastos,

CP 42 (1947) 165). The retention of the same root, when noun is

changed into verb and vice versa, in the first pair of clauses if not in

the last (where the variation must be purely artistic), shows that an

exact balance between each side of the process was involved. Yet

this form is equally necessary if the fragment is simply meant as an

example, less concretely expressed than fr. 88, of the single quality

of every continuum of change between extremes. Hot turns into
cold, cold into hot; wet turns into dry, dry into wet: therefore hot is

not essentially different from cold nor wet from dry. This shows up

the essential unity of the continuum even more clearly, perhaps, than

the succession of opposite extremes like life and death in fr. 88:

there the changes implied by αναριστον were instantaneous ones;

here the verbs imply a gradual rather than a sudden alteration, as is

appropriate to quantitative changes in the strict sense. Probably

Heraclitus was not consciously aware of the distinction.

The mention by Heraclitus of these four opposites has given rise

to some very bold suppositions. Gigon 99 wrote: 'Man kann kaum

Fig. 128 für Heraklit beanspruchen und zugleich die Vier-Element-

lehre ihm absprechen'. Reinhardt, Parmines 223, drew the

following conclusion from the fragment: 'Heraklit kennt bereits die

in der späteren Physik kanonischen vier Qualitäten: θερμόν, ψυχρόν,

δύσην, πρόχειρον.' Gigon used the saying as evidence for accepting air

as Heraclean in the almost certainly Stoic-influenced fr. 760;

Reinhardt held that no one can have known of the four elements as

early as the traditional date of Heraclitus, therefore this date must be

wrong and he actually was younger than Parmenides. So much is

fantasy: let us consider the facts. Heraclitus mentions here four very

common opposites, which for him were things themselves; the first

'opposite' is τὸ ψυχρόν, which merely means 'the cold things', i.e.
cold things in general. The number now changes to the singular, and

the definite article is dropped, but the sense is surely similar: as cold

things tend (eventually) to become warm, so do warm things

come cold. These two oppositions, warm-cold and dry-moist,

evidently occupied a special place in the system of, for example,

Anaximander, who held that opposites were separated out of an

original indefinite substance, the αναριστον: hot and cold were the first

pair to appear (DK 12A10, pseudo-Plutarch Strom. 2 φυσ. 151 εἰ τοῦ
cῆρου γόνιμον ψυχρόν καὶ ψυχρόν... ἀτροπόρητον). As for the

opposition dry-moist, Aristotle at Met. E 1, 553a 52ff. discusses

some archaic opinions about the nature of the sea, and especially the

common view according to which the earth was originally sur-

rounded by moisture, but this was dried up by the sun, the sea being

the remnant. According to Alexander's comment on this passage

Anaximander and Diogenes held this theory. These are only isolated

eglects: it is obvious that in any empirical cosmological analysis

these two oppositions will occupy a primary position. They do not

appear in the Pythagorean "sorōtēxia" or in the examples of opposites

mentioned by Aristotle in relation to Alcmaeon, because the physical

world and cosmology are not there specifically in question. Not,

may be added, is there evidence for thinking that Heraclitus, in this

fragment, intended these opposites to have a primarily cosmological

significance; yet even in the extant fragments so many different

oppositions are cited that it is scarcely surprising if these two also

appear, perhaps with a purely general application. It is quite possible,

as Snell suggested, that their special force lies in the fact that they,

like hunger and satiety and other affections, are directly experienced

by the human body.
It was Empedocles who, in fr. 6, first formally declared that fire, air, earth and water were the four elemental or irreducible kinds of matter, the πέσαρα...πάντων ἀρτόσεις. It is possible that in so doing he was simply attaching to each of the four most physical opposites the appropriate specific cosmic mass. There is no real evidence for this, but a successor to his medical interests and another western Greek, Philistion of Loci, did clearly associate specific δύναμεις with the four ‘elements’ (as they later became known): Anonymus Londinensis, 23 Philistion 8’ οὗτοι εἰκ. οἱ δὲ ἔκλεισαν συνεκαύσας ἡμᾶς, τοῦτ’ ἔστι χέρων στοιχείων πλούσιος, ἄλος, ὠξέας, γῆς: εἰκὴ καὶ ἐπάνω δύναμις, τὸ μὲν πυρὸς τὸ περιλέκαν, τὸ δὲ ἄλος τὸ ἄλος, τὸ δὲ ἄλος τὸ ἄλος, τὴν ὑπὸ τοῦ στενοῦ. In the much earlier fragment of Heraclitus, however, there is no mention either of the four ‘elements’ (in so far as he thought of cosmological forms of matter, he thought of three only: cf. fr. 31) or of basic powers or qualities. This last conception was indeed quite foreign to him, and belongs to a period when more advance had been made in the distinction between an object and what we call its attributes—a distinction to which medical science contributed much. He simply mentioned the four opposites which might occur most naturally to anyone who decided to apply this type of analysis to, say, changes of climate or his own physical sensations. The only problem is what the mention of these opposite things was intended to demonstrate. This must remain undecided in default of other evidence, but I have tried to suggest that it is best taken as another example of the fact that opposites, whether absolute or relative, change into each other, and thus form, in spite of their apparent differentiation, an essential unity.

57

Hippolytus Refutatio ix, 10, 2 (p. 242 Wendland) τοιούτων οὐκ ἄλοις καὶ ωμαῖς αὐτὸν ποιήσεις αὐτόν οὐκ ἀνατύπωσεν ἐπειδή τοῦτο εἶναι ἐν ἰδίῳ ἑαυτῷ, ὅλλα ἐν καὶ τῷ αὐτῷ. ἔπειτα γεγονός ὦ Ἡσιόδος, ὧν ἐμὲν καὶ νῦντα (οὐκ)’ οὐκέν οὐκείρο γάρ, ἐκείνο καὶ νῦν ἐναι λέγον τὸ ποιηθέν τούτων ἐπιστάντα πελεκέτα εἰδέναι, ὅπερ ἐμένει καὶ εὐρήκαντι’ οὐκ οἰκονομεῖν ἐστὶ γάρ ἐν (seg. fr. 58).

1 (οὐ) edidit Goettingensis. 2 εὐρηκαντινον cod., corr. Miller.

Therefore Heraclius says that neither darkness nor light nor evil nor good are different, but are one and the same thing. At all events he ensures Hesiod, on the ground that he does not know day and night: for day, he says, and night are one, in such words as these: 'Teacher of most men is Hesiod: they are sure that he knows very many things, who continually failed to recognize day and night: for they are one (fr. 58 follows).

I have followed the Göttingen edition in adding οὐκ before οἴκεω, because an idea corresponding with that of οἴκεω εἰγενοταοί in the quotation is demanded by the sense; Hippolytus is unlikely to have meant that Hesiod knew (a separate) day and night (whereas in fact these had no separate existence, but were one). Even Heraclitus in the saying which follows accepts ‘day’ and ‘night’ as permissible terms. The use of the simple affirmative οἴκεω can indeed be reconciled with the sense of Heraclitus’ criticism, but makes Hippolytus’ introductory paraphrase unusually and untypically complicated. (8)οἴκεω is just possible, as it, for example, Plato Phaedrus 262.$, but in this sense is unlikely in Koun. For ἐμπιστεύομαι meaning ‘feel sure that’, cf, for example, Herodotus iii, 134 and 139. Miller’s οἰκονομεῖν is unquestionably right. The criticism of Hesiod is aimed, presumably, at Theogony 123 f.:
Here Night is made the mother of Day, and has indeed an essential priority; for Night, thought like Erebos it is said to be an offspring of the primal Chaos, clearly belongs to the same initial stage of non-differentiation. Day and Aither, on the other hand, belong to the first stage of differentiation. To Heraclitus the distinction symbolized by the child-mother relationship was repulsive, for day and night, like other things commonly assessed as opposites, were completely reciprocal: they represent different phases of the same process, and at no stage could either have existed independently of day as Hesiod postulated. The fragment does not tell us on what grounds night and day are considered by Heraclitus to be one. The same pair, however, is mentioned in fr. 67 as one of the pairs of contrary predicates of god. God provides the essential unity of these contrary, which have, however, and legitimately so, separate names representing superficial differences, like the different scents of διαφόρως. This does not reveal whether the mode of connexion between contraries in fr. 67 is relativity or inevitable succession or either. But the other contraries named—winter-summer, war-peace, satiety-hunger—suggest very strongly that the connexion is that of inevitable succession. Day always gives way to night in men's experience, and night to day: the two extremes together form a unity which is symbolized by the fact that the same word, νύκτα, can be used to represent either one extreme or the sum of both, i.e. the total period of 24 hours.

There is another passage in the Theogony concerned with day and night: at 748ff. Hesiod described how *Night and Day address each other in their swift course, crossing the great βραδεύμαν: the one will go inside, the other comes out, nor does the house ever contain both of them*. Nestle, Philologia 67 (1908) 534 (also ZN 909), argued that Heraclitus' criticism in fr. 57 was directed against this description as well as against Theogony 123ff; this view is generally repeated, for example by Kranz in DK ad fr. But there is nothing in 748ff which could offend Heraclitus; he, too, would have agreed that day and night do not co-exist, and he would surely have applauded Hesiod's graphic account of their mutual succession. There is nothing here to suggest that day and night are different in

\footnote{1 In the case of certain opposites Heraclitus was perhaps content to recognize that they belonged to a common genus, without emphasizing their inevitable succession.}

\footnote{2 *in mi. ἦτος: cod., μη del. Reiske.}
apparently accurate direct quotations from Heroditus; but this can
be adequately explained by supposing (what is far more likely)
that he had access to a good handbook or collection of sayings, of
Heroditus among others.

In fact, Kranz, Hermes 69 (1934) 115, rightly observed that
Plutarch’s version is framed in a way typical of Heroditus: o víno
γενόμενον as a form of rebuke recurs in fr. 5, 17, 86, 97, as well as
in fr. 57; and the ρητός of a thing, as the correct object of under-
standing and analysis, is mentioned in fr. 1, 112 b, 123. The two ideas
are doubtless connected: to know the ρητός or constitution of an
object, to be able to classify it, i.e. ρητός, is the same as to recognize
it, γενόμενον. Kranz did not consider that Plutarch’s quotation is
simply a version of fr. 57, but rather that it represented a saying
which originally belonged to the same context as fr. 57; yet he
did not go so far as Reinhardt in assuming that the interpretation
of the saying as an attack on good and bad days belongs to Plutarch
himself. With this last hypothesis I agree, though not without some
misgivings; for according to the scholia A T on H. xviii, 251, Her-
roditus accused Homer of being a ἀπερεπόθος on the grounds
that he mentioned that Hector and his friend Pouslydamas were born on
the same night: this is counted as fr. 1590. The same criticism is
repeated by Pausanias, in Ἰβρικόν ad loc. Bywater, however, in
his note on his fr. 116, held that this criticism was nothing to do with
Heroditus of Ephesus, and mentioned Heraclides of Miletus as the
possible author; one has only to glance at the doxographers to see
how common was the confusion between Ηρακλείδης and Ηρα-
κλείδης. I agree with Bywater that fr. 1590 does not deserve to be
considered as good evidence for Heroditus; for one thing Heroditus,
and indeed any Greek of the fifth century b.c., meant by ἀπερεπόθος
‘astronomer’ (as of Thales, in fr. 38) and not ‘astrologer’ in the
sense of one who connects men’s fortunes with the positions of the
heavenly bodies (see E. Fraenkel on line 6 of the Agamemnon, in
his edition). The seeking of astrological passages in Homer and Hesiod
suggests the Stoa and, as Diels proposed, men like Crates of Mallos;
also Heroditus would scarcely have weakened his main attack on the
epic poets, for their failure to take account of the Logos and of the
necessity of stipes, by such rationalistic side issues as this. If fr. 105
is not by Heroditus it is easier to discount Plutarch’s contention that

Heroditus’ attack on Hesiod was rationalistic and anti-magical (and
so akin to the anti-astrological tenor of fr. 105). And if Plutarch’s
interpretation is inaccurate then the obvious inference is that fr. 106
belongs to the same context as fr. 57. Having come so far there seems
no reason why one should not assume with Reinhardt that fr. 106 is
simply another form of fr. 57, instead of supposing with Kranz
that it is a separate saying about the same subject. ἱλαστῆς could
easily be a paraphrase of o víno γενόμενον, and put into direct form in
a past tense Plutarch’s version might read: o víno γενόμενον ἱλαστῆς ἰδίως μὲν ὄρειν. This is not very different from the
ἰλαστῆς καὶ ἅρπαγον ὁν ἱλαστῆς of fr. 57. If instead of ἱλαστῆς
ἀρμόδια there stood ἱλαστῆς καὶ νυκτὶς (or ἅρπαγον), the two state-
ments would be almost identical. I do not suggest that Plutarch
himself was necessarily responsible for this last alteration; rather it
was made in his source, and the disappearance of the idea of night
diverted him from the correct interpretation of the saying. It was
only too easy to alter ἱλαστῆς καὶ νυκτὶς into ἱλαστῆς ἀρμόδια, given the
ambiguity which undoubtedly existed in the meaning of ἱλαστῆς
(either day-and-night or day as distinct from night). Perhaps τινός
ἱλαστῆς ἀρμόδια was originally written, meaning ‘the whole day’,
i.e. ‘day-and-night’; then the article was dropped and the whole
sense of the saying altered; ἱλαστῆς now meant the inclusive period of
24 hours (without reference to its components), and the way was
open for interpretation as an attack on Hesiod’s lucky and unlucky
days. In some such way as this Plutarch may have been led astray.

In (6) the wording is quite vague, and Seneca’s comments show
that the interpretation of ‘unus dies par omni est’ was a matter of
dispute among his predecessors or contemporaries. Again there is
the ambiguity in the meaning of ‘dies’, although Seneca makes it
quite clear which meaning he attributes to it in each case; only in
the phrase ‘nec habet quod dies perdidit’ does he use the idea of
day as distinct from night. Of the two interpretations mentioned by
Seneca the first is too trivial to be plausible, even if one remembers
that observations on physical and astronomical matters which to us
seem entirely naïve may well have struck an Ionian of the early
fifth century as worth making; see on fr. 120, Kranz in DK sug-
gested that ‘similarum’ in the second interpretation represented the
Greek quaon, being analogous to quaon in Plutarch’s version; he
referred to the ‘polemic against Hesiod’ and to his Hermes article.
cited above, from which we may deduce that he meant the polemic of fr. 57, not the attack on lucky and unlucky days suggested by Plutarch. Certainly the words which follow in Seneca make it clear that the latter at any rate cannot be in question: the ‘similitudo’ evidently consists in this, that the day (as a period of 24 hours) contains the basic units of time-measurement, night and daytime (‘hæc Die’). There is nothing about the good or bad effects of different days. What is perhaps significant is that in both interpretations mentioned by Seneca the constitution of day (24 hours) out of daytime and night is stressed; they are the essential elements of ἡμέρα or ‘dies’ in the wide sense, and however much these elements vary in their proportions relative to each other, the total remains unchanged—‘nox habet quod dies perdidit’ (and, it may be assumed, vice versa). It may be fanciful to suggest that this concept is a vestige of a fuller and more explicit version of the saying attributed to Heraclitus, which placed the emphasis on the invariable reciprocity of night and daytime; but this is by no means impossible. As it stands, the assertion ‘unus dies per omni est’ does not seem to have much connexion with fr. 57. But if ‘similitudine’ forms part of a fuller Latin version, then the saying comes very much closer to Plutarch’s φῶς ἡμέρας δύναται ἐμὲν δῶσαι. This, as we saw, may well have been another version of fr. 57, or rather of the original saying of which fr. 57 is our best extant account. Probably Plutarch’s φῶς represents an improvement on fr. 57. If the different versions are set out below the hypothetical original version it will be seen how close they really are; two possible Greek translations of the Latin version are added, the second of which rearranges the sentence so as to make φῶς the subject.

Hypothetical original: φῶς ἡμέρας καὶ εὐφρόντως οὐκ ἐγνώσακεν ἐστὶ γὰρ ἐν (οὐ μὴ).

Fr. 57: ἡμέρας καὶ εὐφρόντως οὐκ ἐγνώσακεν ἐστι γὰρ ἐν.

Fr. 106(2) (Plutarch): ἐγνώσατε ἐν φῶς ἡμέρας ἐκτὸς ἐμὲν οὖσαν.

Fr. 106(3) (Seneca): unus dies per omni est...similitudine.

Possible Greek translation of fr. 106(2): μὲν ἡμέρα όμως ἐκτὸς ἐστὶ φῶς.

οὐ: φῶς ἡμέρας ἐκτὸς μὲν ἐστὶν.
Plutarch, *Ag. et ignis comp.* 7, 937A  "Ἡράκλειτος μὲν οὖν εἰ μὴ ἦλιος
φτείνῃ ἢν, εἰσαρχήτω ἢν ἔτη 2 ἐπίστη ὡς εἰ μὴ ἦλιος ἐν
πάντων ἐν διακόσιας γὰρ κανόνας καθιστών ὁ ἄνθρωπος ἦν.

Now Heraclitus says: If the sun did not exist it would be right.
And it is possible to say that if the sea did not exist man would be the
wildest and most destitute of all creatures.

Plutarch gives another version of this saying at *de fortuna* 3, 98c: καὶ
δυστέρη ἦλιον μὴ δυτοκέ ἐνακτάν τῶν ἄλλων ἀστρῶν εἰσαρχήτω ἢν ἔγονθα
καὶ ἔτη 2 ἐπίστη ὡς εἰ μὴ ἦλιος ἐν πάντων καὶ τῶν ἄλλων ἀστρῶν.
It is obvious that Clement was imitating this passage when he wrote,
*Protr.* 113, 3 ([p. 8c St.]), καὶ γὰρ δυστέρη ἦλιον μὴ δυτοκέ ἐνακτάν τῶν
ἀλλών ἄστρων νῦν ἢν ἔτη ταύτα, κατὰ τούτοις ἦλιον καὶ τῶν ἄλλων ἀστρῶν
καὶ τῶν ἄλλων ὀνείρων καὶ ἔτη ταύτα τούτα.

The use of the quotation (introduced, and further modernized by the
substitution of νῦν for ἔγονθα) is exactly similar to its use by Plutarch
in his *de fortuna* version, and is designed to substantiate the very same
point. We cannot therefore use Clement as an independent authority
here. The important thing about Plutarch’s second version is that it
adds, perhaps as part of the quotation, the additional words ἡνακτά
τῶν ἄλλων ἀστρῶν. Since the attribution of these words to
Heraclitus would be liable to alter the whole sense of the fragment,
it is important to try and decide whether they do in fact belong to
or whether they were just inserted to serve the purposes of his
own sense by Plutarch. It must be admitted at once that on the
evidence available it is not possible to make an absolutely certain
decision one way or the other, and so the proper interpretation of
this fragment must remain to some extent doubtful. I give what
seems to me the more probable interpretation, based on the opinion
that ἡνακτά τῶν ἄλλων ἀστρῶν was added by Plutarch, and that the
more correct version of the fragment is provided by his quotation
in *Ag. et ignis comp.* Most editors, however, Diels and Kranz among
them, accept these words as belonging to Heraclitus and insert them
in the version of *Ag. et ignis comp.* This version is, in other respects,
obviously closer to the original than that of *de fortuna*: εἰ μὴ instead
of the genitive absolute construction is better suited to early Ionic,
and ἢν instead of ἔγονθα (which may indeed he corrupt in the text
of Plutarch: note that Clement has ἢν) is simpler, and avoids the
generalizing first person plural which is rare in early prose, except
where personal reactions form the main point. There is a slight
*a priori* probability that the doubtful words, being omitted in what
is otherwise clearly the more accurate quotation by Plutarch, do not
belong to Heraclitus. Now one of the difficulties in detecting
insertions in Plutarch’s quotations is that, on account of a stylistic
preference for having his own citation in the same verbal form
as that of the quotation which he is adding to substantiate it, he
tends either to reshape the quotation to fit the form of his own
assertion which he already had in mind, or to adapt the expression
of his thought to the previously existing form of the quotation
which he is already thinking of adding. It is sometimes impossible
to decide which process has taken place. In the *de fortuna*
passage this parallelism in form between the quotation and Plutarch’s own
assertion is certainly present, although he has lessened it somewhat
by retaining ἦλιον in his own assertion (doubtless from a subconscious
memory of the correct form of the quotation) and suppressing it in
favour of a genitive absolute in the quotation. This is presumably
due to the speed at which Plutarch must have composed his essays.
The question we must now attempt to answer is as follows: is the
ἔνακτα phrase in Plutarch’s own assertion absolutely necessary to the
sense of that assertion, or is it likely to have been added simply to
complete the parallelism with the quotation? To this may be added
a second, complementary question: in the version of *Ag. et ignis
comp.*, where the ἔνακτα phrase does not occur either in the quotation
or in Plutarch’s own assertion, could such a phrase have been added
to the latter without damaging the sense, or has an original ἔνακτα
phrase in the quotation been suppressed simply because it was
impossible to include a relevant parallel phrase in the main assertion?
To the first question the answer seems to be that ἦλιον ἔτη αἰσθητο-
νου, which may be translated ‘as regards the senses’ (i.e. if we restrict

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162
our consideration to the senses), is absolutely essential to the point which Plutarch is trying to make, that it is reason and not any special form of sensation which distinguishes man from animals. It is perfectly possible that in formulating this point Plutarch naturally chose to use a ἔνεσθα phrase without any thought of parallels with a quotation. As for the second question, it is clear that had Plutarch wanted to supply such a phrase to his own assertion about the dependency of men on the sea, in order to provide a formal parallel to the quotation, he could have done so; a phrase like ἔνεσθα τῶν ἀλώνων ἑρμητικῶν would in fact have made the sense clearer. Thus the probability is, on these grounds also, that Plutarch inserted the words ἔνεσθα τῶν ἀλώνων ἑρμητικῶν in the de furtuna passage to correspond with a ἔνεσθα phrase of his own, rather than that he suppressed a part of the quotation from Heraclitus in the Ἀφ. at ignis comp. passage.¹

If ἔνεσθα τῶν ἀλώνων ἑρμητικῶν were to be accepted as a part of the original saying of Heraclitus then it would be necessary to interpret the fragment as a cosmological statement of the unique brightness of the sun compared with other heavenly bodies. Heraclitus undoubtedly considered this to be the case, as indeed would any man who was not blind or out of his senses: so in the fuller doxographical account in Diog. L. ix, 10, λαμπρότεραν δὲ ἐκ τῶν τοῦ ἡλίου φῶς καὶ θερμοτέρας: the explanation is added that the other stars are further away, the moon nearer but in an insecure region. Macrobius, in Somn. Sep. i, 20, 3, asserted that 'Heraclitus [sc. solen] fontem caelestis lucis appellet'; Gigen 79 wonders whether this does not suggest that Heraclitus used the word τοῦ ἡλίου of the sun, as Xenophanes (fr. 30) used it of the sea. At any rate there is no reason to believe that Macrobius' source had this fragment in mind; probably the statement is simply a more vivid expression of the doxographical judgement quoted above from Diogenes. H. Fränkel, AIP 59 (1938) 326, compares ἐπὶ ὅποιον ἔνεσθα ἐπισκεύαζε ἔποιες ὑποτρέπει:

¹ This conclusion cannot easily be tested by a consideration of the use of ἔνεσθα. It is often difficult to determine an exact significance for the word (which explains the very questionable analysis of meanings in LSJ); it is tempting to translate ἔνεσθα τῶν ἀλώνων ἑρμητικῶν as 'in spite of the other stars', but this will not do for ἔνεσθα τῶν ἀλώνων ἑρμητικῶν, and it is probably best to envisage a meaning like LSJ s. v., i, 2, expressed by the clumsy but unavoidable phrase 'as far as regards'. ἔνεσθα was occasionally employed in this way by both early and late writers.

cόλπος in Pindar's first Olympian ode, but it is doubtful whether there is any significant connexion.

It has been seen, however, that the ἔνεσθα phrase probably does not belong to Heraclitus: we are left with the bald statement that 'if there were no sun it would be night'. This can scarcely be intended as a piece of significant astronomical observation; even if the fact is accepted that apparently obvious phenomena were worth defining at a time when so little had been objectively defined (one may compare the catalogue of points of the compass which forms Heraclitus fr. 126), it is still difficult to accept this fragment merely as a naïve observation. Pain, to escape this difficulty, ingeniously suggested that an ἕνεσθα had been dropped from the texts of Plutarch, or rather from Plutarch's source: in this case the fragment would depend on the assertion in fr. 57 that day and night are one—the sun is the mark of the day; if there were no sun there would be no day, and if there were no day there would be no night, for day and night are the same. Few scholars have accepted this suggestion: there is no real reason for thinking that an ἕνεσθα has been dropped, and the sense given is very complicated; if ἔνεσθα and not ἕγερσα had been written it might have been possible. The connexion of this fragment with fr. 57 is correct (so Reinhardt, Parnendides 180 n. 2; he, however, accepts the ἔνεσθα phrase as authentic); once this is understood there is no need to add the negative.

The fragment as it stands clearly does not assert exactly the same as fr. 57, or rather as the argument which perhaps underlies that fragment—that day and night are 'the same' because they inevitably succeed one another. What it asserts, indirectly, is that the sun is the cause of day: without it, there would be continuous night. Thus the distinction between day and night (conditions which at first sight are essentially opposed to each other) is brought about by a single cause; these dual phenomena are the product of a single factor. Thus in yet another way the connexion between day and night is established. It is not exactly the same type of connexion as is stressed in the other fragments of this group, although the idea of a single cause for apparent opposites is not entirely separate from that of inevitable succession: the basic idea is that of variation in a continuum. Yet it must be repeated that any interpretation of this fragment remains somewhat precarious.
GROUP 6

Frr. 10, 102, 67

If opposites are essentially connected (as they have been shown to be, in different ways, in fragments of preceding groups), then the continua which they form can be regarded as either single or complex, according as the dissociation or the essential connexion of the opposite extremes in every category is more or less stressed. So too the whole sum of things (which can be analysed into combinations of the different opposites, i.e. opposed substances) can be viewed synthetically or analytically, with emphasis either on the underlying connexion between opposites or on the superficial separateness of things. God takes the synthetic view, which is the truer one: he sees all things in the cosmos as fair and right, while men analyse into opposites, fair and ugly and so on. On the other hand, all the pairs of opposites can themselves be equated with God, who stands for the connexion between things and not the more apparent variation, which is nominal and superficial though not completely unreal.

But perhaps Nature has a liking for opposites and produces concordance out of them and not out of similars, just as for instance she brings male together with female and not each with members of the same sex, and...
composes the first concord by means of opposites and not similars. Art, too, seems to imitate Nature in this. For the art of painting, by mixing in the picture white and black colours and yellow and red, achieves images concordant with the original; and the art of music, by mingling high and low, short and long notes, achieves a harmony in different tones; while the art of writing makes a mixture out of vowels and consonants and compounds its whole art from them. It was this same thing which was said in Heraclitus the Observe: Things taken together are whole and not whole, something which is being brought together and brought apart, which is in tune and out of tune: out of all things can be made a unity, and out of a unity, all things. Thus a single harmony by means of the mixture of the most opposed principles has arranged in order the structure of the whole—by which I mean of heaven and earth and the whole universe.

The introductory passage to this quotation is reproduced above at some length, not because it is particularly relevant to the interpretation of Heraclitus' words here, but because it contains ideas which may be in some way Heraclean. The idea that the natural world contains a ὀπόσωσις of opposites, and that any concordance is a concordance between opposites, is certainly one which occurred to Heraclitus. Further, Aristotle (or the compiler of the Eudemian Ethics) cites, just after a reference to Heraclitus, two of the instances of the necessary conjunction of opposites mentioned in this passage of the de mundo: Eth. Equ. H. 1, 1235 a 25 (DK 221 a 22) and Ἱερακλείτων ἔπειτα τό παραστάτη ὁ ἰδιος ἐκ τε ἔννοιας καὶ συμμεταφραστών ὠόμος. οὐ γὰρ ἀνθρωποὶ παρακαλεῖν μὴ ὀνομαζόμενοι μακροοφίλους καὶ μέτρων μεταφραστών ὄντων. The indirect statement of the last sentence here shows that the citation of these instances is attributed to Heraclitus himself, though Gignon 117, for example, doubts whether this is correct on the ground that male and female do not fit into the scheme of Heraclitus' reconciliation of other oppositions. This is true; but there is no reason to disbelieve that Heraclitus may have referred to a number of common oppositions in the natural world, in order to illustrate the important part in his constitution played by obvious opposites, even if the unity of these oppositions was not such as could be proved by the kind of analysis which he adopts in the extant fragments, namely, connection by relativity or invariable succession. The fact that the 'opposites' (commonly so regarded) male and female were conjoined for the production of a new creature may well have struck Heraclitus as significant both of the important part played by opposites and of their necessary connection. So also the fact that the musical scale would not exist were it not for the existence of high and low notes ("high" being here regarded as opposed to "low", perhaps with no special reference to the octave) is another simple and obvious instance of the importance of opposites. Possibly Aristotle means by ὀπόσωσις 'musical concord', which we know cannot have been a meaning accepted by Heraclitus (see pp. 204, 205 f.), but to the latter the necessity for contrast and difference between successive notes, in order to make a scale or a tune, may have had implications enough (see on fr. 51: ὀπόσωσις in other fragments does not have a musical significance, though this may be accidental).

The other examples given in the de mundo passage are less apt, and there is no reason to think that they derive from Heraclitus himself; indeed, the introductory generalization 'Art imitates nature' shows that we are dealing here with Peripatetic concepts. Snell in his important article on this fragment (Hermes 76 (1941) 84 ff.; esp. p. 97 n. 1) observes that the idea of a mixture of opposites to produce a single result is foreign to Heraclitus; yet this idea is dominant both in the de mundo passage and in the analogues references in de victu. The inference is that, if in either case there is any dependence on Heraclean sources, these sources were considerably later than Heraclitus himself and had achieved considerable divagations from his original theory. Nevertheless, the concrete examples of opposites, even if subjected to a later (and perhaps Aristotelian) interpretation, may go back to Heraclitus himself. Certainly the emphasis on the idea of a harmonious cosmos formed by the connexion and interplay of opposites, which permeates the whole of this pseudo-Aristotelian
treatise, it by no means foreign to the central conception of Heraclitus; but in the meantime it has been subjected to much restatement and remoulding, particularly in the early Stoa and then, probably, under the powerful influence of Posidonius and his followers.

One of the chief difficulties of this fragment is the determination of the correct text. The apparatus given above is based upon that of W. L. Lorimer (editio of de mundo, Paris, Belles Lettres, 1933), and the consideration of the problems involved owes much to Snell's article cited above. The main problem is whether we should accept συλλόγως or συνάγων: the verbal form συνάγων is accepted by Bywater and the older editors, was shown by Diels (SB Bar (1901) 188ff) to have only weak ms. support, and this has become still more apparent as a result of Lorimer's much more thorough recension of the ms. Diels and Kranz accepted συνάγων, while Lorimer prints συλλόγως and Snell confirms this choice. That συλλόγως is a good Ionic form was seen by O. Hoff mann, Griech. Diad. 311, 240; Kranz, DK ad fr., admits as much, though he claims that the word is unsuitable to the sense in this context. W. Schulze, Festschrift f. P. Kretschmar 220, shows that α- forms like λέγομαι were suppressed in the ms. tradition of Herodotus (the substitution of η for α being considered a correct restoration of 'Ionic' by Alexandrian and post-Alexandrian scholars), though this was the true Herodotan form. Nevertheless, a consideration of Lorimer's apparatus shows that there is strong support among the better mss. for συλλόγως: Lorimer's acceptance of συλλόγως is presumably due largely to the support given by Stobaeus (who copied out this part of de mundo) and by the transcription in both mss. of Apuleius, which, confused as they are, agree in writing συλλόγως. In addition, P and Stobaeus give the probably correct reading δλακτε αυγά δακτυλι, as against various kinds of confusion in many of the mss. which support συνάγων. Snell, op. cit. 83 and n. 1, comments that further information on, for example, Lp is necessary in order to decide whether its reading here is significant; but he seems to be premature in suggesting that συλλόγως was read in one of two archetypes, followed by the mss. of Lorimer's Class III (op. cit. 107); for AET (favouring συνάγων) also belong to this class. The superscript v added as a correction in Lp may, as Snell remarked, mean either συλλόγως or συνάγων: certainly the writing of συνάγων (what Snell calls an 'etymologische Schreibung') was not uncommon among over-learned scribes; cf. Kühner-Blass, 1, 263. This presumably explains the agreement on this point of both mss. of Apuleius. Snell summarizes the general probabilities of the case in these words (op. cit. 83): 'Aber selbst dann verdiente συλλόγως schon aus dem ganz äusseren Grund den Vorzug, weil die ungewöhnliche jonische Form συλλόγως viel eher in das aristeolische gewöhnliche συνάγων geändert werden könnte, als umgekehrt. In view of all these considerations συλλόγως may be accepted.'

δλεκτε αυγά συνάγων δακτυλι may be read with some certainty, the variants being patent and misjudged attempts to 'restore' the true Ionic forms. More important is the question of whether the succeeding pairs of opposites should be linked by κει. In the first case there is full manuscript agreement in favour of the connecting particle, except for the Latin translation of Apuleius and one of the two mss. of Stobaeus; in the second case (between συνάγων and δακτυλι) the mss. are about equally divided. This suggests that the addition of the two κει's represents an attempt in the tradition to establish an exact balance between the three groups of contrasted words. I have already argued under fr. 88 that this exact balance of single words (as opposed to whole phrases) is not typical of Heraclitus' style; in that fragment there is strong evidence for a variation in the use of the definite article between parallel and juxtaposed phrases. Further, in the present case there is some need for κει in order to separate δακτυλι and the negative phrase συνάγων, while there is no such need in the case of single opposed words like συμπερικαταστάσεως and επαρθενικά. On the whole Heraclitus was sparing of inessential connectives, and cases of asyndeton are frequent; but no general rule can be established, for while formally opposed words are juxtaposed without connection in fr. 67 (and perhaps also in fr. 68), in fr. 88 they are joined by κει.

1 The de mundo was written in the first or second century a.d.: cf. W. Capelle N.Jahrb. 15 (1900) 329 ff. Capelle placed it in the first half of the second century, and maintained with much plausibility that it is based primarily upon the Metapošyogy of the Stoics and the stoic of Posidonius (who of course used Aristotel's Metapošyogy as well as Stoic sources).

[1] The occurrence of συνάγων in the de mundo passage, well before the quotation, does not seem to me to give any worthwhile support to συνάγων.
Before ἐκ πάντων most mss. add another καί: but Stobaeus does not (the transcription of Apuleius seems doubtful). Vide 8, which was one of the few mss. to give the correct reading ἔλαχι καί ὀοκὺ ἔλασθιν, also omits καί, as does Paris 166, which, however, is more liable to inaccuracy at this part of the treatise. While connecting particles were being added to the pairs of opposites it would be easy to add one here also. Certainly there is a considerable break in the flow of the sense: ἐκ πάντων καί, states a conclusion from or summary of the preceding part of the quotation, and we should expect it to be separated by at least a colon. This is what Lorimer puts in his text (as did Bywater), and I have followed him, though with less confidence than at other points.

As σώματα has not been put entirely out of account by the ms. evidence it is as well to consider whether it, and it alone (as Kranz in DK implied), provides a possible sense, and whether indeed it is in itself a probable word. A glance at S.J.I shows that neither σώματα nor σωλήνως (σωλήνως) occurs before Plato and Aristotle apart from this fragment, except that the latter is a good fifth-century legal word for 'arrest' or 'laying hold of': this is hardly an appropriate sense here. Other forms akin to σώματα, namely, σωματικός and σωματικός, similarly do not occur earlier than Aristotle. σωλήνως, on the other hand, seems to occur first at Archytas (Suppl. 457, σωλήνως πεπλων (active)); and Septem 468, meaning 'syllable'—that is, in a passive sense, 'that which is taken together'.

Of corresponding verbal forms, σωμάτωσις is very common: so at e.g. Hdt. ii. 173, 'border on'; Aesch. Ag. 1699, ἁμαρταί σωμάτωσις; but, of plural abstract concepts, not before Plato. On the other hand, σωλήνωσις means 'to comprise, or take together' (particularly in speaking), at Hdt. ii. 783; vii. 16, as well as at Plato Soph. 234A (ἐν πάσα σωλήνωσις) and elsewhere. On these grounds, therefore, σωλήνως (in itself an unexceptionable noun-form) is a more probable word for Heraclitus to have used than σώματα; in the plural it presumably has a passive sense like that of σωλήνως, only without the technical sense of 'letters taken together'. In any case, it might be objected, the argument is purely a technical one, for the two words mean very much the same thing. Yet σωλήνως contains an implication of an animate assessor which is absent from σώματα: and this limitation of meaning is of great importance. Gigon (20ff. and 44ff.), who makes his interpretation of this fragment, very largely, the basis of his theory of Heraclitus' cosmology, takes σώματα = 'things in contact' to imply that the pairs of words which follow are related to each other by succession, and that the final words mean 'all things come out of one, and then (at a later stage) one comes out of all things'. This is made to support his intuition that the main opposition, for Heraclitus, is between κόσμος and ἀνάρχης. This interpretation, as will be seen, is scarcely possible; fortunately σωλήνως, which from every point of view appears to be the word used by Heraclitus, allows a more pregnant interpretation, especially of the final words. The only doubt is whether it means 'taking together' (i.e. more than one act of comprising, whether in speech or merely in thought) or 'things taken together', the objects of such an activity. The use of the plural suggests that the latter is the correct meaning; we have seen that this passive sense is justified by the very close analogy of σωλήνως.

An examination of the groups of words which follow shows that they are not, as Gigon thought they were, typically Heraclitean pairs of opposites: Snell has stated this very clearly. Above all they are not opposites which can be connected because they invariably succeed one another. Indeed, κόσμος and ἀνάρχης are antithetical, not opposites in the Heraclitean sense of extremes or poles of a single continuum: they are not opposed in the sense that the hot and the cold, or winter and summer, or the way up and the way down, or the beneficial and the harmful, or satiety and hunger, are opposed, though doubtless if one were asked 'What is the opposite of "whole"?' one might be tempted to reply 'Not whole'. It is legitimate to infer that the opposed things (which we call opposites; it is perhaps accidental that this word does not occur in the extant fragments) which Heraclitus stated to be 'the same' are invariably thought of as extremes; yet even if 'whole' is an extreme yet there is no opposed extreme. Concepts like 'broken' or 'interrupted' or 'in pieces' are all susceptible of further, qualitative, determination, such as 'in sixty-four pieces' and, as Anaxagoras well knew, 'there is not a smallest part of the small'. 'Not whole' simply attempts to hide this deficiency: negation does not imply the opposite, as, for example, 'not summer' does not necessarily imply winter, and might imply 'pig'. As for the question of succession, a relationship which

1 That is, in relation to the entire indefinite continuum of 'not whole'.
Gigon thought to apply to the two members in each of these groups of words, it is true, that any alteration of the attribute 'whole' must involve its replacement by the attribute 'not whole'—but then any change in any object (to revert to the type of materialistic analysis which must have presented itself to Heraclitus) must similarly result in its replacement by another object which is not the first object: for example, if the hot (regarded as an extreme) changes, then it must become 'not the hot'. It is extremely doubtful if this had the kind of significance for Heraclitus that Gigon thought it had—that is, the kind of significance that the inevitable succession of night and day actually had for him, namely, that night and day are essentially connected and therefore one. 

The words ὑμνημένον διαφέρουσαν could be treated as an example of the coincidence of opposites: compare fr. 51, where διαφέρεται should probably be read (as in Plato's paraphrases) instead of διολογία in Hippiusus: οὐ εὐνοίων δέος διαφέρει τοῖον τόσον καὶ κόσμος. Perhaps it should be understood as subject of the δέος clause, and that of which τοῖον τόσον is predicated; but whether this or a word like δέος is to be understood, it is plain from the simile of the bow and lyre (the point of comparison must be the normal tension of the string) that 'being brought together' and 'being brought apart' are alternative ways of describing a single condition, according to one's point of view or point of comparison. They are not success-

1 Of course we understand, and doubtless Heraclitus would have understood if it had been put to him in this way, that 'opposites' like summer and winter merge into each other, and that there are intervening periods which cannot be described entirely as summer or entirely as winter. In the case of youth and old age, for example, the one extreme is not suddenly replaced by the other, even if in fr. 88 Heraclitus chose to take a synoptic view, concentrating on the termini of the young-old continuum and ignoring the process between them. Actually the fact that in many cases the process from one extreme to the other is necessarily a gradual one would appear to Heraclitus to strengthen his argument for the real connexion of all extremes. He did not make this point, at any rate in the fragments which survive, presumably because he was thinking in verbal symbols which can easily be mentally clasued as 'opposites', and which encourage the thinker to ignore the results of experience—for example, that twilight is an intervening stage between what we experience as day and what we experience as night. For Heraclitus it was the invariable nature of the succession between two extremes, rather than its manner of operation, which was chiefly significant of their essential unity.

174
improbable. Snell adds a further argument against this view: from the other fragments of Heraclitus, and especially those of Group 5 (cf. also fr. 51), we should deduce that it is the διερημένες themselves which are ‘connexions’ (so as to become ςυμπαραστάτους): ςυμπαραστήτων and διερημένες can themselves only be described as ‘connected’ in a very unusual sense, and certainly not that which scholars have attached to the word in this context. Snell, on the other hand, has suggested that ςυλλαμβάνει should be taken as subject, and the three groups of succeeding words as predicates. It is at once clear that in this case there is no need for the members of those groups to be opposites in the Heraclitean sense, or to bear similar relationships to each other in each group. The sense given is strong: ‘Things taken together (that is, things mentally connected and therefore belonging to the same category—and especially extremes or “opposites”, like moist and dry, hunger and satiety) are in one sense wholes or continua, in another sense not wholes, but separate and opposed. In one sense they tend together, to unity, while in another sense they tend apart, to plurality. In one sense they sing in tune with each other and form a single unison, in the other sense they sing different tunes and appear as utterly separate.’ Thus there are two opposed views which can be taken of ςυλλαμβάνει; the first terms in the three groups of predicates describe one view, the last terms the other. Such a statement is completely in accord with what we know from other fragments of Heraclitus’ mode of thought: in all the fragments dealing with opposites he stressed the first or synthetic view against the second, conventional, analytical approach. Unlike Parmenides he did not deny the existence of the ‘many things’ of the phenomenal world, though he considered that wisdom lay in being able to regard them synthetically. To see the connexion between things and not their separation would presumably be just as stupid (for men, at least; cf. fr. 102) as the common, almost universal, fault of seeing the separation and not the connexion. There is no need to urge on men the fact that things are many and separate (in one way); that is why the opposite view is so strongly stressed in the fragments. Nevertheless, the denial of plurality would involve the denial of the resultant unity, just as the abolition of ςς would involve the destruction of the ordered cosmos (Group 8). In this fr. 10 the two different ways of looking at things are stated as alternatives, without the suggestion that either can be entirely dispensed with; though there can be no question that the synthetic way is the more significant.

Thus if ςυλλαμβάνει is taken as subject the whole statement becomes meaningful, and the meaning given accords well with that of other fragments. There is of course nothing in the structure of the sentence to prevent us from treating that word as subject; thus in fr. 67 ςς θέλων, as subject, is followed as here by three groups of opposed words which stand as predicates; and in fr. 51 the heading, μετά τον, is subject and not predicate. The variation from the plural of διερημένες to the singular of two other groups of words is slightly more difficult on the assumption that these groups are predicates and not subjects; but there is no insuperable difficulty, especially in view of Heraclitus’ customary freedom over adjectives used as substantives (cf., for example, fr. 126), if is assumed to be a not impossible modification of the meaning of ςυλλαμβάνει from ‘different groups of things taken together’ in the case of διερημένες, ςυμπαραστάτους (which are of course substantives), to ‘single cases of things taken together’ (e.g. the hot-the cold) in the case of the singular participial substantives. The omission of the article before such participles is relatively common in Heraclitus.

The last part of the fragment, δέ παντον εν και ς ς ευς πάντα, is, as has been seen, probably separated from διερημένες by a colon. Once ςυλλαμβάνει is accepted it becomes impossible to interpret δέ and ςς in a gross temporal sense—that is, if the last sentence of the fragment is to have any bearing on the first. Thus there is no connexion whatsoever between the last sentence and those statements of the temporal successions of εν and πάντα collected by Norden, Ἀγνώστος Θεος 249 ff, and added by Gigon 43 ff. and Walzer ad fr. A typical example of these statements is attributed to Cleanthes, in connexion with a cosmogony, by Arisius Diodynus (SVF 1, 497); εν και ςς ευς το πάντα γίνεται και δέ παντον εν συναίνεσθαι. Cf. also pseudo-Musaeus, DK 2, 1, 4; pseudo-Linus ap. Stobaeum, Ed. 1, 10, 5 (1, 119 Wachsmuth). In point of fact such statements depend partly upon Empedocles’ assertion of a temporal succession between εν and ἀλήθεια (fr. 17, 11), and partly (as Diels, Doxographi 179, well showed) upon Aristotle’s momentous and misleading generalization, Met. A 3, 983 b 8 εκ το ευρήκον δείκηται το διά τον και και τό ευρήκον γίνεται πάντων και δε θεώρεται τελεστὸς τό τούτου και τούτην ἀρχὴν τετελεσθαι και και τούτων. Snell saw that there can be no question
of cosmogony in the last sentence of the fragment, and suggested, without committing himself any further, that the verb to be understood was ἔκτη or σύνετης: "diese συλλάινει", he comments (op. cit. 87), 'als Gleichnis standen für die grosse συλλάλεις des Kosmos, der "aus Einem" und "aus Allem" besteht.' Now it is true that the phenomenal world exemplifies a unity made out of plurality, not simply because it is a whole of parts but rather because all its apparently disconnected parts are essentially connected: so it is assumed on the basis of the coincidence of opposites. In the words of fr. 54, there is a συνάλαλεις: an apt parallel is provided by ἑκάστην 1, 17, οἰκοδόμοι ἐκ διελθομένης συμφρασμένης ἐργαζόμενος, τὰ μὲν ἕνα ὑπεράλλελα, τὰ δὲ ὑπέρ ἔργα, τὰ μὲν ἑκάστη, τὰ δὲ διελθομένη συνεντεῦσι. The word ἕκαστη in the fragment might legitimately imply a constituent material and not a creative process in time: this κόσμος is eternal according to fr. 35, it must always have contained πάντα and must always have been a synthesis of its many parts. On the other hand, it does not seem to be the case that, in an analogous sense, ‘one thing’ is the constituent material of ‘all things’: Heraclitus’ unity is the connexion between opposites, and the connexion can scarcely be regarded as sole constituent of the things connected. Therefore Snell’s explanation, even so far as it goes, is unsatisfactory. The word συλλάλεις, being derived from λάλειν, of itself implies a personal subject or subjects: in this fragment it must mean ‘things taken together’, but the personal criterion is not abolished, and we have seen that the groups of distinctive predicates each contain possible alternative descriptions, according to the point of view of the person ‘taking together’. That Heraclitus was aware of the possibility of using different standards in judging a single object is shown by the relational fragments of Group 3. The last sentence of the fragment must depend upon the same possibility of different points of view: ‘from all things (i.e. the plural phenomenal world) one can understand a uniting connexion; from this connexion, the single formula or Logos of all things, one is led to turn one’s attention back to the many things which are so connected.’ The first stage or point of judgement corresponds with predicking ‘whole, tending together, in tune’ of those things which one ‘takes together’; the second with predicking ‘not whole, tending apart, out of tune’ of the same things. The difference is that συλλάλεις by itself might refer to a limited number of opposites or
Porphyrius Qu. Hom. ad III. iv. 4 (p. 69 Schrader) ἀπρεπὴς φασιν ἀπὸ τῆς του λόγου πολύν θέα, ἀλλ' ἀπρεπεῖς τῷ γαρ γενεσία ἐργα τὰς ἄλλος τις περιοχὰς καὶ μόνον ἡμίν ήπλήκτησιν, τὸ δὲ ἵνα ὑπὸ τούτῳ διῶ οὕτως ἄνευ ἔκπληκτος ὁ θεός πρὸς ὀρφικοῦ τῶν θεῶν ἂν καὶ ἁλοµον οἰκονομικὰ τὰ συμμέτρητα, ὕποται καὶ θράκειτος ἀγέως, ὡς τῷ μὲν θεῷ κάλλα πάντα καὶ ἀγάδο καὶ δίκαιον, ἀνθρώποι ὡς τῷ μὲν δίκαιω ὑπελήφησαν αὐτὸ τῇ δίκαιη.

1 see Zeller, ZK 853 n. 3.

They say it is unbecoming if the sight of wars delights the gods. But it is not unbecoming; for what delights them is the noble deeds. And besides, wars and battles seem dreadful to us, but to god not even these are dreadful: for god accomplishes all things with a view to a harmony of the universe, arranging them so as to be fitting—as Heraclitus also says, that: To god all things are beautiful and good and just, but men have supposed some things to be unjust, others just.

Zeller was probably right in characterizing the bracketed words as an ancient variant which was taken into the text ἀλλοθ ὡς οὐκ ἐστιν ἀπρεποῦς, and in the variant ἁλοµον οἰκονομικὰ τὰ συμμέτρητα, ὕποται καὶ θράκειτος ἀγάδο καὶ δίκαιον, ἀνθρώποι ὡς τῷ μὲν δίκαιω ὑπελήφησαν αὐτὸ τῇ δίκαιη. Presumably Porphyrius is referring to an otherwise unrecorded objection after the manner of Xenophon.

Wilamowitz, Herakles 11, 68, correctly observed that the sentiment attributed to Heraclitus is expressed in Porphyrius' own words, not in its original form: this is suggested by the extreme antithetical style and the variation in construction from τὸ ὡς τῷ ἁλοµον ὡς οὐκ ἐστιν ἀπρεποῦς, ὑπελήφησαν; for as far as can be determined from other fragments Heraclitus emphasized parallelism in sense by the use of parallel constructions rather than by excessive use of ὡς οὐκ ἐστιν ἀπρεποῦς. C. Mazzanti,

Heraclit. Fr. 96, held that the use of ὡς ἀπρεποῦς, meaning 'to suppose', was in itself a sign of rewording; but while this sense of the word is rare before Plato it occurs once in Herodotus (11, 55), and therefore cannot be regarded as impossible for Heraclitus. Probably the extent of the rewording is not very considerable; δὲ δὲς recurs in fr. 67 in connexion with other opposites (though the relationship implied is quite different), and the contrast between human and divine is again explicitly drawn in frs. 78, 83. The fact that only the last of the three adjectives in the first part of the sentence is treated in the second part, with its opposite, may be due as much to the naturally rhythmic quality of Heraclitus' prose, and his tendency to make parallel clauses rhythmically equivalent at the expense of precise verbal correspondence, as to Porphyrius' careless Greek.

There is no reason to doubt that the sense of the fragment was expressed by Heraclitus.

Mazzanti well suggested (if I correctly interpret his somewhat abstract phraseology) that if the original form had been something like ὡς ἀπρεποῦς ὡς ἀγάδο ὡς δίκαιον ὡς δίκαιον there would be less difficulty than there now is in the interpretation of the two instances of ὡς. In the present form of the fragment the subjective word ὡς ἀπρεποῦς implies that the distinction made by men between, for example, just and unjust is illusory and invalid: but if this is the case then the word 'just' (and also 'beautiful' and 'good') should not be used of things as seen by god, since by its nature and its use below to describe an extreme it implies this very distinction. If, on the other hand, men legitimately distinguish between just and unjust (a possible interpretation with τῷ ἁλοµον ἄλοµον), then this illogicality is avoided. To imply that this distinction would be legitimate would not be to suggest that it is admirable: the synthetic view (seeing the underlying unity in opposites) is more admirable, certainly in Heraclitus' eyes, than the analytical one (seeing only their separateness and difference).

Yet the analytical view also is necessary; if the opposites ceased to be in one sense opposed then the underlying unity would fail, just as if strife ceased the world as
we know it would die; the unity that followed would be the unity of changelessness and death. This is largely speculative interpretation; but fr. 10 stated clearly enough that things taken together are wholes and not wholes; thus διότι and δέος, which are συνάσπισμα, can either be regarded as a single whole or as separate and distinct opposites. Admittedly, in fr. 10 the relationship of συνάσπισμα and δέος is not expressed by a verb; but it can hardly be other than predicative, and certainly could not imply that either of the alternative ways of assessing things is impermissible.

Of course, a slight variation in the meaning of, for example, διότι is unlikely to have troubled Heraclitus; the matter has been raised because there are other grounds for thinking that in the possible original form of the saying the variation was not as great as it now is. In a passage which has been held to be an imitation of this fragment a similar variation (and, strictly, confusion) is more immediately apparent: de victu 11 τὰ μὲν υἱοί διότι διέδεσσαν συνάσπισμα κατὰ τῶν ἴππων ἔχει οὗτος ἄρον ἀόρατος μὴ ἄρον δέος δὲ ἄρον διέδεσσαν δεὶς ἄρον καὶ τὰ υἱόν καὶ τὰ μὴ υἱόν τοσσοῦτον θεοὶρισί. Here there may be a consciously paradoxical use of υἱόν, as certainly in καὶ τὰ υἱὰ τὰ φίλα σέ ἐστίν at Cleanthus Hymn to Zeus 15—another work which contains echoes of Heraclitus. In neither case, however, can a direct reminiscence of this fragment be proved; the sense of the sentence from de victu, although its form is quite similar, is utterly different from that of the fragment, and the words of Cleantians, though they too express the view that opposites are one to god, are too few to be conclusive. Reinhart, Parmenides 186 n. 2, took the fragment as a criticism of men for not seeing the connection between the just and unjust; so it is, but it is more than this, and more than a mere restatement of the coincidence of opposites in moral terms. Gigon 157 believed the context in Porphyrius to show that the saying of Heraclitus referred specifically to war; cf. fr. 86, εἴπανα χρή τινν τὸν τῶν ἰππών κόσμου πολέμοιν τοῦτο. God knows that strife is justice, while men do not understand this but, like Homer, pray for the abolition of strife. This is a possible enough sentiment. Yet in Porphyrius the quotation is separated from the remarks about wars and battles by a purely generalized assertion about god, ὅτι μηδε

According to fr. 67 god would not view things in terms of opposites, because he himself is (or temporarily becomes) the opposites.

1 Gigon's objections against this last interpretation (which he wrongly attributes to Reinhart) are based on the belief that Heraclitus cannot have used διότι in incompatibile senses.
Hippolytus, Refutatio, 10, 7 (p. 244 Wendland) έν δὲ τούτῳ τῷ κεφαλαίῳ πάντα ἐμιχνεύοντος τοῦ ἱδίου νοὸν ἀπεθάνον, ὡμόλογοι καὶ καὶ τῶν τῆς Νοετᾶς αφεξώνων, οὕτως ἐπεξείρησαν δὲ ὡς Χριστὸς ἁλλὰ Ἡρακλείδου μεγάλης. τὸν γὰρ ποιητὴν τῶν λόγων, καὶ τὴν τοῦτον γεννήματι σαφές λέγει: ο θεός ἡμῶν οὕρωρανθήναι: ο θεός ἡμῶν εὐσαυρόρην, χείμων θεός, πόλεμος εὐρήνῃ, κόρος λιμόσ, τόσαντα ἐπιστον, σαφές δὲ νοὸς ἀλλιώτως ἐνδικεῖται καθ’ ἰδιότηταν ἐκτός. φανεροῖς δὲ τὰς τούτων ἡ τοιοῦτοι τηγανίδιας καὶ τῆς αφίκσεως προστάτες, καὶ καὶ Ἡρακλείδου λέγειν διακόνος μὴ γεγονότως ἐκκρατάλα, ἀλλὰ γιὰ τὰ Νοετᾶς δέδοσαν αὐτομενώς αὐτοφανῶς τοιαύτα ἀφηγολογίαν. λέγομεν γὰρ σαφές: ἐναὶ καὶ τὸν αὐτὸν ἦν διὰ τῶν σαφών ἰμάτων καὶ παθέρα...

1 πρὸ γένος σαφέντας: em. Bernays
2 κατὰ σαφέντας: Deicke, δὲκεῖ τὸν Μ. Ζέλετζερ καὶ Heidel καὶ Snell
3 πόλεμος: δὲκεῖ τὸν Μ. Ζέλετζερ καὶ Heidel καὶ Snell
4 ένδικεῖται: em. Bernays
5 σαφές: em. Bernays

In this chapter he set out all together his particular meaning, and at the same time that of the Noetus, whom I have just demonstrated to be a pupil of Christ but of Heraclitus. For that the created world becomes maker and creator of itself he says in these words: God is day night, winter summer, war peace, sabority, fire, all the opposites, is the meaning—and undergoes alteration in the way that fire, when it is mixed with spices, is named according to the scent of each of them. It is clear to all that the senseless successors of Noetus and leaders of the heresy, even if they were to deny that they had become disciples of Heraclitus, yet by choosing Noetus' opinions openly agree in the same beliefs. For they say this: that one and the same god is maker and father of all things...

The words in this chapter (for such must be the meaning of τούτῳ, see n. 1 on p. 350) probably refer to what had gone before, i.e. fr. 64-36; τούτῳ could scarcely point forward to fr. 67, from which it is very far separated. This is the only occasion on which Hippolytus appears to allude to the source from which he derives the sixteen or so quotations from Heraclitus which occur in these two chapters of the Refutatio. Hippolytus must have had access to the good book preserved in this source. Probably the claim should not be treated too literally; Hippolytus selected quotations from Heraclitus which were (as appeared to him to be) all on the same subject, and he would naturally assume that they came from the same part of Heraclitus' book.

The quotation itself raises many difficulties. One thing is clear: that the words τὸν θεὸν τούτοις are interpolated, perhaps by Hippolytus himself. They have all the appearance of an explanatory gloss, the sense of which is not quite clear. W. A. Heidel, 'On Certain Fragments of the Pre-Socratics', Proc. Amer. Acad. of Arts 48 (1923) 703ff., maintained that the words are those of Heraclitus except that τούτῳ was originally ἑκατός; this suggestion was disposed of by H. Frankfurt, 'Heraclitus on God and the Phenomenal World', Trans. Amer. Philol. Ass. 69 (1938) 250ff. who in n. 4 on p. 251 pointed to the difficulties of the article in τὸν θεὸν, and the alleged implausibility of such an early stage of νοὸς = 'real significance'.

The first part of the quotation sets δὲ τῶν side by side with four pairs of opposites, two of which occur in other fragments. There is no verb to define the relationship, which presumably must be predicative; 'god' must be the subject, since it is certainly the subject of the main verb in the second part of the quotation. Even so one must remember Wilamowitz's dictum that δὲ τῶν is essentially a predicate; the generalization is too sweeping, but it reminds us that at this stage of language and logic the division into subject and predicate cannot always be clearly made. The pairs of opposites all have one thing in common, that they are connected by...
invariable succession rather than by variation of standards—in other words, they belong with Group 5 and not to Groups 2, 3 or 4. The real unity of the first pair, day and night, was explicitly stated in fr. 57; doubtless Heraclitus held the same to be true of the second pair, winter and summer, which are also temporal divisions and also dependent on the behaviour of a single factor, the sun. The equivalence of the fourth pair, κόρος ξύος, is asserted in fr. 111, where these opposites are associated with others especially connected with human feelings and affections; but it is not impossible that in the present case they are to be taken closely with the temporal opposites and especially with winter and summer, which produce variations in the state of the food supply. It is true that in fr. 67, quoted by Hippolytus a little before, Heraclitus is said to have called fire χρυσόμεθαν και κόρος: Hippolytus adds, no doubt from Stoic-influenced sources, that 'want' describes the world-forming process and 'society' the διάνοια or turning of all things into fire. Gignot 147 is unusually cautious over identifying κόρος ξύος with χρυσόμεθαν και κόρος, but remarks that if they do have the same meaning then the four pairs of opposites in fr. 67 may deliberately represent increasingly long time-periods. The third pair, χαρά-πάθος, does not fit happily into this scheme, and no doubt the pairs of opposites were not selected so deliberately. In fact the attribution of cosmogonical significance to χρυσόμεθαν και κόρος is out of the question: Heraclitus implies clearly enough in fr. 50 that there was no cosmogony and will be no dissolution into fire; this was a Stoic interpretation based perhaps upon the Peripatetic transformation of the constant cosmological process into a world-forming process. Fr. 65 (on which see pp. 337 ff.) occurs in a passage which is mainly interpretation by Hippolytus or his source; the only thing that can be attributed to Heraclitus are the words χρυσόμεθαν and κόρος. The former is too unusual to be regarded simply as a doxographical variant of ξύος, but the predicate of these words of τὸ θεό is perhaps derived from the predicate of κόρος ξύος of ὁ θεός in this fr. 67: on the Aristotelian assessment, 'fire' and 'god' were identical for Heraclitus. The third pair of opposites, χαρά-πάθος, is at first sight more straightforward: yet how can god be described as 'cheer' when fr. 53 asserted that 'war is the father and king of all', and Homer was rebuked for his prayer that 'strife may perish from gods and men'? War and strife seem to have symbolized for Heraclitus the inevitability of change which for him was essential to the survival of a cosmos; peace, (which is not named elsewhere in the fragments; the mention of it in the Theophrastus-derived account at Diog. 11, 8 as the stage leading to Αἰολισμός is probably purely speculative) would thus, if continued indefinitely, lead to the disruption and death of the cosmos as we have it. Yet this difficulty is perhaps created by trying to impose upon Heraclitus a consistency, and a precision of vocabulary, to which he never aspired and which he certainly fails to achieve in some other passages. War is used as a symbol for the predominance of change, of action and reaction; but the word μάχη can also be used to describe a well-known fact, war in its straightforward, descriptive, non-symbolic sense; and so too in the case of θανάτος. Indeed, it is possible to defend Heraclitus against the charge of inconsistency even while accepting in this fragment the symbolic implications of the words 'war' and 'peace': short periods of peace in isolated parts of the cosmos would not bring about a stoppage in the movement of the whole, just as the long immobility of a stone or a mountain does not destroy the general rule that all things eventually must change. Probably, though, the former explanation is the simpler and more acceptable one here.

The relationship between ὁ θεός and these four pairs of opposites cannot be fully explored without examining the second part of the fragment, which goes on to describe the way in which god undergoes, or appears to undergo, change from one extreme to each pair to the other, or from one pair taken as a whole to another pair. The gloss gives a plausible explanation, that the four pairs are named as representatives of all opposites: this would explain the fact that they cannot all be placed in any single category. Cosmological events are balanced against anthropological, as is appropriate to a generalization of this character about a god who is somehow identified with or inherent in the whole world. Clearly the words which follow the gloss must be subjected to a critical scrutiny (especially in view of the uncertainty about ἀλλοκτονός, which is discussed.
below) in order to determine whether they really belong to the quotation or simply continue the comment of Hippolytus. Here the words of Hippolytus which introduce the quotation help to reassure us, though they give little positive information: Heracleitius is said to state that the cosmos becomes (more the present participle) its own maker and creator. The word γενήσεσθαι κτάναι, and could not possibly describe the juxtaposition of god and the four pairs of opposites. Thus Hippolytus himself implies that the quotation continues after the added explanation τὸν θεὸν -τοῦτο. The first part of the quotation appears in his summary in the word κοσμοῦ: this must be inferred from the equivalence of god and the opposites and represents a similar interpretation of these words to that of the gloss which follows them.3

The fragment gives a different idea of ὥσις from that which is to be derived from the other extant fragments. Fr. 5, 24, 30, 33 mention ὥσις in a purely traditional sense (though fr. 30 denies that any of them made 'this cosmos'); in fr. 78 divine disposition is said to possess true judgement, as against human disposition; in fr. 83 ὥσις is said greatly to surpass men in beauty. In fr. 32 'the only wise' in one way consents to be called Zeus; in fr. 114 the Logos is by inference described as 'divine law'. Only in fr. 102, otherwise, is there any suggestion that god has a special connexion with the opposites; there we learn that all the opposites are equally 'good' to him. This is not entirely incompatible with the view that god himself is the opposites, unless strict logic is demanded from Heracleitius. Elsewhere in Heracleitius, it is true, the Logos occupies the place which in later thought would be held by ὥσις: in fr. 114 'the common' is equated with ὥσις, ὁ ὥσις, ὁ ὥσις; and fr. 2 states that the Logos is common. The Logos is undoubtedly connected with the opposites, in fact it is the unity which underlies them and which

3 It may be noted that Hippolytus' mention of τῶν συνήθων καθαρίων could conceivably be caused by the pairs of opposites alone, with the omission of ὥσις. If the ὥσις after διάλογον is dropped the quotation makes perfectly good sense, and becomes considerably less obscure, without ὥσις. It is conceivable that these words were added to the quotation by a copyist in order to improve the correspondence between the words of Heracleitius and the sentiment attributed lower down to the followers of Nectes, a sentiment which Hippolytus declares 'exactly to agree' with Heracleitius: μορφον λαμβάνεις ἀλλὰ χρὶς τῶν συνήθων καθαρίων οὐκ εἶπεν εἰπεῖν καθαρίως. It will be seen, however, that ὥσις is probably integral to the fragment.

The use of διάλογος has for long been regarded with surprise, if not with suspicion. H. Fränkel, op. cit. 232 n. 5, thinks that the original verbal expression was suppressed 'and replaced by a trivial and meagre paraphrase in the current language of doxography'. Of his reasons for so thinking, the first, that 'the expression is incomplete, inaccurate and illogical, in contrast to the careful phrasing of comparisons in frgs. 1, 5 (lids), 90, 114', is not persuasive. It is true that most of the similes in extant fragments are simple in type and clearly expressed: but in fact fr. 114, one of those cited by Fränkel, contains a comparison just as compressed (surely 'illogical' at any rate is unfair?) as the one involved here. Fränkel's second reason for suspicion is that διάλογος is not otherwise found before the fourth century except at Thucydides ii, 59; Euripides Supp. 944 (ambles); and (for this work is probably one of the earliest of the Corpus) Hippocrates Prognostic 2. Later it occurs in Xenophon, often in Plato, Aristotle and Polybius, and in other works of the Hippocratic corpus—especially in de viu, e.g. 1, 411, 107; 1, 28. For a convenient summary of its occurrences see Ernst Fraenkel, Griechische Denominationen 177, who points out that the middle and passive uses are much commoner than the active. In Aristotle the verb acquired an almost technical meaning of 'qualitative alteration': the word 'alteration'

1 On the other hand, de piscato 14, 26 ff., p. 81 C., might refer to fr. 53 and not this fragment.
in my translation above is not intended to prejudge the issue of whether the use here is pre- or post-Aristotelian. H. Frankel admits that derivative verbs in -ος, especially in the middle and passive, occur from Homer onwards, and refers to Wackernagel, *Sprachliche Untersuchungen zu Homer* 123ff.; but he is right in maintaining that the invention of many such verbs (like that of abstract nouns in -ος) belongs in particular to the second half of the fifth century. This is of course no certain proof that the word could not have been employed by Heraclitus as a neologism some half-century earlier, especially if he wanted a word which would not imply change between opposites (as his other words for change, ἀνακτόριον, μεταμορφωσία, προσπλήσια, tended to do, especially in view of his use of the first two in that sense), but alteration in general, and, in particular, alteration from one continuum or pair of opposites to another. Heidel, *Qualitative Change in Pre-Socratic Philosophy*, Archiv. f. Gesch. d. Philos., N.F., 12 (1966) 375, defended the word in this fragment by citing, for example, Plato *Theaetetus* 181d, where it is used to describe changes which do not involve motion; much more to the point, however, is the occurrence of the adjective form ἀλλοος, not only in Homer, Pindar and Herodotus, but twice in Empedocles (fr. 108, 22; 110, 6). If the adjective were adopted as a convenient term in abstract writing, then the incorporation of the verb would not be so difficult. On the other hand, in Diogenes of Apollonia fr. 2 occurs the following sentence: ἀλλοο τοῦτο ἀλλοο ἢ τοῦ ἄλλου τοῦ ἄλλου ἀλλοο ἀλλοο ἀλλοο... surely, it might be argued, if the cognate verbal form ἄλλοοζον was known it would be used here, rather than an inappropriate verb which strictly implies 'becoming the other'? (ἡ ἄλλοοζον is of course a verb of the same class as ἄλλοοζον, and is found as early as Melissus.)

The question is a complicated one, there are many factors both for and against, and until new literary evidence turns up no certain decision one way or the other can be made. Perhaps the strongest argument against ἄλλοοζον belonging to Heraclitus himself is the argument ex silentio advanced by H. Frankel, that if such a convenient verb was in use as early as Heraclitus it is surprising that it does not recur in fifth-century philosophical writing, and does not tend to replace the longer and less precise expressions which were in fact used. My own feeling is that, in spite of the objections outlined, ἄλλοοζον may have been coined by Heraclitus from

ἄλλοος to meet a particular purpose, but did not catch on with his contemporaries.

In the single manuscript of Hippolytus's *Hist. Afr.* is followed by ὅτι οὖν: the inconsistent use of Ionic forms shows the unstable nature of the tradition in this respect. In this case there can be no doubt that -ος is correct in both instances. At some point in the simile a noun, subject of εὐθυγραμμεν and ἄλλοοζον, has dropped out: on no other hypothesis can sense be restored, for neither god nor the pairs of opposites could be conceived on any occasion as being mixed with spices. Diels restored τοῦτο after ὅτι οὖν: its omission by haplography would be very simple—or, as Pfeiderer held, a slight change in one letter would result in its attachment as a suffix to ὅτι. Most scholars—e.g. Burnet, Kranz, Gigon, Reinhart, Calogero—have accepted Diels's restoration, mainly perhaps because of its great simplicity. This is a good reason for acceptance, and H. Frankel's remark that 'Any word can be omitted for no apparent reason' (op. cit. 238 n. 26) savours of special pleading. Nevertheless, certain objections to the sense given by this restoration have to be considered. Nestle's criticism, ZN 854 n., that it is inelegant to compare god with fire, since according to Heraclitus god and fire are the same, is not valid until this equivalence can be proved; and in fact the balance of the evidence is that although many of the same attributes are shared they are not interchangeable any more than are ἀθάνατος and ἀθανάτος. In so far as this cosmos is an ever-living fire (fr. 30), and god is somehow inherent in it, they cohere; but quite apart from other considerations the kind of fire into which incense and spices are thrown is not identical with the ever-living fire of the cosmos. A more important objection is the obvious one advanced by H. Frankel, op. cit. 233, that it is not Greek to talk of fire being mixed with spices. He maintained that the passage added by Diels (Pindar fr. 120-30 Schröder θέλῃ μεγάλην ταύτα τῷ ἄδει) does not justify the expression in Heraclitus because Pindar had a special and peculiar predilection for verbs meaning 'mix', which led him to invent strange phrases. Certainly R. Dornseiff, *Pindarische Sprachprobleme* (Berlin, 1921) 94 ff., adduces some remarkable phrases of this type, e.g. ἀλλογλυφίας ἔργον ἔργον (Isthm. 11, 3), ἀλλογλυφίας καθὼς ἐκεῖν (Men. 11, 22), and reaches the conclusion (p. 96): 'Diese Worte sinnlich, butreeren, begegnen usw. stehen für jede Relation, für jede Verbindung und
können alle Beziehungen bezeichnen'. On the other hand, the germ of these extreme usages was present in Homer, where ἄγωνωμα can mean little more than 'to be brought into contact with' (LSJ s.v. b.2): e.g. καρπόν κοιμήθη Ἦλεκτρη (II. x, 417; Od. XXI, 379); κλείστη μιγώμεθα (II. XV, 405). In this fragment of Heracleitus οὐκ ἦμα can mean exactly this. There is no close parallel for the expression, although some deceptive ones are quoted by Diels which provide a similar general situation: Cramer Anecd. Par. 1, 157, 17 όν γὰρ κατὰ τὸ τόο τάσει πρὸς τὸ θεύμα, έπε τινάσωσε ἡ λαβεντος εὔπε πέριη, τὴν δημιουργία τῆς ὑπερήπτου τοῦ δαύδι τοῦ δόκιμο καί τοῦ δόκιμο τοῦ δόκιμο μετατόπισεν μὲν ἐν τούς θεάμας, νομίζων γενεί. Hippolytus Refutatio vii, 32, 3 λέγεσθαι ὅτι οὗ κατασκοπεῖ τοὺς πέμπτους καὶ μείκτως λόγων συνεπάγεται τόθε τοῦ τρόπου τῆς ἑκατέρας τῆς φωτεινῆς ἐνοχῆς ἐνεργείας, καὶ τὸν κατεύθυνα τὸν ἐξάγωμεν ἐν τοῖς ὑποστασιοῖς ὑπόστα ἐν κατευνάσθη λεπτός καὶ συνέξεσθαι καὶ γεγονδέναι ἐν τῇ ψυχῇ, ὡς μὲν οὖν καὶ πολλοὺς κατευνάσθηκαν ἐπὶ τοῦ πορείας χρησιμολόγου καί διὰ τῶν ἐπιστρέφοντος, τῆς συνεργασίας ιέρας κριτήριων τόσοος, ἐπὶ τῆς μιᾶς τῶν ὑμιλητῶν διακρινών λεπτὸς ἔκοσμος τῶν κατευνασθέντων ἐπὶ τοῦ πορείας ὑμιλητῶν οἰκεῖς συνεργασίας καὶ σύμφωνας καὶ ἔργους ἡ τοῦ ἄλλο αἰώνιος ἑνωγμένων. Another passage in Hippolytus refers again to this same image, which was evidently a favourite one among the Sichelians: Refutatio vii, 32, 3 (cf. v, 19, 4) ἐξ ἑλέους ἐνδοξίας φόρεσεν... ὡς τοῖς διακρινών ὑπόστα ἐπὶ τὸ πορείας. It must be understood that the participle κατευνάσθηκαν in the first Hippolytus passage does not describe the relationship of the spices with the fire, but the relationship of the separate spices to each other—a much more normal expression and idea. It is true that the participle is on both occasions followed by the locative phrase ἐπὶ τοῦ πορείας: but to be mixed over or on the fire is very different from being mixed with the fire. In the Sichel image a number of different spices are simultaneously thrown on to a fire, so that they mix with each other; or they are first mixed and then thrown on to the fire. The result is a complex odour which defies the analysis of all but the purest and most acute nostril. In the image used by Heracleitus it is not certain whether spices are thrown one after the other on to the fire, and so mixed with it, or whether they are mixed with it all at once; this depends upon the interpretation of the last three words of the fragment, which will be discussed below. Even though the corre-

1 I attach no evidential value to the remark at Refutatio vii, 3 (cited by Reinhardt op. cit. 165), that Simon, by saying that God was original fire, was σὺν οὕτων δειπνῶν μένεν τοῦ νόμου Μωσίου, διὰ καὶ τοῦ συνειδήν ἑνωγμένων.
the instance from Pindar provides a perfectly good parallel for the grammatical usage.

Frankel's final objection to ἁρυπόν as the noun to be supplied in fr. 67 is more serious: it is that specific names of spices were not in fact attached to the smoke of the fire into which they had been cast, but applied to the spices in their solid form. Yet this is to take the whole sentence, and ἀρωματος in particular, far too literally. Doubtless, at a sacrifice, when frankincense or cista had been thrown on the fire, the onlookers did not point to the normal smoke and say 'There is frankincense' or 'There is cista'; nor would the blazing fire itself be called by these names. But the odour of the spices, which became much stronger when they were burnt, would be called by the name of each spice; and this odour was in fact carried from the fire in the form of a thin smoke, the result of mixing fire with spices. When Xenophanes wrote (fr. 1, 7) ἐν δὲ ἄρωμα ὑπὸ ἡμέρα ἅρωματος ἵππου, it is surely legitimate to suppose that this ἅρωμα might itself be called ἅρωματος: and that, since it is presumably omitted (ντοματον) as a result of mixture with fire, the part of fire which has mingled in the warm scented vapour could be called by the same name. The whole concept of fire 'being mixed with' spices depends upon a naïve materialistic view of the process of burning: the warm vapour is regarded as an actual compound of portions of fire and portions of spice.

Other restorations of the missing substantive have been suggested. Zeller's ἅρυπα is patently inappropriate. ἃρωμα, which could easily be omitted before ἅρωματος, has more to be said for it. The situation would differ from that in the image used by the Sphintians, where one tries to analyse the individual ingredients in a mixture of scents; in this case καθ' ἃρωματος ἄρωμα should probably be interpreted as meaning 'according to each man's pleasure (or taste)' and not 'according to the savour of each ἃρωμα'. Thus everyone who experienced this mixture of scents would name one element, which to him was the most efficacious, as constituting the whole. The change in names applied to the mixture would be arbitrary, yet no name would be entirely false, describing as it does a part of the whole. This would imply that god could in the same way be called by the names of various pairs of opposites, according to one's subjective preferences at the time; yet god is the whole mixture, and these names only describe one aspect of him. The change would be a nominal one. This gives a plausible sense to the statement about god, and the only drawback to this explanation is the nature of the image from spices, which is surely very far-fetched. Was it customary for spices to be mixed together and then for different people to apply a single name to them? (Note that this is the opposite situation to the hypothetical one in fr. 7, where Heraclitus says that if all things were reduced to the single visual appearance of smoke, yet the nostrils would smell our differences between them.) Without further description and limitation this image is difficult to accept. Another restoration, that of ὡπών, shares the advantage that this word could easily have dropped out (by confusion with the very similar letters ὠφών ὦ-), and has the additional merit of making the image readily understandable. The custom of flavouring wine with various kinds of herb was common in Greece; cf. Theophrastus de odor. 8ff. This kind of wine was called 'scented', e.g. olives δέντες at Aristophanes Frogs 1350; Plautus 827; Xenophon Hell. vi, 2, 6. Other passages of this type are gathered by K. Becker, Charikles 111, 342ff., and mentioned by Nestle in ZN 834 n. The clearest indication that adjectives derived from the names of different spices were attached to ὡπῶν is given by Dioscorides, De medic. v, 27ff., where olves ἀρωμάτων, ἀφράτων, ἀρωματικῶν, καρακαρακοες, and other types are mentioned. Thus god would in this case be equated with the wine, and receive the name of different pairs of opposites which represent the spices. The analogy is not exact, however, since the word ὡπῶν appears to have been invariably mentioned, and the adjectives from the spices did not achieve the status of substantives; in the case of the opposites, however, ὡπῶν is not normally mentioned. Another objection is that wine, even if mixed with spices, is not free from a specific taste of its own but varies quite apart from the variation of other ingredients which may be mixed with it: while the point about god and the opposites is presumably that god does not change in essence, but is merely seen in different aspects.

An explanation on somewhat similar lines has been advanced in detail by H. Frankel in the article already cited. He bases himself on Heidel's suggested restoration ὡπῶν (Proc. Amer. Acad. Arts 48 (1913) 764-8), and thinks that the image refers to the preparation of unguents, but instead of supplying ὡπῶν, which refers to the finished
product, he supplies ἔκσαρα, the base to which specific spices were added. ἔκσαρα need not mean ‘incense’, i.e. spice specially for burning: it can also mean the same as ἄρωσις, namely, the scented spice which is used for making unguents, or ὄμορον, the unguent itself. Of the passages which Fränkel cites in support of this contention the most striking are Homer Il. xiv, 172 ἀθάνατος...πό σις οἱ τεφθάνοντον ἄρωσις; Seaxones id fr. 14 Diels οἰκείας ὄμορον καὶ τεφθήκε τοῖς ἔρωτοις; and Hesychius’ gloss, θεομήκε μέρος, ἄρωσις. In the present case ἔκσαρα would refer to the scented ingredients which were mixed with oil to form different kinds of unguent.

It stands to reason that the oil which formed the base of these scents should itself be as odourless as possible; as Theophrastus said at De odor. 18, 6 οὐξ ἀρκεῖ εἰς τὸ ἐκσάριον. Fränkel thinks that this provides an excellent parallel to the working of god in the world: he is totally unspecified, but assumes different forms; it is these forms which men perceive and to which they attach names, just as in the names of unguents the words ἔκσαρα or ὄμορον were often omitted, as at, for example, Aristophanes Knights 1322, σιῶν κατὰ πᾶσαν. He suggests that there may be an additional significance in the comparison, and cites a passage of Plutarch (de curvis san. 10, 127b) to the effect that as flower-scent is themselves weak, but derive strength and vigour from being mixed with oil, so the substrate of objects provides substance and body for their external attributes. Thus Heraclitus may have meant that god gave force and reality to the opposites. (This of course is pure conjecture: so is Fränkel’s hypothesis, p. 239f., that Plato Timæus 50a ff. is dependent upon Heraclitus. The simile of the golden figures is quite different from that of Heraclitus fr. 90, nor does the use of the verb ἐκσάρειν show that Plato necessarily had him in mind.) At 50e Plato uses a simile derived from the preparation of unguents, where he too stresses the fact that the liquid base should be as odourless as possible. Thus Fränkel builds up a complex and, as far as it goes, well-documented case for the appropriateness of ἔκσαρα, and has won over Snell (Heraclit., Tusculum-Bücher, ser. 2, ed. 1940) from the side of Diels’ μόρος. He may well be right. Yet the relative improbability of ἔκσαρα being lost from the text, and the fact that no parallel exists as early as and as striking as the Pindar parallel for μόρος, persuade me to take the conservative side and adhere to Diels’ restoration. Some of Fränkel’s conclusions and deductions are indeed too adventurous: he is misled by his concept of Heraclitus as a metaphysician, and it is surprising, after his diversion on the Upanishads (pp. 241 ff.)—always a danger signal in Heraclitus-studies—that he returns to as sound a summary of the general force of fr. 67 as appears on pp. 243–4. For the fact is that whether it is fire or oil that is said to be mixed with spices, the implication of the image is the same: that god is the neglected but all-important substratum (to use an anachronistic but convenient term) of all differentiation in the world, and that he provides the link between the various pairs of opposites in terms of which all change can be analysed.

Diels, Heraklit us 13 fr. and in editions of VS, drew attention to the brachylogy of the simile and referred (as Kränzle, Worbitz and others still do) to Vahlen’s commentary on the Poetica ad. p. 275; but Vahlen is referring to the particular kind of condensation which occurs in images introduced by the negative phrase τὸ γάρ ὄσον. This is of little relevance here. For condensation in successive negative clauses, though not in the case of a simile, the best parallel in Heraclitus is fr. 94 ἔρωτας...οὐκ ἔσχας τὴν μέταθεν μέτα διὸ ὄπισθεν. At any rate this kind of condensation shows that Heraclitus was not always (as Fränkel implied him to be) fully explicit and logical in his syntax: I have already remarked (p. 51) on the considerable concentration of the syntax of fr. 114. In fr. 67, of course, the brachylogy consists in saying that ‘god changes in the way that fire...is named...’ The adverbial phrase καὶ ζῷον ἄκτωρ qualifies τῷ...συνοικεῖται—this is shown, if by nothing else, by the use of the word τὸν meaning ‘taste’ or (more generally) ‘flavour’: but in sense it must qualify both συνοικεῖται and ἐκεῖνον. In isolation the phrase could mean ‘according to each man’s fancy’: but I have already pointed out that in the circumstances of the simile this would present a very unusual state of affairs; and in view of the use of τὸν ὄρνητον as ‘flavour’ by Anaxagoras (fr. 4), Diogenes of Apollonia (fr. 5) and the author of the Heraclitizing part of de view (1, 23), this same meaning is to be preferred here. Thus god changes according to the particular character of each pair of opposites just as fire is named according to the particular scent of the spice with which it mingles. This is the literal meaning of the saying, and there is no reason to deny that this meaning was intended by Heraclitus. Yet it is probable that the wording of the image reflects something...
Thus it may be correct to infer that just as it is erroneous to call
the odour of burning myrrh simply "myrrh" (ignoring the all-
important ingredient fire)—but not actually false, for the name
corresponds with a part though not the whole of the object—so it is
misleading though not false to call god by the name of a particular
pair of opposites. God is that pair of opposites, but he is all other
categories of opposite too, as may be inferred from the first part of
the fragment. The only kind of change which he undergoes is that
of being identified with one or other pair of opposites at different
times. Here a difficult point of interpretation presents itself: does
the change which god undergoes refer to the change from one pair
of opposites (or genus) to another, or from one extreme of a pair
of opposites to the other, or to both? This is not a fully legitimate
question in that Heraclitus may not have defined the application
of ὀλοκλήρωτα (or whatever verb this represents) so precisely; yet one
type of change must have been more in his mind than the other, or
the combination of the two types more than either single type. In
the discussion above it has been assumed that change from one genus
to another was in question, perhaps to counterbalance the usual
assumption among modern critics that the change referred to is
between separate extremes. Here the simile may give a guide,
though there is no need for the correspondence to be total. The
literal point of comparison is that god (who is day-night, winter-
summer, war-peace, satiety-hunger) changes, and fire (when mixed
with spices) is named, according to the characteristic of each. The
different spices are not related to each other as extremes, yet they are
indubitably objects belonging to the same genus. This does not help
very much to determine whether ὀλοκλήρωτα, with reference to god
changing, applies to the extremes day and night, etc., or to the
different pairs of opposites, day-night, winter-summer, etc. Yet these
pairs themselves belong to a single higher genus. What happens at
a sacrifice is that first one, then another, then another kind of spice
is cast upon the fire: there is no limit, theoretically, to the number of
different savours that can be produced—but if the changes of god
were changes between opposites, only two characteristics, the two
extremes, could be assumed in each class. The same conclusion, that
god's changes are between pairs of opposites or genera and not
between the opposites themselves, is suggested by the word ὀλοκλήρωτα.
This, as it stands, means 'becomes of a different kind':

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1 This interpretation is accepted by Heinemann, Hermes 54, and Categorico loc. cit., who rightly rebukes Kraut for his comment on ὀλοκλήρωται in DK, "der Name bezeichnet gerade nicht die Sachen vgl. B 33, 32, 48, Neude Philolog. 67 (1908) 326".

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It is not a verb which would normally be used for change between opposites (although it is so used at Plato Theaetetus 181d), except in so far as all change can be analysed in this way. At all events the meaning of διάλογος cannot be restricted to this type of change, although it may include change between opposites and between classes of opposites, i.e. between summer and winter, war and peace, and summer-winter and war-peace. The safest course, perhaps, is to assume that both these kinds of change are implicit in the fragment.

It is not easy to see precisely in what way god was named according to the characteristic of different opposites. Perhaps the meaning is that if one type of change became particularly important because of the predominance of one extreme, god was identified especially with events of this kind: for example, if there were a famine, people would pray to the god of satiety, they would hold god responsible for the famine and neglect his operation in other kinds of natural event. So too god might be identified at different periods with different extremes: in war it is the war-god who is all-important, and who in a polytheistic system tends to usurp the devotion usually offered to the other gods; in peace men turn their prayers and sacrifices to a divinity whose special function is the support and protection of peaceful pursuits. As far as the actual naming goes, Nestle, Philologus 67 (1908) 536 (cf. Zh 814), has aptly referred to the concept summarized at Plato Cratylus 401e, διάλογος in τοις ευκρίνεις νόμοις τοις μόνοις ευχέσθαι, αὐτοίς τε καὶ διήλων χαρέσιν διαμερισμένοι [sc. οἱ θεοί], παρεται καὶ ημέρας εὐτύχεις καλέν. In the same way men use the particular epithet of their chief divinity which they think most suitable to the circumstances of the moment. There may be a reminiscence of this fragment in a Stoicizing passage in Plutarch de E 9, 388f: ὥς τεός ἐκ τοιάς διάλογας τοιαύτης... γυμνόπεδος ὄς γίγνεται τὸν κόσμον ὀυκομάχειν... τὸ γνωριμιστικὸν τῶν υἱῶν τοῦ θεοῦ.

To turn away from details of interpretation: what is the significance of the fragment in the whole scheme of Heraclitus' beliefs about god on the one hand, and the opposites on the other? Strictly of course this distinction between the two is unjustified: god is the opposites, though in other fragments about the deity Heraclitus does not entirely escape from the language of anthropomorphism. Here we learn that god is inherent in the world, that he underlies all change, and that he provides the essential unity of things which is elsewhere called the Logos. Presumably god has no separate existence outside the phenomenal world— to this extent Heraclitus can be called a pantheist. Yet the examination of his other fragments suggests that he was not greatly interested in religious speculation as such, that he tended to express his discovery about the nature of things in logical rather than in religious terms, and that he only occasionally diverged to express his idea of the Logos in terms of the highest monotheistic thought of his day. Here Gigon was right in emphasizing his dependence on Xenophanes. The chief importance of the fragment lies in what it tells us about the opposites and their relation to each other: that is why I have treated it (like fr. 102) in this group, and not with other assertions about the deity. Once again the essential unity of opposites is asserted: just as the differentiation of the scent of burnt offerings depends upon a common element in them all, and one which is usually left unspecified, so all differentiation in the world is dependent upon the underlying connexion, and all the pairs of opposites and all the extremes in these pairs are ultimately but facets of the underlying unity, whether it be called god or the Logos (or even perhaps fire). From the logical point of view this fragment is exceptionally important, because it bridges the gap between different categories of opposite. In the fragments of previous groups Heraclitus has presented a variety of arguments to show that there is an essential connexion between apparently opposed extremes, in various continuos of quality: but he has not succeeded in relating the different continua, and thus showing that his unity is universal. In this fragment he does this: god is all the opposites, and the changes he undergoes are changes from one type of opposite (or genus) to another, as well as between extremes. He is the unity which extends to all parts of the phenomenal world.

1 This is evidently the conclusion of Gigon (47), who writes: ... es handelt sich nicht um den Umenschl g der Gegenwart in die andere, sondern um den Hineintritt des Gottes in die Gegenwartwelt. And a few lines later: 'Der Gott macht sich bald mit Tag, bald mit Nacht und lebt nach ihnen Tag oder Nacht.'
This group consists mainly of general statements of the connexion between all things, making explicit some of the presuppositions of earlier groups. Two special aspects of this connexion are emphasized. First, and looking ahead to the sayings of Group 8, the dynamic nature of the apparent stability or tension between opposites is stressed by the image of the stretched bow and lyre (fr. 51). Secondly, the hidden or under-the-surface nature of this universal connexion is the theme of frs. 54 and 123. Fr. 7 is a hypothetical specific example of the fact that unity and plurality can exist in this way; it puts a case where the unity or connexion would be the superficial aspect, while the differentiation lies beneath the surface. If this could happen then the converse may be true.

Hippolytus Refutatio 19, 9, 1 (p. 241 Wendland) "Ἡράκλειτος μὲν ὥσπερ φησιν ἐν τῇ πάνω διαμετρών ἀδιαμετρόν... οὐκ ἀχρόν ἄλλα τοῦ λόγου άθρόμοντας ἀθρόμοντας ἀθρόμοντας ἁπλῶς ἐστιν ἐν πάντω καὶ ἐν Ἡράκλειτος ἐστιν (fr. 50). καὶ ὅτι τούτῳ οὐκ ἡκούσαι πάντως ὡς ἀκόγονον ἐπιμέλειται ὡς ὕστερον ὡς εὐνώτατον ἐν εὐνώτατον εὐνώτατον: ὁ ἤμπερκλετος τὸ ποτάμιον ποτάμιον ποτάμιον ποτάμιον καὶ ἄνθρωπος. ὁ δὲ λόγος ἐστὶν οὐκ ὡς τὰ πᾶν καὶ διὰ πάντως διὰ ὑπάρχει (seq. fr. 1).


Heraclitus, then, says that the All is divisible and indivisible: "Listening not to me but to the Logos it is wise to agree that all things are one" (fr. 50), says Heraclitus; and that they all ignore this and do not agree he complains in words like these: They do not apprehend how being, at variance it agrees with itself: there is a connexion working in both directions, as in the bow and the lyre. And that Logos is always the All and exists for ever he says in these words: (fr. 1 follows).

The subject of the first sentence is to be understood as of ἄνθρωπον or perhaps of ποτάμιον: cf. frs. 1, 56 (ἄνθρωποι, cf. ἄνθρωποι); 17, 29 (ποτάμιοι, cf. ποτάμιοι). Other fragments attacking the generality of men, in which no subject is specified, are frs. 15, 20, 23, 72, 104: in some of these the grammatical subject perhaps belonged to a previous sentence which has not been preserved; but Heraclitus' attacks on men in general were doubtless so manifold that a plural verb alone, together with a critical tone, would be sufficient to show who were in question. οὐ εὐνώτατον corresponds with ἑξάρποστον in fr. 1; cf. also fr. 34. Snell, Ph.L. 29 (1924) 47, was probably right in emphasizing that ἀνεξα μετατρές properly means 'to take in, to assimilate to oneself.'
something that is presented to one, e.g. by the senses, rather than simply ‘to understand’ with its connotation of a primarily intellectual effort of synthesis; so men are continually surrounded with evidence of the Logos, but they do not take it in. Gignò 22 pointed to the similarity of the reproachful opening of this fragment with that of Hesiod, Ἐσσίττα 40 νήπιοι, αὐτῆς ἵππου... Ἔμενοι δὲ Σενονίδες fr. 29, τὸ Diehl and Empedocles fr. 11, 1 may be influenced by this well-known line, and so may Heraclitus also.

It was Zeller (ZN 827 n. 1) who first maintained that the ms. reading διοιστέαν is a mistake caused by the occurrence of this verb twice in the preceding two sentences, and that an original συμφέρον, (or συμφέρεσθαι) should be restored from two Platonic passages, one of which certainly and the other probably refers to this fragment. The first of these is Symposium 187a, μονοπλήκτης 63 καὶ παντὶ καταδίπλος τῷ καὶ συμφόρον προανήγχον τὸν οἶκον ὃτι κατὰ ταῦτα ἐξή τοῖσιν, ὡσπερ ἡμος καὶ Ἡρακλεῖτος βουλεύτη λέγων, ἐπεὶ τὸ γὰρ ρῆμα τό καθόλου λέγω. τὸ τι ἡγαρ δειν “διαφερόμενον αὐτῷ αὐτῷ συμφέρονται ὡσπερ ἠμοίς ἡμῶν τόσον τῷ καὶ ἄλοχος, ἐπεὶ δὲ ποιεῖσθαι ἐλεγῖα ἄρμονοι παρά διαφερόμενοι ἐργαζόμενοι ἐτοίχως Ἔρυχαναχίς the doctor, who is the speaker, goes on to make it absolutely clear that he is having Heraclitus. δραμάλων in a musical sense, and in our sense of ‘harmony’; he declares that ἡ γὰρ δραμάλων συμφώνων ἵσταται. So aρμονος does not develop a technical musical meaning until the period of early fifth-century lyric, and this meaning is not widespread before the fourth century; even then it normally means ‘musical scale’ (derived from the method of straining), i.e. a succession of notes. Plato (but cf. Rep. 431e) is unique in equating the word with συμφώνως, which is normal Greek for a concord or harmony in our sense. Thus Plato (for we cannot put all the blame on his character Ἔρυχαναχίς is guilty of having misinterpreted Heraclitus on this point. It will also be noticed that Plato supplies τὸ ὑπόν as the subject of διαφερόμενον... συμφέρονται. This is not certainly the case in the other passage, Soph. 1220, ἐλεύθερος δὲ καὶ Σεισμοῦ τινι ϋς ὑπέρτεροι Μοῦσας συνενόησαν ὅτι συμφώνουσιν ἀναφερόμενοι ἡμείς καὶ καὶ λέγειν ὡς τὸν πόλεμον τι καὶ ἔντον, ἔχοστο καὶ φαίνεται συμφώνητον, διαφερόμενον γὰρ ἡμοῖσι συμφώνητο, φαοῦς αὐτὸν συναφότητα τῶν Μοῦσῶν. ὥστε μολὼν τὸν τοῦτο. Here the whole passage is concerned with differentiation out of the One, and it is possible to supply either τὸ ὑπόν or τὸ ὑπόν as the subject of the phrase attributed to

‘the more severe Muses’, who of course represent Heraclitus. In the earlier Symposium passage the supplying of τὸ ὑπόν as subject is in no way required by the context. Yet presumable Plato there tended to apply the same sort of analysis to Heraclitus as he later more explicitly applied in the Sophist, taking the opposite participles as referring to the whole cosmos as a unity: by treating Heraclitus and Empedocles as offering different but comparable explanations of a world-process he was forcing this specialized interpretation upon himself. It is most improbable that Heraclitus himself ever talked of τὸ ὑπόν or τὸ ὑπόν: elsewhere we hear of τὸ πάνω, or of specific descriptions of this κόσμος like τὸ πάνω δέντρον. The participles is of universal application: anything which is διαφερόμενον is also συμφέρονται, and the whole sum of things is no exception to this rule. Plato’s interpretation is therefore understandable. Thus these passages are not valueless, and though they should not be used as evidence that τὸ ὑπόν was originally subject of the first part of fr. 51, yet taken together they strongly suggest that in the version known to Plato (which, admittedly, he would not necessarily quote with great accuracy) συμφέρονται and not διοιστέαν was the main verb. It is of course conceivable that he substituted συμφέρονται from διαφερόμενων διαφερόμενον, one of the pairs of opposed predicates of συλλαβῆσαι in fr. 10. Yet αὐτῷ αὐτῷ in the Symposium passage suggests a clear reminiscence of ἑνωτῷ in the original saying. And quite apart from Plato, διοιστέαν does not seem suitable. In fr. 50 it has a special meaning which is partly dependent upon the hidden word-play between ἱματῖα and λέγειν; the sense is ‘it is wise to listen to the Logos and to say—the-same-as-the-Logos, that all things are one’. There is naturally no such motive in fr. 51; on the contrary, Heraclitus was by no means averse from using cognate forms with opposed prefixes to express strictly opposed ideas, and διαφερόμενον is what we should expect after διαφερόμενον, as in fr. 10. There the two participles are predicates: they represent opposite analyses which can be made, at any time, of continua of quality. Here the subject probably lies in the subject of the verb-forms, and the equivalence of the two processes which they represent is stated as a general rule; but as all opposites (and thus all things absolutely) can be regarded as subject to these processes, there is no disparity with fr. 10 (contra Gignò 12). A further possible objection to ἑνωτῷ διοιστέαν meaning ‘correspond or agree with itself’ is that
there may be no other sure case in which the verb bears this meaning, unless the idea of correspondence of words is present. Such an idea is certainly not present in fr. 51. Of the passages quoted in LSJ s.v., πότε, only two appear to break this rule: Hdt. vii. 54 ὁμολογεῖσθαι καὶ ὑπηρετήσαντος εἰσθανεῖν, and Lysias xx. 12 ὑπερν τινὶ ὁμολογεῖν τῷ τρίτῳ τοῦ ἀθάνατον. In these passages, however (also Hdt. ii. 10; ii. 81), the verb refers not to exact correspondence but to any kind of contact or similarity; probably by extension, though there is no theoretical reason why the ἴσος constituent of the verb should not occasionally mean 'proportion, explanation' rather than 'word'. In fr. 51 it might be possible to treat this constituent as referring, as in fr. 50, to the Logos, were it not for the word ὑπηρετήσαντα, which shows that absolute internal agreement is in question. In view of all these considerations, together with the fact that ὁμολογεῖν was naturally, after fr. 50, in Hippolytus' mind when he wrote out the second quotation from Heraclitus (note that he uses it as a link between the two quotations, in paraphrasing ὁν ὁμολογεῖν: ὁν ἀποτελεῖ πάντοτε ὑπηρετήσαντα), there seems to be justification for restoring ὑπηρετήσαντα to the text of the fragment in Hippolytus, who certainly reproduces it in its fullest form.

If πότε is not to be supplied as the subject of ὁμολογεῖσθαι, what is the subject? Zeller, ZN 327 n. 1, suggested that it lies within the participle, which therefore stands for πότε ὁμολογεῖσθαι. In Heraclitus this is by no means impossible; in fr. 58 neuter participles are probably used substantively without the definite article, and in fr. 136 the same is the case with neuter adjectives. From the available evidence Heraclitus' practice varied in this matter. On the other hand, it is at least equally possible that the subject lies within the main verb, where later Greek would supply a τί. The omission of the indefinite pronoun is fairly common in the early language: but Ἀγαμεμνόνων 71, contra the scholiast, Wilamowitz and Franke, is not a good example of the usage. Eduard Franke's note on this line (Aschenbrenner, Ἀγαμεμνόνων 11, p. 44f.) mentions the relevant authorities, and compares lines 39ff. of the same play. It is impossible to decide with certainty between these alternatives: the further possibility must always be considered, that the true subject lay outside the fragment and has been lost—although the opening phrase suggests that the fragment as we have it did not lead directly on from any preceding statement. One thing is clear, that

the statement implicit in the ὅτε ὁμολογεῖσθαι clause is of general, if not of universal, application: it states a truth about anything which can be regarded as 'at variance with itself', and we know from fr. 10 that all 'things taken together', that is, all apparent opposites, are superficially so regarded.

The second part of the fragment also has its difficulties. First the nature of its relationship with the first part may be discussed: does ἐξερεύνησεν ἑρμηνεύειν stand directly for the subject of ὁμολογεῖσθαι, or does it describe the way in which this subject undergoes the action of ἐξερεύνησεν-ἐρμηνεύειν? In other words, should the translation be 'is a π. ἁ. or there is a π. ἁ.'? Logically the first is, I think, impossible: that which is at the same time at variance and in agreement with itself (regarded from different points of view) cannot itself be said to be a connexion or method of joining; rather it is susceptible to these opposing descriptions because there is such a connexion between such descriptions. Thus the second part of the fragment goes on to describe not so much the subject of ὁμολογεῖσθαι as the opposing conditions of that subject.

ὁμολογεῖν has been translated above as 'connexion' or 'method of joining', and this must be the meaning here. The noun is of course derived ultimately from the root ἁρ- (cf. ἀφρωτός), 'fix' or 'join'. In the fifth book of the Odyssey it occurs twice, meaning a joint or fastening, something like γυάσθος; while at Il. v. 60 ᾿Αρμοῦντος is described as a carpenter and shipbuilder. The only Homeric passage where ὁμολογεῖν has anything but this strictly material sense is Il. xxii. 445, where the plural is used metaphorically meaning 'agreements'; in the Homeric Hymn to Apollo 155 and Hesiod Theogony 397 the personified ᾿Αρμοῦντος may in part symbolize agreement between men. This last cannot be the meaning here, since it would be
nonsense to talk about peace or agreement of bow and lyre: interpretations like those of Lassalle 1, 105 ff.; Pfeiderer, *Die Philosophie des Heraklit* 80 ff.; Joel, *Geschichte der antiken Philosophie* 1, 316, which assumed a δέρματι between bow and lyre (instruments typifying Apollo's dual function as a god of war and of peace), are implausible because they cannot be reconciled with the first part of the fragment. It has already been mentioned that the word has a musical application in lyric poetry; Pindar, *Nem.* 41, 44 f., wrote: ἕρματε, ἀλλ' ἔφοβοι γὰρ, ἱμίδες σὺν ἄρμονι μέλος...; cf. also Præm. fr. 46 Diehl, Lasus fr. 1 Dichtl, mentioning the *Aίχες* ἀρμονία. Thus by the early part of the fifth century, when Heraclitus was active, άρμονία had assumed the technical meaning "scale" or "mode"; yet these words are perhaps too abstract, for the scale is dependent upon the method of stringing (i.e., the tension of each separate string), and this is the same as the method of joining the two arms of the lyre. Thus the musical sense of the word simply involves a specialized application, but no significant extension, of what we have seen to be the basic meaning of the word, namely, "means of connexion." Yet in spite of the mention of the lyre in this fragment, it is out of the question that ἀρμονία should have its special musical application here; for this would be totally unsuitable to the other object of comparison, the bow. Nor is it easy to accept Zeller's suggestion (Z. 828 f.) that Heraclitus attached different meanings to ἀρμονία in the case of the bow and the lyre, perhaps unconsciously. Surely the matter is quite simple: the ἀρμονία is something which is common to both the bow and the lyre; one of the common elements of these two instruments is the presence of the taut string; the string or strings can be regarded as the method of joining or connecting the extremities of the bow or lyre, and "means of joining" is the basic meaning of the word ἀρμονία. Therefore the overwhelming probability is that in this fragment ἀρμονία means just this, and refers primarily to the string of the bow and the strings of the lyre. It may be noted that Empedocles uses the word four times, but never in a musical sense and three times simply with the meaning "joining"; on the fourth occasion (fr. 122, 2) Ἀρμονία is a personified figure opposed to Γύρος. The other fragment in which Heraclitus used the word is fr. 54 of this Group 7; there it also means simply "connexion" in general. Fr. 8 is an Aristotelian paraphrase (see p. 220), but the sense of ἀρμονία could be a purely general one. The musical instance of
different (i.e. high and low) notes making up a single ἀρμονία or scale, involving the succession of notes, is cited in connexion with Heraclitus in the *Eudemian Ethics*, H 1, 1331 a 25 (DK 22 a 22), then in *de virtut. i*, 18, then preceding fr. 10 at de mundo 396 b 15. Gigon 117 thinks that the first of these passages cannot reproduce the thought of Heraclitus himself, and he may well be right; probably the musical instance was used by followers or elaborators of Heraclitus; the non-Aristotelian passages depend either on them or perhaps simply on the information of the *Eudemian Ethics*. On Plato *Symposium* 174 a, 2 see p. 204.

There is, however, another property which the bow and the lyre sometimes have in common, and that is their shape: the stretched bow (and to some extent the string but unstretched, and even certain types of unstrung bow) has a rough horse-shoe shape similar to that of the lyre. Can this be, as some have thought, the reference of ἀρμονία in this fragment? It may be said at once that this word cannot itself refer to a shape, and the only way in which it can be connected with this idea is by placing all the emphasis on its epithet and making this refer to shape. Yet even if this is the meaning of the epithet it is extremely hard to see how there can be any connexion whatsoever between ἄρματος καταστρωτός and the horse-shoe shape of the bow and the lyre, let alone the significant connexion which we expect of an image employed by Heraclitus. To suggest as Bernays did (Ges. *Abh.* 1, 41) that the "connexion" is the central member into which in some bows two horn-like extremities were fitted, which has its counterpart in the sounding-box of the lyre, is surely somewhat far-fetched; in addition, it is not the connexion itself, but the connected arms which are πολλάκις πολλάκις and finally the bearing of the whole simile on the preceding sentence would still be obscure. Diels had another and more plausible explanation which again took into account the shape of both instruments: the arms of the Scythian bow and of the lyre 'streben aus einander wie Dachsparren'. Now it is true that rafters have roughly the same shape, and that they are under tension in such a way that if one rafter is removed the other (and whatever they support) will collapse. Preachter, *Philologus* 33 (1933) 342 ff., has followed up Diels' reference (Heracliti 28) to Alexander as cited by Elias in his commentary on the *Categories*, p. 242, 14 Busse, and discovered other passages to show that the image of πολλάκις πολλάκις
was quite commonly used as an illustration of the ἐσείς relationship in Aristotle; he quotes Simplicius in Car. p. 412, 20 Kalbfleisch as an indication that this image of complementary rafters, etc., was connected specifically with Heraclitus. This passage is as follows: 'Ἀριστοτέλης ἐν κάτω ὑπόθεσεν δύον τὸ πάντοτε υγιένιν καὶ πάντοτε λυκώς γενόμενο, τὸ μὴ ἐξ ἄλλης ἀρτησίας τάνυστα ὀστήρ τὸ πάντοτε ἄταλιον. Οὐ γὰρ τὸ ἄταλια ἢ ἄργες ἢ ἄργας ἢ ἄργες ἢ ἄργας, οὐ πάντως ἢ τὸ ἅρβον ἐκεῖον ἐκεῖον ἐκεῖον ἐκεῖον ἐκεῖον. Σημεία πάντως ἀραιωδίαν. In fact this merely makes the point that according to Heraclitus opposites were interdependent, like (Simplicius adds) relative properties; but the words ἐξ ἄλλης ἀρτησίας as applied to the rafters suggest other passages in the commentators, in which the image of the rafters was used. Praechter tries to be cautious in his deductions from these possible connections, and suggests that later Heracliteans may have had a hand in the development of the rafter-image for illustrating the dependence of separate opposites; but in general he supports Diels' interpretation of fr. 51. The complicated character of Praechter's article should not lead his readers to accept his conclusions too readily. The evidence is at best tenuous, and the underlying assumption that the bow and the lyre behave in the same way as rafters is totally false. Rafters press together at the point of junction, while the other instruments pull apart from it; in the latter case there is no particular mechanical strength in the relationship, and the necessity of the existence of one arm of the bow or lyre for the existence of the other is not something which particularly deserves comment. In their case the tension is directed towards the string, which has no exact counterpart in the case of rafters. Further, it is strange that Simplicius (who cites the comparison with the bow and lyre, but in connexion with Heraclitus' supposed equation of good and bad, at in Phys. p. 50, 11 Diels) did not mention the bow or lyre in the in Car. passage if this was the standard interpretation of fr. 51 at his time. But whatever the later interpretations of this fragment we may safely discard this view of the meaning of Heraclitus himself, on the grounds that it is obscure, inappropriate to the structure of the instruments in question, and neglectful of their common and most obvious characteristic.

The exact interpretation of the image may be postponed for a while in favour of a discussion of the variants πολύντες and πολυντος. Diels was clearly right in calling them ancient variants: Hippolytus has πολυντος; Plutarch has πολυντος at 1026b1 and πολυντος at 359b, while at 473f one manuscript, D, gives πολυντος and the rest (including the other members of D's family) give πολυντος. Porphyry, de anu. synph. 29, has πολυντος in a clear reference to this fragment: καὶ διὰ τοῦτο πολυντος ἢ ἀρμονιον (ἀνόριστο ἱππον) καὶ τοῦτο ἢ πολυντος ἀρμονιον [τοῦτον καὶ τοῦτον] Schleiermacher.

Thus there is nothing to choose between the two variants on the grounds of ancient testimony; the fact that Hippolytus gives the fullest version of the fragment and had access to a good collection of Heraclites' sayings does not mean that his reading is necessarily to be preferred, since the other may have been current before his time. The divergence in texts of Plutarch may have been due to uncertainty by Plutarch himself. Diels referred to Parmenides fr. 6, 9, πολυντος τοῦ πολυντος ἢ κάθαρος, as an indication in support of πολυντος in the Heraclean fragment. Yet it is extremely uncertain whether this phrase and the context in which it occurs in Parmenides really form a deliberate reference to Heraclitus. Parmenides may have had Heraclitus among others in mind when he wrote δύο τι ἰδαν ἢ τοῦτο ἢ τοῦτον νεώτερον φασι δύο, ἢ τοῦτον, but this is a very general description and certainly does not suit Heraclitus specifically. The πολυντος κάθαρος is even more general; a κάθαρος is very different from a ἁρμονιον, and πολυντος, even if it does not occur elsewhere among the Pre-Socratics, is common enough in tragedy and by no means an obscure compound. Some scholars have thought that the reference, if it is to Heraclitus at all, is to the δύο τι ἢ κάθαρος in fr. 60: but even if one accepts the conventional interpretation of that fragment as referring to the upward and downward path of fire, these alterations are not germane to Parmenides' 'being and not-being'. Theophrastus' references to an ἐναρκτορια ἢ ἐναρκτορια of things (Diog. L. 18, 7; Aetius i, 7, 22) depend upon his physical interpretation of the same fragment.

πολυντος has won the support of most scholars (though, for example, Zeller, Reinhart, Gigon, have prudently refrained from committing themselves); it is accepted by Diels, Kranz in DK, Wilamowitz, Gr. Lesbush i, 129, Neale in ZN 289f.; on the other hand Bриeger, Burnet and Waizer prefer πολυντος. I believe that this last view is the correct one. Hirzel, Unners. zu Cicero 11, 1,
159 n. 1, ingeniously suggested that Plato’s humorous periphrasis for Heraclitus at Soph. 242 e, ai συνεντευκτής τῶν Μουσών, following as it does on an almost certain reference to the first part of fr. 51, involves a punning reference to the idea of τῶν in παλαιότάτων in the second part of the same fragment, which he does not quote but might have expected his readers to have in mind. This must remain in the realm of speculation: a consideration of the actual usages of the two epithets may provide a stronger support for παλαιότάτων, παλαιότατος is used twice by Aeschylus in lyrical passages, meaning ‘averted’ as applied to eyes or face: this cannot be the meaning in the Heraclitus fragment and may be ignored. In four passages it means ‘turning back’ or ‘having turned back’—Sophocles Phil. 1232f. (..., τοι καλόν οὖν την καλύτερα την ευρέστερα); Euripides H.E. 1069 (lyr.) (τοι καλόν οὖν την καλύτερα); A.E. ix. 61 (τοι καλόν οὖν την καλύτερα); and of course Parmenides fr. 6, 9 already quoted. At Sophocles fr. 576, 5 the ms. reading is as follows: μάταια γένεσις τινος τῆς σκληραίας παλαιότατον (παλαιότατον δέλεων, ποιον τρόπον τί). Lobeck and Ellendt emended, almost certainly correctly, to παλαιότατον, and Meineke read παλαιότατον in place of παλαιότατον: Pearson accepted this. Certainly this epithet is more attractive; on the other hand, Jebb was right in holding the ms. reading to be possible. Pearson comments that ‘it would be difficult to find a parallel for παλαιότατον as here employed’; this is not altogether true, for LSJ quotes several parallel usages from Hellenistic, e.g. Philostr. adv. G.L. 6, 6 (παλαιότατον τῆς ἐκλογῆς ἐπιτόμους); v. 16, 9; Dioc. S. 16, 8, 7. Evidently ‘contrary’ as a description of successive events or results (not of shape) was a common enough meaning for παλαιότατον in κοινή: this may explain the manuscript reading in the Sophocles fragment, in place of an original παλαιότατον. In any case ‘contrary’ in this sense would scarcely be an appropriate epithet for a δέμων if this means ‘method of connexion’—still less if it refers to shape. Yet this must be how Diels understood it, for he translated ‘gegenseitige Vereinigung’, a translation which has been widely approved; though this sense goes beyond even the κοινή meaning. There is no other known meaning of παλαιότατον (Bacchylides 11, 54 Snell παλαιότατον τόπος is an extension of the meaning in tragedy): and it must be admitted that the word is not used in the fifth century in any way appropriate to δέμων, unless perhaps (as is improbable) the ms. reading of the Sophocles fragment is correct.

Παλαιότατος is a Homeric word, like many in Heraclitus’ vocabulary. It occurs five times in Iliad and Odyssey, always as an epithet of τῶν or τῶν and always immediately after the feminine caesura; the position of τῶν (three times) and τῶν (twice) varies in each case. 

In three cases, at Iliad 14, 443 = Od. xiii, 59, and Od. xxi, 11, the same words are used to fill the line after the feminine caesura: παλαιότατος ἀνήκετο εἴρηται (v). But even in the two other cases, although different words are used after the bucolic deixis, it is clear that παλαιότατος (or) occurs in a traditional position. Thus whenever the poet wished to mention the bow he knew that a suitable epithet could be used to fill a crucial part of his line. We surely have learnt enough from Milman Parry to know that this type of formula is sometimes used more or less indiscriminately, without precise regard for the original meaning of the formula. It is misleading to try and differentiate between a description of the string and the unstrung bow, for the epithet is used indiscriminately in either case: thus at Iliad 15, 466 = Od. xxi, 443, the bow in question is strung; at Od. xxi, 11, xxi, 59, it is unstrung; and at Iliad 14, 459 it is uncertain whether it is strung or unstrung (contra LSJ). In the two almost identical lines Od. xxi, 59, Iliad 14, 443, the context shows that the bow was strung in one case, unstrung in the other. Now it is clear that the string and unstrung bow cannot be described as παλαιότατος in exactly the same way; if the epithet refers to shape, then if the bow is ‘stretching back’ when it is strung it is strictly ‘stretching forward’ when it is unstrung, or vice versa. If, on the other hand, the verbal element in the compound carries most weight, and the emphasis is on the stretching or tension of the string or the whole instrument, then this can only properly be applied to the strung bow. There is a slight a priori probability that the two lines describing the strung bow, which occur in separate books of the Iliad, were composed earlier than those describing the unstrung bow, which occur in a single book of the Odyssey: it is therefore possible that the epithet originally applied to the strung bow and not to the unstrung, although if it merely describes shape we still cannot differentiate. 

Kranz in DK in a somewhat confusing note on the fragment asserts that the epithet in Homer applies to the tension of the string; this is indeed my own feeling, but unfortunately it cannot be proved. Certainly at Herod. viii, 69, and perhaps originally at Aeschylus Cho. 162, the epithet (derived no doubt directly from the Homeric
poems, as at Homeric Iliad xxvii, 16; Sophocles Trach. 511) is
applied to the shape of the bow, and in particular of the Astarte bow.
Yet at Aristophanes Birds 1739 (τὸν ἀστρέφειν μεταξύ) the word
may very well emphasize the tension of the reins rather than their
backward-pointing direction. In any case, these later uses tell us
nothing about the proper original meaning of the word, though they
may make it clear that in the fifth century it was legitimate to use it
in either of its two main senses.

The result of this investigation so far is that ταλάντωτος cannot
well describe δρομήν, and is indeed probably not used during the
fifth century in any sense which could conceivably be attached to the
reins. ταλάντωτος may refer primarily to the string bow, and
therefore probably to tension rather than shape. Diels, however, made
the following criticism (VS 6, 87): ‘ταλάντωτος τοξον versteht man,
hier ταλάντωτος δρομήν (1) der Grenz kann schwerlich auf die
ersehnten Gegenstande...gehen trotz Homer, Od. xxi, 401 f.’ His words
make it plain that he objects to the idea of a ταλάντωτος
δρομήν, and of this concept applied specifically to the lyre.
The passage from the Odyssey describes how Odysseus strung his bow
as easily as a man fits a string round a new peg in his lyre. This
simile is in fact quite irrelevant to our fragment and the idea
expressed in it; the point is that there is no difficulty whatsoever in
fitting a lyre string, because the tension on the string is created by
turning the peg after the string has been attached. In the phrase
δρόμην οταν γυναικεῖον περὶ κολλητον χορδήν, the verb is used much as
we use ‘stretch’ in expressions like ‘he stretched out his hands’,
merely to describe the covering of a given distance. If we ignore
this simile there is no more difficulty in talking about a ταλάντωτος
δρομήν of a lyre than of a bow: in both cases the reference is
probably to the tension in the string or strings, or in the instrument
as a whole. Admittedly the bow has a single string, the lyre has
several strings, but the general structure of the two instruments is
the same: a curved frame has its extremities joined by one or more
strings, which hold it under tension. According to Theognis
Trag. fr. 1 and Aristophanes Rhet. I 11, 1421 b 25, the bow was a
φαραγές δεξιός. It has usually been assumed that this expression
was based upon the similarity of shape, and this has even been
advanced as support for taking the epithet in the second part of
fr. 51 as referring to shape; but it is at least conceivable that δεξιός
is to be interpreted loosely as ‘without so many strings’, and that it
is the functional tension as much as the shape which gave rise to this
pretentious description. Thus there is no difficulty in treating
the tension in bow and lyre as similar. A more serious objection
would be that, while it is permissible to talk of a ταλάντωτος τοξον meaning
a bow under opposing tensions’ or simply ‘a stretched bow’, it is
not permissible to talk of a ταλάντωτος δρομήν: δρομήν cannot refer
to the instrument as a whole, but only to a part or property of it.
But even this objection is without real substance: the δρομήν or
‘connexion’ (whether this implies the material means of connexion,
as in the Odyssey, or the mode of connecting the connected things,
which is perhaps more likely) may legitimately be described as
‘under opposing tensions’, because in the case of the bow and the
lyre the connexion is between the arms of the instrument and the ends
of the string: the string in each case is made taut (though by different
methods), and thus the framework too is put under tension. In fact
there are, in the instruments as a whole, two opposite tensions: the
string is being pulled outwards towards its ends and the arms of the
frame are being pulled inwards towards each other. The effectiveness
of each instrument depends upon the existence of these two tensions
and the exact balance between them.

The questionable part of the above explanation is the translation of
ταλάντωτος as ‘under opposing tensions’ or, in the full translation
on p. 203, ‘working in both directions’. There is no evidence in the
Homeric occurrences of the word that so much as this was meant.
The normal meaning of τάλων in compounds is ‘back’, ‘backwards’,
or ‘again’. But the adverb τάλων, like τάλως, can imply contra-
diction or opposition: e.g. I. x, 36 πάλη τάλως = ‘innsorty’; Pindar
Ol. x, 87 νεκτήρ και τάλως = ‘the reverse of youth’. Yet these uses
do not suggest the idea of simultaneous contrariety. Perhaps,
however, the ταλής element itself implies this contrariety: any kind
of tension must work in both directions, and in a tautened string the
tension can be regarded as operating either from the centre outwards
or from the ends inwards. The addition of ταλής merely emphasizes
this contrariety, and it need have no more than its common force of
‘back’: a piece of elastic is pulled outwards, but it simultaneously
stretches back, i.e. towards its normal state or inwards.

Two other interpretations of the image, involving the idea of
tension, have been put forward. L. Campbell in his edition of the
Theaetetus (Oxford, 1861), p. xi, wrote as follows: 'As the arrow leaves the string, the hands are pulling opposite ways to each other, and to the different parts of the bow (cf. Plato Rep. 439), and the sweet note of the lyre is due to a similar tension and retraction: the secret of the Universe is the same.' Wilamowitz, Plato, p. 367, also believed that the Plato passage gave the key to the simile; the passage is as follows, Rep. 439b ὥσπερ γε εἴμαι τοῦ τοξοῦ καί καλῶς ἔχει λέγει οἵ τινες ἅμα καί χεῖρες τὸ τόξον ἀποδύναται τε καὶ προσελκύονται, ἐὰν ἄλλη ἑκάσσια γέροντες ἐν οἷς ἰσομερήσσων. But while it is true that the pulling of the bow-string and the plucking of the lyre-string increase the opposing tensions, they do not create them: thus this picture is needless complexity, and, indeed, is quite out of the question, since the action of the hands on the bow and lyre could not possibly be described as ἄρωμα. The second interpretation is that of Macchiari, Eracleio 94ff. (cf. Zagreus 417ff.), who believes that παλικάρες ἄρωμα refers specifically to the string. It is true that the string itself, without taking into account the rest of the instrument, contains a tension which is mechanically twofold. But this is not how Macchiari interprets παλικάρες; he takes it as meaning 'alternately stretching,' and refers it to the alternate tension and relaxation of the string as it is plucked by the fingers. This is obviously more applicable to the lyre, just as the Campbell-Wilamowitz explanation was more applicable to the bow; but in any case Macchiari's alternating tensions are entirely out of the question, for the first part of fr. 51, which the bow and lyre image is intended to illustrate, deals with something which is simultaneously tending together and tending apart: so much is shown by the present tense of διαφέρων.

We may now consider the implication of the whole fragment. The two-way tension that exists between the frame and the string in bow or lyre is said to resemble the way in which something which is at variance (with itself) agrees with itself; or, taken more concretely, the way in which something which is being carried apart is simultaneously drawn together. In view of Heraclitus' obsession with the opposites it does not seem too bold to guess that this something is the opposites in general, or each pair of opposites singly. Of course, διαφέροντα and ζωέροντα might themselves be intended to stand as a particular example of the coincidence of opposites, except that it is not the case that what is carried apart is literally drawn together except in very special instances like that of the bow and the lyre. If this were intended as a special concrete example then on the analogy of other fragments we should expect the form of the statement to be: τός λέγει καί λέγει διαφέροντα... διαφέροντα τοπικά γέροντες καί άρωμα. Now in fr. 51 it was concluded that διαφέροντα and διαφέροντα were alternative ways of describing σύλλογον, which meant 'things taken together' or continuum of quantity-quality falling within the limits of opposite extremes. Thus there is an additional reason for thinking that fr. 51 refers to the opposites. In every category there is a connection between the extremes themselves, as there is between the individual extremes and the unity which is formed by the category taken as a whole. ζωέροντα describes this synthetic way of regarding differentiation, which is symbolized in the bow and lyre by the fact that the string draws in the arms of the instrument and so holds it together. διαφέροντα describes the analytical way of viewing differentiation, by which the separation of the opposites and not their essential connexion is emphasized; in the image of bow and lyre it is symbolized by the arms drawing the string apart, and so tending to separate it and to disrupt the instrument as a whole. Properly speaking, however, these two directions of tension in the simile cannot be separated. That is the real point: the connexion is one which simultaneously operates in contrary ways, and it is only maintained so long as each tension exactly balances the other. If the outward pull of the arms is too strong the string breaks; if the inward pull of the string is too strong the arms break: in either case the ἄρωμα is destroyed and the uselessness of the instrument is at an end. So in the case of the opposites: each pair of opposites is at the same time a unity and a duality, tending together and tending apart. Only so can the cosmos or orderliness of things as men experience them be maintained. The connexion between the many phenomenal things and the single underlying unity, which is elsewhere described as the Logos or the result of the Logos, is maintained by the maintenance of a tension between opposites which exists as a result of their inevitable change, sooner or later, from one extreme to the other. If it were not for the connexion provided by succession the other connexion, of relativity to different subjects, could not exist. Thus this fragment is seen to be of wide application; the words διαφέροντα...ζωέροντα can apply to all pairs of opposites, and
thus the whole of existence. The grammatical subject cannot be precisely defined, as was shown earlier in the discussion, but its character is too plain to be mistaken. What it could not be is Diels' ἰδαν or τοῖς ἰδαν. It was perhaps the wide application of the fragment which persuaded Plutarch to supply the word κόσμου after ἐφύη ἦμα, on each of the three occasions when he quoted the second part. In each case his words are the same except for the divergence noted above over παράλληλος or παράλληλος: de Lyc. 45, 560a is representative: παράλληλος γὰρ ἐφύη ἦμα κόσμου ἐφύη ἦμα κάθε καὶ τοῖς, καὶ ἦρμακτον. Bywater even went so far as to give Plutarch's version the status of a separate fragment (his fr. lv). Yet there is surely nothing surprising about the occurrence of κόσμου in all three of Plutarch's quotations. He felt that in order to make the sense clear, especially since the earlier part of the saying was to be omitted, some special reference had to be given to ἐφύη ἦμα: and since he may well have realized that the statement was of general application it is not surprising that he added κόσμου. This is, of course, a word which would not have been used by Heraclitus without further limitation to mean what we call 'world'. At this point another piece of irrelevance may be considered: it is customary in the consideration of this fragment to mention Scholusius fr. 1 Diels, ap. Plutarch de Pyth. orac. 16, 402α (περὶ τῆς λύρας) ἦν ἐφύη ἦμα: Ζητοῖ συνεχής Ἀπόλλων παῖς, ἄρχην καὶ τάλος | συλλογῆς, ἔχοις καὶ λαμπροῦν πληθυνθέντας τά ξύλα φανερή. Here ἐφύη ἦμα: and the description of the lyre remind one vaguely of our fragment of Heraclitus: ἄρχην... συλλογῆς belongs to the common language of four-century hymnology. Scholusius, according to Hieronymus ap. Diog. L. ix, 16, composed a verse version of Heraclitus: it is therefore possible that the above two and a half lines come from this version; and are a reminiscence of fr. 51. But if so (and it is no more than a possibility) it tells us absolutely nothing new about Heraclitus except perhaps, what is not surprising, that Scholusius misunderstood him by taking ἐφύη ἦμα in a musical sense. Gigon, whose interpretation of the fragment as a whole does not diverge too much from that given above, misleadingly describes the lines of Scholusius as 'important'.

There is a danger in taking this fragment to imply any criticism or amendment of the ideas taught by Pythagoras. To name only two scholars, Jaeger, Namenlos von Euvra 109 (who refers to Norden,
in some statement of the same general import as frs. 10 and 51. Gignon points to the circumstance of διαφόρως being replaced by διαφορήσωραν in the second statement; but this hardly impugns its authenticity. Burnet 136 n. 5 chose to take συμφέρων as being a medical application of the word, implying allopathy; there are no grounds for this. Finally, a consideration of the context in Aristotle makes it very probable that only a summary of Heracitus was intended: the words from Euripides are indeed a loose quotation of fr. 898, 7ff., but the clause ὅταν ἔρχεται πένθος ἰσφραίαν in the original is condensed by Aristotle into ἐφευρείσθεν. More strikingly, Empedocles' view of the nature of attraction is given in an unpretentious summary; it is reasonable to suppose that Heracitus, too, is merely summarized, though with references to his original terminology.
Hippolytus Refutatio ix, 9, 5 (p. 242 Wendland) ὅτι δὲ (ὅ θεός) ἀρμονή [ὁ] ἀρκτός ἀρχοντος ἀνθρώπως ἐν τούτω λέγει ἀρμονή ἀρκτοῦς φανερῆς κρείττων ἐκεῖνη καὶ προσεξειμένη πρὸ τοῦ γιγαντοκομέουν τοῦ ἀρχοντος αὐτοῦ καὶ ἀρκτοῦ τῆς ἐνυπνεός.

1 line. tres non legi possessi: 6 ὃ δὲ Wendland, terr. Miller. 2 see. Wendland.

And that (god) is unapparent, unseen, and unrecognized for men he says in these words: An unapparent connexion is stronger than an apparent; he praises and admires the unrecognized and unseen side of his power, rather than the recognized.

This fragment is quoted twice by Hippolytus; the passage above follows a repetition of fr. 51, the first part of which, together with the introduction to it, is obliterated in the only manuscript. The general purpose of the last part of chapter 9 and the first few lines of chapter 10 of this book of the Refutatio is to show that ἡ ἱστολογίας ἐν τῇ μορφῇ τῆς ἀρχοντος (ix, 10, 1). This purpose is achieved for Hippolytus by following this fr. 54 with the quotation of fr. 55, διὸν ὃς ἔχει μισθήσας πάντα τῷ ἐγώ προτεινα, a saying which seemed to him (with some justification, it must be admitted) but the original context must have been different from that of fr. 54, and doubtless no contradiction was intended) to imply the opposite of fr. 54, that the apparent is preferable to the unapparent. Strangely enough he simply repeats this whole assertion, including the quotation of the two fragments successively, at the beginning of chapter 10 (fr. 56 having intervened): this seems to be a case of over-hasty composition. The second quotation of fr. 54 is introduced as follows: ἔτι γὰρ, ὡς εἰς ἀρμονή ἀρκτοῦς... Schuster, Heraclitus v. Ephesus 24, proposed that the reading should be ἐκ τῆς γὰρ, and that these words belong to the fragment, which is interrogative. In this way the meaning would be that the apparent connexion is better, and there would be no contradiction of fr. 55. Zeller (ZN 856 n. 1) devoted a good deal of space to refuting this mis-

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Our other source for the fragment is Plutarch de an. proc. 27, 1026a, in a context which is illuminating: τῆς δὲ φυσικῆς οὐδὲν μὲν ἐλεύθερον οὐδὲ χώραν ἐποτελεῖται τὸν ὄλον ἁρμονίαν ὧν ἀρμονίαν φανερῆς κρείττων καὶ κατακόπτειν ἄρκτυν, ἐν τῇ διάφορα καὶ τὰς ἐπιγραφὰς ὃς ἀρχοντος ἀρκτοῦς καὶ κοτζές. The γὰρ is clearly Plutarch's. The only significant thing is that this quotation in Plutarch, as in Hippolytus, follows shortly after a quotation of fr. 51 (at 1026b). Both fragments, of course, contain the word ἁρμονία, and it would not be surprising if they occurred together in some well-known collection of sayings of Heraclitus which may have been used in one form or another by both Plutarch and Hippolytus; nor can the possibility be ignored that the two sayings belonged to the same original context in Heraclitus; their subject-matter does not preclude this. Yet the safer course is to attribute the succession of these fragments in both Hippolytus and Plutarch to the occurrence in both of the same uncommon term.

This is the type of fragment which, short as it is and preserved in contexts which provide little clue to its original meaning, is susceptible of several interpretations, none of which can be shown for certain to be the correct one. In this case there is a fair measure of agreement among the authorities: Diels in Heraclitus and early editions of VS, Reinhardt, Parmenides 179, Gigon 29, and Walzer ad fr. held that the apparent connexion is between night and day, summer and winter, and all things and events which invariably give way to each other (as described in the fragments of Group 5), while the unapparent connexion is the essential unity which underlies opposites of that kind. Diels, in addition, suggested that the former type of connexion is perceptible by the senses while the latter is λόγος θεωρητός; but Gigon is right in holding that this kind of epistemological distinction is foreign to Heraclitus—at least, it may be implicit in his beliefs but was never expressed by him. Certainly his use of λόγος never has epistemological connotations of a Platonic order. In the third and fourth editions of VS Diels simply said that the ἁρμονία ἀρκτοῦς meant god, while Kranz in DK equated...
it with the Logos. But the context in Hippolytus is no guide to the original context of the quotation; Kranz’s suggestion is a little better, because the Logos either is or is very closely related to the fact that all opposites are one, and this may very well be the meaning of ἐρμοκός ἐρμοκή.

A more detailed scrutiny of the fragment may help to limit the possible meanings. ἐρμοκός must have the same sense as in τοκτονικον ἐρμοκός in fr. 51, namely, ‘connexion’. The only possible alternative is the earlier musical sense of ‘scale’ or ‘mode’, and an ‘unapparent scale’ is nonsensel. The question is whether we are to think of a concrete, material connexion or joint as used by the carpenter, or an abstract connexion; the adjective κατάκτην can in neither case bear any moral connotation, and must mean ‘stronger’. Now it is not true that material connexions, splices and joints and so on, are stronger if they are hidden and unapparent: therefore the hidden connexion cannot be concrete in this sense.¹

It is more likely that the apparent connexion is a concrete one, the unapparent one being the unity underlying the opposites, the sort of sense being that ‘the unseen connexion between opposites is stronger than a chain’. Yet one cannot be sure that the apparent connexion, too, is not a non-concrete one. The meaning might be that connexion between opposites is stronger than that between similars, or between things which are patently related to each other. To take an imaginary example: the connexion between summer and heat is more apparent than the connexion between summer and winter, yet it is not so strong; for heat can occur without summer (e.g. as a result of a fire), and parts of summer can be devoid of heat; while the connexion between summer and winter, which is one of succession, can never fail. Summer and winter, although apparently so different, are extremes in the same genus, and by definition cannot be ‘disconnected’. If Aristotle’s paraphrase in fr. 89 had read ἄπορα τῶν ἐρμοκῶν

¹ There is perhaps one meaning of ἐρμοκός which would give the fragment a specific application: at II. xxi, 215 ἐρμοκός means ‘covenants or agreements between opposing forces’. The word could therefore cover political agreements; it would be significant, and possibly true, to say that ‘a secret treaty is stronger than a public one’. Heraclitus did, after all, make political pronouncements. Yet even so, in view of the use of ἐρμοκός in an almost technical sense and specifically in connexion with the opposites at fr. 51 (as also in Aristotle’s paraphrase, = fr. 81), this interpretation can scarcely be called probable.
FR. 54

which connects all things. This interpretation of the fragment seems to give it more point than one which takes the apparent connexion in a concrete sense, though the somewhat naive quality of the latter meaning might be in its favour. Any judgement here is bound to be subjective: what is indisputable is that the fragment refers in one way or another to the underlying unity in things, also called the Logos.

123

Themistius Or. v, 69b φυσις δ` ει τον Ἰρακλειον μεταπεσθαι φιλει, και προ της φυσις ό της φυσις δημιουργος...

The real constitution of things according to Heraclitus is accustomed to hide itself, and sooner than Nature the creator of Nature...

The difficulty of this fragment lies in the determination of the exact meaning of φυσις. For the ancient authors who quoted it no difficulty existed—they took the word to mean what it commonly meant in their day, that is, Nature collectively. According to Diels' plausible conjecture, Porphyryus was Themistius' source for the quotation (repeated in the revised version at Or. xii, 159 b); he was certainly Proclus' source at in Republiam ii, 107 Krall, κατα της φυσις τοιοτα παροιμια, διοτι κατα της φυσις κρατεσθαι φιλει κατα Ἱρακλειον... This comes among arguments which, Proclus says, Porphyryus would have added (ibid. ii, 106). The earliest source in which the fragment occurs is Philo: references to it preserving the actual words but without specific attribution occur at de somni. i, 2, 6; de spec. leg. iv, 51; de figur. et inv. 31, 179. It is attributed to Heraclitus at Qua in Gen. iv, 1, p. 237 Aucher, of which only the Armenian text is preserved. Aucher's Latin translation is as follows: 'arbor esse secundum Heraclitum natura nostra, quam se obteneire atque abscendere amat.' (The tree is the oak of Mamre, Genesis xviii, 11; as usual the quotation is twisted to fit Philo's context. See also ZN 837 n.) Other possible references, without mention of Heraclitus, are Seneca Qua, nat. vii, 10, 4 (combined with atomist and Platonic ideas); Manilius iv, 869 f.; Julian Or., vii, 216 C. In the passages from Seneca and Manilius, however, even allowing for translation into Latin, the verbal correspondence with Heraclitus' saying is not striking, and the coincidence of sense may well be accidental: 'the secret of the Universe' and so on is by then a fairly common theme.

The surprising thing about the ancient testimonies is that none antedates the Christian era. It may be that the reason is the same as
that which explains why many of the extant fragments occur only in Hippolytus, that they were preserved in good summaries and collections which were carefully perused by Christian writers for their special purposes. Philo eventually performed an analogous publicizing function for this fragment; nevertheless, it is so short and so easily memorable, so convenient also for a variety of themes, that it is surprising that it was not quoted in earlier secular writings.

Needless to say, no evidence about what Heraclitus meant by ὁπόσις can be gleaned from the contexts of these later authorities. There is divergence among modern scholars: thus Diels gave ‘die Natur’ as the translation; Kranz added in parentheses ‘das Wesen’; Gigon 101 (here implicitly corrected by Heinemann, Nomos und Physik, 92-3) inclined to take the word in its most primitive sense, equivalent to ἔκδοσις: he took this fragment closely with fr. 769 (which is not, in fact, more than a collection of inaccurate paraphrases) and held that as every becoming involves the death of one sort of matter, the birth of another, this process might well be described as ‘hiding’. This is one of Gigon’s least fortunate conjectures; it is an over-simplification to say that ‘origin’ or ‘becoming’ is the original meaning of ὁπόσις: this view of Heidelberg was opposed by Burnett 369 ff. (whose own extreme view that ὁπόσις necessarily implies ‘stuff’, in early contexts, is equally out of the question). No one denies that ὁπόσις means ‘grow’—but this may be a derivative meaning. Rather the truth is that at the ‘primitive’ stage of language there is no firm distinction between ‘become’ and ‘be’. The root ὁπ- simply implies existence, and the broad general sense of ὁπόσις, from which all specialized senses are derived, is ‘essence’ or ‘nature’, the way a thing is made and, what is at times connected with this, the way it normally behaves. Aristotle’s various attempts at definition in Metaphysics Δ do not vitiate this view. In fact, passages in which ὁπόσις must mean ‘becoming’ or ‘growth’ are very rare. Ross, Metaphysics 1, 296, could find only Plato Laws 892 c, Aristotle Physics β 1, 193 b 12, in addition to Metaphysics Δ 4, 104 b 17. His opinion (following Aristotle, Met. Δ 4, 104 b 35 f.; cf. Lovejoy Philos. Review 18, 371 ff.) that at Empedocles fr. 8, 1 the word means nothing more than ‘substantial, permanent nature’ is not, however, convincing, and it is difficult to escape the conclusion that in that passage (but not

necessarily in Empedocles fr. 63) ὁπόσις, opposed as it is to ἐκδόσια τοῦ κόσμου, means something very like ἔκδοσις. This does not alter the argument that the most common early sense of ὁπόσις is ‘being’, though the idea of growth is not excluded and may be emphasized on particular occasions.

The translations proposed by Diels and Kranz are no less erroneous, suggesting as they do that the word in this fragment means the constitution of the whole agglomeration of things (Reinhardt 337 f., concurs, perhaps because such an interpretation supports his later dating of Heraclitus), or a transcendent principle—what we call Nature. This meaning is probably not found before the latter part of the fifth century, if then. The title ὁπόσις which is attributed to the doxographers to the works of nearly all the Presocratics is partly anachronistic: see p. 377 n. Burnett’s well-known contention that ὁπόσις means ‘stuff’ in all Presocratic uses is equally mistaken: as most scholars have now seen, the word tends to imply ‘material substance’ in these cases because most Presocratics thought that one could best describe the essence or constitution of a thing by describing its matter.

A specific guide to the interpretation of ὁπόσις in this fragment may be derived from the other occurrences of the same word in extant fragments. In fr. 1 (see p. 422 f.) occurs the phrase ...ἰσοπόσις, καθά ὁ πόσις ἀποδίδει ἀπὸ τοῦ τιτάν ὀφείλει τὸ κόσμον ὀφέλος ἡ εἴσ : the division of each thing into its proper category is made ‘according to its real constitution’, and the words ὁπόσις ἀποδίδει repeat the idea of a real essence (Gigon 10 and Heinemann op. cit. 93 disagree, and hold that the first phrase describes the origin, the second the essence of things). So in fr. 1064, which may include some original phraseology, the words ὁπόσις ἀποδίδει ἄρχονται are analogous to those of fr. 1; the meaning is ‘paying attention to things as they really are’. The only other fragment in which ὁπόσις occurs is fr. 1064 a (from Phatarch), here discussed under fr. 57. There the conclusion is reached that both these fragments are versions of an archetype which corresponded most closely with fr. 57, but which contained the phrase ὁπόσις

1 One must sympathize with Kranz in the difficulty of his task of subdividing the uses of ὁπόσις, in the word-index to DK: but it must be admitted that the result is not free from confusion. As always, original and doxographical uses are jumbled together, the latter being often quoted under A-B reference, wrongly implying that the original words of a fifth-century author are in question.
Doubtless, though, Heraclitus did not go into details, and the omission of a limiting genitive may be due to his condensed style and considerable grammatical freedom; compare his laxity over the use of the definite article. The idea of everything is one which would naturally supplement that of 'real constitution' for anyone who used ὁσος; in the same way as Heraclitus and was not confused (as we tend to be) by its later extensions. Thus the whole saying, brief as it is, falls into place as an assertion analogous to fr. 54: that part of the ὁσος of a thing which particularly tends to be concealed may be compared with the λογος ἑκατον of that fragment (for strictly speaking not the whole of a thing's ὁσος would be concealed, though doubtless for Heraclitus individual superficial characteristics were less significant than the underlying part common to everything). The hidden truth about things is that they are not separate from each other; they are compounded of opposites which are 'the same', and in spite of their apparent separation and irreconcilability they are inextricably connected in a unity which goes beyond a simple interrelationship of separate parts, since it extends not only to their arrangement and mutual relationship but also to their material.

It is important to notice that Heraclitus does not say that the constitution of things is unknowable, only that it is hidden: fr. 18 ("If you do not expect the unexpected you will not find it"). Those who search for gold dig much earth and find little", and possibly 83, suggest that with confidence a part at least of this hidden element can be discovered. The keynote of the fragments as a whole is that the Logos (which is the common element in the constitution of all things) can be apprehended, though most men ignore it. This is a completely different attitude from the scepticism of Xenocrates (fr. 34, 1: ὁσος ἐστὶ οὐδενός οὐκ ἦν ἐστιν), whose successors in this respect were Gorgias and other sophists, and Democritus (cf., for example, fr. 117 εἰτε ύμεν ἐστιν οὐδενός ἐν μισίν ἕκαστον οὐκ ἵππη). 1

That Heraclitus believed some things to be compounded of opposites is an assumption, but a legitimate one in view of his preoccupation with opposites, and the attitude of Anaximander before and Anaxagoras after him. The opposites themselves were regarded as substances, and doubtless some of the objects in the world were uncompounded opposites, e.g. the hot (what we should call fire) or the wet (moisture). For the connection between these objects see the suggestion on p. 245. The connection between compound objects depends upon a less rigorous application of the same principle.

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1 Cf. ἐστὶν τῶν πράγμάτων (in a context which links ὁσος and ὁμοιωματικα) in [Philolaus] fr. 6; there, as in [Philolaus] fr. 1, the meaning of ὁσος may be the same as for the Presocratics even though these fragments were probably not by Philolaus himself: they show considerable knowledge of Presocratic modes of expression.
Aristotle is our only witness for this fragment. The text of the context in which it is quoted is slightly corrupt, as often in the de sensu, a pointless and repetitive gloss has intruded. It is impossible for Aristotle to have written the sentence bracketed above, since by stating that all thinkers explain smell in terms of the smoky exhalation it contradicts both the assertion which follows—that all explain it in terms of exhalations, but of different kinds—and that which precedes, that some explain smell by the smoky exhalation. No doubt this sentence was copied into the text at this point from the place where it, or something like it, occurs after the quotation from Heraclitus. Certainly Alexander did not read it in the former position: in his paraphrase of this passage (p. 93 Wendland) he writes that Aristotle described some thinkers as saying that smell was the smoky exhalation, while of all of them said it was the moist exhalation, others the smoky, others both. This is a fair summary of the passage of Aristotle as restored above. I have followed Christ in adding ἔτι τὸ τοῦτο (meaning either 'to this opinion' or, syntactically easier, 'to this kind of description', i.e., as exhalations of one sort or another); after the ditography had taken place the original sentence, from which the repetition was made, doubtless became corrupted in attempts to restore a reasonable sense; and the misplaced repetition provides a clue to the original form of it. Christ, however (followed by the Teubner editor Biehl), retained the minority reading ἐτις ἐτις ὑπόσκης: Bere in the Oxford translation also read ἔτις but did not accept Christ's addition of ἔτι τοῦτο: like Biehl he explained ἔτις as being answered by αὐτόν at 129, which is difficult to accept. On the other hand, ἔτι τῆς ὑπόσκης, ἔτις ἔστιν Ἱσραήλ makes no satisfactory sense with any known meaning of ὑπόσκης. I suggest ἔτι ἐτις ἐτις (cf. τῆς ὑπόσκης above): the sentence in square brackets is misplaced, but otherwise closely follows the original and gives the clue to it. The original sentence was altered in order to avoid repetition, once its doublet had intruded shortly before; possibly δι' ἐτις in the majority reading ἔτις ἐτις ὑπόσκη was derived from ἔτι τοῦτο when this phrase dropped out.

The textual difficulty has little effect on the interpretation of the quotation; the meaning of the passage as a whole is not seriously in doubt. Only in the use of τῆς ὑπόσκης is there any reason to suspect that the quotation may not have been exact. τῆς ὑπόσκης by itself would have done well enough; Heraclitus does not elsewhere use the phrase τῆς ὑπόσκης, which became quite common a little later. Clearly it could have been added by Aristotle, who was not meticulous in quotation. On the other hand, the phrase τῶν ὑπόσκην τὖς τῆς, meaning little more than it would do in the Heraclitus fragment, occurs in Empedocles fr. 129, v; τῆς ὑπόσκης is used also in Diogenes fr. 2; Zenon fr. 3; Proclus ap. Xen. Mem. 11, 1, 27; and [Philolaus] fr. 2. In Melissus frs. 7 and 8 τῶν ὑπόσκην and τῆς ὑπόσκης carry special emphasis ('the things that actually are', even having its usual Eleatic implications) and are not quite comparable. One cannot say that an expression used by Empedocles could not have been used by Heraclitus, even though it does not recur in the extant fragments; but in view of the frequency of this phrase in philosophical language by Aristotle's time I have here omitted it from the quotation.

Chermiss 322 makes the following comment on the Aristotelian passage: 'Aristotle's notion that the fact that this smoky vapor is common to earth and air was the reason for the belief of earlier
thinkers is obviously false, since it rests upon his own theory of exhalations as intermediate stages in the alteration of the elements, the result of incomplete change of one of the pairs of qualities of which his four "simple bodies" consist. This is perhaps not very easy to understand, but I entirely agree with Cicero in his conviction that the dual-exhalation theory is Aristotle's alone and not, as some exegographers would suggest, derived by him from Heraclitus; see pp. 279 ff. Here we see Aristotle judging not only Heraclitus but all Presocratics in terms of his own meteorological theory. He thinks (or chooses to think) that Heraclitus' remark referred to his own dry exhalation because the word καρμοσ occurs in it, and this is the name which, at Meteorologica B 4, 359 b 12, Aristotle suggested may conveniently be given to this kind of earthy exhalation; in the de sensu passage he distinguished this exhalation as θ' καρμοσιας ἄδελφοι λέοντων. But does Heraclitus' saying really refer, primarily at any rate, to the nature of the sense of smell? The form of the saying suggests that it does not: the hypothesis envisages a condition which, if not merely imaginary, has little to do with the world of experience which would be the proper background for a discussion of the nature of different kinds of sensation. What we are entitled to assume is that Heraclitus thought that different odours which might inhere in what to the eyes is a single kind of smoke would be apprehensible through the nostrils; the only scientific presupposition here is that the nostrils are the means of smelling—which is hardly startling. If he had meant, as Aristotle suggests, that smell is connected with a dry, earthy exhalation which he called καρμοσ, then this meaning would have been put somewhat differently even by the obscure Heraclitus. As it is, the saying has the words καρμοσ and πίφει, and that is good enough for Aristotle.

Diels, Heraclitana, 18, took the fragment as a demonstration of the restricted value of the senses: "if everything turned to smoke the eyes would lose their power and the nose be the only criterion." Later he wisely abandoned this improbable interpretation (which does not even accord with Heraclitus' evaluation of the senses in other fragments); in VS he refers with approval to the interpretation of Patin, Heraclites Einheitslehre 17 f., and Krau in DK repeats this comment. Patin's explanation was indeed ingenious: he held this fragment to be ironical, another criticism of men for their passion for finding diversity at all costs while ignoring the essential unity of things. "Even if things turned to smoke, and so their one-ness became plain at last, men's noses would still smell out differences and concentrate on an unimportant diversity!"—This is indeed a possible explanation. I do not accept it, however, on the grounds mainly that ironical statements in Heraclitus are not common enough to warrant preferring an ironical interpretation of an ambiguous fragment to a straightforward one, where both types of explanation give a plausible sense. Reinhardt, Parmenides 180 n. 2, gave an excellent interpretation, of which the following account is a development. There is a hidden unity in the things of the world around us, a unity which is discovered by the intelligence working upon the results of the senses, not by the senses themselves. A hypothetical example of this may be drawn from the realm of the senses alone: if everything turned to smoke (a purely hypothetical assumption) the nostrils would still perceive all kinds of different smell in this smoke, but the eyes would be presented with a single uniform impression. Reinhardt remarked at this point: "now there is no difference between smell and the other senses"—in other words, the conclusion is that in the hypothetical state the same thing, i.e. smoke, would be both one and many to the same person according to what criterion he used (i.e. sight or smell). So also in the real world things are one or many according to the way one looks at them—this was precisely the implication of fr. 10. I would suggest a further possibility: that Heraclitus considered the sense of sight to be a higher sense than that of smell, and therefore that the unity presented by the eyes is more significant than the plurality presented by the nostrils; so the underlying connexion in the real world is more significant than the apparent diversity. It is possible to object here that there is no specific evidence that Heraclitus placed more value on sight than smell. This was, however,
the common ancient view: and he certainly preferred sight to hearsay (fr. 101a may not mean more than this). The deprecation of smell is one possible implication of fr. 98. But the view has been put forward that smell held not the lowest but the highest place for Heraclitus, for according to the plausible information of Sextus Empiricus adv. math. vii, 129 (DK 22 A 16) the soul's only connection with the Logos and the outside world, in sleep, is breath (with which smell is intimately connected). Judgement had better be reserved on this point.

Gigon 57, followed by Walzer, gives another twist to Reinhardt's explanation and refers the fragment to the cosmological doctrine that all things are fire (for they are forms of fire), though they appear to be different kinds of matter. Gigon admits that there may be no grounds for this special application, and it is indeed difficult to find any: the use of ὑπερήφανος must be restricted to the hypothesis and cannot give any clue to the aspect of the real world which the hypothetical example illustrates.

Reinhardt, loc. cit., pointed to fr. 15 and 90 as other examples of Heraclitus' preference for the hypothetical method of demonstration. Another parallelism is with fr. 67, where god is said to change in the way that fire receives different names when different spices are thrown upon it; here again smoke with different scents is used as an example of the combination of one and many in the same subject, according to different means of apprehension. In fr. 7 it is the phenomenal world as a whole which is so illustrated, in fr. 67 god, but as inherent in the world. The two fragments are very closely related, though there is a slight difference of emphasis; in fr. 7 the opposites are not mentioned.

GROUP 8

Fr. 80, 53, 84a, b, 125, 11

The fragments of this group declare, both directly and in metaphorical terms, that interaction between opposites—called 'war' or 'strife'—must be continuous, and applies in all parts of the world; it is 'common' in the same way as the Logos is common. There can presumably be remissions of movement and change at different times, in different parts of the metaphorical battlefield. Then, in the language of fr. 51 in the preceding group, the tensions are equally balanced. Any general interruption of the interaction or strife would cause the end of the ordered world as we know it; thus strife is not anti-natural, but the normal course of things.
Origen contra Celsum vi. 42 (ii. 111, to Koetschau) ...φησί [sc. ὁ Κέλσος] δέθης τοις πόλεμοις εινύπτωσι τοὺς πολίτους, Ἰρώλατους μὲν λέγοντα δόλοι  εἰλέαντας χρῆ τον πόλεμον ἑόντα τινὰν καὶ δίκερον ἐρυκαὶ καὶ γινόμενα πάντα κατ' ἐρν καὶ χρέων: Φερακρυὴν ἔτ... (seq. Pherecydes fr. 4).


Celsius says that the ancients used to hint at a kind of divine war, and that Heraclitus said as follows: One must know that war is common and right is strife and that all things are happening by strife and necessity. And Pherecydes... (Pherecydes Syrius fr. 4 follows).

The first two corrections of the ms. version are virtually certain; χρῆ (a comparatively common introduction to moral exhortations in Heraclitus, cf. frs. 31, 43, 44, 114) must have an infinitive, which can only be represented by τίκα in them. Corruptions of διόν are not uncommon in our texts: in this case three letters have been entirely lost—there is little to be said for keeping them with Diels, and many fragments lack connectives. It is a strange coincidence that the ms. has three extra letters at the end of the quotation, if Diels’ χρέων is right, even instead of τίκα: there is no sign in the Vatican ms. of c. Celsius (on which all other extant ms. depend) of such a transposition, which may, however, have been accidentally made at an earlier date. Diels’ conjecture, first made in a review of Bywater’s Heraclitē Ephēsii Religiae in Jenais Literaturzeitung (1877), 594, received some support from the discovery of the de piaeatis of Philodemus at Heraclea (pr. 433 ὁ includes the following lines, restored by Philippon, Hermes 35 (1920) 254:

...�οισαμάν κατ' ἐρυκαὶ καὶ τίκαν χρέων
πάντας ὁλοκλήρων Ἰρώλατος, Μηθεάνος
καὶ τοὺς ψυχομένους
ὁ δ’ Ἐντακτορῆς
κτλ.

238

Diels thought that in line τίκα was more likely to be the reading than κατ’ ἐρυκαὶ, however, is the commoner preposition in this sense and is certainly used in Anaximander fr. 1. Philippon remarked: 'Den Namen Empedokles lese ich mehr aus dem Zusammenhang als auch den Zeichen heran'; Heraclitus and Empedocles are so often mentioned together, especially in contexts dealing with strife, that this conjecture is not improbable even though only one letter is certain. At all events it seems possible, in spite of the fragmentary nature of the text, that we should recognize here a version of part of fr. 80; χρέων is a plausible restoration (a nominative is out of the question after the almost certain τίκα). Further confirmation that in this fragment Heraclitus conjoined the ideas of strife and necessity is possibly provided by Plutarch de soll. anim. 7, 964ε: ἐπὶ το γὰρ τεμένεσθαι καταποιεῖν ἐκείνον τον ἀνθρώπον σύνθετο τὰ ἁμαρτήματα μεταξύ τῶν Ἐμπεδόκλεισ καὶ Ἰρώλατου ὅσα ἀρχαίς προσδέχονται, συλλέγοντας ὀφειλόμενα καὶ λαμβάνοντας τὴν φύσιν τόν ἁμαρτίαν καὶ τὸν πολέμον ὁδών, ἐξαιρόμενης μὴν μὴν σκληρωθῆς ἐξουσίας κτλ. But Plutarch is talking about pollution connected with the treatment of animals, and in the case of Empedocles seems to have in mind fr. 119, ἄρχων ἄρχων χρέων... he who has embroiled himself with killing or with quarrelling and perjury becomes incarnated in one after the other of the lower animals. This fragment involves both ἀρχαίας and ἑ δὲ, and it is quite possible that Plutarch was thinking particularly of it when he claimed that Empedocles and Heraclitus looked upon necessity and war as belonging to the nature of things; in the case of Heraclitus he may have had in mind fragments rephrasing blood purification, like fr. 5, but in none of these is there any mention of necessity. Thus what appears to be a reference by Plutarch to the last clause of fr. 80 may be nothing of the sort; the reference may be primarily to Empedocles, Heraclitus being appended because he too talked about strife, and, in different contexts, about pollution.

No more adequate solution than that of Diels has, however, been offered. The ms. reading does not make sense, while Schuster’s textually unobjectionable emendation gives a very specialized and indeed inappropriate sense: κατακοντιάσευτα meant to be opposed to γινόμενα? for if so κατ’ ἐρυκαὶ should be in a position where it can apply better to both participles. Bywater’s τίκαν is better, and he compares Philemon fr. 204 Kock, χρέων τὰ πάντα γινόμενα καὶ τίκαν. But again this verb seems too abstruse for what
otherwise is a very undecorated generalization; and in this case it would add little to γνώσεως. Keersting at first followed Gundernann in reading χρεόδων; but the transposition of non-adjacent letters is not as easy as it might look, and in addition it is quite clear that the emphasis of the fragment is on τέλων-έψις. not on reiterations of the meaning of γνώσεως. Bigmore, *Empedocles* 175, suggested χρεόδων (υ καιροντοι) μενε; Diels wisely rejected Heidel’s improbable χρεόδων μὲνα. A point in favour of χρεόδων is that there may be elsewhere in this fragment a reference to the ex tant fragment of Anaximander, ...κατα το χρεόδων διδονα γει αυτα διηκυ κατα ποιω φυλάχθων τησ αδίκες κατα την του χρεόδων τάξιν. Here διηκυ means ‘retribution’, αδίκεια ‘injustice’. It is possible that Heraclitus was deliberately amending this statement by Anaximander, with its implication that opposites commit aggression upon each other, and that change between opposites involves a kind of injustice; on the contrary, he held that strife between opposites was ‘the right way’, normal and just. He accepted, however, the idea that the behaviour of opposites comes within the sphere of what must be, of the regular course of events; and for this reason may have repeated χρεόδων. Even if he not conscious of the use of the word by Anaximander, its previous known use in the same kind of context is in its favour here. Gigon 116 claims that Heraclitus is criticizing, among other pronouncements, Hesiod *Theog.* 276ff.: τόνδε γαρ ἀνθρώπων νόμον διάτοξε Κρόνος, | ἵκονα μείκτον καὶ θανάτον καὶ οἰκονομίαν πεπερασμένον | διήγερεν ἐλέειαν, ἐπεί τιν καὶ πληροὶ ποιμέν οὐ δέχεται | ευπροσφέρειν δ’ ἐδικώδη δικήν, | ἢ πτολεμὸν ἄρτωτα | γίγνεται.... Hesiod implies that strife among animals is due to the lack of ἀδίκεια, of any accepted and ordered way. Heraclitus does indeed proclaim the opposite of this, that ἀδίκεια implies the presence and not the absence of ἐρήμος. But the word ἐρήμος is not used in the Hesiodic passage, which diminishes the likelihood of a specific reference to it by Heraclitus. On the other hand, the description of war as ἐρήμος perhaps is an intentional echo of a well-known earlier passage: *II. xvn. 200* ἡνεκε οὖσαν καὶ τις καταμετρήσατα κατάκερκα. This declaration of Hecataeus is rephrased by Archilochus in fr. 38 Diehl, ἐπεῖπε...”ἐπιπνὸν γαρ ἐρήμον ἀνθρώποις” ἀσαίρει. Even here it is far from certain that Heraclitus was intentionally modifying a well-known expression; if so, one might have expected him to retain the personification. Also, ἐρήμος is a word which Heraclitus might have used anyway. It may indeed convey some impression of

impartiality, as in Homer and Archilochus; but the primary emphasis is probably on the universality of war—this surely must be the sense in view of frs. 2 and 114 and of the description of war as father and king of all in fr. 53.

The last clause of the fragment is paraphrased by Aristotle at *Eth. Nic.* 1155 b 5 (in what Diels wrongly counted as Heracleitus fr. 8; see p. 220), καὶ τέμνει τοίχων γίγνεται. The fragment asserts that war is common not only to all men, but also to all things; all things invariably come about (rather than come into being) according to strife. War or strife must here symbolize the interaction between opposites; for all change, as Heraclitus and many of his contemporaries seem to have believed, could be resolved into change between opposites: the unity which Heraclitus detected in particular pairs of opposites extended to the whole sum of things. Change between opposites is the normal course of events, it is what we might call ‘natural’: little more is implied by the words ἐρήμος and χρεόδων here. The first word meant originally the direction indicated by the majority, and implies normality; the second is sometimes equivalent to ἐκβολή, but even ἐκβολή in Presocratic contexts often means much less than ‘absolute necessity’ and is used to account for regular events which could not be rationally explained; particularly, perhaps, for the origin and continuation of physical change and motion. But χρεόδων imply little more than ἐρήμος, that is, conditional necessity; thus ‘it is necessary to know’ that war is common, if one is to be wise and happy and effective; but doubtless Heraclitus would hold that many men did not know this. H. Frankel, *GGN* (Phil.-hist. Kl. 1930) 181, stated this as follows: ‘Die Wörter des Stammesχρν – bezeichnen ein Sollen und Schuldig Sein, ein Gebrauchen und Beschaffen Sein, nicht ein Müssen und Unvermeidbar Sein’. What would happen if strife ceased to be the normal rule is suggested by Heraclitus’ attack on Homer, described below. In fact, the continuation of strife and change was particularly important for Heraclitus because it was by reciprocal change that many opposites were

*Theophrastus evidently took this fragment to refer to coming-to-be, in a cosmological sense; for Diog. L. 19, 8 (almost certainly derived from Theophrastus) appears to paraphrase this saying: τῶν ἐπιπνον οὖσαν καταμετρήσατα κατάκερκα μαγισθεῖται... In fact the present participle γίγνεται in the fragment could hardly refer to past and non-continuous cosmological events. (1. 241)
connected, all those which were held to be 'the same' because they inevitably succeeded one another. The cessation of ordered change would involve the surrender of unity, and the destruction of the kosmos or organism of things; though not all things need be enroaching upon each other all the time, just as in war some of the combatants are apparently at rest, either because they are gathering strength for new attacks or because they are locked in struggle with an exactly balanced enemy.

The whole fragment appears to be homogeneous and to be a carefully balanced and slightly repetitive statement of a single idea. War and strife are different words for the same concept; ùσει and ἔρημον also partly coincide, while the idea of ἔραξις is implicit in πᾶση. The fragment might be stated as follows:

"War-strife is everywhere, normal-course-of-events is war-strife, everywhere things happen by war-strife and normal-course-of-events."

If a, b, c are the three elements of the composite proposition, then b is predicated of a, of c, and a-c of b: in the last clause all three elements are taken together for the first time. According to this analysis ἔραξις is by no means inessential or inappropriate to the structure of the fragment.

Here we may consider the well-attested criticism by Heraclitus of Homer, for making Achilles wish that strife would perish from among men and gods (II. xviii, 107); for this would involve the destruction of the world as we know it, the ordering of which depends on strife. Unfortunately, Heraclitus' own words are not exactly recorded, and there is some variation between our sources about the consequence of Achilles' wish being granted; so this important saying cannot be given the status of a fragment. It should nevertheless not be neglected, forming as it does an important confirmation of and addition to fr. 80. Kranz, Hermes 69 (1934) 116, has pointed out that Heraclitus was evidently given to attaching specific sayings of Homer and Hesiod (cf. frs. 57 and 103). The evidence (given in part as DK 222.222) is set out opposite.—Cf. also Σ 4 to II. xviii, 107 ἡμέραστας τινι τῶν ὄντων φύσιν κατ' ἰσομερέστας νομίζων μέρος, ὡς ὄντων, συγγενές κόσμου δοκιμών αὐτῶν ἀξίωσην... In Aristotle's account the Homeric line is followed by reasons for the criticism, in indirect speech—that is, they are formally attributed to Heraclitus. But Aristotle is frequently imprecise in this way, and attributes his own conjectured reasons to the holders of earlier opinions to which he refers: the indirect speech is no more a proof of historical accuracy than an introductory προσ is a guarantee that a direct quotation and not a paraphrase will follow. Gigon 117 does not accept the reasons as those of Heraclitus, on the grounds that the opposition between male and female does not fit into any of the classes of opposites mentioned in extant fragments; in particular, their unity cannot be proved by invariable succession or by relative coincidence. Yet we are not entitled to assume that other classes of opposites were not mentioned by Heraclitus, and the male-female opposition is very striking even in an observation about the unity between them is of an obvious nature. Similarly, the musical opposition between high and low notes, and their conjunction in a time, is not cited in any fragment; Heraclitus might conceivably have used ἀπαίτητος in this sense, though he does not elsewhere do so (see on fr. 91). It is notable that both these instances occur in the pseudo-Aristotelian de mundo, and the musical instance in de uesto 14, 18: see p. 168f. None of our other sources, however, follows Aristotle in attributing these reasons to Heraclitus or even mentioning them. Otherwise, Plutarch and Numenius are not very different, and according to them Heraclitus held that Homer was unintentionally (ἀυτόπητος; 'quod non intelligere') wishing for the destruction of the world (in Plutarch, of ὄντων, perhaps because he had in mind νῦνων in fr. 80, which he quotes elsewhere). Simplicius and the Homeric scholiast (cf. also Eustathius ad loc.) agree that this,
according to Heraclitus, is what the abolition of strife would involve. Possibly Plutarch and Numenius used the same source; perhaps Simplicius followed Numenius; we cannot be certain. Simplicius mentions Heracliteans as well as Heraclitus himself; the rebuke is attributed to Heraclitus, and so is the reason for it—but the reason is expressed in words already attributed to the Heracliteans. This may just be because the words are those which occurred to Simplicius on both occasions, to express the same idea; but it may suggest that the rebuke belonged to Heraclitus, while the obvious reasons for it were made explicit later and eventually attributed to the master. This is a reasonable view to adopt in the absence of other evidence. All later sources except Plutarch agree with Aristotle in saying that Heraclitus reproached or blamed Homer (cf. Plutarch's Ἱστορία τῆς Ἱμηλίας Ἡσιάδου in fr. 106f., under fr. 37); here they are probably dependent on Aristotle. Why they deserted from him in the reason given for the attack is not determinable; judgement must be reserved also about whether the male-female and musical oppositions were instanced by Heraclitus himself or by followers. The last is perhaps more probable.

All the fragments of this group assert the necessity for the continuation of change in the world; the universality of strife is a less extreme stage of the belief which Plato attributed to Heraclitus in terms of the river-stimulus. Reinhart pointed out that there is no fragment in which all things are compared with a river, and Gigan accepted his point of view. I shall add that the river-statements (frs. 12 and 91) bring out a new idea about change: that it must happen according to measure if the result is not to be chaotic. The same idea is implicit in the παλαιός ἄριστος of fr. 51 and in the whole metaphor of strife, if this is made to apply (as it is) to opposites: the unity of opposites is destroyed if strife ceases, or if one side gains too great a predominance. On the other hand, the strife-metaphor does not imply, as the river-metaphor was held to imply, that everything is changing all the time. Nothing remains stable for long; all things eventually change, in no part of the world is everything stable—this was enough for Heraclitus, and indeed it is the common-sense view and the unexpressed view of most of his contemporaries.

53

54

Hippolytus Eusebius ix. 9, 4 (p. 242 Wendland) (post fr. 52)

...ὅτι δὲ ἢ τὸν θεὸν πάντων γεννητὸς γεννητος, κτισμὸν δημιουργοῦ, κτίσεων λέγοντος ἄκουσένης πόλεμος πάντων μὲν παντίρι ἢτις, πάντων δὲ βασιλεὺς, καὶ τοὺς μὲν θεοὺς ἄριστοι τοὺς δὲ ἀνθρώποις, τοὺς μὲν δούλους ἐποίησε τοὺς δὲ ἐλευθεροὺς (seq. fr. 54).

(After fr. 52) And that the father of all things begetth and unbegotten, creature and creator, we hear him say: War is the father of all and king of all, and some he shows as gods, others as men; some he makes slaves and others free (fr. 54 follows).

Hippolytus evidently derived his conclusion from this fragment (anticipated in the words introducing fr. 59) by the following argument: War is described as a supreme god, and yet he creates the gods as well as men; therefore sae god he is both creator and created. Childish arguments such as this give no help towards the historical interpretation of Heraclitus, but they at least show that Hippolytus was not prone to alter his quotations from ancient authors to suit his own ends: for he was clearly not exacting on the subject of relevance. Here he gives the fullest known form of this saying of Heraclitus, which is unusually symmetrical and makes exceptional use of verbal balance and antithesis; probably this is due not to later realigning, but to the intentionally hieratic nature of the description of Poimen. Plutarch quotes part of this description at de Is. 48, 379a, Ἱστορίας μὲν ἄκουσένης πόλεμος ἄριστοις πολεμοῦντας καὶ βασιλεὺς καὶ κύριος πάντων. Priscus twice attributes the predication of war as father of all to Heraclitus, in Tim. 20a, 242; Lucian has the same predication but without attribution to Heraclitus, at Quaest. hist., conscrib. 2; Icarmon. 8. In none of these cases is any light thrown on the original context. An earlier reference, probably to this fragment, was made by Chrysippus according to Philodemus de pietae c. 14, p. 81 Gomperz: εἰ δὲ τῷ τρίτῳ τῷ μετα΄ καὶ τῷ μετα΄ ἄλλῳ τῶν προενίργων ὀνάσεων τὰς καὶ ἀρχώντας καὶ τῶν

244
remain free. But how does it 'reveal' some as gods, others as men? Gigon 119f. explains that those who become gods are those who are killed in battle; this gives a neat pattern: War separates its participants into dead (who become gods) and living; the living it separates again into slaves (the captured) and free (the uncaptured).

Such a pattern would not be inappropriate to the antibalistic style: but does Heraclitus really believe that all those who are slain become gods? It is customary here to refer to Hesiod Erga 157f., where the 'divine race of heroes', Hesiod's fourth race of men, is described as οὐκολοντων ἱεροὶ. Heraclitus may here be thinking of the Heroic Age when all men died in war—at any rate he uses some of the terminology of the poet of that age, Homer. Homer calls all fighting men of good family 'heroes', but not even in Hesiod did all heroes become gods after death. He tells us that 'some were hidden by the end of death; the others were settled by Zeus at the boundaries of the earth' to live the blessed life of demi-gods. Yet these, we know, were those who had one divine parent—who were heroes in the strict sense. The majority passed to Hades where they were not gods but less than men. It was the golden race, according to Hesiod, who after their eclipse became 'diomós, guardians on earth of mortal men' (Erga 122f.); and these presumably are the 'thirty thousand immortal watchers over mortal men' of Erga 252f.

They are immortal; but their fate cannot be emulated by those of the Heroic Age, let alone by the contemporaries of Hesiod or Heraclitus. In Homer, of course, all but the semi-divine heroes go down to Hades. Therefore this interpretation of the fragment as a statement in terms of heroic literature and the heroic view of life and death does not bear examination. Nevertheless, Heraclitus may have had his own views about the fate of those slain in battle: fr. 24 and 35 attribute a special virtue to death in battle—not specifically to a brave death, at any rate in fr. 243 while fr. 156a, although clearly not original in form, may contain a Heraclitan sentiment—that souls of those slain in battle are 'pure' than of those who are wasted away by illness. The reason must be that the former are fiery, the latter watery: for my article 'Heraclitus and Death in Battle', AJPh 70 (1949), 384ff. We do not know exactly what were "

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pelaimon) and the Dios the α(γ)νον εφαλλότ(ε)ς and the 'Hephaistouk
L难以. Chrysippus correctly recognized that Heraclitus' description
of Polhemus in the fragment is that often applied to Zeus, and so he
asserts that Heraclitus equated the two. This is unlikely; in fr. 32
'his only completely wise thing' partly coincides with the Zeus
of traditional religion and to this extent is willing to be called Zeus,
but otherwise this name is fallacious; so too Polhemus is not
completely coextensive with Zeus.

This fragment restates in more concrete terms the assertion in
fr. 80 that war is common. In that fragment we learned that a
principle of strife or reaction between opposites was in question;
the present fragment contains nothing to show that so wide an
application is intended, and war here may be simply the war of the
battlefield, and no metaphorical principle. This, indeed, is what
the fragment as it stands implies, and this is perhaps the way in which
it should be taken in the absence of a defining context. Fr. 80
certainly indicates that the statement about the battlefield is probably
an illustration of a more general contention by Heraclitus, and
therefore fr. 53 may safely be grouped with fr. 80. Gigon 119 is
surely right in maintaining that ἀνθρώπων in fr. 53 must be understood
as applying to all men (more correctly to men and gods) rather than
to all things; the rest of the fragment shows that attention is
concentrated on the world of men. Zeus in Homer is the father of gods
and men, or the king of all the gods; it is he who exercises ultimate
control over the Trojan battlefield. Heraclitus elevates this function
to the supreme one, to the neglect of the other activities of Zeus.
War is supreme king, so Pindar spoke of νόμος as δ' ἄνθρωπων
βασιλεύς τυχάντων καὶ ἀδαμοντών, in fr. 167 Schröder. This, even when
restricted to the war of the battlefield, is no mere commonplace; it
may be true that Ionia in Heraclitus' lifetime had had a stormy
history, but that by itself would hardly justify his assertion. The
second half of the fragment may reveal its motive; yet here fresh
difficulties arise. The authors are probably 'gnomic'; 508e admitted
could refer to a distinction between gods and men which took place
once and for all, in the past, but the making of slaves and free goes
on all the time and presumably indicates that the first distinction too
is a continuous one. Compare the authors in fr. 111, on which see
p. 131. We can easily understand how War makes some men free,
others slaves: those who are captured are enslaved, other survivors

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246 247
Heraclitus’ views on gods: sometimes he uses ὑδατός and ἄστροι in a purely conventional way, at other times, as in fr. 69, the word seems to connote some idea particular to himself and closely connected with that of the universal Logos or formula of things. This Logos, in its material aspect, must be a kind of fire; and in so far as Heraclitus believed in gods at all they must have been thought of as fiery. The good soul, we know, is fiery; and souls which are fiery when they leave the body might be described as gods—although they can have no individual existence and are joined to the mass of aerial fire which is perhaps the source of the ῥηγέατα undergone by matter in the cosmos. The immediate conclusion is that Heraclitus may very well have thought that those killed in war achieve the only possible kind of divinity: thus war might be said to make some into gods and keep others as men; the latter may be divided into slaves and free. But this does not solve what is perhaps the chief difficulty about this fragment: not all human beings by any means partake in war (in its common sense), and yet War is said to be father and king of all. Can the effects of war be held to apply even to those who do not indulge in it—can they be said to be ‘free’ and ‘men, not gods’ as a result of former wars, or wars elsewhere, or the absence of war? This is surely too abstruse. Another fragment quoted by Hippolytus, fr. 62, may be relevant: ἁγάμων θυρωρίας, ὑπεραυτοῖν ῥηγέατα, living their death, dying their life. This seems to apply to men in general, not only to warriors. We have already seen in fr. 88 that Heraclitus held the living and the dead to be in a way identical, because each succeeds the other: whether this succession is invariable—whether mortals invariably become immortals—is another question. That they can so become the essential connexion between the two states. On the whole it is safer not to use fr. 62, itself so obscure in its limits of application, to explain fr. 53; it is obvious, however, that the two are in some way connected.

The problem remains: if war in this fragment refers (as the last clause strongly suggests) to the war of the battlefield, that is, war in its first and most concrete sense, then it is difficult to see how it can be called the father and king of all. Yet this must be remembered: we are not entitled to demand that Heraclitus should adhere to one kind of application of a concept, even within the limits of a single sentence. The careful schematization of the fragment suggests logical clarity, but this may be illusory: the sense may be ‘War is universal (in the sense of fr. 88), and on the battlefield it is responsible for each of three very different classes—gods, free men, slaves’. It is possible, indeed, that the last clause provides a close analogy to the previous clause: ‘War controls all human destiny; it distinguishes gods from men just as on the battlefield it distinguishes slaves from free.’ In this case war—strife as a general principle would show some as men, others as gods; the reference must be to what happens after death (‘men’ would be those who were found to be mortal in that their souls were destroyed by ceasing to be fire and becoming water), but not specifically to death in battle. Any kind of change—and death of whatever sort is a kind of change—implies the operation of strife in the sense of fr. 88, that is, the interaction of opposites. Yet such an example of parataxis where subordination of the last clause is clearly demanded by the sense would be unique in Heraclitus, even if it is not impossible in archaic prose style. Possibly the solution is that the inclusive force of ἔμιστροτα should not be too strongly stressed; after all, the word occurs as part of the conventional Homeric description, and Heraclitus may have taken it for granted that war in its concrete sense only has power over those who fight, or their dependants. Perhaps we are tempted to take ἔμιστροτα literally because we automatically take this fragment closely with fr. 88, in which strife is associated with all kinds of event, not merely with human events or the destiny of a certain class of humans—those involved in wars. This much remains clear amid the mass of possible conjectures: war in this fragment is personified and endowed with the power normally ascribed to Zeus. The fragment then is a strong paradox. Primarily it is war in its concrete sense which is in question: one of its effects as cited by Heraclitus, the making of slaves and free, is specifically associated with the war of the battlefield; the other effect mentioned, namely, the distinction between men and gods, may apply particularly to death in battle, if fr. 24 is rightly interpreted, but in view of general statements like fr. 62 and 88 it might conceivably be applicable in all spheres of life. In this case the concrete meaning of ἔμπωσε is temporarily associated with a metaphorical meaning as in fr. 88. In any case the fragment, even if it is a purely practical and concrete statement about war in a non-metaphorical sense, must have been used to substantiate the general principle asserted in fr. 88 in much the same way as the many fragments which simply mention practical instances of a coincidence of opposites were intended as illustrations of a general truth about opposites.
Plotinus' rejection of Heraclitus for his obscurity reproduces the phrase εἴπερ δὲ σαφώς αὐτούς in the same few lines of Diogenes. There, however, there is no mention of the two short sayings quoted by Plotinus; either these were found in a separate source by Plotinus or they belonged to the Theophrastean original but were neglected by Diogenes. The latter possibility cannot be dismissed; at any rate the two sayings, despite the lack of reference to them in other than Neoplatonic sources, seem to be genuine. Needless to say, the Neoplatonic interpretation provides no valid clue to their original sense, which probably had no more specific reference to the soul than did the 'way up and down' of fr. 65.

Died added the scholiast on Nicander Alex. 171 ff. (DK 22 A 14 a): ὅτι δὲ διαλέγεται οὐκ ἐκ τούτου, ἀνατέλλει τὸν κατὰ κύριον δηλοῦν, τὸν δὲ ἀπὸ ἡράκλειτου καὶ Μακρατίδως εἰρήκει ἡ ἠρακλείτου ἑπιστήμη ἐκ τοῦ τούτου καὶ Μακρατίδως ἑπιστήμη ἕτερα καὶ κατὰ κύριον δηλοῦν. We have no other sign that Heraclitus believed water and fire to be subservient to the winds, unless it be Aetius 33, 9 (DK 22 A 14 a), which attributes to him a standard explanation of thunder as the result of the collision of winds and clouds. That fire can be blown out, and water stirred up or evaporated by wind, is a commonplace observation; perhaps Heraclitus made it. It seems more probable that the scholiast recognized the phrase τὴν µὲν εἰσίν καὶ τὴν δεν εἰτέκαν in the Nicander passage as Heraclitean, and decided that Heraclitus was responsible for the whole sentiment.

Menocrates here is probably but not certainly the Old Comedian, and may genuinely have made some such remark. The Nicander passage, together with its scholiast, is of such dubious relevance to Heraclitus that it certainly cannot be used as evidence to settle a doubtful point. Diels accepted them, and the Neoplatonic interpretation, as relevant to the second saying in particular: the soul-fire becomes tired of serving the water and earth which compose the body. There is no justification whatever for this interpretation, which is accepted also by Kranz; the speculative nature of Plotinus' interpretation is shown by the phrase ἐκ τούτου δεὶ γίνεσθαι κατ' ἐμφάνειαν in Diogenes and the ἐμφάνειαν ἐκάθεν in Theophrastus Phys. 2 1 (see Table 1 i p. 24). In addition,
He gave no reason for this view, nor is it easy to discover one. One saying mentions rest (δυνατότερον), the other its opposite (κακότερον); one mentions change (μετάβασις), the other its opposite (τοιούτοι). 'Change is rest, no-change is weariness' is surely a legitimate summary of the content of the two sayings together; the second contains the additional concepts of service and being ruled. In fact they seem to belong so closely together that it may be wondered whether the κατ' which connects them was supplied by Heraclitus, so that they were originally continuous as in Plotinus; yet plainly Plotinus could have supplied the connexion here as after δῦνον τα δούλα κατ' κακότερον, and it is safer to assume that he did so. Gigno commented on the paradoxical character of the first saying and compared it with fr. 51, διορθωμένον όντως ηξισφηνται. The same doubt exists in both cases whether an indefinite τι is to be understood as subject of the verb, or whether the participle is to be taken nominally, the definite article being omitted. In the present case the second explanation is the less likely, for the sense (which is not in doubt) is clearer if the participle force is emphasized, either temporally or causally: 'rests while, or by, changing.' This looks like a generalization, and perhaps a specific subject should not be sought: even if τι is understood the translation should be 'anything (i.e. everything) rests by (while) changing.' This is not a paradox of quite the same order as the statements of the coincidence of opposites; here is no formal opposition between change and rest, but nevertheless our experience causes us normally to associate rest with absence of change, with stability rather than the reverse. The idea of 'rest' introduces a human criterion; δυνατότερον is properly applied to animate subjects, and where it is not, the sense is metaphorical. Thus Heraclitus is not merely asserting that change is universal (in that everything is subject to it), he is giving an explanation of this fact—a metaphorical and incomplete one, it is true. 'It is restful for things to change': this attempts to account for natural events in terms of human experience, much as Anaximander did with his ὕδα, ὀξύς, ῥήξις, and even Empedocles with his πάθος and ἐποχή, and ultimately even Aristotle with his κατά τέσσαρα. It has already been seen that in fr. 80 Heraclitus probably reacted consciously against Anaximander, not by abandoning but by reversing his metaphor of injustice; and in frs. 80 and 53 'war' is another metaphor derived from human experience and applied to external events. In the present case the paradoxical nature of the statement suggests that Heraclitus is trying to account for change in terms of the rest in accordance with men's own feelings; no sort of rational explanation is given and we are left little the wiser.

The compound μεταθάλασσαν is not dissimilar to μεταχώρησαν in fr. 88, which describes the replacement of one opposite by the other in the human body. Doubtless in fr. 84 too the change which is also rest is particularly change between opposites; for Heraclitus the preservation of opposites depends upon the continuation of change between them, and this change is an instrument rather than an end. ἀνάκεφαλεια recurs in fr. 111, where weariness (κακότερον) is said to make rest (ἀκάκοτερον) sweet and good; but in fr. 29 μεταθάλασσαν μεταθαλασσάτων must be a gloss by Clement or his source upon μεταθάλασσαν ἐξαιρεθησθησαν. Gigno 94ff. cites the two words χρηματοθήκη ... καταργήσεως in fr. 65 as a further example of terms of human experience being applied to the whole sum of things: this is possible. Fr. 772, a later elaboration of fr. 36, includes the words τα πάντα ἕκαστον (of the soul becoming moist); one alternative or the other, probably the former, must be a gloss by Numerius—another example of the Neoplatonic conception of alterations in the condition of the soul being due to the desire for change.

The second saying quoted by Plotinus also seems to be a generalization; again the accepted facts of human experience are applied to things in general, but this time not paradoxically: just as it is wearisome for a servant to continue toiling for the same master without change of scene or occupation, so (it may be inferred) it is wearisome for matter of any kind to remain indefinitely in the same relationship with its surroundings. This gives the clue to the paradox of the first saying, and explains why change is restful. Why Heraclitus introduced the new idea of being ruled must remain doubtful: he could easily have said 'it is weariness to remain always in the same surroundings'. But this is certainly less graphic; possibly, too, the tiresomeness of serving the same master was proverbial.3

As they stand, then, the sayings of fr. 84 are of wide application, and in view of other comparable generalizations in this group they

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3 Reinhardt, Parmenides 1940, 2, held that this saying applies to the macrocosm, fr. 20 to the microcosm: he continues to accept διατηρήσεως in fr. 20 as Heraclitean, even at Hermes 77 (1942), 4.
may be taken to describe the behaviour of things in general. The second saying, including as it does the idea of being ruled, might conceivably have had a more specific meaning; we cannot entirely exclude the possibility that it applies to the soul and its changes, though the apparent external evidence for this is valueless; if it does so apply then τοῦ αὐτοῦ refers to the body or its constituents, and the changes of the soul (death, sleep?) come under the general principle of change between opposites. In conclusion, the analogy should be noted between the change-metaphor and the strife-metaphor: change (which seems to be tiring) is really restful; war and strife (which seem to be wrong) are really right.

\[\text{I25}\]

\[(84a)\]

Theophrastus *de vertigine* 9 (III, p. 138 Wimmer) τὰ γὰρ παρακάτω κατέθει τὴν κάτων ἄλλοις ἐναντίον εἶ καὶ συνήμενα διὰ ταύτην, εἰ δὲ μὴ, ἐκ τοῦ Ἰεράκλειτος φήμης, καὶ ὅ κυκλώμα διηγεταίται τοῦ νήματος. Κυνούμενος, εἰ τῷ δὲ καὶ τῇ κυκλοφορίᾳ αὐτὸ ταύτη ἀπόειδοιοι. . .


For the things which by nature undergo this movement at other times even hold together because of it, but if it fails, then as Heraclitus saysEven the barley-drink disintegrates if it is not moved. It would be possible to give the same explanation for turning round, also . . .

Bernays maintained that the μὴ which has to be supplied in the quotation was displaced and added to the line above; the original reading was εἰ δὲ, which became corrupted to εἰ δὲ when μὴ was added. This is a possible, not a necessary emendation; for εἰ δὲ μὴ also gives a possible sense, perhaps a more logical one than εἰ δὲ if the vulgar ἄλλος is retained (and it is difficult to see what word this could have replaced); in this case there is a contrast between ἄλλος (=‘normally’, i.e. when they are in motion) and εἰ δὲ μὴ (=‘otherwise’, i.e. when they are not in motion).

The quotation proper cannot begin until καὶ or perhaps δὲ καὶ, Theophrastus had employed διηγεταίται twice in the immediately preceding lines, but Heraclitus too could very well have used this common Homeric verb. That μὴ must be supplied is shown by the *Problematum* attributed to Alexander of Aphrodisias, IV, 42 (p. 11 J. H. D. Usser) δὲ καὶ καὶ, διηγεταίται Ἰεράκλειτος φήμης, ἐν τῷ μὴ ταύτῃ, διηγεταίται; the ms. give κυκλώμα and τοῦτο, which were emended by Usser, the first change being certainly correct. The preceding sentence in the *Problematum* is almost identical with one which came a little earlier in Theophrastus, who was certainly the source of this section in the later work. Quite apart from this support, μὴ is required by the sense; a positive assertion, whether διηγεταίται or τοῦτο be read, is out of the question; so much is
demonstrated by the futile attempts at an explanation of this kind by Lassalle, 75, and W. Schultze, Archiv. f. Gesch. d. Philos. 22 (1929) 202.

The constitution of the κοκέος is known from II. xi. 63 ff.: it is a posset made of ground barley, grated cheese and wine; at Od. x, 234 honey is added. The barley and cheese could not dissovere in the wine, and the mixture had to be stirred before it was drunk. If it were allowed to settle the barley and cheese would sink to the bottom, and what would be drunk would be next wine, or wine and honey—but not κοκέος, for the mixture as such would no longer exist. This is one of those homely and concrete illustrations to which Heraclitus was particularly addicted. Many of them illustrate the coincidence of opposites; the present one must exemplify the result of an abolition of interchange and movement between opposites, such as that involved in the abolition of strife, for invoking which Homer was rebated by Heraclitus; see p. 242 f. The fragment contains a negative version of the view expressed in this group, that all things are subject to change, all opposites are opposed under tension (cf. fr. 51), war is father of all, it is universal and strife is ‘the right way’. If change between opposites ceased, then the opposites themselves would cease to be connected with each other; the only unity between them, and so the only unity subsisting in the world, would be destroyed. There would be no such thing as κόσμος, just as there would be no such thing as κοκέος if its ingredients existed in isolation from each other. The fragment is of greater importance than at first appears: it is the only direct quotation that asserts, even though only in an image, the consequences of an interruption in the reciprocity of opposites; image though it is, its possible field of reference is not wide. The above interpretation seems to the present writer to be overwhelmingly probable; Gignon 178 was right to reject the possibility that the reference is to an δίδως κόσμος. This last is a doxographical concept; in so far as it is the nearest doxographical equivalent to the general Ionian assumption that all objects in the world of nature are subject to change and decay it is indirectly relevant to this fragment: but Heraclitus always thinks of change first and foremost as change between opposites, and as one of the essential preconditions of the unity underlying all opposites.

The image of the barley-posset became well known; it perhaps suggested the form of the no doubt fictitious anecdote, which has

a completely different point, about Heraclitus’ symbolical drinking of the κοκέος (see p. 13), in Plutarch’s account of which the stirring of the drink is specifically mentioned. Chrysippus, too, used the image according to Plutarch, de Stoic. repugn. 34, 1049 γ. πρότος γεί σε τι πρότερο τερ περι φύσεως το δίδως τος κόσμος κοκέος παρεκκλησις [σε Χρυσίσππον] ελλα ελλα εστρέφεται και ταρατσάται των γυνειών… Chrysippus also accepted the equivalence of war and Zeus, probably after fr. 53. In Marcus Aurelius also the barley-posset is a symbol for confusion (as a sense not present in Heraclitus, it should be noticed); so at, for example, ix, 39 κοκέον και συνεπιστοσ; cf. vi, 10; iv, 27. Lucian, in his section on Heraclitus at Ph. ch. 14, connects the posset with the θανάτων θανάτου; cf. p. 476 ἀλλὰ κνως ἐγι κοκέος τάναι συνεπιστεῖται. The last word, meaning ‘are compressed’, perhaps reproduces the Stoic interpretation of confusion; if so, Lucian is misleading on two scores—change for Heraclitus was not necessarily (as Plato had suggested) continuous for all things simultaneously, and above all it was not disordered; the reverse in fact was true. This idea of disorder was probably in Epicurus’ mind when (according to Diog. L. x, 8 = fr. 238 Userer) he called Heraclitus κοκέος; though here the disorder is probably meant to be in the philosopher’s own thought. This piece of abuse is another comparatively early evidence for the authenticity of the fragment.
behave as parts of a single organism; before the present passage three lines of the Odyssey were quoted which merely enumerated certain trees. The quotation from Heraclitus, even without δὲος, is more relevant than that; it does not merely mention animals, it asserts that animals behave as the result of a stimulus to which they are all susceptible. For the author of de mundo this in itself was sufficient to justify his quotation. We cannot be sure that he did not understand the stroke or blow to be god's, but even if he did, this tells us nothing of what Heraclitus intended.

It is probable that Plato refers to the fragment at Critias 109a, c: the gods, he wrote, oyev νομίσας ποιμνία, κτήματα καὶ δρέπανα κατὰ τούτον ἡμᾶς ἐπιχρόον, ἐπάνω σοι πάντα εἰς λέγεται καθάπροσδείκνυεν τοὺς πιθανοὺς κτήνης πληγή νόμιτως, ἀλλ᾽ ὀνεὶν οὐκ ἔστιν μυρίας ἀποτελεσμάτως κατὰ τούτον διὰ τούτου, ὅπερ ὀνειρούμεθα τὸ ἔτος τῶν βοσκερῶν. There is little justification for believing, like Bergk followed by Diels, that oyev and δέος are references to fr. 64 and 41 respectively, since these words and the metaphor they represent are commonly employed by Plato. Diels (SB Ber 1901), 190 n. 3 was probably correct in believing that Proclus in Rempd. 11, 20, 23 Kroll depends upon Plato rather than Heraclitus—in fact, this passage may be derived from a Stoic source: αὐτοκράτωρ γὰρ ἄνω καὶ οὐ περιέχεται μόνον ὑπὸ τῆς ἐμπερήμωτος, ὡσπερ τὰ πληγῆν ἔχεινς τὸν οὐκ ἔχεινς, ἀλλὰ καὶ ἐκείνους περιέχεται. The same applies to two other Neoplatonist uses of the phrase τὰ πληγήν νομίτως, Proclus in Alc. 1, 279, 19 Creuzer and Olympiodorus in Alc. 11, 178, 18 Creuzer. A much more significant parallel to the fragment is provided by Cleanthes, Ἕλλην ἦσαν ὡς ὄνειρον ἅρκτην εἰς ἄρχετον ἑκείρειν ἂν ζῷον τούτον καὶ τις διαλέγηται κατασκεύασθαι τῷ γάρ ὑπὸ πληγής φόρας πᾶσιν ἐπὶ γὰρ τὴν ἴλην, οὗτοι ἄν οἱ κατακόειν καὶ τοὺς τῶν ἄραι ἄγουν ἀπὸ τῶν γὰρ τῶν. This passage undoubtedly contains echoes of Heraclitus, e.g. φυσικὰ παράδειγμα, is a clear reminiscence of τῶν δείκνυσιν in fr. 30. We are not entitled to assume, however, that the (κεραυνὸν) πληγή in the next line is another such reference, and thus that Διὸς or δέος should

And of living creatures both the wild and tame, those that graze in air and on earth and in water, are born and reach their prime and are destroyed in obedience to the ordinances of gods: for every animal is driven to pasture with a blow, as Heraclitus says.

This fragment cannot be assigned with certainty to this group.

The manuscript reading of de mundo can scarcely be right: 'every animal grazes on the earth' is surely too commonplace, and the article is unexpected; πληγή gives a commonplace sense, it is true, but one that can be related to that of other fragments. Stobaeus' version of this part of de mundo, Ecl. 1, 1, 36 (K. a. 43, 6 Wachsmuth), gives πληγή; so do the two best ms. of Apuleius' version according to Diels (SB Ber 1901), 197ff., followed by P. Thomas in the Teubner text of Apuleius' philosophical works (Apuleius de mundo 36, p. 172, 17 Thomas); this is accepted too by W. L. Lorimer in his valuable edition of the pseudo-Aristotelian treatise, p. 98 n. 1. The quotation is transcribed into an attempt at Greek by scribes who were ignorant of Greek script. Even if we accept that OCCarrI or OSSarl and offahiü or OSalYTI represent ΠΑΗΠΗ, we may hesitate to suppose that the initial Ω is a remnant of, or attempt to reproduce, ΣΩ (= δέος), which is what Diels suspected. In his note in VS he did not press for the addition of δέος to the fragment, but held that the context shows that this word must be understood.

Assuming that the author of de mundo took the quotation as a comprehensive illustration of his own point, this is so; but such an assumption is quite unnecessary. The whole context asserts that all things in nature, plants and animals as well as the heavenly bodies, as parts of a single organism; before the present passage three lines of the Odyssey were quoted which merely enumerated certain trees. The quotation from Heraclitus, even without δέος, is more relevant than that; it does not merely mention animals, it asserts that animals behave as the result of a stimulus to which they are all susceptible. For the author of de mundo this in itself was sufficient to justify his quotation. We cannot be sure that he did not understand the stroke or blow to be god's, but even if he did, this tells us nothing of what Heraclitus intended.

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be understood in fr. 11. There is nothing in Cleanthes about ἐπιθέτον to suggest that he had the fragment in mind; admittedly ἐπιθέτον occurs in line 5, but as a reminiscence of, for example, II. xvii, 447 ὅσον τε γεγονα ἐπὶ πτερὺς τε καὶ ἐπιθέτον. On the other hand, Cleanthes was doubtless influenced, in his use of πτηγήν, by the comparatively common references in tragedy to the 'stroke of Zeus': cf. Aesch. Ag. 367 Δίας πτηγην ἔχουσιν εἶπεν; Soph. 668 πτηγεῖος γένοις θεοὶ κατατηκοῦσιν; Soph. A. 137 πτηγήν Δίη; ibid. 278 κ θεοῦ πτηγήν τις; idem, fr. 961 θεοῦ εἰς πτηγήν. Diels in VS, followed by Kranz, considered that the existence of this kind of phrase supported his view that θεοῦ is to be understood in the fragment: but the existence of a common metaphorical use of a word does not mean that all uses of that word are to be interpreted metaphorically. In Cleanthes, it should be noted, the blow is the blow of the thunderbolt, not of Zeus directly: it is a symbol for the τοῖχος which holds things together and by its two-way pull gives them stability and strength (cf. ταύντα ἐργά τινος πτηγην). This τοῖχος was evidently described by Cleanthes as a blow of fire, cf. fr. 563 v. Arnim, ap. Plut. de stoic. repug. 7, 1034D: δέ ἦσαν δαίμονες ἐν ὑπάρχοντι φωσκός ἐιπέν δεὶ πτηγὴν παρ' ἐν νόσον ἐνεργή. Thus the connexion between (Δίη) κρανιός and πτηγή in Cleanthes is based upon a purely Stoic conception; this is not to deny that this conception was expressed by means of separate symbols derived from earlier thought—but not necessarily Heraclitan symbols, since the thunderbolt as the weapon of Zeus, and the 'blow' of heaven, are common ideas in tragedy and elsewhere.

The conclusion is that Cleanthes' Hymn is of no positive value in the interpretation of Heraclitus fr. 11, and that the supposition that the blow mentioned there is a divine one is virtually unsupported. 'Every animal is driven to pasture with a blow' makes sense as it stands, and is as true as any such generalization is liable to be. The 'blow' is the quite concrete kick or lash or prick which you give to a cow or a donkey; this is what the words ascribed to Heraclitus imply and this is how they must be taken in default of stronger considerations than those adduced by Diels and his supporters.

To consider the fragment by itself: γόρο obviously belongs to the context in de mundo. ἐπιθέτον means 'a creeping thing', or, more literally, 'something that moves with its trunk parallel to the ground', i.e. κρίνας, other four-footed animals, and reptiles; birds and fishes are excluded. So too, normally, are men; at Od. iv, 418 ὅσον ἐπὶ γαλλόν ἐπιθέτον describes some of the things Proteus might turn into, and therefore probably not men; on the other hand II. xvii, 447, cited above, includes men—but the verb is perhaps less definite in application than the noun. Men are formally included among ἐπιθέτον at Xenophon Mem. 1, 4, 11, τοῖς μὲν ἄλλοις ἐπιθέτον ποῖος ἔστω· ἀνθρώπων δὲ καὶ κρίνας, though ἄλλοι in cases like this is often used loosely. On the whole it is probable that the meaning of the fragment is restricted to animals (and, of course, to domestic animals that can be grazed). This does not prevent us from taking it as an illustration or example of some wider statement which has been lost. At its face value it is somewhat banal; and Heraclitus was fond of concrete illustrations of generalizations. Cattle are driven with blows; men, perhaps, are driven with a different kind of blow (a god of one?—Diels' interpretation here makes a different claim for consideration). But nowhere else in the fragments do we hear of a blow, of god or Logos, directing men; on the contrary, most men are able to neglect the Logos and live in private worlds. However, Gigon 146 dubiously subscribed to this kind of interpretation, and added: 'Das ist ein vorzügliches Bild, wie es in der Gegenüberstellung Gott-Mensch angemessen ist'; cf. fr. 64 and p. 355 f. He performed the useful service of strongly questioning the relevance to Diels' argument of Nicander Alex. 171 ff. (DK 22A 14a). Apart from the one phrase ἀνθρώπων there is probably nothing Heraclitan here: see p. 251, where the scholium also is dismissed as evidence.

Nestle's conjecture of the fragment's meaning was that '...alles Existerende—also auch alles Leben—unveränderlich' (ZN 912): but although this accords well with Heraclitus' emphasis on the importance of σώφρον, it involves reading a great deal into one simple concrete illustration. Nestle was perhaps over-influenced by the context in de mundo. Wissowa (Gr. Felsbuch 11, 132) is more credible: 'Heraclitus hatte nur gemeint "alles Vieh (und so die Menschen) wird mit dem Schlafe geweckt"; ohne Gewalt geht es nicht ab; πάντας πετρραντευομ...'. The connexion of the fragment in this way with frs. 80 and 53 is not a necessary one; war is no more exclusively a symbol for the motive of change in Heraclitus (as it certainly is for Empedocles) than it is for the fact of change. War is common not only to
all men, but also to all things and events (fr. 80... γινόμενα πάντα και ἄλλα ταῦτα). In the case of ἀρχή the opposition between them and their masters is an instance of this war: perhaps the fragment means no more than this. Perhaps, after all, men are included, contemptuously as Gigon suggested: men too are driven, but with different blows, e.g. wars, ambition, hunger and want—this was the view of H. Gomperz, Zeits. f. öst. Gymn. (1910) 963. Conceivably we should interpret the fragment in the sense of fr. 29 (... τὰ πολλὰ κακὰ, οὐκ οὐκοὶ πάντες κακὸς) as referring only to the foolish majority of men who need driving like cattle, with blows such as Heraclitus himself administers, towards an apprehension of the Logos. R. Hackforth suggests that the emphasis might be on animals: men have to be driven even to get their essential food (and similarly animals have to be driven before they obtain the bare minimum of understanding, i.e. of the Logos). Thus there are many possible interpretations once the fragment is separated, as it should be, from the context in which it is quoted. On the whole I think it as likely as not to be a concrete illustration of the universality of strife: the opposition between man and beast may typify that between man and his surroundings, or the action and reaction between all things absolutely.

GROUP 9

Fr. 6, 3, 94, 120, 100 [+ 1370]

The fragments of this group deal with astronomical phenomena and their laws. The first four all concern the same: fr. 6 and 3 consist of apparently naïve assertions about it; fr. 94 emphasizes its regularity, and fr. 120 also, if it is not merely an enumeration of the four main directions, stresses the same point. Under fr. 6 is discussed the theory ascribed to Heraclitus by Diogenes Laertius, presumably after Theophrastus, that the heavenly bodies were bowls in which exhalations burned. This is here accepted as a basically true account (though the dry exhalation is due to Aristotle), from which, however, it is clear that Heraclitus did not devote much time to meteorological-astronomical events, or describe them exhaustively. The bowl-theory is itself sufficiently dogmatic to suggest that the naïve observation of frs. 6 and 3 is not merely intended as a criticism of Milesian dogmatism; nevertheless, Heraclitus evidently tried to be empirical in astronomy. Fr. 6 may also be intended as an assertion of measure in large-scale natural phenomena, as one aspect of the regularity which he detected in all natural change. Fr. 100 should probably be connected with the theories attributed to Heraclitus in astrological sources, concerning the human generation and a "great year"; human and natural cycles are parallel, and changes in either are regular and interrelated. It is to this inherent regularity that fr. 1370 must refer, if it is not merely a Stoic adage.
Aristotle Meteorology B2, 354 b 33 διδ και γελοιοί τότες ὡς τῶν προτέρων ὑπάλλον τῶν ἔλεον τράφονται τῷ ὕδρε. καὶ διὰ τοῦτο ἤσοι γας καὶ ποιεῖται τὰς τροφίς αὐτῶν οὔ γαρ ἢ τοὺς σώματος διαφαίνεται τόπος παρακεκτείναι αὐτὸ τὰ τροφῆν. ἀναγινώσκει δι' ἐν τούτῳ ὑπάλλον τῷ ἔλεον τράφονται καὶ ἤσοι γας τῷ παιδίν τῷ, ἥν ἦν ἢ ἢ τροφὴν, μέχρι τοῦτο γὰρ, τὸ ὕδρον τῷ παιδίν τραφέν ἐνιάκετο καὶ ἀλάκουσκόντος καὶ πρὸς τὸν ἔλεον τό ἀναγινώσκει τῷ ὕδρε, ἢ τῇ ἅμοιῳ τιστήν ὑπάλλον συμπεριέτῃ τῇ γεγομενῇ ἱκανᾷ, δι' ἢ τοῦ ἄκακος ἄσωτος καὶ περὶ τῶν ἔλεον υπάλλον. τὸ δὲ ἄρτι δέον ὁμοίως ἢ μὲν γας φαίνεται ἀναγινώσκειν ὑγροὶ καὶ ἤτοι ἀναγινώσκειν γίνεται καὶ ἢ τραφέν (οὐ γὰρ ἢ ἢ) τὸν ὑπάλλον συμπεριέτῃ τῇ γεγομενῇ ἱκανᾷ κρόνος ὁς ἦν ἔτοι, περὶ τοῦ ἔλεον ὑπάλλον τῷ παιδίν συμπεριέτῃ, ἀπελεύθερον γε τῶν ἄσωτῶν τροφῶν, ἀλλὰ εἰς τὸν ἔλεον τῷ ἔλεον καθέτερον π′ Ἡ νήφελης φησὶν νέος ἐστιν ἡμέρη ἐστίν, ἄλλω ἃτι νέος συνεχώς.

Hence all those earlier thinkers are absurd who supposed that the sun is nourished by moisture. Some of them, indeed, say that this is the cause of the solstices: for the same regions cannot continuously supply the sun with its nourishment, and it must inevitably be nourished in this way or other. For visible fire lives just so long as it has nourishment, and moisture is fire's only nourishment—as though the moisture which is drawn up could reach so far as the sun, or this ascent were of the same kind as the coming-to-be of flame, on the analogy of which this supposition about the sun is based! For flame is constantly coming-to-be, by a constant interchange of moist and dry; it is not nourished, seeing that it hardly remains the same for a single instant. This cannot be the case with the sun, since if it were nourished in the same way, as they say it is, it is clear that the sun is not only new every day, as Heraclitus says, but always new at every moment.

Chermiss 133 n. 541 argued that this whole passage refers only to Heraclitus and his followers and not, as has been generally thought, to a whole group of early stoics. Certainly Alexander, commenting on 355 b 7, was wrong in saying that Anaximander explained solstices as a search for nourishment: for there and at 355 a 22 Aristole distinguishes one group of people who said that at first the earth was moist, then it was dried by the sun, and air was generated and caused the solstices. Elsewhere Alexander plausibly assigned this belief to Anaximander and Diogenes of Apollonia, to whom Anaximenes should be added; the idea of the earth drying out from primeval moisture was a not uncommon Ionian one, held also by Xenophanes and Archelaus (it was not in fact invariably associated with the explanation of solstices as due to wind). Aristotle clearly contrasts with this theory of solstices the theory in our passage that they were due to the sun's search for food. Probably Heraclitus did think that sun and moon were nourished by moisture; cf. Διήθεν 11, 17, 4 'Ἡρακλείτος... πράγματα τού τίκτης ἐκ τῆς ἀπὸ γῆς ἀναφθομένης. However, this is the only occurrence of τροφή or πράγμαta in the doxography of Heraclitus, and it is in any case partly false, for according to other accounts it was the moist exhalation, not the earthy one, that was burned in the bowls of the sun and moon.

Chermass adds the following considerations to support his view that only Heraclitus and his followers are meant: (1) the direct mention of Heraclitus as author of the quotation; (2) the nourishment by moisture (cf. fr. 31, he presumably means, where sea turns somehow into fire); (3) the implication of the theory of de vietu 1, 3 that the sun's search for moist nourishment is also Heraclitiun; (4) ἄρουρα at 355 b 6, referring to the ἄρουρα in fr. 60; (5) 'the implication that the theory in question distinctly called the process τροφή and not γένεσις (355 a 9-11)'. But these indications fall far short of proof, and some of them are invalid: (3) assumes that de vietu 1, 3 refers (a) to solstices, and (b) to Heraclitus; but there is grave doubt on both points. The passage states as a general rule that there is a reciprocal movement between fire and water, since fire approaches water to obtain nourishment from it and water recedes at the too close approach of fire. There is no mention of the sun; and although there is much imitation of Heraclitus from 1, 5 onwards, there is nothing recognizably Heraclitean here (so Friede, hotly opposed by Burnet 156 and 157-6). There is much borrowing in this treatise from other sources also, particularly from Anaxagoras, Empedocles, Archelaus, and unidentifiable medical sources: the interaction between fire and water looks like a combination of
Archelaus' theories with medical theories of τὸ ὕποπόν as τροφή. (4) is very slight; we know that Theophrastus misinterpreted fr. 60 as referring to a cycle of matter, but not that Aristotle did so. As for (5), it has already been seen that the idea of τροφή is not particularly Heraclitean; though in addition to the doxographical passage already quoted Heraclitus used εἰπέσχεται quasi-metaphorically in fr. 114. It is probable, though still not certain, that he believed the sun to be nourished by moisture (see below), but this may have been a widespread popular account according to Antiphon fr. 26 the sun is fire 'grazing upon' moisture; Aristotle suggested that one of Thales' reasons for the choice of water as principle was that the warm comes-to-be and lives by water (Met. A 3, 983 b23), and Aëtius, 3, 3, 1, expanded this into a regular exhalation-theory; the search for food is mentioned as one possible motive for the revolution of the stars at Lucretius v. 523ff. The most specialized view that the salsates are due to the sun's search for nourishment may also have been a popular, non-scientific one; but the evidence for connecting this explanation with Heraclitus is very slight (cf., for example, the fact that Cleanthes, who in physics sometimes followed Heraclitus, is said by Cicero, N.D. iii. 14, 37, to have subscribed to this view).

Thus only the specific reference to Heraclitus in this passage of the Meteorologica can be used as sure evidence for our purpose. Aristotle attempts to discredit the theory that the sun feeds on moisture by asserting that the sun does not behave like an ordinary flame— or if it does, it must be continually changing (not merely new every day as Heraclitus said), which is absurd. The argument is not a good one; according to Aristotle's own interpretation elsewhere Heraclitus ought to have agreed that the sun was new all the time, which is, after all, a hypothesis worth considering. It is conceivable that there should be no pause after ἀέριν: '...it is clear that, as Heraclitus says, the sun is not only new every day but new all the time.' This accords with the τόντας ἢμα interpretation of Heraclitus, and does not weaken Aristotle's sense; but if this were the meaning καταστήματος ὧν ἦλεκτρον θείον would more naturally precede ὧν ἔσεσθαι. Alexander and Olympiodorus understood the quotation to end at ἀέριν, and, especially in view of the fact that other substantiation for the τόντας ἢμα interpretation is lacking, we may do likewise. Now if Aristotle's reference to Heraclitus is a serious one—if, that is, he wished to make an exact scientific comparison with the earlier theory and not merely to take a well-known expression out of its context and pervert its sense for his own stylistic rather than scientific purposes—then Heraclitus must have meant that the sun's matter is gradually renewed during every twenty-four hours, not that a completely new sun is born each day (like Xenophanes' sun, which continues on in a straight line and disappears altogether each day), or that it is extinguished at evening and rekindled at dawn: so also Reinhart, Hermes 77 (1942) 335. But that this last is precisely what Heraclitus did mean is suggested by the commentators upon Aristotle and the scholiast upon Plato Rep. 498 a; and, indeed, Aristotle is as likely as not to have used the quotation in a light-hearted and inexact fashion, especially since he did not normally consider Heraclitus worthy of serious attention:

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| ἀναπόκτησε τὸν ἦλεκτρόν κατὰ τὴν ἀέριν | ὑποπερτερονέοις ὡς τὴν ἠρμογνωμονηματικὴν ἀκομὴν ἀπὸ τοῦ ἐν τῆς κοίλῃ τῆς ἐκς ἀναποκτήματος ἐθέλουσθος ἄριστον ἐπὶ τὸ ἐν τῷ ἀέριν | ὦ, τὸ ἐπάνω καθὼς ἐν τῇ ἐν τῇ ἔκτη ἐν τῷ ἐ

All these commentaries go beyond Aristotle and agree that according to Heraclitus the sun is kindled in the morning when it rises in the east, and extinguished in the evening when it sets in the west; Olympiodorus adds that this is due to cold in the west and heat in the east, while the Platonic scholiast holds that the extinction is caused by submersion in the western sea, and that the sun then passes to the east below the earth's surface (κτησίβιω πάνω γιὰ ὁ). Perhaps Reinhart, Hermes 77 (1942) 336 n. 3, was right in thinking that Olympiodorus' comment is a perversion of the account represented by the scholiast, and that Alexander is independent; at all events all three agree in the assirption of ἄπραξια καὶ ἀπεξάρτητος to Heraclitus' sun. Here we must consider Plato Rep. 498 a ἄριστο

266
following Theophrastus: see Simpl. de caelo p. 294 Heiberg, quoted under fr. 30—and then took the opportunity of attributing to Heraclitus the old popular idea of the sun being quenched in Okeanos and later rekindled in the east.

I accept the view that fr. 6 originally continued with an assertion that the sun is somehow kindled and extinguished; for although Plato and the commentators might have been led to imply this by confusion with fr. 30, it is improbable that they should have made this confusion independently—and as Reinhart, op. cit. 238, remarked, it is unlikely that the Aristotelian commentators are dependent here on Plato, whose context is very different from theirs. But both Gigon and Reinhart share one assumption which is totally unjustified, that the sense of ἀποθέμενον and ἁπλών in the original sun-statement must be parallel in sense with ἀπωθτικεύμενον μέτρα and ἀποκαταστάσθησαι μέτρα in fr. 30. This last phrase certainly refers to simultaneous kindling and extinction (though the parts which are kindled are different from those which are simultaneously extinguished): but the sun-statement may perfectly well have been concerned with periods. The commentators are explicit that this was the case: they may have been merely applying Theophrastus' false periodicity-interpretation of Heraclitus, but if some part of the evidence is misleading it is at least as easy to assume that Aristotle misapplied his quotation from Heraclitus, as to suppose that Plato and all the commentators, who certainly go beyond the passages on which they were commenting, are wrong. Ptolemaeus here is of negligible evidential value, being an extremist follower of the ἀπωθτικικος ἀποθεμενος interpretation.

The commentators' accounts, and particularly that of the scholastic on Plato, suggest that Heraclitus subscribed to the mythological idea that the sun was carried round Okeanos in a bowl, from west to east. The arcaic loci classicai for this myth are Minnemus fr. 10 Diehl and Sittichorus fr. 6 Diehl; the latter begins as follows:

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"Αλλος δ' λεγομενος ἰστός ἵπποπληθον
χρυσοσ, ἐφορα δι' ἄλαμπανον περίθαλ
ἀθυρσόν ποτὶ μοιδήν ξυλίστω ἰομεθώ
τοιεν μέσην κοπαθῶν τ' ἀλεογον πενήθη τ' θρίοις.
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σαφείς (= ‘bowls’; the word later means ‘boat’, e.g. at Aristophanes *Knights* 1145). There is no indication that these bowls were used like the sun’s bowl in the myth, to sail round Okeanos; but they might be a development of the mythological story. There is nothing in the fragments to support the truth of the doxographical account of σαφείς (nor is there any mention of fr. 6 in the doxographical sources); but this is such an unusual idea, so different from the sort of thing which would be invented by Theophrastus or a doxographer, or imported from another source to fill a gap, that it deserves provisional acceptance as belonging to Heraclitus. There is one statement which refers the theory to Alcmaeon and Antiphon also, *Aetius* ii, 29, 3 Αλκμαίων Ἡρακλείτος Ἀντίφωνον κατά τὴν τοῦ σαφείδος στροφήν καὶ τῆς περίπλους [sc. ἐκείνην τὴν σελήνην]. The lemma (preserved only in Stobaeus, not in pseudo-Plutarch) may be at fault, though another theory in one respect similar to Heraclitus’—that the sun feeds on moist air, and its rising and setting are due to the search for this—is attributed to Antiphon by *Aetius* ii, 2a, 15; Antiphon was an eclectic in his physical theories, and it is not impossible that he accepted part of Heraclitus’ astronomy.

Deductions from fr. 6 can be carried no further; but this is an appropriate place to describe and assess the Theophrastean (presumably) account, already mentioned, of Heraclitus’ explanation of the heavenly bodies. This is one of the very rare topics, together with the generation and ‘great year’, and Sextus’ account of the soul’s contact with the outside world, on which the post-Aristotelian tradition has anything credible to add to the extant fragments. All the relevant information is contained in Diogenes’ tenth memoir account (for the earlier part of which see Table II on p. 24, and p. 323). Diog. L. ix, 9–10 γίνεσθαι δὲ ἐναλλάξεις ἀπὸ τῆς γῆς καὶ Θεότους, ἐν μὲν λουτρὸς καὶ καθάρος, ἐν δὲ ἐνεργείας. ἀνακάθεσθαι δὲ τὸ μὲν ὕδωρ ὑπὸ τῶν λυμπρῶν, τὸ δὲ ὕδατος ὑπὸ τῶν ἐνεργῶν, τὸ δὲ περίχον ὑπὸ τῶν ἐναλλάξεων ἄρῃδος ὡς ἦλθον: εὐς μὲν ἐν κάτω ἀκατοστροφοῖς κατὰ καλύτερην πτήμον ἄνθρωπος, ἐν αὐτὶς ἀρχομένοις τῆς ἀκατοστροφοῖς ἐπιστρεφόμενος ἄρῃδος ὡς ἦλθον: τὰ δὲ ἄρῃδα ἐκείνα ὡς ἦλθον καὶ ἐκείνα, τὴν δὲ σελήνην προσερεῖσταν ὑπεράνεια ὑπὲρ τοῦ καθάρου σφέρας τούτου, τὸν μὲν ἡλίον ἐν ἐνεργείᾳ καὶ ἀνακάθεται καὶ μύριον ὡς ἦλθον ἔχειν σελήνην καὶ μύριον ἔχειν διάστημα τοῖς πάντοις μιᾶλλον.
(ἐπικατηγοροῦσαν) of the dark one; so too summer is caused by the increase of warmth from the bright exhalation, winter by the ascendency of moisture from the dark one. This explanation of day is at variance with the idea that the sun is fed on moisture; for in this case night would be caused by the mere absence of moisture, not by the presence of its contrary, and nothing positive like a dark exhalation is needed to quench the sun. Darkness patiently comes when the sun sinks below the horizon; this is quite different from the sky being filled with or covered by a dark vapour. Conceivably the impure region through which the moon moves is the region of the dark vapour; when the sun sets this vapour is able to spread upwards and cause total darkness. Now it is true that darkness and shadow are sometimes indicated in early contexts as something positive and active, as mist or ὅμιο; but Heraclitus was well aware that the sun is the cause of day, and that day and night are really the same (because they are due to the presence or absence of a single cause, and also because they inevitably succeed one another), cf. fr. 99 and 573; he would scarcely have thought that night was due to a negative and a quite separate positive cause: the absence of sun, and the presence of a dark exhalation. Cf., however, Burnet 135 and Reinhardt Porneisides 182. As for winter, it was known before Heraclitus' time that this was caused by the retreat of the sun to the south, whether in search of fresh moisture to absorb, as one popular account maintained, or blown by winter winds as Herodotus suggested (11, 24); it was obviously not due to a persistent masking or diminution of the sun's power by a dark exhalation.

Thus it is intrinsically improbable that Heraclitus believed in two exhalations. He believed in one, the sea-exhalation, is indicated by the following considerations:

(1) The φυσικήσια theory requires that something shall be burnt in the bowels, and the view reported by Aristotle that the sun (or fire in general, cf. also de vivis 1, 3) feeds on moisture suggests that this substance is the moist exhalation.

(2) The cosmological changes described in fr. 31 include one from sea to fire (the nature of which is not specified if, as I think, ἰδοντικα here means "fire"; see p. 330f). This is most likely to take place by evaporation, an observable phenomenon and the only conceivable meteorological means of change from sea to the fiery sky. This evaporation is the moist ἐφεύγομαι; it may even have been called 'bright' because it feeds the bright sun. Heraclitus may not have used the term ἐφεύγομαι, but the one which Aristotle used for his moist exhalation, namely, ὅμιο.

(3) The doxographical tradition is unanimous in attributing the sea-exhalation to Heraclitus, while the land-exhalation is only intermittently assigned to him. Aristotle himself has nothing to say on this point, unless Prob. 934b 33 is by him or an immediate follower: ἐκ δὲ κατὰ τῶν ἄκρωτορρησίων ἐκ τοῦ τούτου ἔλεγομαι καὶ ποιομένου ἄλοιπου γίνεσθαι καὶ γῆν, ἐκ δὲ τῆς ταλαντίας τῶν ἠλικῶν ἀναφθαρμένη. (Whether Heraclitus himself made such a distinction between fresh and sea water must remain a matter of doubt; see also on fr. 31.)

How, then, did the theory of two exhalations come to be attributed to Heraclitus in the doxographical tradition? Simply, it must be assumed, by the confusion of a known Heraclitean single-exhalation cosmological theory with Aristotle's expansion of this into his two-exhalation meteorological system. It is invariably taken for granted that Aristotle took his two-exhalation theory straight from Heraclitus; but if this were the case one might expect some mention of the fact in the Meteorologica—not in acknowledgement, of course, but rather as a criticism of Heraclitus for not having made proper use of a good idea or in substantiation of Aristotle's own belief by reference to its antiquity. No such mention occurs (Heraclitus being named only as author of fr. 6); on the contrary, there are clear suggestions that Aristotle considered the two-exhalation theory to be his own invention. At Meteor. A 15, 349a 12 he turns to consider the nature of winds, also of rivers and the sea. But first, he says, the difficulties involved must be discussed, 'for as in other matters, so in these we have received from our predecessors no explanation which might not have been given by anyone': ἄποτε γὰρ καὶ τοῖς ἀλλω, ὡς οὖν καὶ τοῖς τούτοις συνὸς περιλαμβάνων λόγον τούτων ὃ μὴ καὶ ὃ τοῖς ἐρροήσεις. Aristotle's eventual explanation of winds (which is delayed until B 4, 350b 27) is entirely based on the two-exhalation theory: ἐκ δὲ πνευμάτων λόγοιον, λαβώντας ἐπικράτειαν αὐτῶν ἴσως νεφελώς. Ἀπετί συγκατά ἑαυτή τοῦ ἀναφθαρμένου, δέλεον, ἢ μὴ ἄγρα ἢ ἐπὶ ἔφαγε. Are we to say that this complicated explanation might have been given by anyone? for if Aristotle really had it from Heraclitus (and at Diog. L. 19, 10 winds are accounted for by the interaction of two exhalations), this is what he implies. No:
Aristotle can only have received simple and popular accounts of winds, and the two-exhalation theory is his own development, subsequently attributed also to Heraclitus. There is further evidence: Aristotle at his first mention of the theory introduces it as something new (this is a probable though not a certain inference), as an improvement on ‘what some think’: A 4, 341 b 34 vetaimówvénos, γὰρ τῆς γῆς ἐπὶ τοῦ ἄγα διὰ τὴν οὐσίαν ὄαγκας γίνονται μὴ ἐπιτὸ, ὡς τοῖς οὖσοι, ἄλλα διὰ τὴν μὲν ἐκπονοντοπέραν τῆς ἀναμισθίσας καὶ τῆς πνευματοπέρας τῆς μὲν τοῦ ἐν τῇ γῇ καὶ ἐπὶ τῇ γῇ γύρου ὀμφέος τῆς ἀγα οὖσῃ ἡ ἐρα ἀναμισθομένη. The Oxford translator, E. W. Webster, suggested that the view that there is only one exhalation is Plato’s at Timeus 56a; this seems improbable, and I would suggest that Aristotle is thinking primarily of Heraclitus. A further indication that no two-exhalation theory existed before Aristotle is given by Meteor. B 4, 359b 39, where Aristotle says that the moist exhalation has a name, ὀξύς, but the other one has no name but may be called something like ἔκματι: καθά τοῦ ἀ ἡ μὲν ὀξύς, ἢ ἐκ τὸ μὲν ὄλον ὀξύσιον, τοῦ χεῖρος ὄνομα αὐτῶν καθαρεύοντος εὐθὺς ὁ λοιπὸς κατέγιν. If Heraclitus had developed an elaborate theory involving two exhalations, he would surely have found a name for both of them; or if he had merely used the description of the dark exhalation given in the Theophrastean account, namely ἡ ὀξυμοί ὄνομα, or something of that kind, then Aristotle would have mentioned this description. In fact there is no known instance before Aristotle of the compounds ὀξυμοί ὄνομα, ὄνομα, etc., and it is rather improbable that Heraclitus used such a term; probably he used ὀξύς as the name of his single exhalation, and this is what Aristotle had in mind when he wrote that ‘the one is called ὀξύς’ (ὄξυς occurs also in Herodotus iv, 75, 1). One other point is notable: Aristotle pours scorn on the idea that moisture could be drawn up as far as the sun, in his discussion at 355a 5 of the old theory that the sun is fed by moisture; surely he would have taken the opportunity while on this subject to mention this as a main defect of Heraclitus’ two-exhalation theory, if he held such a theory, namely, that neither exhalation could be drawn up higher than the sublunary region. Aristotle himself believed that the exhalations operated in this region only, and were connected solely with meteorological events (which by his time had been distinguished from astronomical ones); this would have been a vital difference from Heraclitus’ partly astronomical theory, and one which would have merited the most careful emphasis.

If with these doubts in mind we re-examine the doxographical evidence two further anomalies are revealed:

(a) At the end of the description of ‘the way up’ (probably falsely so called, and falsely interpreted as cosmogonical) at Diog. L. x, 9 inc. comes the clause συνεποῖον τὸ ἐπὶ τὴν ἀναμισθίσαν ὁμάθημα τῆς ἐκπονοντος τῆς πνευματοπέρας τῆς μὲν τοῦ ἐν τῇ γῇ καὶ ἐπὶ τῇ γῇ γύρου ὀμφέος, τῆς ἀγα ἐτείς ἡ ἐρα ἀναμισθομένη. This shows clearly that in Heraclitus’ account of cosmology, as seen and interpreted by Theophrastus, the exhalation from the sea played a predominant part; yet had it been balanced by an opposite exhalation it should have had no predominance. Here we should consider Aristotle de an. A 2, 405a 25, καὶ ἢ ἀναμιθεῖται ἐπὶ τὴν ἄρτιν ἐνεία ἑράτι γιος, ἐπὶ τὴν ἀναμιθεῖτας ἐν ἐπὶ τῆς συμβολῆς. This occurs in a context in which Aristotle is anxious to find a common term for soul and ἐράτι (see Chermes 298 n. 13); by ἀναμιθικός he here means a kind of fire, but has deliberately chosen a vague term for it; he partly explains why at Meteor. A 4, 341 b 14 ff. Yet this is simply Aristotle using his own term for an elusive concept—he does not mean to imply that this ‘exhalation’ has much to do with the moist evaporation from the sea which Theophrastus saw to be a conspicuous factor in Heraclitus’ cosmology. In any event it is again significant that only one exhalation is implied; or rather Aristotle would hardly have used the expression τὴν ἀναμιθεῖτας τῇ ἐπιμετά τῷ ἐκτροφήνει: if Heraclitus had employed the same expression to describe something which quenched and was opposed to fire.

(b) In the Diogenes account rain and wind are explained as being due to the interaction of two exhalations. This is mentioned very summarily; the doxographical accounts contain no details about Heraclitus’ views on the causes of such phenomena, even though Theophrastus considered meteorological questions to form a standard part of any Presocratic system, and we may doubt whether Heraclitus was strongly interested in such details. Aëtius, iii, 3, 9, attributes to him explanations of thunder, lightning and electrical storms, but with the exception of the account of lightning as occurring κατὰ τῶν ἀναμιθθείων ἐκτροφῶν standard reasons are given which have no relevance to exhalations; the account of lightning, however, looks as though it is based on the idea of a dry, combustible exhalation as in Aristotle (p. 271).
It may therefore be concluded that Heraclitus postulated only one kind of exhalation, the evaporation from the sea, or possibly from water in general. This evaporation is drawn up and kindled in the bowls of the sun and moon. Aristotle criticized those who believed the sun to be nourished by moisture for neglecting the stars, *Meteor.* B 2, 335a18 ἄπτοντος δὲ καὶ τὸ μῦνον φροντίσαν τοῦ ἥλιου, τῶν δὲ ἄλλων ἀστερῶν περιλαμάνας κάθετος τὴν σεληνίδαν, τοιούτων καὶ τὸν Πλατήν καὶ τὸ μεγάλον ὕδωρ. This may refer to Heraclitus, though in the Theophrastan account the stars were evidently described as bowls, as well as the sun and moon (Diog. L. ix, 9; Aetius ii, 28, 6). Perhaps this was simply an extension by Theophratus, and Heraclitus did not bother to specify the fixed stars (which he would not assume, as Aristotle did, to be of any considerable size). Possibly Aristotle was thinking of some other exponent of this general theory, unknown to us.

The operation of the οὐράγων in Heraclitus must remain a matter for speculation. Diogenes tells us that eclipses, and the phases of the moon, were due to the total or partial turning of the bowl, so that its open side in which the fire was gathered was turned away from the earth. This does not save the appearances: the turning of a circular bowl (and circular they must be assumed to be, quite apart from Diogenes' affirmative evidence) makes its open side appear more and more elliptical, but never crescent-shaped as is the partially eclipsed sun or moon, or the moon when not full. However, exact correspondence of theory with phenomena is not a characteristic of early Greek science. The bowls were somehow carried across the sky from east to west, and sunk below the level of the earth's flat surface; this, in the case of the sun, was the reason for night. Did the bowls then disappear or disintegrate—were we to complain with Theophratus that Heraclitus left no clue to their composition. Or did they transform themselves into the golden cup of legend (though this referred strictly only to the sun), and sail round the stream of Oceanos, past the northern boundaries of the world, to rise again in the east, where fire was kindled in them as soon as they rose above the horizon? If this were the case one might argue that the sun would not be entirely new every day, for all, for the moon would remain unchanged. This would be too minute an objection; the visible part of the sun, the fire which we see and feel, would be renewed on each occasion of the sun's rising, and the state of the sun would be that described in Herac. *comm. sect.* 10, 'Sol... aliusque et idem nascens.' But are we in this case to suppose that the bowls of the heavenly bodies are filled with moisture at dawn, and consume this portion of nourishment during their journey across the sky? and is the portion exhausted (cf. Lucretius v, 672, of the sun: 'stus esfavit languidus ignis') at the very moment when they sink below the horizon? And what of the exhalation from the sea—surely this must be dispersed throughout the whole of the earth or at any rate not concentrated in the east or at a particular point of the earth's rim?

In view of the last consideration it seems more consistent to suppose that the sun is continually refreshed with moisture during its passage. There is, however, some evidence that Xenophanes thought of it as a concentration of fiery particles from a moist exhalation: Aetius ii, 20, 3 ἀνατεινάσας εἰς ἄλοχον πτερυγίαμα ἐκ τοῦ ἥλιου. οὕτως εἰς τοὺς Ὀρείστας γέγενεν εἰς τιρικόν μὲν τῶν συμμετοχομένων ἐκ τῆς ζυγίας ἀνακύμανεται, συμμετοχομένων δὲ τῶν ἄλοχων. The first sentence is perhaps from Posidonius (so Diels in DK); it is repeated and expanded at Aetius ii, 13, 14, ἀνατεινάσας εἰς ἄλοχον πτερυγίαμα [καὶ τῶν ἄλοχων γέγενεν]. οὕτως εἰς τοὺς Ὀρείστας ἐχώνου ἄλοχον μεταβαίνει κατὰ τοὺς δυσμεμένους ἄλοχον ὁ ἄλοχος καὶ τὰς δύσες ἐξείκονει καὶ σύμβας. The assertion attributed to Theophratus in the former passage is not necessarily inconsistent with the rest (though, isolated and obviously added as it is, it might have been displaced from Theophratus' description of Heraclitus). The heavenly bodies are concentrations of fire derived from the moist exhalation; they resemble fiery clouds; they are kindled on rising, extinguished on setting, like embers which may die down and then be made to glow once again. Apart from the absence of the οὐράγων this is very like what Heraclitus may have meant; the simile of the embers suggests that something
persists during the period of extinction. If anything, these passages suggest an instantaneous kindling in the east, the effect of which lasts all day (or all night, in the case of the moon and stars); so, too, in Lucianus v, 660ff., a passage which does not specify Xenophanes but merely records an evidently well-known belief that a concentration of fire takes place in the east at dawn—"seminas...ardoris...quae faciunt solis nova semper lumina ignis" (662); cf. Diodorus xvii, 7, 5-7. Diels, SB Ber (1920) 211ff., accepted the Lucianus passage as a reference to Xenophanes, and believed that Heraclitus was partially dependent on him, in fr. 6 at least, for his view of the heavenly bodies: so Gigon 84. Both scholars thought that Xenophanes' explanation of the sun in unadulterated material terms was intended as an attack on the popular belief in the sun's divinity (cf., for example, Plato Apology 260), and that Heraclitus may have had the same motive. In addition, Gigon sees in fr. 6 a deliberately naïve empiricism which was intended to rebuke or offset the dogmatism of the Milesians. This interpretation certainly cannot be dismissed; it seems to express one of the fundamental tendencies of Heraclitus' astronomy as represented by the fragments of this group (cf. especially fr. 3), and one which is by no means at variance with his intolerance of other scientists and sages and his contempt for τροχοκεφαλίς (fr. 49). Yet if Diogenes' account of the exōkén hypothesis is correct Heraclitus seems to have exceeded the bounds of 'naïve empiricism'. However, if all he did was to connect his observation of evaporation as one of the transformations of matter with a traditional view of the sun falling round Okeanos in a bowl, and to modify this last belief by suggesting that the sun was a bowl (instead of, for example, Helios and his chariot) even in its course through the sky, then he might have supposed himself to be far less dogmatic than Anaximander, for example, with his elaborate postulate of celestial rings. On the whole it seems that although Heraclitus intended some criticism of his predecessors, this was not one of the main motives of his astronomical theories; these are usually restrained and based upon common sense (as, for example, in his explanation of the variation in brightness between sun moon and stars, at Diog. L. ix, 10), but in the exōkén theory he seems to have given way to the convenience of a traditional explanation which appeared to combine successfully with his exhalation theory. One thing is certain: his account of cosmological changes in so far as they affect

...men's immediate environment on earth was neither naïve nor casual; it was empirical in the best sense, being based upon an intelligent observation of natural processes and of the regularity which underlies them. The exact constitution of the heavenly bodies is not strictly relevant to this more immediate problem, nor, of course, is it determinable by observation; which is perhaps why he may have given no detailed description of the τροχοκεφαλίς hypothesis.

Heraclitus' assertion that the sun is new every day appears, then, to have been immediately preceded or followed by a reference to the extinguishing and kindling of the sun's fire. This in its turn must have been connected with the theory preserved by Diogenes from Theophrastus that the heavenly bodies are mobile bowls filled, during their journey across the sky, with fire. This fire is maintained by a moist exhalation or evaporation from the sea, either continuously or by a recharging of the bowls with moisture at the start of each journey. Evaporation from the sea is one of those balanced cosmological processes which are an essential factor of our differentiated world; the greater part of this evaporated moisture is doubtless restored in the form of rain (rather than by the extinction of the heavenly bodies in the western ocean as Zeller, ZN 899 n. 9, suggested). Heraclitus' detailed astronomy, such as it was, is not completely interrelated with the theory of natural exchanges, though the sun too (see fr. 94) has to maintain regularity. The astronomy was probably developed some way beyond the needs of the main cosmological theory, beyond the limits of Gigon's anti-dogmatic empiricism; nevertheless, it probably remained of subordinate importance—a state of affairs which Theophrastus would naturally do his best to remedy. When all is said, we still do not know the exact purpose of the declaration that the sun is new every day; but the number of possible purposes has been substantially limited. 1

1 Herákleitos, Parámeidés 177, suggested that the regularity of the sun is implied in this fr. 6: the fire in the bowls burns for a certain time and no longer. The main emphasis, however, seems to fall naturally on vovs rather than on ἑβάθον. His comparison with one version of fr. 106 (see under fr. 174, unus dies per annum est"), shows that he misunderstood the purport of that fragment.

2 F. W. Herford now kindly draws my attention to an Arabic scholion on fr. 7. 93 b 6: "It may be that he follows in this the view of Heraclitus that the stars cease to exist when they set." See W. Poinc, Oration 6 (1953) 133.
The rhythm of these three words is dactylic, and it is possible that they are not a doxographical paraphrase (the doxographical way of expressing this idea, following Aristotle, being represented rather by Th. 11. 22, Ἡρακλείτους δὲ τοῦτον), but a quotation from some merical version of Heraclitus, conceivably of that of the Syntagmaticus (who could, like Archilochoch, have written also in hexameters) mentioned by Eusebius among Diog. L. x. 16: see also under fr. 100. The words may not be Heraclitus’ own (though not on account of any dogma like that proposed by D. on fr. 137, ‘Aber Zitate Heraclitus gibt es in den Placita nicht’), but they must be accepted as expressing a genuine opinion of his; a similar opinion is attributed to him in what appears to be an appendage to the summary account at D. L. ix. 7, σίμεα ὑπὸ ζευξίμου μελέτησις, that is, ὅτι τὸ ἡλίκον ἄρτι τὸ μέγεθος ὑπὸ πολλὰς φανερὰς ἡμέρας. The connexion of this view with Heraclitus is known by the author of the ninth pseudo-

Heraclitan letter (line 23 Bernays): ἄλογον τινα δὲ ἄρετος οὐδὲ ἅμα ἡμέρας ἀρχήσεως. Cf. also M. A. 3, 339 b 34; de c. 458 b 28, 460 b 18. Epicurus, then propagated the opinion that the sun actually was about as big as it seemed, Ep. ad Pyth. 91 τὸ δὲ μέγεθος ἡλίου τε καὶ τῶν ὄρων ἑκατέρου τῇ μὲν τὸ πρὸς ἡλίον τὴν ἡλίων φανεράκι ἐκτὸς τῆς ἡλίου φανεράκι, καθαρὸς ἀκτήτορ ἦτοι μεῖον τοῦ ἀρχηγοῦ καὶ μερικὸς ἔλεγεν τῇ ἡλίων φανεράκι. The comparison with

the human foot does not occur here, but that Epicurus made it is suggested by Cic. de fin. 1. 4. 20; Acad. n. 25b. 32.

Heraclitus may or may not have been the first to enunciate this commonplace; the question is why he enunciated it. He cannot have seriously thought that the sun is a foot wide; apart from anything else this does not fit in with the σύμμετρον theory (pp. 269f.); Gignis 82 pointed out that even the golden bowl of myth must have been more than this size. Heraclitus was no fool; he did not reject the evidence of the senses (fr. 57), but considered that it had to be correctly interpreted by the γνώσις before it had any value (fr. 107).

The passage of Diogenes quoted above seems intended to show that Heraclitus rejected sense-evidence; but it is extremely unlikely that he would have stated without qualification that ‘seeing is believing’ (fr. 461), and the whole passage looks like the result of Cynic interference with the tradition. Various more attractive interpretations have been proposed:

(1) Dechgräber, Philologus 93 (1938–9) 25 f., suggested that the saying was meant to exemplify the subjectivity and fallibility of human judgement, in support of generalizations like fr. 58 (ἀφίκειν γὰρ ἀναφοράς μὴ ἄκειν γνώσις, διὸ καὶ ἡμέρας) and fr. 82–3.

But Heraclitus undoubtedly thought that some people, those who comprehended the Logos, attained to a degree of wisdom; and of those that did not, not all would be so naive as to make this particular mistake.

(2) Reinhardt, Parnassides 237, believed this fragment to be an example of the coincidence of opposites: the sun must be very large to be the cause of day (fr. 99), yet it is also, empirically speaking, very small; in this case large and small coincide. — I agree with Gignis 82 that this interpretation is over-complicated: the example of coincidence is neither a good nor a typical one, contrasting as it does, with apparent characteristics.

(3) H. Frankel, AJP 59 (1938) 327, suggested somewhat similarly that the fragment was originally connected with fr. 99 and 45 to form a proportional assertion: the sun, which is by far the most important heavenly body, is only a foot wide; but the boundaries of the soul are infinite. — There is no real evidence for such a connexion; an assertion like this, based upon an obvious falsehood, could carry little persuasion; the proportional method of exposition is certainly used by Heraclitus, but Frankel is wrong in seeing it everywhere.
(4) Gigon in his useful discussion, p. 81 ff., makes the most plausible suggestion so far: Heraclitus is here rebutting (following perhaps Xenophanes) the extremely dogmatic astronomy of the Milesians, by advancing an exaggeratedly empirical view as having equal or greater validity. This was, in part, Epicurus' intention also. Heraclitus did not believe this statement about the sun to contain the whole truth, but at least it contained as much truth as other theories.

The same objection may be made against this interpretation as against Gigon's similar explanation of fr. 6: Heraclitus may have been to some extent an anti-dogmatist in astronomy, but he cannot have been an extreme one, since his own account of the heavenly bodies is far from empirical. Gigon undoubtedly overestimated the influence of Xenophanes upon Heraclitus, though by emphasizing that there was some influence he performed a useful service. A further point is that the width of the sun was not a particularly appropriate subject for an anti-dogmatist attack; the only known Milesian opinion on this subject is the not unreasonable one ascribed to Anaximander by Aëtius 11, 21, 1, that the sun is about the size of the earth (though very different, of course, in constitution).

The lack of any indication of the original context of the fragment makes any attempt at a definite interpretation hazardous and potentially misleading. But it is probable that Heraclitus did not seriously consider the sun to be the width of a human foot, and in this case he must have been referring to its apparent width. It will be seen in the discussion of fr. 120 that he was on occasion content to make simple observations about the sun, especially which out of context appear too obvious to be worth recording. Perhaps this is such an observation. Doubtless it was made for a purpose, and conceivably (4) or (4) above reproduce a part at least of this. Conceivably, too, ἀναπαραίτω is emphatic, and he is relating the apparent size of the sun to the size of a mere part of a man, with the implication that appearances are deceptive, that one has to look below the surface, that 'a thing's constitution is accustomed to hide itself' (fr. 123). Perhaps again he is implicitly criticizing not so much the extravagance of his predecessors in the scientific field as the popular reverence accorded to the sun as a divinity; for this kind of criticism see under fr. 16. If that fragment is rightly interpreted below, a conjunction of sense with the present one is possible: the sun is supposed to see and hear all (but he sets at night, and cannot
Plutarch de exil. 11, 604 a καί τών πλανητών ἱκαστος ἐν μή σφαίρας καθέτερ ἐν νικόν περίπολον διαπελέεται τῆς ταξιν. 'Πώς γὰρ οὐκ ἐπιβάλλεται μέτα, φήσιν ὁ ‘Ηράκλειτος: εἰ δὲ μή, ἔρημες μιν Δίκης ἐπικουρεῖ εἴπερεςουν.

And yet each of the planets revolves in one orbit as though in an island, and preserves its regularity; for Sun will not overstep his measures, says Heraclitus; if he does, the Eunyces, the minions of Justice, will find him out.

The form of this fragment is clearly original. The personified Dike occurs again in fr. 28, as a punisher this time of human wrongdoers; and possibly in fr. 29. ἐπικούρεσσα occurs in frs. 18 and 45, but without the idea implicit here of finding out and then punishing, though punishment is perhaps implied from Δίκη rather than the verb, εἶ δὲ μή, in place of εἰ δὲ, after a negative sentence, is a not uncommon construction, cf. Kühner-Gerth ii, 346 § 6b. The last sentence of the fragment is almost exactly reproduced in a saying attributed to Pythagoreans by Hipolytus, Ref. vi, 96, 1 (p. 153 Wendland) ἄρη τῆς ἔρημης μη ἐπικουρεῖ σι δὲ μή, ἐπικούρεσσα Δίκης ἐπικουρεῖ σι μεταλευχόντα. A shortened version of this occurs among the Συμβολα Πυθαγόρευσ (practical injunctions based upon taboo and sympathetic magic, probably developed especially by the Acousmatic sect of Pythagoreans) recorded by Tarchon, Protr. 21 (DK 1, p. 466, 29): ἐπικουρείς τῆς οἰκείας μη ἐπικουρεῖσα, ἔρημες γὰρ μεταλεύχοντα [ἐπικούρεσσα] om. Bywater sec. Hippol.). Bywater's emendation seems to be fair: ἐπικούρεις in Hippolytus must mean 'one's own country' or 'one's own village', understanding γὰρ or κοινὸς, but is not recorded in LSI before c. 2 B.C. ὑποκάρ, on the other hand, meaning 'one's own country', occurs at Hdt. 1, 64, 3; if ὑποκάρ is substituted for ἐπικούρεις in the Hippolytus version the original form of the saying will perhaps have been restored (ἐπικούρεις occurs at Plato Laws 954 b, meaning simply 'to be away from home': Tarchon's reading cannot therefore be absolutely discounted, though I think the other much the more probable). The resulting sentiment is strange: 'If you are away from your own country, do not turn about (or pay regard to it); otherwise the Eunyces, minions of Justice, will come after you.' This is different in character from the other Symbols we know of, which are more concrete and specific; moreover, it is an unaccountable piece of advice. There is no reason, however, to doubt its authenticity; like its companions it was probably not of very early date, as it stands. The exact significance of the first part is not fully relevant here; the second part, however, certainly reproduces Heraclitus. Does this suggest that Heraclitus simply took over and adapted a well-known phrase, which was also adopted by the Pythagoreans? or that Heraclitus' sayings were so well known in southern Italy that they themselves were naturally adapted to other purposes? No certain answer can be given; but I would tentatively suggest that at any rate the words ἐπικούρεις Δίκης ἐπικουρεῖσα were not invented by Heraclitus but quoted by him from some well-known source unknown to us. Compare the grandiloquent language used by him in fr. 120, also in connexion with the sun and its limits. The author of the ninth Letter knew the phrase as Heraclitea τοῖς Δίκης ἔρημες, ἐπικούρεισσαν φόλας.

The precise interpretation of the fragment depends upon whether μέτα is taken spatially, or temporally, or generally to include both extent and period. If the reference were exclusively to the limits of the sun's course one might have expected the more precise μέτεπτερα (cf. fr. 45) or ὑποκάρ (cf. fr. 120). There might be another quantitative sense, of size—that is, the sun will not grow too large and hot. This meaning could be excluded by reference to the ἐκβολή theory: the sun's bowl is presumably of a limited size and not more than a certain amount of fire can burn in it. If temporal, the exceeding of the sun's measures would involve an unnatural length of day, or of summer; both of these anomalies could also be expressed in spatial terms (cf. also Diogenes of Apollonia fr. 3), and it is obviously wrong to try and restrict μέτα—a word which applies in more than one category—to a narrow sense here. Doubtless Heraclitus is thinking of any departure by the sun from its normal behaviour. But the use of the verb ἐπικούρεισσα, which is primarily spatial though frequently used metaphorically, suggests that Heraclitus' first thought is of spatial measures of the sun's course through the sky, as in fr. 120. Plutarch in a second, freer quotation certainly
would restore the normal measure), but hardly likely that this was intended to be an explanation of eclipses. These were caused, according to Theophrastus, by the turning of the bowels—this is Heraclitus’ scientific explanation, and it seems doubtful whether this fragment is intended to be an explanation of cause on the same level. It states clearly enough that the sun will not overstep his measures, i.e. that this is not a natural event at all. If in spite of this Heraclitus did have in mind actual meteorological or astronomical phenomena, then he probably meant simply that if in any way the sun exceeds his normal course and behaviour this will be compensated for by a corresponding withdrawal: for example, if he appears to come too close and stay too long in summer (i.e. in a long, hot, dry summer), he will be driven farther away and for a longer period in the following winter (which will be cold, wet, and longer than usual, thus restoring the balance). An eclipse would never last for long enough, or recur frequently enough, to redress the balance of, say, an exceptionally hot summer; nor, it may be added, were there any observable excesses which immediately preceded eclipses.

Dike represents the regular course of events, normality, the organization which is one of the notable features of this cosmos and which indeed is implicit in all uses of this word. For the application of Dike, in origin a social concept, to the world-order, cf. Anaximander fr. 1. The Erythrai avenge any infringement of the natural order of things (and so homicide in human society): as Jaeger well commented (Theology 229 n. 31, cf. ibid. 116; so also Nestle, ZN 838 n. 1), ‘the Erythrai avenge every violation of what we should call the natural laws of life’: he then cited the notable instance at II. xix, 418, where they put a stop to the anti-natural human utterance of Achilles’ horse Xanthos. The regularity of the world as a whole, as opposed to its human inhabitants, is such that the Erythrai have little occasion to interfere: Deichgräber, Die Anth. 15 (1939) 120, has pointed out how rare in myth are large-scale natural anomalies; the only case of interference with the sun in the Iliad is at II. XVIII, 239ff. (cf. Od. XXIII, 241ff.), where in rare conditions, with the sun σκοτεινωθείς, Hera brings on nightfall before its normal time—a device so useful to the gods that one might have expected it to be employed more often. Heraclitus in this fragment is simply stressing this accepted element of regularity in the sun’s behaviour: the sun has πέρας to which he adheres. So also, we shall discover, all things

gave this sense to μέτρα: de Is. 48, 370d καὶ τῶν μὲν Ὄμηρου, ἐξοξεῖον δὲ τῆς ἑλέους ἐρώτων τε ἀνθρώπων ἐπιλογιζεί, κανθάμενα, φησὶ; [see: Hesych.], τῇ πάντως γειτνίᾳ κατορθοῦμεν ἐκ μέτρου καὶ ἀντιποθέσει τὴν γίνεσιν ἔχοντος, ἠλέητο εἰ μὴ ἐπιθυμήσεις ποιεῖ τὸ προσκεκλήματος ἀφοῦ εἴ τε μὴ γλώσσας μαίνως ἐπικρίνομαι ἔξερες ταύτα. Probably the best emendation of the impossible γλώσσας is Schuster’s Κλάδος; though it is strange that Pieterse should have remembered and reproduced a comparatively obscure variant (which, in spite of the appropriateness of the Κλάδος as being spinners of fate and death, has little claim to be the original form in view of the agreement of the Pythagorean version on Ἐμφυτεύσα: though Κλάδος would fit into a dactylic form, e.g. Κλάδος καὶ Αἰκένῳ ἐπικρίνομαι). Diels, Herakliters, ad fr., suggested that γλώσσας was introduced from a marginal comment on the style of the fragment.

Both Reinhard (Pomponides 777; Hermes 77 (1942) 14) and Gigon (86f.) take μέτρα here in a temporal sense. Reinhard takes the fragment closely with fr. 6 (the sun is new every day), and finds in the regularity thus announced an argument against ἐγκυροῦς; Diels, loc. cit., on the other hand, finds in it a preface of an ἐγκυροῦς. I do not believe that Heraclitus ever conceived of a total consumption by fire, but I think that Reinhard here is almost as wrong as Diels: neither of them distinguishes properly between the sun in this fragment and the cosmic fire which must be involved in any ἐγκυροῦς—the sun may be the chief visible representative of that fire, but it certainly cannot be identified with it in behaviour. Gigon saw this well enough, even though he is a keen believer in an ἐγκυροῦς in Heraclitus. He, however, made an analogous error in taking μέτρα here as completely parallel in sense with ἐγκυροῦς in fr. 30: the latter he took (wrongly, I think) to be temporal, therefore the former are also temporal. It is quite fantastic to think that Heraclitus must always have used ἐγκυροῦς in the same sense (it was probably Burnet, p. 161, who canonized this error), and quite obvious from a glance at the two fragments that the whole application of the word, quite apart from spatial or periodic content, is different. Gigon goes on to suggest that the punishment meted out by the Erythrai will be eclipse, and that this fragment is a serious approach to that standard astronomical problem. This is an ingenious suggestion: it is, indeed, possible that Heraclitus had eclipse in mind as the revenge which the Erythrai would take (since the subjection of the sun for a period
in the natural world have Ἀρκτός (perhaps not quite the same kind in every case) which are scrupulously preserved by Δῶρος, ἄρκτος, ἀρκτός; if these measures were abandoned then the world as we know it could not continue to exist."

1 In suggesting that the regularity of the sun is intended by Heraclitus to exemplify or even symbolize the regularity of the natural world as a whole I agree with Neele, ZN 838 a. 1, in his summarizing of this fragment: "Es soll wohl auch hier nichts weiter als die unverbrüchliche Gesetzmäßigkeit des Weltlaufs zum Ausdruck gebracht werden."

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Strabo 1:3 Cas. βῆτην 6 Ἰβραδάετος και διμπακοτάρειος ὑμένας ὑπὸ τοῦ ἄρκτου τῆς ὑβροτοῦ ὑμένας ἢ ἐκτέσσερα θέρματα ἢ ἄρκτος καὶ ἀντίον τῆς ἄρκτου ὑβροτοῦ αἰθρίου Δῶρος. ὁ γὰρ ἄρκτος ἐστὶ δυσύκος καὶ συμπαθής ὅρος, οἷς ἢ ἄρκτος.

Heraclitus is better and more Homeric when he likewise uses the name 'the Bear' for 'the Arctic circle'. The limits of dawn and evening are the Bear and, opposite the Bear, the boundary of bright Zeus. For the Arctic circle, and not the Bear, is the northern boundary of rising and setting.

Strabo does not help at all in the interpretation of this fragment, since he uncritically accepts anything which appears to support his own pedantic and anachronistic argument that Homer meant 'the Arctic circle' when he said that ἄρκτος ὑμένας ἢ ἀθρογος ἐκτέσσερα ὑμένας ὑμένας (H. xviii, 489; Od. v, 275), because nothing within the celestial Arctic circle appears to rise and set. He takes Heraclitus to be making the same point, and thinks that by 'the limits of dawn and evening' he is referring to that part of the sky (i.e. between the Arctic and Antarctic circles) in which heavenly bodies rise and set. Thus Strabo implies that by ὑμένας ὑμένας Δῶρος Heraclitus means to designate the Antarctic circle. We shall see that this cannot be the case; but meanwhile there is nothing to suggest that Strabo misquoted Heraclitus, even if he misinterpreted him. Reinhart prints a colon after τιμέτητι, but this is a matter of choice.

There can be little doubt that what are in question here are what we should call the points of the compass; dawn represents the east, evening the west, and the Bear the north, often enough in Greek literature. The only other possible interpretation would be that followed by Strabo; and this is out of the question because there is no evidence whatsoever that Heraclitus believed in a spherical earth (as perhaps some Pythagoreans did, but later) and a south pole and Antarctic circle; and a great deal of probability that he did not. The Ionians regularly thought of the earth as flat; Xenophon...
certainly did, and Heraclitus may have been influenced by him in
cosmological details. The doxographical evidence assembled under
fr. 6 shows that the ὀξεῖος were quenched in the west, which
suggests if anything that Heraclitus shared the common view of
Okeanos flowing round the rim of the earth, and (cf. Anaximenes)
of the heaven bodies travelling round the earth to the north (slightly
below its rim, perhaps) and not underneath it. Butcret, 135 n. 5,
took the fragment as 'a protest against the Pythagorean theory of
a southern hemisphere'; no one else supposes that any such theory
was formed by Pythagoreans as early as this, or that there is any
reason to imagine that Heraclitus had heard of it.

ὁῖτ' ἀπό τιθην ηπερᾶς, then, probably represents the south. Gigon 84
calls it 'an astronomical name unknown to us', and does not
attempt to elucidate it; in this he is unduly defeatist. It may, indeed,
be almost a technical term, in the sense that it was a quotation
from Heraclitus' contemporaries; like Ἐγκαρεῖν ἁδης τρισκάρειν it
shows signs of a metrical origin, only much more clearly, and this
time of an iambic or trochaic original (so Heidel, Proc. Amer. Acad.
of Arts 48 (1913) 712, who, however, regards the whole fragment as
metrical in origin). It stands out as an essentially poetical phrase in
a prosaic sentence (note also that Heraclitus uses a different form,
Zώος, in fr. 32; though this may be for a special purpose); there
is no question either here or in fr. 94 of a metrical version of
Heraclitus like that of Smythius, but rather of the use by Heraclitus
himself of poetical phrases; cf. also fr. 5. Various interpretations
have been offered of this phrase, all turning on the meaning of
ὁῖτ'. This could mean one of four things in Heraclitus: (i) favourable
wind; (ii) watch; (iii) mountain (ὁῖτ' being an epic, though
not Ionic, form of ὕπειρος—i.e. it is a hyperionism in Herodotus ms.; but
Heraclitus undoubtedly employed some epic words, and not only
in formal quotations); (iv) boundary (ὁῖτ' being regular Ionic for
ὕπειρος).—(i) was adopted by Reinhardt, Parmenides 182 n. 1, and
Heidel 49. cit.; but ὕπειρος does not necessarily imply a south wind,
only a favourable wind in general' (so, for example, at Od. v. 176;
at Od. xvi, 297 the favourable wind happens to be south, for
Telemachus is returning from Pylos to Ithaca). Admittedly the idea
of 'south' is implicit in 'bright Zeus' (see below), and directions are
sometimes expressed by names of winds, as at, for example, Hdt. 1.
148; ii. 8; iii. 115. In the second of these a wind-direction is mixed
with celestial directions, ὅτι ἄρηστον τικειομένη τοι τοι νότου,
as would be the case here: some winds, like νότος, became synonymous
with points of the compass, but this can hardly be the case with a
periphrasis like 'the wind of bright Zeus'; and why mention the
wind when 'bright Zeus' gives the necessary direction? (ii) is
obviously unsuitable. (iii) was adopted by Diels in Herakleitos", 45;
and early editions of VS: he maintained that the 'hill of bright
Zeus' was the Thessalian Olympus, which lay in the same meridian
as Delphi, the acknowledged centre of the earth; in this way the
Bear (the middle of the northern sky), Olympus (the middle of
northern Greece), and Delphi (the middle of the world) are all in
line, and give the main north-south division between the eastern and
western regions. This is ingenious, but must be rejected because
(a) ὕπειρος is not adequately accounted for (it is not a normal
decorative epithet), and (b) Olympus cannot properly be described
as opposite the Bear, especially if it is thought of as an intermediate
point between the Bear and Delphi. Something definitely southern
is required. (iv) was long neglected, but finally was adopted by
Burnet, and also supported by Kranz in SB Berl (1916), 1161 n., and
DK. I believe it to be the obviously correct interpretation—not
because, as Burnet strongly held, 'it is clear that ὕπειρος = ἄπειρος',
because this gives the clearest denotation of the south.
ὁῖτ' ὕπειρος Zeus means either 'the bright blue sky' (Zeller and Burnet),
and especially the brightest part of the sky, which lies in the
south and not the north; or the sun. This last identification is advanced by
Kranz (who, in addition, takes ὕπειρος in its most concrete sense as
'boundary-stone', cf. II. xxi. 40)), who compares de vevn 1. 5
πάντω καθαρός καὶ οὐκ ἄπειρος ἄπειρος Ζεὺς καθά; John Lydus de mens.
iv, 3 (DK 749) Ὑπειρός ἄπειρος [sc. Ζεὺς] θεός θεοποιήθη; and Ζεύς
ἱερός in Ependecedes fr. 6, 2 as one of the four βισθέσεις, presumably
fire. Of these the first two are dubious as evidence, and only the

1 Although as a general principle it is wrong to overlook the original
particulared and concrete meanings of words in dealing with the
archaic prose-style, it seems unlikely here that Heraclitus thought particularly of a
concrete limit. Reinhardt was probably right in saying that ἄπειρος is the
northern region of heaven, and its opposite is presumably a region rather than a
point.
second equates Zeus with the sun. The bright sky is the original
domain of the Indo-European Zeus, and the sun is the cause of the
sky's brightness. But to say that Zeus is the sun is going very much
further, and making an identification which I think would be bizarre
to most Greeks. On the other hand, I believe that sun is implied
in this phrase though not directly named: bright Zeus is the bright
part of the sky, and the boundary of bright Zeus is the region where
this brightness becomes greatest, namely, where the sun is at its
height at noon. This lies to the south; and it is opposite Arctos
because it lies on the other side from the point of view of a Greek
observer. Burnet, loc. cit., suggested that the boundary was the
southern horizon, an attractive idea invalidated by Diels' criticism
(Heraclitou 41) that the horizon connects, rather than separates,
est and west.

At all events it is plain that the phrase has the general meaning
'south'. Now it is obviously true that the limits (or turning-points)
of dawn and evening, i.e. the end of morning and beginning of
evening, can be regarded as a line drawn from north to south through
the position of the observer; such a line would equally separate the
region of dawn, i.e. the east, from the region of evening, i.e. the
west. It may be that Heraclitus merely wished to state that fact—the
fragment may be no more than a recapitulation of the points of the
compass; as Zeller, Z.N 843, put it: 'Am Enden wollen die Wörte, so
boumsachtlich sie lauten, doch nur besagen, zwischen Ost und West
liege Nord und Süd...'. Another astronomical statement, fr. 3, is
perhaps equally devoid of profound content, and such an interpreta-
tion cannot be rejected because of an appearance of over-simplicity:
many facts needed stating discursively which are now taken for
granted. However, it is more likely than not that the saying had
a particular application. One possible application is as follows
(cf. Reinhardt loc. cit., Heidel Proc. 713): Heraclitus might have
defined the division of morning and evening (or east and west) as
a line between celestial north and south because this is a relative
and not an absolute meridian; that is, his definition would remain true
however far east or west the observer moved. This could be part of
a proof that day and night are relative, not absolutely separate
entities (but in Heraclitus' sense 'the same': cf. fr. 57), because
moving into the region of day does not increase the time of 'dawn',
i.e. the period from dawn to noon. Again, however, this explanation

is very complicated: a simpler one, which connects this fragment
with an equally well-confirmed opinion of Heraclitus and which
would make it complementary to fr. 94, is that it is intended to stress
the truth that the delimitation of dawn and evening will always lie
between the north and the culmination of the sun's daily journey
through the sky: dawn (morning?) will not be unduly prolonged at
the expense of evening, nor evening at the expense of morning; noon
will always come exactly half-way between the two. Kranz in DK
adopted an interpretation similar to this, and actually equated the
'boundary of bright Zeus' with the 'measures' which in fr. 94 the
sun will not overset. This is by no means certain: it is possible, for
example, that the 'measures' in fr. 94 refer primarily to the sun's
seasonal position in the ecliptic, while the 'boundary' in this fragment
refers, clearly, to its east-west movement. In this case fr. 120 would
add to fr. 94; but whether or not the above restriction of the sense of
fr. 94 is justified it is clear that fr. 120 could be similar in intention—
a statement, that is, of the regularity of the sun's apparent movement,
rather than a simple assertion of the basic celestial directions.

1 Cf. the distinction of ἂρακ as 'morning', rather than 'dawn', from θερινός ἄρακ and θερισμός at H. xxi. 117, etc.
Plutarch Quaest. Phil. 8, 100c76 ...ο χρόνος ...κινείται ἐν τάξιν μέτρου ἱκατέρα καὶ πέρασα ται περιόδους. ἐν ό χρόνος ἑπτάπτες ἔτος καὶ οκτώμενος ἐτος ἐντεκεντο καὶ ἐπεισενικοὶ καὶ ἐπιστροφεῖν καὶ ἐπιστημονικαὶ το ἄρα καὶ πάντα πέρασε. κατ' Ἡντεκέρετον, οὐδὲ καὶ πάντα ἐντεκεντο εἰς τοὺς ἐνετοὺς καὶ κυκλοτάτους, τῷ ἰγνώστῳ καὶ πρώτῳ διὰ γίγνεται συνεργός.  

1 Ἑντεκέρετο; Ἑντεκέρετος: οἰκ. Reinhardt.

... Time... is movement in an order that has measure and limits and periods. Of these periods the sun is overseer and guardian, for the defining and arbitrating and revealing and illuminating of changes and seasons which bring all things as Heraclitus says—not of unimportant and small periods but of the greatest and most influential—and so the sun becomes a fellow-worker with the highest and chief god.

This is the only passage in which this phrase is attributed to Heraclitus; the limits of the quotation are not specifically marked, but only the words ὅρας αἰ πάντα πέρασε can be in question. As it stands the fragment is extremely ambiguous in meaning, but presumably the ὅρας are primarily the seasons of the year (rather than, for example, of human life), as in the context in Plutarch. The phrase is clearly marked by dactylic rhythm: cf. frs. 3, 137, 94, 5.

This may mean either (i) that it is a deliberate quotation by Heraclitus (as perhaps in the case of Diogenes Erythraeus in fr. 94), or (ii) that it is unconsciously expressed by him in epic form (as perhaps in the case of theos οὐδὲ ἱππόδας ἐνετοὺς ἐν τῷ fr. 1), or (iii) that it is taken not from Heraclitus himself but from a poetic version of him (compare Clearchus' Ἱμην, which, though not a version of Heraclitus, contains clear reminiscences; frs. 3 and 137D may be derived from such a version). (iii) is possible, even though Plutarch, a good authority, attributes the phrase to Heraclitus himself; (ii) is less likely than (i), since the verse rhythm is too striking to be accidental even in the early days of prose composition. It is a phrase which any poet might have used: cf. Od. ix, 131 φεροί δε κεφ
the whole phrase πάντων δή χρεώσεις δεραί γα τε η φράσει as a reference
to something said by Heracles, but the last three words (though,
in spite of their abandonment of dactylic rhythm, they appear
to belong to the quotation here) are not attested for Heracles in
Quaes. Plur. Apart from Plutarch there are two occurrences of the
words δέραι and χρεώσεις in Marcus Aurelius: ix. 3 oβον γάρ εστι το
νέον κατά το γηρεάς καί σπάσκει καί οποιοικά καί καταρεικα καί
τη στᾶ ιεία το φυσικά ενέργειας δευκα τοι τοι διενέργεια χρεώσεις,
tοιοῦτο κατά το διευρύνει. iv. 23 πω εις υμειοτέρον δει τοις εκδοτικών
στην κοσμή 

The punctuation and meaning of this sentence is far from certain. For
dέραις ἐκ τοῦ ὄργανος καί τοῦ τρόπου: αὕτη, "contrast to men's ways." I tentatively take this phrase
to be parenthetical, so as to retain the force of its negative: "Is not the year,
which contains itself... called a "generation"—and not contrary to men's ways."
This would be a forward reference to the τρόπος which is described in the
following lines, of using the same name for measure and thing measured: it does
not give an entirely satisfactory sense since δέραι-τρόπων becomes irrelevant.
Babbitt, the Loeb translator, made δέραι-τρόπων a self-contained question, and
continued: 'and if it is not foreign to men's ways to call it a "generation"?'
this seems to concede too much to Cleombrotus' adversary. R. E. Fadiman in
his edition of this essay, p. 132, takes δέραι-τρόπων with γενειο, which gives
an adequate sense but is grammatically impossible. No way of translating the text
as it stands brings out what should be the point of the derivation of fāvōroν; that
it is a complete cycle, just as the human γενειο has just been shown to be,
according to Heracles' definition; and as such the two might be regarded as
interchangeable.

1 The sentence in the fifth pseudo-Heraclean letter, μαθαίαν δέραιν, καί ημων
δέραιν δεχεσθαι, δεκαενήθητο, remains one strongly of the context of
fr. 100. Both are somewhat Poseidian, cf. also the context of fr. 10 in de mon de.

296
between the cycle of the year and the cycle of the human yēsēt. That he may have originated or repeated the derivation of ἤτοικος from ἰην ἠτόκος is independently suggested by the following considerations: (i) this derivation is attributed by Stobaeus, *Ed.* 1, 8, 43 (p. 108 Wachsm.), to Scytthinus: ἤτοικος ἦτος ἔστησεν καὶ πρῶτον πάντων καὶ ἤτοι καὶ ἴδοι πάντως καὶ ἔστησεν ἴδος καὶ κόκ χοῦν ὁ παροξυμενός ἐς τοῦ ἴδος αὐτὸν ἂναντὴν ὁδὸν παραμετρονεύτων\(^1\) τὸ γάρ ὁμοιον ἢ μὲν [sic] τῷ ἔργῳ χαίρετο, τὸ δὲ χαίρει ἄρσιν. This has been restored to trochaeics by Wilamowitz and is printed by Diels (DK 22 α 3, 2) among imitations of Heraclitus; it is not quite certain that it came from Scytthinus’ version of Heraclitus, though it is said by Stobaeus to be from Scytthinus προτείνοις. The last sentence, especially, resembles what passed for a Heraclean style in the fourth century B.C. (cf. de sicuti passim). (ii) In a fragment of the old comedian Hermippus (fr. 4 Kock) this same derivation immediately precedes what Reinhardt takes to be a clear reference to Heraclitus fr. 103:

καράνες ὑπὸ στραγγύλους τὴν ὅμοιον ὁ ἀνιγμήνα, ἂν τῶν ἠτόκος περιεχόμενων ὁδῶν, τὰ πάντα εἰς αὐτὸν, ἢ μὲν δὲ τὰ περιεχόμενα τῆς γιατὶ ἄντοντο, ὁποῖα ἐν τῇ στραγγύλῳ τὴν κρίνειν χαίρει ἄρσιν αὐτοίς οὐσίαν ἐνικεῖ ἔργῳ ἀνιγμή.

The etymology is a common one in the fifth and fourth century (cf. also Euripides fr. 862 Nauck; Plato *Cra.* 416 b); but these indirect associations with Heraclitus cannot be disregarded. At any rate it was a commonplace that the year was a cycle, the stages of which were the seasons. That Heraclitus commented also on a cycle in human life, not from birth to death but literally from generation to generation, and that the length of this cycle was thirty years, we learn not only from Plutarch but also from Philo and Censorinus (after Varro) [cf. DK 159]: these passages are set out opposite.

It will be seen that Philo gives a totally different explanation of Heraclitus’ thirty-year generation from the other two: H. Fränkel, *AfP* 59 (1938) 89 ff., has shown clearly that it represents an easy perversion of Heraclitus’ real reason, reproduced by Plutarch and Censorinus. Thirty years is the average length of time between a father’s generation of a son, and that son’s generation in his turn of another son: this is a cycle of life, more truly so than the interval between life and death, and it is indeed what we mean today by ‘a generation’. Philo misinterpreted a rather confusing statement of this fact, like Plutarch’s, and assumed that Heraclitus held a generation to be thirty years because this was the least age at which one could become a grandfather—for, theoretically, a boy becomes potentially procreative at the age of fourteen. This would be an absurd criterion and there can be no question at all that Philo was mistaken. But Philo’s mistake may be partly due to a statement evidently ascribed to Heraclitus in a Socratic account: *Aetius* ν, 23 (DK 22 λ 18) Ὑπότενύσας καὶ τοῖς ἀνθρώποις ἔριζες τὸν παλαιότερον τερματία ἐπὶ τὴν δεύτερον ἐρισκόμενον, περὶ ὅπως ἦλθεν ἡμῖν οἰκείσκειον ἰδίον. Καὶ γάρ τὰ δύο ἔριζες ἔριζες τὸ τελευτάτος, ὅτι ἐρίζεσθαι γεννᾶν τὰ στέρματα. This coincides in part with Aristotle, *H.E.* 14 1, 181 a 12 ff., who also puts the age of puberty around the fourteenth year. The question is whether this attribution to Heraclitus was due to some Socratic who made the same mistake as Philo, or whether Heraclitus did in fact say that humans reached a kind of completeness around the fourteenth year: Reinhardt, *op. cit.* 232 ff., thinks that the latter is the case, and that the comparison with trees shows that Heraclitus drew, here too, a parallel between human cycles and cycles in the world of nature. This is possible but inescapable of proof. Yet if (as is certain) he referred to ‘the seasons which

\(^1\) That the statement of Heraclitus’ view of a generation available to later antiquity was obscure is perhaps suggested by the still grosser error perpetrated by John Lydus, *De mens.,* 14 Ὑπότενύσας γενέσεως τὴν τέτοιον καθή—unless Heraclitus really thought that any true natural cycle could be called γενέσεως, as Cleomirratos did in Plutarch; or perhaps John Lydus was simply developing Cleomirratos’ theory, and wrongly associated it with Heraclitus.
produce all things’, and if (as is probable) he associated this idea with the year-cycle, and the year-cycle with the human yeař, and if (as is certain) he declared this yeař to be a cycle of thirty years from generation to generation, then it is a reasonable assumption that he compared the lengths of the cycles of human life with the lengths of the cycles of events in nature.

Now there is evidence that Heraclitus spoke of a much larger natural cycle than that of the year: Censorinus, de die nat. xvin, 11 (after a discussion of the Egyptian Sothis-period) ‘est praetera annus quem Aristoteles [fr. 25: probably from the Prosopoeia according to Reinhard, Parmenides 183 n. 1] maximum potius quam magnum appellat, quem solis et lunae vagantesque quinque stellarum orbis successus, cum ad idem signum ubi quondam simul fuerunt una referatur; eunum anni hiems summa est cataclysmos, quam nonst pluviosum vacant, sestas autem epyrrosis, quod est mundi incendium. Nam his alternis temporibus mundus tum ignescrete tum exaeque crete videtur. Hunc Aristarchum putavit esse annum verum etrum Pccclxxiii, Arates Dyrachini, Velleius, Heraclitus et Linus Xcc, Dion Xccclxxiii, Orpheus Cxx, Cassandrus trices sexies centum milium: aliis vero infinitum esse nec unumim in se reveri existimatur.’ Compare Aetius ii, 32, 3 ‘Hēsiskýtes ἐκ μορφῶν ἀκούσκιλων ἑπιστήμων ἤλθεν [εἰς τὸν μέγαν ἑπιστήμων θεόν]. Diels has emended here to ἀκούσκιλον (DK 22 A 13) to bring this passage into line with Censorinus; the corruption would be an easy one. 18,000 years is, it is true (as Schuster 37f., Burnet 157 pointed out), half of 36,000 years, which is a possible cycle (used, for example, by the Babylonians); but whatever the cycle intended in Heraclitus, half of it is of no use whatever, nor can ‘the way up and down’ be introduced to help it. On the other hand 10,800 years is very plausible, as shown below. The Censorinus passage, as Reinhard, Parmenides 183, pointed out, is a complete muddle; it is obviously based upon a Stoic source, and records year-cycles established for entirely different motives as though they were all Stoic òesòs-periods—astronomical cycles of planetary conjunctions, Babylonian astrological cycles, and lengths of legendary generations (Orpheus). Aetius and Censorinus are probably using the same source, which Reinhard, Parmenides 189, declared to be Diogenes of Babylon on the strength of Aetius ii, 32, 4, Διογένης ἐκ τῶν καὶ ἤλθε τοιαύται καὶ προς τᾶς ἑπιστήμαις ἑπιστήμων.

This seems probable: Diogenes was a Stoic who presumably had an astrological background (Philectus too, in the de def. or. passage, had used, though critically, a Stoic source). There is little reason, in any event, to doubt the information that Heraclitus posited some kind of cycle of 10,800 years; but what kind of cycle can this have been? Can it have been an òesòs-cycle (i.e. the lapse of time from one configuration to the next), as the later Stoics claimed? This depends on one’s view of whether or not Heraclitus believed in an òesòs. I believe very strongly that he did not; all the evidence of the fragments, and most of the non-Stoic doxographical evidence, is absolutely against the hypothesis; cf. pp. 335f. This explanation, then, is of no avail. Lassalle, 1, 111f., suggested that the period is that which elapses, in the cycle of changes of matter, before any particular piece of matter regains its former state of fire: Burnet 157f. adopted a similar explanation and attempted to reinforce it by a curious and to me unintelligible argument based on Aristotle de caelo A 10, 279b14-280a15. However, he did make a correct connexion with the idea of the human generation. This interpretation has much in its favour—see now Vlastos, AJP 76 (1955) 31ff. It is handicapped, first, by the inherent improbability of Heraclitus having established a definite time for the cycle of matter; secondly, by the fact that this cycle was spasmodic and not necessarily continuous, so that no finite length could be predicted in any particular case; and lastly (as Burnet 158 apprehended), by the difficulty of supposing that any one piece of matter preserved enough individuality throughout its changes to ‘have’ a cycle: in fact, the whole idea of every piece of matter undergoing equal changes goes far beyond what is implied by the òesòs of fr. 30, which apply only to totals. Actually, as will be seen, the probable form of the proportion demands that the interval of 10,800 years is connected not with a general physical, but with an exclusively anthropological change.

How was the figure of 10,800 years most probably reached? The answer to this question may reasonably be expected to provide an explanation of the cycle. It has long been seen that 10,800 is a product of 360 (a commonly accepted number of days in the year) and 30 (the number of days in the month, or the number of years in a yeař). Since Heraclitus certainly specified 30 years as the length
of a γενέτειον, it is perhaps more probable that the hypothetical 30-factor refers to this. Thus there are three known cycles involved: (i) the human cycle of the generation, 30 years; (ii) the shortest obvious natural cycle, namely, the day; (iii) the largest obvious natural cycle, namely, the year of 360 days. From a ratio of these cycles a fourth cycle is deduced, that of the so-called ‘great year’, which is called παντοειδές in the proportional summary 1:360:30:παντοειδές (παντοειδές = παντοειδές). Thus παντοειδές is related, not to a natural cycle, but to a human cycle: 10,800 years is the longest human cycle just as 30 years is the shortest human cycle (from generation to generation), and bears the same relationship to it as the longest natural cycle (the year) bears to the shortest one (the day). This conclusion is indeed speculative, but it is an attractive one, especially in view of Heraclitus’ fondness for the proportional statement; cf. frs. 79, 823, 9 etc.; Fränkel AJP 59 (1938) 30ff. What then does this 10,800-year human cycle represent? It is obviously nothing to do with the living human being, and must be concerned with the soul. Other such cycles are known in connexion with Orphic beliefs of a κόσμος τοῦ θεοῦ; see Heraclitus 11, 123; Empedocles fr. 115; Plato Phaedr. 248c—1,000 years being the total cycle for the soul, from first incarnation to escape from the wheel of birth into divinity, for Empedocles and Plato, and 3000 for Heraclitus’ Egyptians. Now Heraclitus certainly was not himself an ‘Orphic’, but he equally certainly believed that in some cases men, after death, could become ὑμικός; see frs. 52, 63, 224, 25, 27, 156D, and my article ‘Heraclitus and Death in Battle’, AJP 70 (1949) 38ff. Further, the whole context in Plutarch de def. or. is concerned with the periods which must elapse before a human soul can become heroic, daemonic, or even fully divine—the χρόνος τῆς μεταβολῆς διαμετρίες ἡμερῶν καὶ ἔτους τοῦ θεοῦ (ἐν θεούς τοῦ θεοῦ); and it has been seen that Plutarch, at any rate during parts of this discussion, had Heraclitus in mind. This again is very speculative, and, in default of more certain evidence, must remain so. What is significant here is that fr. 100 has led, by a series of unconfirmed but not implausible inferences, to a connexion between the periods in the cosmos and the periods in the anthropological sphere: these inferences have been grounded upon the doxographical evidence about the γενέτειον and the ‘great year’: and they show at least, what is obvious from other fragments, that for Heraclitus there was no rigid division between one field of speculation and another, but that all reality belongs to a single connected system which is based upon the Logos. In so doing they show incidentally that it is legitimate to extend the concept of ἀπεριώτητα, which has been found in some fragments of this group to apply in the astronomical sphere, to other branches of physics and indeed to existence in general.

It is relevant to consider here what Diels classed as a dubious or false fragment, fr. 137 (63b): Aëtius 1, 27, 1 (= Stob. Ecl. 1, 5, 15) Ἡράκλειτος τὸν τάχτου καὶ ἀπεριώτητα τῆς ἠτομίκης ἐνεργεῖ τοὺς ἑαυτοῦ γυναῖκας ὑπεροχὴς ὑστερήσεις ἐπερήματος. The text in Stobaeus apparently breaks off here; the next paragraph (missing, like γυναῖκας ὑστερήσεις, in pseudo-Plutarch) reports an opinion of Chrysippus. Theodotion, vi, 13, gave a slightly fuller version of the past common to Stobaeus and pseudo-Plutarch: καὶ οὔτε Ἡράκλειτος ὑστερήσεις ἐνεργεῖ τοὺς ἑαυτοῦ γυναῖκας ὑστερήσεις ἐνεργεῖ τοὺς ἑαυτοῦ γυναῖκας. Thus we are entirely dependent on a disputed and faulty text of Stobaeus alone for this so-called fragment. Diels held it to be an addition by Stobaeus derived from Chrysippus (evidently treated next in Aëtius). In Ἡράκλειτος, 53, he had further remarked that πάντας καὶ ἑαυτοῦ γυναῖκας καὶ ἑαυτοῦ ὑστερήσεις. But it is not even certain that this is the right reading: if ἑαυτοῦ γυναῖκας is correct then the ‘fragment’ is undeniably of Stoic origin, since ἑαυτοῦ γυναῖκας, as a noun is not found before Plato and is, of course, a common Stoic term. Diels (quoted, evidently with approval, by Kranz) called ἑαυτοῦ γυναῖκας, too, a Stoic term. This again is quite misleading, since the participle appears at Theognis 1033 (ὥσπερ ἄνθρωπος ἄνθρωπον) and Aeschylus Ag. 913 (ἀνθρώπος ἄνθρωπον, a difficult expression: the text may be corrupt), as well as Sophocles Trach. 169 and other places. There are a number of doxographical passages in which the concept if not the word ἑαυτοῦ γυναῖκας is attributed to Heraclitus. Diog. L. ix, 7, ix, 8 and Aëtius 1, 27, 22 may depend primarily on Theophrastus Phys. 655 fr. 1, τοῖς καὶ τοῖς πάντως ἐν τῇ τοῦ κόσμου μεταβολῆς κατάφιλον ἑαυτοῦ γυναῖκας. Aëtius 1, 27, 1, however (the context of the doubtful fragment), and 1, 28, 1 are derived from a Stoic source (cf. Diels Doxographi 178), which might nevertheless have repeated an actual quotation correctly. Diels’ argument that direct quotations of Heraclitus do not occur in Aëtius is absurd: fr. 3 is probably such
a quotation. Note that Theophrastus did not attribute ἐμμορφαζόμενη to Heracleitus, but ἐμμορφαζόμενη ἀνάγκη: it is possible that Heracleitus used the words ἀνάγκη and (participially or adjectivaly) ἐμμορφαζόμενη (-ν ἐμμ. etc.) as in Aristotle 1, 27, 1, moreover, could intend to suggest that Heracleitus used the word ἀνάγκη for what the Stoics more commonly called ἐμμορφαζόμενη—though Zeno probably used both words (SFE 1, 160) and Chrysippus sometimes equated them (SFE 11, 977 and 976, the last being Philodemus de poetr. c. 11 [Χρυσήματα] καὶ Ἑλληνικά σύντομα στρατηγεύσεως καὶ ἐμμορφαζόμενη καὶ ἀνάγκη). Theophrastus might naturally have used ἐμμορφαζόμενη adjectivally on his own account, to expand a Heraclean concept of ἀνάγκη. On the other hand, we have no other evidence that Heracleitus talked of a cosmic ἀνάγκη, and indeed Theophrastus may be basing these words, as he certainly is those that preceed them, on nothing more than the Ἀποικίαν ἐμμορφαζόμενον μέτρον and ἐπιστευτικά μέτρον of fr. 30. But Heracleitus did perhaps say that all things happened κατὰ χρόνον, cf. fr. 80.

It is clear that no study of the doxographical material is going to show whether this alleged quotation from Heracleitus is genuine. Certainly the Stoics were keen to attribute ἐμμορφαζόμενα to him, and the quotation, if it is not displaced in Stoicus, may be due to this wish: this is almost certainly the case if ἐμμορφαζόμενη and not ἐμμορφαζόμενα is the correct reading. But the former is more likely to be a (Stoic) corruption than the latter; and ἐμμορφαζόμενα μέτρον at any rate has a dactylic rhythm, like frs. 3 and 100. This suggests that it may not belong to Heracleitus himself but to a hexameter version—though here again a Stoic version cannot be ruled out. The first extant uses of πάντος in a positive sense meaning ‘in all ways’ are Parmenides, fr. 4, 3; Aesch. Pers. 689. In Herodotus it is used often with ἄτι, which is close to its use with ἐμμορφαζόμενη: e.g. VII, 101 ἀτι γὰρ πάντως. It is perfectly possible for Heracleitus to have said ‘all things are absolutely (or inevitably) apportioned’, meaning nothing more than that there were μέτρον of all natural events, which could not be transgressed; it is possible, moreover, that the dactylic rhythm of ἐμμορφαζόμενα πάντος is accidental: also the presence of ἁπτάμενον γὰρ in the quotation cannot be totally ignored—the γὰρ cannot here be (as it

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1 πάντος might also mean ‘in the end’, ‘sooner or later’, as at Solon fr. 1, 8 Diels, πάντος μετέχει ἐνὶ τῷ μὲν, cf. idem. 31. At 55 πάντος surely qualifies what follows.
GROUP 10

Frr. 30, 31, 36 [+ 76D], 90, 64, 65 [+ 66D], 16

The fragments of this group deal with the characteristics of cosmic fire. The world-order itself (i.e. the perceptible cosmos and its inherent arrangement) is an 'ever-living' fire of which measures are constantly going out and corresponding measures constantly being kindled (fr. 30); it thus behaves like a fire, which turns to smoke and consumes fuel in equal proportions. But fire is more than a symbol, it is the actual basic substance of the world. Fr. 31 describes the changes undergone by fire in the constant natural process: first into sea, then into earth, and then the reverse. The quantities of each remain unchanged because of the preservation of the measures. Thus fire, sea and earth are the three main world-masses, of which fire (presumably that composing the sky and the heavenly bodies) is the origination one. In fr. 36 the metaphor of 'death' is used partly of these cosmological alterations. In fr. 90 the equality of the exchanges is again emphasized, together with the primary importance of fire, of which sea and earth are only variants. Fire 'steers' all things—that is, it is responsible for the preservation of the constant exchanges upon which the maintenance of a more or less stable world depends (fr. 64). Frr. 65 and 16 are of uncertain meaning, but they may well re-emphasize in metaphorical terms the regularity and directive capacity of fire.

Clement Str. 104, 1 (31, 396 Stählin) comments on Ηρακλείτος ὁ Ἐφεσιος ταύτης ἐστι τῆς δύναμις [sc. οὐσίας, ποτὲ ἐστὶν τὸν τοῦ πυρὸς ὑπάρχοντα μεταβολὴν], τὸν μὲν τινα κόσμου ἀτόμου εἶναι δικαιόμενον τὸν δὲ τινα προφετικόν, τὸν κατὰ τὴν διακομὴν εἰδώλιον σομαί γνῶσιν ὑπάρχειν τοὺς ἦγουσας ἀλλ' ὅτι μὲν ἔσεσθαι τῆς ἀπαύγησις τῆς οὐσίας ἦλθεν ἵπτερον ποιήσας κόσμον ἢ δὲ μετέχειν τοῖς θεοῖς υἱῶν οὐκ ἔσται ἀνθρώπων ὑπολείπον, ἀλλ' ἄν ἔστι καὶ οὕτως καὶ διατηρήσεται καὶ ἀνθρώπων ἐκείνων, ἀποτέλεσμα μέτρα καὶ ἀποδιδομένου εἴματα. ὦτι δὲ καὶ γεγονός καὶ φανερώς οὕτως εἶναι δυσμάτως μηνύει τὸ ἐπιτρέποντα (seg. fr. 31).

Clement’s The Ephesian is most clearly of this opinion [sc. that there will some time be a change into the essence of fire]; he considered that the world in one sense is eternal, but in another sense is in the course of destruction, knowing that the world of this world-order is none other than a modification of the eternal world. But that he knew that the world exclusively as such, composed of all reality, is eternal, he makes clear by these words: This (world-) order (the same of all) did none of gods or men make, but it always was and is and shall be: an ever-living fire, kindling in measures and going out in measures. And that he pronounced the opinion that it is both created and destructible, the following words tell us: (fr. 31 follows).

Clement is discussing ἀνάληψις, resurrection, a prediction of which he sees in various theories of things turning into fire. Heraclitus, he thinks, is a good example of this. Here he is following the interpretation of Heraclitus initiated by Theophrastus or Aristotle and popularized by the Stoics, that the world is periodically consumed by an ἐσποράσμα: Clement is almost certainly dependent here on a Stoic source—see the context of fr. 31 (which follows in Clement), where οἱ Θεοφιλεῖται οἱ Στοιχεῖοι are said to have held opinions...
very similar to those attributed to Heraclitus. The immediate problem for the Stoic source was the reconciliation of this statement of Heraclitus, that the κόσμος was uncreated and will last for ever, with the Stoic assignment to him of a periodic world-configuration. The reconciliation was carried out simply, in precise Stoic phraseology (cf. Aetius ap. Euseb. P.E. xx, 15 [Doxographi 484]), by the assertion that κόσμος here means not the particular world we see and live in, which is subject to configuration, but the all-embracing world, or pattern of existence, within which phases of διάσκεψις and ἐπιθέσεις take place. That this distinction of two senses of κόσμος was not made by Heraclitus himself needs no elaboration; we must simply be grateful that the need for making it ensured the preservation of one of Heraclitus’ most important, if most difficult, sayings.

First the correct text and punctuation must be established. Most editors have accepted the words τῶν αὐτῶν ἐπάνων as belonging to Heraclitus: Reinhardt, however (Parmenides 170 n. 1; Hermes 77 (1942) 127f.), has maintained—I believe rightly—that they are an interpolation by Clement. We have two other testimonies for this part of the fragment:

(1) Plutarch de an. pass. 5, 10.14 κόσμου τόδε, φησίν ’Ἡρα-κλείτος, οὐκέ τις τῆς ὀνείρης ἐπάνων ἐπιθέσεων, ἄλλοτε ἐπιθέσεις μὴ ἑνώ τοῖς ἐπιθέσισι τῶν εἰς ἑαυτὸν διμερείαν τούτος εἰς κόσμον δημιουργῆς ἐπιθέσεως. This is merely a passing reference.

(2) Simplicius de caelo, p. 294 Heiberg (the whole relevant context is quoted, and will be discussed below) καὶ Ὡρακλείτος δὲ τούτοις ἀντιροθείς λέγει τοῦ κόσμου τότε δὲ ἐκ τοῦ πολύ ὁμοιουμαι τῶν αὐτῶν κατὰ τοὺς χρόνους πολλοὺς, ἐν ὕδατι νηρὸς ἀντιροθείς καὶ μετέχει ἀντιροθείας. [mêtrio; mētría A, Galen de instaur. v. 677 Κίλης]; τὰτούτοις δὲ τῆς δόξης τοῦτον ἐγέννηκε καὶ οἱ Στοιχεῖοι καὶ Ὡρακλείτος δὲ δὴ διανύστηκεν τὴν εὐομοίαν σφαίραν ἀναχώρημα οὗ τούτο ἔπειτε δοκεῖ οὐτοὶ πάλιν ἐπιθέσεις ὁ γοῦν ἐστὶ κατὰ τὸν γεγονός ὡς διακρίνεται κόσμου τότε δὲ ἐν ὕδατι νηρὸς ἀντιροθείας, ἄλλο τοῖς τῶν διαφορὰς καὶ κατὰ πολλοὺς χρόνους, καὶ τῶν αὐτῶν διαφορὰς καὶ κατὰ πολλοὺς χρόνους, καὶ τῶν αὐτῶν διαφορὰς καὶ κατὰ πολλοὺς χρόνους. The sense is: if the views of Heraclitus himself are correct, and if we accept the difference in his meaning between the two terms, then the distinction between the two classes of κόσμος is precisely what Clement himself has just carried out—why then should he not himself use this distinction for exegetical purposes? If the three words really were by Heraclitus (as is accepted recently by Kranz, Philologus 93 (1939) 441; Deichgräber, Rh.M. 83 (1940) 48 n. 4), other difficulties would occur. Gigon 55 supposes that they form a suitable addition (ἐπάνων meaning ‘all existing things’) if (as is probably the case) κόσμον τόδε means, not ‘this world’, but ‘this order’; but I do not see the point of τῶν αὐτῶν in this case, even granting that it is possible Greek for ‘this order which embraces all existing things’; cf. ξύλον τοῦτον in fr. 114. Rather τῶν αὐτῶν suggests that there is a κόσμος which is somehow not the same for,
or does not include, all things; this points clearly again to the Stoic distinction adopted by Clement.

The second question is that of punctuation. Only H. Gomperz (Hermes 58 (1923) 49), Reinhart (Parmenides 171ff.; Hermes 77 (1942) 10ff.) and Snell (Heraklit: Fragmente, Tuskuln-Bücher, and ed. (1940) 15) have printed a stop after ἐστιν: again it was Reinhart who initiated this change (of which Kranz in DK remarked merely that it ‘ scheint unmöglich’), for which the chief reason is that ἐστιν καὶ ἐστιν καὶ ἐστιν and its variants are a formula often used from Homer onwards, but never copulatively. It would be surprising if Heracleitus altered the application of such a solemn, almost hieratic phrase by abandoning its existential sense, true though it is that distinctions between different usages of ‘to be’ were not yet properly recognized. Instances of the formula are: Il. 1, 70 ὥς ἡ ε ἔστι τῇ ἐλεύθερῳ πρὸ τῇ κοινῇ; Herod. Thog. 38; fr. 96, 75 ... καὶ ἐστιν μὲν ἐστὶν πρὸς ἐστὶν; Emp. St. fr. 21, 9 διὰ τὴν ἔστιν καὶ ἐστὶ καὶ ἢ τι; Meliss. fr. 2 ὅτε τοῖς ἐγκεκριμένοις ἐστὶ, καὶ δόθη ἢ καὶ ἐστὶ; Aesch. frs. 12 καὶ ὡς ἐχθροὶ ἐστιν καὶ ἡ ἔστιν ἢ οὕτως, καὶ δόθη ἢ καὶ ἐστὶ καὶ ὡς ἐστιν πάντα ἐκκεκριμένα νῦν. Cf. Plut. Parn. 1356 ἢ τὸ ἐπὶ τὸν καὶ ἐστὶ· Tim. 371 λέγειν γὰρ δὴ ἢ καὶ ἔστιν καὶ ἐστὶν, τῇ ἤ [ἐκ. ἐγνώρισε] τὸ ἔστιν μόνον κατὰ τὸν ἄλλῃ λόγῳ προτεραῖον, where Reinhart, Hermes 77 (1942) 11, appropriately comments: ‘Platonische Polemik gegen die vorsokratisehe Beviktensformel.’

The one example cited by Reinhart of a copulative use, Aesch. fr. 12 fr., is not strictly comparable, for there is intentional stress on both the imperfect and the present tense: ἤρων ὥς οὖν ἐστιν ἐστὶν διὰ του ἐστιν ἢ τῷ ἔστιν ἢ τῷ ἔστιν ἢ ἦτο τοιαύτη τῇ ἔστιν καὶ ἐστὶ. A further reason against the conventional punctuation, though by no means a compelling one, is that καὶ ἐστὶ καὶ ἐστιν εἰς ἐστιν ἐστὶν involves an unnecessarily clumsy repetition of ἐστι; and another, much stronger one, that Simplicius in the passage quoted above ends his quotation from Heracleitus ἐστὶν ἢ καὶ ἔστιν καὶ ἔστιν. We know from other fragments that Heracleitus tended to avoid the copulative ἐστιν in abstract statements and that he preferred connexion by apposition (perhaps because this allowed the nature of the relationship to remain somewhat vague): the most notable parallel is fr. 51, ὡς ἐστιν ἢ καὶ ἐστιν ἢ καὶ ἔστιν καὶ ἔστιν τῷ ἔστιν ἢ καὶ ἔστιν τῷ ἔστιν καὶ ἔστιν. In fr. 51 and 67 the predicate (or subject) is put as a kind of heading, with no copula, and is followed by a list of subjects (or predicates). In fr. 51 it is probable that no absolute equivalence between (ἡ) ἔστιν (or ἔστιν) and ἔστιν is intended, but rather a looser relationship, ‘there is a connexion.’ So too in this fragment there is formally no strict assertion that this καὶ ἔστιν a fire; we could understand, if we wished and if it seemed more appropriate, ‘there is a fire’, or even ‘it resembles a fire’ more of this below. Gigon 52 tried to have the best of both worlds by suggesting that ἔστιν, etc., are both copulative and existential, there is in fact ‘einer Art Doppelbezogenheit’! This was rightly rejected by Reinhart.

It need hardly be said that καὶ τῆς τοι ἔστιν καὶ τῆς ἔστιν τοῦ ἔστιν is a polar expression with an all-inclusive sense; its components are not to be taken separately and literally, for no one had seriously supposed that any man, at least, had made this καὶ ἔστιν. ‘No god or man’ means ‘absolutely no one at all’, as at Il. viii. 27, xiv. 342 and Xen. Euthyph. 23, ἢ τῷ ἔστιν πάντως καὶ ἔστιν τοῦ ἔστιν ἔστιν. It is probable that this emphatic mode of expression is intended to convey criticism of traditional accounts of world-birth and world-arrangement (e.g. the Thogon). Carried out by deities, and possibly of philosophical cosmogonies of the Miletan type; what Heracleitus primarily wanted to say was that this καὶ ἔστιν is uncreated and eternal. This polar expression, like the hieratic formula ἢ καὶ ἔστιν καὶ ἔστιν, the epithet ἔστιν, and the repeated ἔστιν, are the most striking elements of a pronouncement which is solemn, elaborate and portentous, which reveals its origins in heroic verse, and which in its complexity and discursiveness is most similar, among the fragments of Heracleitus, to fr. 1—that this in itself should not persuade one to accept Gigon’s suggestion (p. 51) that it may have opened the cosmological part of Heracleitus’ work. However, the monumental style probably indicates that this pronouncement was considered by Heracleitus as an especially important one.

The next problem to be faced is that of the meaning of καὶ ἔστιν in this fragment. The one which at once springs to mind is ‘world’—but it is at last beginning to be accepted that this is a later philosophical-scientific development which cannot be assumed as normal before the fourth century (for which see Cornford, CQ 28 (1934) 1). Examinations of early uses have been carried out by Reinhart (Parmenides 174ff.), Gigon (52ff.) and Kranz (Philologus 93 (1938–9).
430ff)—the last being somewhat indiscriminating in his acceptance of evidence on the Presocratics. The basic meaning of κόσμος (κόσμος) is ‘order’ (i.e. some kind of arrangement as opposed to none); thus οὗ κόσμος at II. x, 472; II, 214; Od. viii, 179, etc.; frequently in the dative, οὗτοι κόσμοι at Hdt. iii, 13; viii, 69, etc., Thuc. iii, 108, etc. Very often such references are to physical arrangement (~τοίς), of an army or a ship’s crew, etc., as at Il. x, 472; Od. xii, 77; Hdt. viii, 67. Of political arrangement κόσμος is found at, for example, Hdt. i, 65; i, 93; Democritus fr. 218, 299: cf. the Cretan magistrates known as κοσμοί. Analogous to this sense is that of ‘good behaviour’, as in the adjective κόσμος. The word can also mean ‘ornament’ or ‘decoration’ (cf. especially the semantic style), of which the earliest instances are the Homeric ones, Il. iv, 145; xiv, 187. Aeschylus Ag. 355 f. (Νοὐς...μεγάλον κόσμον κατέστρεφε) is an example of this meaning. Finally, there is a semi-logical sense of κόσμος applied especially to songs or recitations: so in the Orphic fragment ap. Plato Philoeb. 666 (DK i 141), καταπλάκασε κόσμοι δοσίδης; Solon fr. 2, 2 Diel.; Parmenides fr. 8, 52 κόσμοι ομοϊ οπίου ὁμοίως ὁμοιότατον; Democritus fr. 21; and possibly Od. viii, 491, where οὗτος κόσμοι ἐπειδὴ διωκότοι may refer more to the ‘order’ of the well-known song than to the ‘structure’ of the actual horse.

On supposed Presocratic uses the following observations may be made: (i) I cannot agree with Reinhardt, Kranz, and Gigon (who wrongly refers, p. 53, to H. Pränkel), that Theophrastus’ τοὺς οὐφρανοῦς καὶ τοὺς εἰς οὕτω κόσμους ap. Simpl. in Phys. 24, cf. Hippolytus Refs. i, 6, 1, represents the actual words of Anaximander, the distinction of the two terms here depends upon Aristotle’s definition at de caelo A 9, 278 b 11. There is no suggestion that Theophrastus is quoting Anaximander. (ii) I side with Reinhardt (Kosmos u. Sympathie 209ff.), Wilamowitz (Glæbae der Hellenen 1, 374 n. 3) and Gigon 54 against the conventional view (cf. e.g. Kranz loc. cit.), in thinking that Anaximenes fr. 2 is clistorous by re-wording. (The parallel between man and cosmos is first explicitly drawn by medical speculation in the fifth century.) ‘T’ull the fragment were genuine, κόσμος would have to mean ‘world’ (here alone) by the time of Anaximenes. Similarly, I cannot accept Kranz’ extreme view that chapters 1–11 of πτερον, in which κόσμος means ‘world’, date from as early as c. 500 B.C. (iii) Nowhere else in the genuine sayings of Heraclitus does κόσμος occur; for in fr. 75 τῶν οὐ ζήσει κόσμος γνώσεις is added by Marcus; the first part of fr. 89 is a paraphrase by Philocharis; and in fr. 124 McDermid, AIP 62 (1941) 492ff., and Friedländer, AIP 63 (1942) 336, have adequately shown that κόσμος belongs to Theophrastus. (iv) Melissus fr. 7 may be the first occurrence, apart from Heraclitus fr. 30, of κόσμος in a philosophical context: ἢ δὲ καὶ ἥν ἐπανερχόμενα εἰμι εἰς τὸν κόσμον ὁ γὰρ κόσμος ὁ πρῶτος ἐκ τῶν οὐκ ἄπρωτα ἐκ τοῦ μὴ δύνανται. Here κόσμοι clearly means ‘arrangement of things’. (v) in Parmenides fr. 4 κόσμοι exemplifies the common use, ‘in order’. (vi) Empedocles fr. 26, 5 ἀ μὴ τέσσερα πάντα συναγαγώμενοι εἰς ἕνα κόσμον, κόσμοι here means ‘groups’, or ‘arrangement, organism’; but in fr. 134, 4, προεστία κόσμων ἀπαντὰ κατατάσσοντο, the sense ‘world-order’ or ‘world’ is clear. (vi) Anaxagoras fr. 8 o κόσμου ἀναλλότριον ἐν τῷ τὸν κόσμον ὀφθαλμόν πεποιηκέντος πλῆκτον καὶ τῷ τὸν ψυχρόν ὀφθαλμόν ὀφθαλμόν τὸν τὸν ψυχρόν ὀφθαλμόν. Here again the εἰς κόσμος is the one group or category—in this case, probably, the continuum formed by each pair of opposites. (vii) Diogenes fr. 2 ἔρχεται ἐν τῷ κόσμῳ ἀνάμεσαν τοῖς τῶν ἑ τὲ καὶ τὸ ἄνθρωπον κοινή ἔργα καὶ τὰ πάντα τοιν προκειμένα εἰς τῷ τούτου κόσμῳ δύνατα. . . . The meaning here is harder to isolate, but again κόσμος may contain, strongly emphasized, the sense of ‘arrangement’: ‘in this arrangement’ and not simply ‘in this world’; cf. (iv) above.

Thus in most pre-fourth-century philosophical occurrences of κόσμος its sense is ‘order’, ‘arrangement’ or ‘group’—in Diogenes perhaps ‘world-order’, but only there and in Empedocles, and then not certainly, can it be translated simply ‘world’, i.e. the sum of natural things with no reference to their arrangement. There is, however, a well-known doxographical statement that Pythagoras first used κόσμοι to mean ‘world’: Ἀττικ. 11, 1, 1 Ἀπατόμορφος πρῶτος οὖν τῶν ἐν τούτῳ περιεχομένων κόσμων ἐκ τῆς ἡπτάνου τέκνων.1 Here the idea of ‘order’ is suggested; even so the ascription to Pythagoras is

1 Compare Diog. L. viii, 48 [Pythagoras] ἐλλάς ἢν καὶ τοῦ οὐρανοῦ τρόπον ὀρθοχρήστως κόσμων καὶ τῆς ἐνατύχοντος ἢν τί θεοφράστου Παρακάτου, ἢν τί Ζήρων Χειρόθεος. It is clearly only with the second discovery, the roundness of the earth, that Parmenides and Hesiod were (wrongly) associated. Diogenes’ information is simply an expanded version of the statement recorded in Ἀττικ. whose source there was no doubt Heralclides Ponticus rather than Theophrastus.
surprising. The explanation may be that Heraclides (or conceivably some other investigator of Pythagoreanism) found in Philolaus instances of κόσμος where the word, if it did not simply mean ‘world’, was well on the way to doing so. Such at any rate is the case in frs. 1, 2, 6 of pseudo-Philolaus, which were probably written shortly after Aristotle and perhaps used known pronouncements of Philolaus as a model. In these fragments κόσμος is always closely associated with verbs like ἐφαρμόζει, συνεργάζεται, ὅρκεται, and the idea of order, as Kranz saw, is not absent. If this imitates an actual practice of Philolaus then Heraclides might well have been led to consider Philolaus as a pioneer in the use of the word; and, in keeping with the Pythagorean tradition of disguising all development in their ideas, he might consequently have given this significant innovation to Pythagoras himself.

Two fourth-century authorities suggest very strongly that κόσμος — world is a comparatively new and technical usage: Xenophon Mem. 1, 1, 11 ἐ καλοκαιρίνου ὑπὸ τῶν σκότων κόσμος; Plato Gorg. 516e7 ὄνομα οὐκ ἂν οἴηθεν...καὶ τὸ βλέπον τοῦτο δὲ τοῦτα κόσμον κατάλεγεν. It has been suggested that only in Attica was this use of the word new, and that in Ionia and Italy it had been known for a century; but this distinction, which might well be a century earlier, is less apt for a period when Athens was already the cultural centre of Greece, to which, as early as the first half of the fifth century if not before, foreign sages flocked. There is one probable conclusion from all this: that κόσμος meant ‘order’ (in various senses) until well on in the fifth century, when its use for ‘world-order’ by Empedocles, Diogenes and perhaps Philolaus led to a derived meaning, ‘world’. This being so, the latter meaning is uncertain in Heraclitus fr. 30 (as Bernays saw long ago).

What then does κόσμου τόθε· ἱτόρει imply? Gigon 56, by suggesting that κόσμου ἱτόρει is equivalent to ὑπερκόσμησις, oversimplified the problem. κόσμος could mean either ‘order’ or, by extension, ‘ordered whole’ (that in which the order inheres): the addition of τόθε is important, since it obviously limits the κόσμος to that which we experience. In fact this ordered whole would refer to what we mean by ‘world’, but is not identical with this because it gives priority to the idea of ‘order’. Gigon suggested that the first part of the fragment is aimed either against Xenophanes (whose god directs the world, fr. 25) or against the traditional view

that a god or gods arranged the cosmos, cf., for example, Hesiod Theog. 74; Erga 276 (ἄρεσκε in each instance). The latter may be the case; but the primary intention of the first part of fr. 30 is the positive assertion that this κόσμος is eternal. The need for determining the exact meaning of κόσμος is increased by the fact that it stands in opposition to πόρον ἅγιον. Could ‘this order’ (i.e. the arrangement of things in the natural world) be identified with or closely related to an ever-living fire? — For Heraclitus, theoretically it could: since, while it is plain to us that an ‘order’ is not a substance, a thing in its own right, but a property or epiphenomenon of other co-existing objects, it would appear quite possible, before the development not only of formal logic but also of a clear distinction between concrete and abstract reality, to assume that it is a thing in itself, and, moreover, concrete. An order, or ordered whole, would thus be a mixture of the concrete object κόσμος with the other concrete objects in which the κόσμος appears, just as in fr. 67 fire is thought of as being mixed with the things that are burned. This would be an extreme view: the κόσμον ἵτορει, for example, could hardly be thought of as concrete; but here we are making the exact distinction between concrete and abstract which is inapplicable to Heraclitus. Could it not be said, then, that this order which we see in things is eternal; that it is mixed with all things just as fire is mixed with the things it burns? No: for ἄρεσκεν μέρος θαλάσσης shows that no simple simile from fire in general is involved, that this fire is either totally or partly coincident with the κόσμος. Could the order be fire itself, which we know mixed with things not fire? This is attractive: the idea behind κόσμος would be similar to that of λόγος—a constituent formula which applies to all things, which inheres in and actually is a part of all things, and therefore could be treated as concrete. The characterization as fire would be made because (as, for example, Burdet 145 clearly stated) fire is both motive and regulated: it consumes fuel and emits smoke, and its own essence displays that regular change which Heraclitus saw in the events of nature. But fire cannot be identified with the formula of underlying identity of opposites, based upon regularity of exchange, because it has or displays that formula itself, and is qualified as ἀκραῖον μέρος καὶ ἀναμμένου μέρους.

I believe that the idea of fire as the regulating element in all things is implicit in this fragment, but that it is a secondary one. That κόσμον ἵτορε is more than the order of things, that it is things + order
Thus there has always existed that ῥηξορ which is the material of natural phenomena and that arrangement by which part of it is always sea and part always earth. It is called ‘ever-living’ because it is divine in the sense of being immortal (cf. δινόρηξνον καὶ δινόηρης, predicated by Aristotle of the ῥηξορ of Anaximander and others), and because, unlike terrestrial fire, it is never totally extinguished: part of it is always extinguishing itself (note the present participles), but an equivalent part (so much is implied by the syntactical parallelism of μέτρος...μέτρον, as well as by the content of the word itself) is always kindling itself; the participles are probably middle, as Diels held, μέτρον...μέτρον being internal accusatives. The kindling and extinction is shown to be quite literal by fr. 31: extinction means changing into sea, kindling means changing back from sea into fire by means of the moist evaporation on which fire was widely believed to feed—though this feeding itself consisted of ‘catching fire’.

Thus the relationship of κόσμον τόξον τούρ προκαβεν becomes, after all, one of simple predication: the natural world and the order in it (otherwise expressed as the Λόγος) is an ever-living fire. The indefinitive article is, I think, required in a correct translation. In προκαβεν the fire is either in general: προκαβεν can mean a fire as well as the flames that burn there, though the distinction is not normally clear; cf. for example, προκαβεν the fire of the μέτρον. Therefore προκαβεν is equated with a fire like a huge bonfire, of which parts are temporarily dead, parts are not yet slight. This is important because it helps to explain how in fr. 31 a portion of sea can still be counted as ‘fire’: it is a part of the bonfire which is as yet unkindled, is not yet actually ‘asfire’. It also removes the partial anomaly of προκαβεν being δινόηρης, that is, not ever-living in its parts; though the main point is that the κόσμον as a whole can be called ever-living because its entity is preserved unchanged while its parts undergo the ‘death’ of change into water and earth (cf. fr. 36 and fr. 76D, developed from it: the latter discussed under fr. 31).

The description applied in this fragment to the ever-living fire, that it is δινόηρης καὶ δινός, was taken in antiquity as an assertion of periodic changes, μέτρον being treated temporally and not quantitatively. The same ambiguity is present in fr. 94, but in fr. 30 it is clearer that the quantitative interpretation is correct. (1) Although, if μέτρον...μέτρον are periodic, δινόηρης...
could still retain some meaning by the assumption that the fire is never quite extinguished, that epithet clearly suggests something very different—a more or less constant and extinguishable fire, not one which suffers violent fluctuations. (ii) In fr. 31, which (as has been seen) probably followed very closely if not directly upon fr. 30, the verb αὑρώμασθαι occurs of quantitave measure. (iii) Fr. 31 gives a detailed explanation of the process of 'kindling' and 'extinguishing' as the 'turnings' of fire—that is, the meteorological changes of the archetypal form of matter, from fire to sea to earth and back again. These changes are going on, in one place or another, all the time; but they always remain balanced, and the total quantity of fire, sea, or earth remains constant. If this were not so the kērēs or world-order of men's experience would be destroyed. This balance is expressed in fr. 30 by μέτρον...μέτρα: the balance extends also to temporal periods (e.g. the seasons, length of night and day, etc.: cf. fr. 94), but these are not relevant in fr. 31, which deals with the type and the quantity of fire's changes. Further, any periodic changes which Heraclitus did postulate were partial ones, applying only to one or other part at a time of the κόσμος—which would indeed have been destroyed as such if these changes had been total in extent. It was Theophrastus who (perhaps following Aristotle) evidently gave the temporal interpretation to the last part of fr. 30: οὐσ. ἑξῆς fr. i (DK 22,4) ποτὲ δὲ καὶ πᾶν τι καὶ χρόνον ἀριστεύει τῇ τοῦ κόσμου καταβαθμὶ κατὰ παραπομπὴν αὐτοῦ. This was taken up by the Stoics and developed into their cosmogonic account, which is combined with the Theophrastean interpretation of ἀποκαταλαλέων μέτρα: τὸν κόσμον καταβαθμὶ κατὰ παραπομπὴν αὐτοῦ. The Stoics therefore adopted and developed this interpretation of Heraclitus' fr. 30.

Changes, not cosmological ones; this does not mean that the fire should treat the μέτρον of fr. 30 as referring to recurrent periods of world-formation and world-destruction (processes which he attributed, also wrongly, to Anaximander, partly on the analogy of Empedocles). World-destruction was a reversion to fire according to Aristotle's principle (Met. A 3, 983 b 8) that things pass away into that from which they have come into being. Fire, of course, was assumed to be ἔφωσι, on the basis chiefly of frs. 30 and 31, by Aristotle Met. A 3, 983 a 7 and Theophrastus Φυσ. 832 fr. 1. Theophrastus took fr. 31 to describe cosmogonic changes because, following Aristotle again, he assumed that all the Presocratic philosophers gave much attention to describing a cosmogony: cf., for example, Aristotle de caelo A 10, 275 b 12 γενόμενον μὲν οὖν ἐπιστήμης ἐλείας φαιν. [sc. τὸν οὐράνιον]. Fr. 31 could be interpreted as cosmogonic by anyone who did not understand Heraclitus; in fact, in some respects it coincided with the cosmogonic pattern set out by the Presocratic philosophers, set out by the Stoics, and by the early Stoics, who had no Stoic influence in the passage of Diogenes is shown by the fact that in the cosmogony that follows no mention is made of air as in the Aëtius passage. The insertion of air into Heraclitus' 'cosmogony', against the evidence of fr. 31, was presumably a Stoic innovation. For Theophrastus' further developments of his cosmogonic interpretation see under fr. 31, pp. 327 f. The theory of an ἀπειράσια in Heraclitus was perhaps directly derived from Theophrastus (like most of his historical judgements) from Aristotle: de caelo A 10, 275 b 12 γενόμενον μὲν οὖν ἐπιστήμης ἐλείας φαιν. [sc. τὸν οὐράνιον]. ὅλλα γενόμενον μὲν οὖν ἐπιστήμης ἐλείας φαιν. [sc. τὸν οὐράνιον]. ὅλλα γενόμενον μὲν ἡδίνοις, ὡσπερ ἄριστοι ἄλλοι τῶν φύσεων συστημάτων, ἢ ἐγγαλλὰς ἢν ἢν οὖν τοῦτο διὲ διεξέτειν αὐτός, ὡσπερ ἐπιστήμης ἐλείας ἢ ἄριστοι καὶ ἴκαλετος ἢν
'Εφόσον. Notice that Aristotle here ignores the statement in fr. 30 that the κόσμος has always existed; his reason for this appears in his further comment at 280a12: τὸ θ’ εὐάλλαξ συνετάσσεται καὶ διαλύεται εἰκόνες διόλοις τοιοῦτοι οὕτως ἢ τὸ κατασκευάζει τοιοῦτοι οὕτως μὲν ἄλλα μεταβάλλεται τὴν μορφήν, ὡσεστέρα τίς εἰκόνας οὕτως γίνονται καὶ εἰ οὖν πάθη παύονται οὕτως μὲν ἐξηγεῖται ἐκ τῆς θ’ εἰκόνας ἄλλοις γὰρ ὅτι καὶ οἱ ἀληθεῖς τῶν στοιχείων συνιστῶν εἰς ἵππος τέχνης γίνεται καὶ σύστασις, ἀλλὰ οὕτως τις καὶ κατὰ τούτοις τῶν λόγων εἰρημένης, τις τὰς διάφορας ἐνεργείας ἀνάμεσα τοῦ ἔκφραστος. Here Aristotle makes exactly the point which was made by Clement, that one must distinguish between changes of arrangement within the whole world of being, and changes of being itself; Empedocles and Heraclitus were really talking about the former state of affairs. Aristotle implies that they confused it with the latter, for of θ’ εὐάλλαξ καί means 'and others say that it (the first heaven) is at one time as it is now, at another time otherwise and in process of destruction, and this continues in this way—for example Empedocles and Heraclitus'. Now Empedocles, with his alternation from the reign of Love to that of Strife, is a good example of the compromise view which Aristotle wished to describe; but Heraclitus presents no such obvious alternation unless Aristotle understood him to mean that the world is periodically reduced to fire in an ecyprosis. Burnet 158 took Aristotle's comparison of the changes between man and boy, in the second do cælo passage quoted above, to imply that he was really referring to the parallel between a 'great year' (of soul-fire) and the human generation; but this conjecture is absolutely unsupported. His further attempt to eliminate an ecyprosis-interpretation from Aristotle by maintaining that the alternations of the ὁψαλνος referred to Empedocles and Heraclitus concern not the whole world but only the first heaven (pp. 158 n. 1 and 159) unfortunately involves a neglect of the context, in which ὁψαλνος without question refers (as often in this treatise; see the definitions at A 9, 278 b 11) to the whole sum of things enclothed by the outer heaven. It is, however, just conceivable that Aristotle was thinking of some period applied by Heraclitus to a part only of the cosmos—for example, a period in which fire remains unchanged as such, before undergoing its πρωτοτοκία (fr. 31), or a Great Winter and a Great Summer in the sense of Aristotle Meteor. A 14, 312 a 30, i.e. a long-term excess of wet or heat in one part of the world or another, which, however, is eventually balanced by a corresponding deficiency; but we have no definite knowledge of such periods, and the context in Aristotle seems to exclude such partial changes. Taken literally, indeed, de cælo 279 b 17ff. points quite clearly to the fact that Aristotle believed in an ecyprosis in Heraclitus: this conclusion cannot, I believe, be avoided, and it is one which the ancient commentators on Aristotle, influenced of course by their knowledge of Theophrastus, accepted without question. This is surprising, partly because it is fairly plain from the fragments that Heraclitus did not postulate any such absorption by fire (see also pp. 335ff. below), partly because there is no other reference to Heraclitus in Aristotle where an ecyprosis (in the Stoic sense, as opposed to its more limited meaning at Meteor. 342 b 2) is envisaged. Of course it is very possible that Aristotle misinterpreted Heraclitus in this as in other matters, but that he had no other occasion for displaying this misinterpretation; though he may have passed it on to Theophrastus. Yet it is tempting to think that he did not mean to attribute cosmic periods to Heraclitus, but was perhaps led to add Heraclitus' name to that of Empedocles by his familiarity with Plato's presumably well-known comparison at Sophist 240 e: 'Certain Ionian and Sicilian Muses [that is, Heraclitus and Empedocles respectively] agreed that... it is safest to say that reality is many and one, and is kept together by enmity and friendship. For "being carried apart it is always carried together" say the stricter of the Muses [as Heraclitus], but the gentler ones [Empedocles] relaxed the need for this always to be so, and say that in turn the whole is first one... and then many,' In reality this passage quite clearly states that Heraclitus did not believe in any ὁψαλνος changes of the cosmos; but the connexion with Empedocles might be remembered for longer than the important distinction between them: see (ii) on p. 322f. However, this is neither a certain nor an entirely satisfactory solution. In the case of the other passage of Aristotle which used to be thought (cf. Zeller ZN 858) to prove that he attributed an ecyprosis to Heraclitus, it can be shown for certain that no such attribution is intended: Phys. 5, 209 οὐκ ἔχει γὰρ καὶ χωρὶς τῆς ἄνωθεν ἐν τῷ αὐτοῦ, ἀδιάλεκτον τὸ κάτω, καὶ τί ἐπιτελεῖται ὃ ἐν τῷ αὐτῷ, ὡσπερ Ἀριστοτέλει ἡ ἐπάνω, γιανότι τοῖς τῶν... τῶν τε γὰρ μεταβάλλεται ἐκ ἀνώτατον ἐν ἑπάνω, οὐκ ἐκ θεωρίας ἔκ τινος. Cherriss, 29 n. 108, has shown that in the sentence ἐπάνω
the subject is ποτέ and not ἀλήθεια; the whole passage is an assertion that no single substance (whether finite or infinite, an element or something other than the elements) can either be or become the world, because all change is between opposites and therefore a multiple world must be composed of, or originate from, at least two deeps (i.e. one pair of opposites). The instance of Heraclitus is introduced to illustrate, especially, the theory that one substance becomes (as opposed to ποτέ) all things: this is indicated by γίνεσθαι...γίνεσθαι. The generally accepted interpretation, ‘as Heraclitus says that all things at some time become fire’, in the sense of an ecysis, would be quite irrelevant to Aristotle’s argument: he is not interested in things becoming one out of many, but in being or becoming many out of one—it is this which is stated by the monistic cosmogonical theories. Therefore there is no question here of a reference to an ecysis more means not ‘at some time’ but ‘at some time or other, sooner or later’ and the reference is obviously to the τόπος τοποθετημένης in fr. 31 (as Burnet, 179 a 3, saw, though without anticipating Chemniss’ positive interpretation). Chemniss is unnecessarily cautious over this reference to physical changes; the present tense of γίνεσθαι strongly suggests that Aristotle regarded fire’s becoming of all things as continuous, as, indeed, for Heraclitus it was: the point is not merely that fire turns into water and earth (so it did for Aristotle, as Chemniss remarked) but that it is somehow regarded as being the source of those substances. The plurality of this world owes its existence to the changes of a single substance—this for Aristotle was the vicious assumption.

Whatever Aristotle’s view, Theophrastus, as has been seen, certainly assigned an ecysis to Heraclitus. There are two slight but noticeable indications that Theophrastus developed this interpretation along lines suggested by the de caelo. (i) In Theophrastean account in Diog. L. ix. 8 (see p. 140) occur the words καὶ τῶν ἐπιτρικτῶν κατὰ τὸν περιοδὸν ἐναλλάξ τῆς συμπατείας εἶναι here the far from common ἐναλλάξ points to de caelo A 10, 270b 14 of ἐναλλάξει ἕτος. The word does not occur in Simplicius’ direct version of Theophrastus. Both versions mention ἐπιτρικτικὴν τοῦ ἀλλὸ ἀλλάξειν and are presumably connected; Simplicius in general is more reliable, but an isolated expression may well have been preserved by Diogenes and not by Simplicius. (ii) In Aristotle’s comment on the view attributed to Empedocles and Heraclitus, at
case Aristotle laid the foundation, whether intentionally or not, for the *theoirosios*-interpretation of Heraclitus which was developed by Theophrastus and refined by the Stoics.

Plato *Sophist* 242d-e is one of our strongest testimonies that Heraclitus did not, in fact, believe in a periodical absorption of all things into fire, and that Aristotle (possibly), Theophrastus (certainly), and the ancient doxographical tradition, were (understandably) misled. The points in favour of and against an *ektóropoi* for Heraclitus are further summarized on pp. 335ff.1

1 I am now inclined to be persuaded by Vlastos’s argument (*AJP* 76 (1955) 311) that misinterpretation of Heraclitus’s Great-Year doctrine (pp. 309ff.) rather than misunderstanding of Plato (op. 321) is likely to have been the chief factor in Aristotle’s attribution to Heraclitus of a periodical cosmic destruction.

...
rate, very closely if not immediately after fr. 30. This is not an absolute indication that the two sayings belonged to the same original context in Heraclitus, but, taking into account the fact that each is concerned with cosmic fire, this is highly probable (so, for example, Deichgräber Röm. 89 (1946) 49). In fr. 30 the present order of things is said to be eternal, and to be an ever-living fire kindling in measures and going out in measures. The first words of fr. 31, πῦρ ἐστιν τριγών, explain what this ‘kindling’ and ‘extinguishing’ involves: fire turns into sea (and so is extinguished) and sea turns into earth; earth turns back to sea, and then sea is kindled again into fire. The ‘measures’ of fr. 30 are reflected three times in fr. 31, in the words ἱμαυ... ἱμαυ, ἡμέραν, and ἐν τοῖς σφόντοις λίπών ἑκάτερον: we learn from them that each mutation between the three main world-masses, fire, sea, and earth, is balanced by an equivalent mutation in the other direction; or rather that the sums of all such mutations remain balanced. Thus Deichgräber, followed by Reinhardt, Hermes 77 (1942) 10, is justified in saying that fr. 31 gives the solution to the paradox contained in the latter part of fr. 30: amongst other things it tells us how the world can be described as fire (or a fire). It is because sea and earth, its main non-flammable constituents, are but ‘turnings’ of fire, i.e. what fire turns into. This is not to say that there was ever a time when part of fire had not turned into sea and earth, for ‘this order always was, is, and shall be’; it means that there is in nature a continual process between the three main world-masses, and that of these three fire is considered to be the chief, and the motive point of the process—doubtless because it is θεοτόκος καὶ θέλων καλόν as Aristotle said (De an. Α 3, 405a27), and thus more kinetic; and also, since, of the two extremes of the process, fire and earth (which alone could be regarded as potentially separable from the others, since sea suffers changes simultaneously in two directions), earth was too solid and intractable to be considered the ultimate source. In addition, although Heraclitus does not emulate his predecessors in trying to explain an intuitively unity in the cosmos by postulating a single originating material, he felt that one form of material was prior in importance, if not in time, to the others; and he was doubtless attracted towards fire, as Chrysiss and others have suggested, because it most clearly exemplifies the regular process of exchanges (fuel for flame, flame for smoke and heat) and the consequent stability (of the flame or the cosmos) which for him were an essential characteristic of the physical world. The celestial or aetherial fire presumably possessed these qualities to a pre-eminent degree.

Clement, however, evidently interpreted fr. 31 very differently. His source here (cf. the concluding words quoted) may have been a Stoic one; and the Stoic interpretation of Heraclitus’ theory of natural process was itself dependent upon Theophrastus. Theophrastus, who, like Aristotle, treated the Presocratic χρυσοκλάδος (except Parmenides) as intent upon generating a plural world out of a primal unity, naturally expected to find a cosmogony in Heraclitus too. In fact, fr. 30 shows that for Heraclitus there could be no cosmogony, but fr. 31 could be taken in a cosmogononical sense (just as μέτρα in fr. 30 could be interpreted temporally if the rest of the fragment were ignored), and it was so taken by Theophrastus. The ‘turnings of fire’ are interpreted as stages in world-formation (but continued in the cosmological process, p. 106f.): the world was then ‘kindled’ or reabsorbed into fire, after the lapse of certain μέτρα (fr. 30), interpreted as periods; the cycle then begins anew. Thus Heraclitus is made to subscribe to the theory of successive single worlds which was attributed by Theophrastus to many of the earlier monists (including Anaximander) on the false analogy of Empedocles’ successive states of the sphere and the Atomists’ posulation of an infinite number of worlds perpetually coming-to-be and passing away (because matter and space were infinite). This cosmogonic and periodic interpretation is briefly outlined in Theophr. Phys. op. fr. 1 ap. Simplicius in Phys. p. 23 Diels (of Heraclitus and Hippasus); καὶ ἐν πυρὸς ποιήσας τὸ διότι παύεται καὶ μεμοναδικά καὶ διασκεδάζει πάλαι ἐν τῷ ὀπίστῳ μὴ ὑεχθείν γεγονός τῷ ἡπτοκρίτου τῷ πυρὸς γὰρ ἀνατυπωμένῳ ἐκείνῳ τῇ ῥῆγῃ. The mention of ‘thickening and thinning’ is probably due to Simplicius in fr. 31. That Theophrastus’ cosmogononical interpretation rests in part on this fragment is indicated by Diogenes’ detailed account, set out overleaf against some of the passages upon which it depends. His ἐκπροσώπος-interpretation, on the other hand, is based primarily upon fr. 30 (μέτρα) and fr. 90. Thus just as Theophrastus perverted the sense of παύεστος-ἐκαί in Heraclitus by making it a motive force in cosmogony, and by confusing it with Empedocles’ Strife in opposing it to ‘agreement and peace’ (for in Heraclitus the δόξῃ is itself παλάντως), so he perverted fr. 31 by making it apply to
world-formation as well as to the weather-process. His application of the terms ‘way up’ and ‘way down’ (see p. 106f.) is equally unfounded; fr. 60, in which Heraclitus uses the terms, seems from its form to be a purely general statement intended as an illustration of the coinidence of opposites. The specific physical application of those terms would not, it is true, be unsuitable, since fire-sea-earth is a downward movement, and the opposite process an upward one; but in any case ‘the way up and down’ would refer to constant meteorological or cosmological changes, and not to cosmogonical ones.

That the Stoics accepted Theophrastus’ extension of Heraclitus fr. 31 as a legitimate one, and developed out of it their own cosmogony, is shown most clearly by the description of Zeno’s cosmogony given by Aetius Didymus fr. 38 (Diels Doxographi 460): τοιούτῳ δὲ δει τὴν ἐν περὶ τοῖς ἐνὶ διακρίνεται οἷς τούτων.
the principle of the coincidence or underlying unity of opposites is not fully relevant in this situation; rather the unity of the whole physical cosmos regarded statically, as it is in the first part of fr. 31, is due to the fact that it is all, essentially, fire; parts of it are extinguished to form sea and earth, other parts are being rekindled into fire. A dynamic view is expressed in the conclusion of fr. 30: the preservation of the ψάρξ between the main parts of the cosmos throughout their changes supplies the unity of a constant and all-pervading formula akin to the Logos, though not necessarily operating between opposites. Fr. 31 seems to set out to outline as turn the transformations of fire, but it soon diverges from this: for sea, the middle term of change, is described as being half earth and, by anticipation, half προστήρ. Naturally Heracleitus means that one-half of sea can be regarded as turning to earth (and replenished by earth), the other half as turning to προστήρ (and replenished by fire): the total remains unchanged as sea. About προστήρ there has been much fruitless discussion. It is derived from the verbal root πρό-, which developed (perhaps from an original meaning ‘leap’ or ‘dart’) two quite different senses, ‘burn’ (as in πυρέμα, the oblique tenses of which are supplied by πρός) and ‘blow’ (πρός): the compound ἐπερήσα, for example, can have either sense. In technical meteorological language a προστήρ is something which combines both these senses, i.e. ‘a hurricane or waterspout attended with lightning’ as LSJ puts it, citing Aristotle Meteor. G i, 3/18, 16, Epicurus Ep. ad Pyth. 114 (p. 47 Vsemar): Ἀιτέων, iii, 4, Lucretius vi, 424f., etc.: cf. Seneca Qu. nat. vi, 13, 3. Burnet 149 accepted ‘fiery water-spout’ as the meaning in the fragment, and thought that it explained the passage of fire to sea; Diels, Heraklit. i, 24, pictured a more plausible phenomenon (‘Gluweind’ or ‘Gluhweind’) and made it explain the reverse process. Now it is most improbable that Heracleitus picked on what must, after all, be a rather uncommon meteorological event (not of course a ‘fiery waterspout’, which is absurd: it is strangely accepted by Cherris, AJP 56 (1933) 414f., and is presumably a translation of ‘igneous tormio’ in Seneca loc. cit.), and supposed that it was the regular means of transference between two of the main world-masses; or even that he did not suppose this, but merely used the name as a symbol for that kind of change. Indeed, an examination of the rest of the fragment suggests that no intermediary process is meant (and therefore προστήρ is not an exhalation, as Gigon thought, though it is here the result of an exhalation). προστήρ obviously specifies one of the προστήρια of fire and not a process, just as earth—into which the other half of sea is regarded as changing—is a προστήρ. In this case προστήρ is an expression for fire; and since one of its root meanings is ‘burn’ this is not unlikely in itself. The few early occurrences of the word do not provide an exact parallel, but cf. Hdt. vii, 42 προστατ. και προστάτες ἐπερήσαντος; Xenophon H.G. i, 3, 1 δὲ τὴν τῆς Ἀθηνᾶς ἐπερήσαντος προστήρ̣ια ἐπερήσαντος; Theophrastus de ign. i προστήρες καὶ κεραυνοῖ. These passages show that just as the word could be used in one simple sense as ‘hurricane’, so it could be used of something inflammatory associated with thunder and lightning, and so either the lightning-flash itself, or the thunderbolt. As it stands the word means ‘burner’ or ‘blazer’, and is applied to a particular form of fire just as it is otherwise applied to a particular kind of ‘blower’, i.e. a bellows. It would indicate celestial fire quite clearly enough. That Heracleitus used synonyms for fire is suggested also by κεραυνοῖ in fr. 64: in fr. 31 προστήρ is very similar to this ‘thunderbolt’. Therefore half sea is thought of as reverting to fire, half as turning to earth.¹

The second part of the fragment is separated from the first by a further piece of misinterpretation by Clement: he probably took ὑπερήσα to indicate a dispersal of sea into fire (which is, perhaps, how he understood this part of the fragment to refer to an exhalation), and yet the proportion of this dispersal is said to be the same as existed before sea became earth—that is, when it was still sea. This makes nonsense. If, on the other hand, earth is taken as the subject of ὑπερήσα, an excellent sense is restored: earth is dispersed as sea, and is measured into (i.e. so as to produce) the same proportion as existed before it became earth; that is, nothing is lost in the process, and sea is implied to be replenished by the liquefaction of earth proportionally with its diminution by condensation into earth. Each of the three world-masses retains its total volume unchanged throughout these changes. Reinhardt, Hermes 77 (1942) 16, has attempted to

¹ Reinhart (Hermes 77 (1942) 16) is surely wrong in trying to dissociate προστήρια from what he calls the ‘Mächtigkeit des Vateres’; προστήρια certainly exemplifies this power, and in fact Heracleitus probably did not clearly distinguish cosmic fire from all other kinds of fire (contra Lasselle, Zeller, and others; cf. ZN 81,4)—certainly not from different kinds of celestial fire.
justify ἔλασσας as subject of διαχέτα (accepted also by Snell): 'Das Meer geht aus festem in flüssigen Zustand über.' In other words, 'sea' here stands for 'sea which has become earth'. This is difficult, though perhaps just possible; since it involves no change in the text it should not be absolutely rejected. However, what is meant is still, essentially, (γι) ἔλασσας διαχέτα, and for the sake of clarity I provisionally accept this slight addition; that this interpretation is in the main correct is confirmed by Diog. L. 15, 9, τὰ πλούτον τοῦ ἄρτον γινεῖται. This, however, is not reasonable for conjecturing (πρόστηρ τε γι) like Deichgräber, op. cit. 49: fr. 91 is a false analogy. The two parts of the fragment were probably consecutive. It is possible that some short interposing sentence in which γι was mentioned has been omitted; but on the whole this seems less likely, since with the restoration of γι the two statements form a compact yet complete account of all the changes involved: this is apparent as soon as πρόστηρ is given its necessary meaning of fire, and as soon as it is understood that the 'upward' and 'downward' changes of sea (which alone changes into two world-masses) are very naturally treated together, instead of in their ostensibly logical order. The fragment may be represented diagrammatically:

\[
\begin{array}{c|c}
\text{πρόστηρ} & \text{πρόστηρ} \\
\text{τὴν ἐλασσας} & \text{τὴν ἐλασσας} \\
\text{τὸ νῦν ἡμῶν γινεῖται} & \text{τὸ νῦν ἡμῶν γινεῖται κ.τ.λ.} \\
\end{array}
\]

The equality of the changes is expressed for two of the stages: half of sea is moving up, half changing to fire; the same amount of earth is dissolved into sea as formerly (πρόστηρ refers rather to priority in the logical schema than strictly to temporal priority) turned from sea to earth. The only stage for which this balance is not asserted is fire, but the balance can be easily inferred, and is carefully stated in a slightly different form in fr. 95.

Clement's final comment, ὁμολογοὶ καὶ τερί πτὸν ἰδοὺν σταχγεῖς τὰ ἐπιτρέπει, has been frequently misinterpreted. Possibly the omission of air in part caused the comment; more likely he was simply explaining (what might be deduced from the fragment) that the ἄγας of air and earth, as well as of sea, remains unchanged when they too are 'dissolved' to fire in the expyrosis. All these 'dissolutions' take place simultaneously on the Stoic view. Theophrastus, judging by Diog. L. 15, 9 (p. 128), made a superficially similar addition, ἄγας τοῦ ἄρτον [καὶ] ἔλασσας 'the rest' are the heavenly bodies, the creation of which he thinks had not been adequately explained. We know that there was no such cosmogonical explanation to be given: to the evidence of fr. 30, and of that of the assertion of Plato at Sophist 242D, 2, that Heraclitus, as opposed to Empedocles, postulated simultaneity as opposed to periodicity of change between opposites, may be added the implication of the present verses with which some of the πρόστηρ in fr. 31 are described as taking place; these show that what is being described is a constant process and not a periodical cataclysm.

The extremely schematic form of the fragment may blind us to the kind of physical change which Heraclitus must have had in mind. (Not that the schematic form is accidental; it reinforces the idea of the regularity in such change, a regularity on which the continuous near-stability of the cosmos depends.) The alterations envisaged are those with which any careful observer would have been familiar—the most apparent forms of the transformation, that is, between what struck him as the three main components of the world around him: the bright sky above with its fiery bodies, sun, moon and stars; the mass of dry land; and, equally vast in extent and greatly outweighing other forms of water like wells and rivers, the sea. The transference between the sky-fire and sea was obviously by means of rain, which in mythology was regarded as the seed of Uranus with which he impregnated Gaia (cf., for example, Aesch. Danaids, fr. 44 ήτιν τοὺς θυελλοὺς τρήσεις χόνας κτλ.). Sea turned to earth, it was thought, when rivers and harbours silted up, as the harbour of Ephesus itself was silted even in Heraclitus' time; this was a commonly accepted truth, and Xenophanes used his knowledge of marine fossils in Malta, Paros and Syracuse to substantiate a theory (possibly held in a slightly different form by Anaximander) that the earth had once been all sea (DK 21, 332 12, 27). The recurrent fonian idea that the earth had solidified out of primeval ηλιός was no
doubt partly dependent on this observation. Earth turned back into sea when new streams and springs issued forth; when the coastline receded; or when whole land-masses sank, as it was believed that Atlantis had sunk and that the straits of Messina had appeared to separate Sicily from Italy. Similarly the mythical upheaval of islands, like Rhodes and Delos, was perhaps used to support the fact of change from sea to earth. For all these instances see Phïlo de stoic. mundi 23-6, which derives, via Stoic media, from Theophrastus. The change from sea back to fire was, obviously enough, due to evaporation—what became known, later probably than Heraclitus, as évaporation. This has already been fully discussed under fr. 6; the doxographical tradition is unanimous in attributing to Heraclitus the belief that the moist exhalation supplied nourishment for the heavenly bodies, and that by being burnt up in their bowls it turned into fire. Heraclitus recognized that the sun was the sole cause of the bright daylight sky, and thus that all celestial fire was maintained ultimately by the sea. This last is the only process for which we have direct evidence relating to Heraclitus (apart from the word ἀπλασμον, which indicates the necessary mechanics of, but does not fully describe, the change from earth to sea). The other types of change, however, became almost canonical in meteorological writings; they are accepted by Aristotle in Meteorologica A 14, and probably by Theophrastus, some of whose arguments, based on doubt on Aristotle's, are preserved in Phïlo de stoic. mundi 23-6. The essence of these cosmological changes according to Aristotle and Theophrastus was that the balance between world-masses was retained. Aristotle was anxious to combat Ionian theories (cf. those of Xenophanes) that the world is coming-to-be or passing away, and to assert that, although there may be an excess of moisture or dryness in one part of the world or another, and for a shorter or longer period, there is nevertheless a long-term stability. 1

1 Cf. especially Aristotle Meteor. A 14, 357 a 27: ‘Men whose outlook is narrow suppose the cause of such events to be the universe, in the sense of a coming to be of the world as a whole. Hence they say that the sea is being dried up and is growing less, because this is observed to have happened in more places now than formerly. But this is only partially true. It is true that many places are now dry, that formerly were covered with water. But the opposite is true too: for if they look they will find that there are many places where the sea has invaded the land. But we must not suppose that the cause of this is that the world is in process of becoming' (tr. E. W. Webster).

enough that in the Meteorologica he shows familiarity with, and partial reliance on, earlier theories (e.g. his development of Heraclitus' exhalation-theory), as indeed did Theophrastus; and now a true assessment of Heraclitus' doctrine of ἔρεια, in particular in fr. 31, shows that Heraclitus anticipated, and was perhaps responsible for, Aristotle's theory of cosmological stability. It is important to understand the types of cosmological changes which Heraclitus had in mind, because then and only then can it be fully understood that the changes were not exactly balanced at every moment in every part of the world, but that the sum of things is unchanged all the time. The evaporation of the sea is fairly constant, though much greater in daytime and in summer; but the change from earth to sea may be concentrated in certain areas (e.g. where estuaries are plentiful), and the change from sea to earth may be equally local and quite spasmodic. The old misinterpretation of a 'way up and down' for all matter, by which there is a constant and usually imperceptible change of matter in both directions, is based upon a vicious application of the Platonic distortion of the river-fragments (see pp. 366 f.) to the invincible schema of this fr. 31.

### Summary of the Arguments for and Against an Epyrosis in Heraclitus

In modern times Zeller argued the case for accepting the Stoic attribution of an epyrosis to Heraclitus, and has been followed by Diels, Gomperz, Gilbert, Brieger and Gigon, to name only some of the more notable. The opposite view was maintained by Schleiermacher and Lassalle in the last century: their views have been summarized and expanded by Burnet 158-63; further considerations against the epyrosis have been adduced by Reinhart, Parmenides 163 f., and in his article 'Heraclitus Lehrte vom Feuer', Hermes 77.

Theophrastus probably accepted this: Phïlo, loc. cit., attributed to him four arguments against the eternity of the world, of which only the first two, probably, were retained by him (Diels Doxographi 166), the others being purely Stoic. But the counter-arguments adduced by Phïlo in chapters 25-6 are probably also derived from Theophrastus (who of course believed in the eternity of the world): thus he, like Aristotle, held that the sea is diminishing in parts, but also increasing elsewhere.
(1942) 1-27. Nearly all modern critics except Gigon and his followers accept the Schleiermacher-Lassalle-Burnet interpretation: even Nestle (ZN 879 n.), usually an extreme conservative, reproduces Burnet's arguments without disapproval, though they now require considerable modification and expansion.

In favour of an ecpyrosis in Heraclitus is the probable support of Aristotle (in de caelo A 10, 279b12, on p. 319), and the certain support of Theophrastus and the Stoics. The latter, however, were presumably influenced by Theophrastus, and the unreliable nature of their interpretation is shown by the addition of air to Heraclitus' three world-masses. Further, it is easy to see how Theophrastus was misled: fr. 90 (fire is exchanged for all things), fr. 92 (the world kindles in measures which Theophrastus took to be periods), fr. 31 (in part interpreted cosmogonically, and so implying also a reverse process)—all these were adequate to mislead someone who erroneously believed that the theory of successive single worlds was commonly held by the Ionians, e.g. by Anaximander, and who applied Aristotle's principle that 'all things perish into that from which they arose' to the details of cosmogony.

Against an ecpyrosis: (i) the whole tenor of Heraclitus' thought as expressed in the extant fragments: the unity of opposites upon which the Logos is founded depends upon the balance between them, the θετήμενος ἀριστον. If the 'strife' which symbolizes their interaction, and the consequent maintenance of the tension, ceased, then the world would cease to be—a consequence for which Heraclitus evidently rebuked Homer (see p. 242f.). The dominance of fire in an ecpyrosis would entail the destruction of the Logos, the disruption of the 'hidden connexion', and the end of the 'war' which is 'father and king of all'. (ii) More specifically, an ecpyrosis would entail the abandonment of the 'measures' which are implied (in frs. 90, 31, 94, and others) to exist permanently in the world of natural change; and a breakdown of the exchange between fire and all things expressed in fr. 90. (iii) Fr. 90 declines quite definitely that this order (i.e. that which we see around us) is eternal and will never be destroyed. (iv) Plato made it quite clear at Sophist 242D, περιβάλλειν τὸν θεν, τὸν ὄντος ὁμοίως ἑξαρκησομένος, ἀποτέλεσιν τοῦ ὄντος ἑξερχόμενος τὸν ὄντος ὁμοίως. For Heraclitus unity and plurality existed simultaneously; there was no succession of opposed states (e.g. fire on the one hand, and the plural world on the other) as in Empedocles. No supporter of an ecpyrosis in Heraclitus has been able to explain this testimony away. (v) The case in favour of an ecpyrosis, weak as it is, is further invalidated by the following considerations. (a) Even among Stoics there were evidently some who doubted the ecpyrosis-interpretation. Thus in de def. or. 12, 415E-416A Plutarch makes Cleombrotus complain that the Stoic ecpyrosis is 'encroaching upon the works of Hesiod as upon those of Heraclitus and Orpheus', and in one passage Marcus Aurelius (who elsewhere accepts the ecpyrosis, cf., for example, 311, 3) introduces what is evidently an alternative (and correct) interpretation of Heraclitus: x, 7 ... διότι τῆς τοῦ θεοῦ, ἀλλὰ τῆς τοῦ βασιλέως λόγου, ήταν κατὰ περιοδοῦς ἑπταετῶν, ήταν διδοτῆς ὁμοίως ὑποκειμένως, where Lassalle and Schleiermacher, following Burnet, are right in referring the ὁμοίως to Heraclitus (see ZN 869 n. 2). This alternative is a reference to Panaxius, who modified the Stoic ecpyrosis in this way; there is no evidence that he had Heraclitus in mind in so doing, but it may be significant that Marcus expresses the alternatives in Heraclitan terminology. (b) The fragments which were commonly supposed to refer to an ecpyrosis are of no evidential value for this purpose. The so-called fr. 66, which was the chief among these, is really an interpretation by Hippolytus (see pp. 359 ff.); the identification of ἱεροτομία καὶ νόμος (fr. 69), in the same passage of Hippolytus, with διακόσμησις and διακυβέρνως, is Stoic in thought and terminology, and has been adopted by Hippolytus because it appears to anticipate the Last Judgement (see pp. 357 ff.). Fr. 90, which has sometimes been held, after Theophrastus, to support an ecpyrosis ('all things are exchanged for fire, and fire for all things, as gods for gold and gold for gods'), accords well with the τοιοῦτος theory of partial physical exchanges: the point is that the total of goods or gold remains unchanged, not that all the goods go to one party, all the gold to another (see pp. 346ff.). And the last sentence of fr. 10 does not imply periodicity (see pp. 177ff.).

One argument against the ecpyrosis is of no value (so also Reinhart Parnotes 1701). It was advanced by Lassalle, 112, and assimilated by Burnet, 155f., 157f., 162, and uses the theory outlined in de victa 1, 3 to account for natural changes as due to
inevitable reactions between fire and moisture (in the form of exhalations); but though this theory of the alternate advance of fire and water occurs in a treatise which has Heraclitean elements, there is no reason whatever to assign it to Heraclitus, for whom fire sea and earth, and not the first two alone, were involved in natural change. De vietas is an eclectic work which embroiders on Empedocles, Anaxagoras and Archelaus, as well as upon Heraclitus; the interaction of fire and water belongs in all probability to Archelaus."

1 A fresh defence of cycropism in Heraclitus has now been made by R. Mondolfo, Phronesis 3 (1918) 75ff.; I find it unpersuasive (Phronesis 4 (1959) 73ff.), and Mondolfo in turn rejects my counter-arguments (e.g. Problemas y Métodos de Investigación en la Historia de la Filosofía (Buenos Aires, 1960), 143-5).

Clement Stromateis vi, 17, 1 (ii, p. 435 Stuhlin) 'Orphicoς δὲ ποιηθηκας:

ετηνω δοβω χιλις δανατος ἕκ δοβων ωμηθηκας
εκ δοβων (ἀκορω) γαλα, τὸ δοβω των πολλων ὄνομα
ἐκ τον δη ψυχη δομω οὐδ' ἀνέφεσαις;

Ἡρακλετος ἐκ ταύτων τιμωτάτους ποὺς λέγως ὢδε ποὺς γράφει
φυγησαν δανατος δωρω γενεθαι, ὅτι δὲ δανατος γην γενεθαι:
ἐκ γης δὲ δωρω γίνεται, εἰ δανατος δὲ ψυχη.

Orphus wrote: 'Water is death to soul...: from water comes earth, from earth again comes water; from that comes soul, leaping up to the whole aether.' Heraclitus, composing his words out of these lines, writes after this fashion: For souls it is death to become water; for water it is death to become earth; out of earth water comes-to-be, and out of water, soul.

The following discussion of this fragment is only partial, since its implications for Heraclitus' beliefs about the soul are only incidentally mentioned.

The Orphic verses (Kern Orphicorum Fragmenta no. 226) were obviously composed later than the saying of Heraclitus; see Stumplinger Das Plagiat in der gr. Literatur 63 and 73. Clement elsewhere also (Strom. vi. 27, 1) reveals his native belief that Heraclitus was dependent on Orphic doctrines. In these circumstances the confused text of the verses is not of great moment here; it is clear that they reproduced fairly closely the content of the fragment. That this is given with reasonable accuracy (ἔκσε εἰς is neutral) is indicated by a number of other, verbally similar, ancient references, though these only reproduce the first part of the fragment; for the second Clement is the only source. Philo de aet. mundi 21 and Hippolytus Ref. v. 16, 4 are the closest quotations; in the others (which like Hippolytus only give the first clause) ὑψοθεν οὐσία is substi-
itself a kind of fire and so analogous to Heraclitus' ὕψιθ οὕρον in so far as he had one. It seems therefore that Heraclitus has here put soul in the place of cosmic fire. There can be no question of a cosmic soul (as in Ἀδείτις IV, 3, 12, on p. 371); the plural-ὕψιθ, οὕρον, apart from other considerations, makes that certain. Nor indeed can the whole fragment apply to the microcosm, as Gigon 104f. maintained that earth represents flesh, water blood, in the human body. Even if Xenophanes could say (fr. 33) πάντος γαρ γενεσθαι τα και θεοσε έγκυομεσα (and he did not mean this very literally), it would still be impossible to use γαρ by itself to mean flesh: on the other hand, the changes between earth and moisture had been asserted of the outside world in fr. 31. It is by no means certain, in any case, that the soul was nurtured from the blood. The Stoics assumed this, but for Heraclitus the soul's efficacy depended on contact with the outside world and with the material Logos, possibly by the medium of breath, as Sextus tells us, adv. math. vii, 126ff. (DK 22A16). Primarily the contact was with fire itself—the cosmic fire which was replenished by the exhalations from the sea. Perhaps it is to express this point that Heraclitus substitutes soul for cosmic fire. There is no essential difference between the two: soul is a form of material which, slightly changed, exists also outside bodies. (For a summary of my views on the soul in Heraclitus see AJP 70 (1949) 384ff.) From the point of view of Heraclitus' theory of natural changes in the world at large the importance of the fragment is that it confirms the statement of fr. 31, that the three world-masses are fire, water, earth; and that these three can change into each other in this order—fire, that is, does not change directly into earth nor earth into fire. In fr. 36 a different terminology is used to express these changes: not the 'turnings' of fire, but the 'death' of each separate form of matter. This is obviously a metaphorical use which was evidently an idiosyncrasy of Heraclitus. It is conceivably repeated in the very obscure fr. 21 ('what we see when awake is death', i.e. changes from one kind of matter to another?), and is certainly echoed in the paraphrases which Diels collected as his fr. 76, discussed below. Except for the anachronistic use of the word 'element', Philo accurately summarized Heraclitus' intention at de æst. mundi 21:

1 That this kind of view was later attributed to 'Heraclitians' (perhaps Stoics) is shown by Proclus, In 13, 90a 30...
Empedocles. A group of sayings is attributed to Heraclitus in which the ἄθαντος metaphor is used and air is added to the three world-masses of fr. 51 (soul, water and earth in fr. 36). This group is counted as fr. 76 by Diels (−253), and is set out below:

<table>
<thead>
<tr>
<th>Pliutarch &amp; E 18, 392 c</th>
<th>Marcus Aurelius IV, 46, 1</th>
<th>Maximus Tyrius xi, 4</th>
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<tbody>
<tr>
<td>. . . ἀπὸ Ἡρακλείτου λέγεται: τούτων δρᾶν ἀθάνατον καὶ ἀδέρφον άθανατός ἄθανατος γένεσις.</td>
<td>διὰ τοῦ Ἡρακλείτου ἀνασκόπω, ηταὶ γιὰ τὸν ἄθανατον ἀδέρφον γενεσθαι καὶ ἀδέρφον ἄθανατον ἀθάνατον γενεσθαι καὶ ἀδέρφον τὸν ἄθανατον καὶ ἂνταξιοῦ.</td>
<td>. . . καὶ τῆς Ἡρακλείτου ἀνασκόπω, ἤταὶ γιὰ τὸν ἄθανατον ἀδέρφον τὸν ἄθανατον καὶ ἀδέρφον τὸν ἄθανατον καὶ ἂνταξιοῦ.</td>
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</tbody>
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Scholars have for long had suspicions that these passages present no new information on Heraclitus, nothing like a separate direct quotation, but only a Stoicized version of fr. 36 in which τὸ πῦρ is substituted for ψυξί on the analogy of fr. 31, and the 'death' metaphor is formally extended to the remainder of the process. Zeller's scepticism (ZN 850ff.) followed that of Schuster and Thesmiller, and was approved by Diels and Kranz: few except the inaccurate Gilbert held out against this interpretation until Gigon 59 resurrected a faith in fr. 76b, on the ground that Heraclitus, like Anaximander, believed in the special position of the hot and the cold, the wet and the dry (cf., for example, fr. 126, which, however, is evidently purely general in its application), and could therefore have believed in four and not three world-masses. But the question is not what he could have believed but what he did believe, and fragments 31 and 36 show quite clearly that he believed that the main constituents of the world were fire, sea, earth—not air. Further, the argument about the opposites is somewhat misleading (on this point see W. Bröcker's review, Gnomon 13 (1937) 533): the hot and the cold, etc., were indeed substances, but they were not yet neatly identified with specific forms of matter. Possibly the hot was often identified with fire, the wet with sea; but earth and air were more difficult to associate with a single one of these four opposites. It is often said that Empedocles simply identified traditional basic pairs of opposites with particular kinds of matter, but his procedure was more complicated than that: we may infer that he first had to prove the substantiality of air. It may be that Heraclitus' omission of air is a direct
criticism of Anaximenes’ acceptance of it. At any rate there is no evidence whatsoever that Heraclitus ever attempted to describe natural changes in terms solely of the opposites; indeed, one of the strangest features of his system is the lack of explicit interrelation between his special analysis of cosmological change (between fire, water and earth) and his general analysis of change as between opposites. No doubt the latter was primarily a logical analysis, and as such led to his ‘great discovery’, that opposites are not really disconnected; the former primarily an empirical one based upon the evidence of the eyes. The connecting link between the two was the concept of μέταποσ, which automatically holds between opposites and is repeatedly stressed in the three-stage cosmological changes: on this see my article ‘Natural Change in Heraclitus’, Mind ix, n.s. no. 237 (Jan. 1951) 35ff. To revert in conclusion to the pseudo-fragment: note that all the sources are Stoic, and that the earth→fire change in Maximus (who introduces the word γόα) from a garbled version of fr. 62 which he had just retailed is impossible; various corrections of this have been proposed, but the matter is of little importance, and in any event Maximus probably just did not understand.1

1 Cherniss noted in AJP 56, 1935, 411ff., that fr. 76D presents a cycle of change which Aristotle said none of his predecessors had accepted. (I owe this information to W. G. Rubinowicz and W. I. Matson, Review of Metaphysics 10, 1956, 914ff., a useful review-article.)

For as Heraclitus says that the principle which orders the whole by gradually changing makes the world out of itself and again itself out of the world, and all things are an equal exchange for fire and fire for all things, as goods are for gold and gold for goods—so the conjunction of the number five with itself by its nature generates nothing incomplete or of different character, but has changes which are determined.

In this difficult sentence Plutarch follows the Stoic epicyrosis-interpretation of Heraclitus. The whole sentiment from ὡς γὰρ καθηκόντως to the end of the quotation is attributed to him, but the accepted quotation may be in direct speech in spite of the eratol obliqua of the rest, and it is unnecessary to read the accusative ἄντωνομία, with Sieveking, instead of ἄντωνομη which is the reading suggested by the ms. τε, omitted by most mss., is a necessary connexion. The restoration of ἄντωνομη instead of any form of the verb seems to be a certain one (see Diels SB Ber (1919) 191), and is virtually indeed the reading of the class Γ, which is in general the most reliable because it does not often attempt to cure obvious corruptions (e.g. Paton, Pohlerz, Sieveking (Teubner 1929), p. xxvii). The reading is confirmed by the fact that Theophrastus evidently accepted the noun-form (though ἀντωνομη and not ἄντωνομη); so Phys. op. fr. 1 ap. Simpl. in Phys. 24, 4 πῦρ ἄντωνομη...
πάντα; Diog. L. ix, 8 τινός ἀρμοδίου τῷ πάντα. Cf. other doxographic versions, Heraclitus Hom. Qu. Hom. 43; Eusebius P.E. xiv. 3; Philo Leg. alleg. iii. 7; Plotinus Enn. iv, 8, i, etc. Imitations are certainly found in which the verbal form occurs: so de victa 1, 5 χορεῖ ἡ πάντα καὶ ἔδρα καὶ ἀδέρπηται ἄνω καὶ κάτω ἀφανείας; Lucian Ph. aen. 14; Philo de æt. mundi c. 21. But the authority of Theophrastus, and indeed the text tradition of Plutarch, justify the acceptance of ἀρμοδίου. The compound noun is not found elsewhere before Charito 5, 2, 4, τὴς ἄρμοδες τὴν ἀρμοδίου, but it is a perfectly possible one. ἀρμοδιοῦδικός, meaning ‘to exchange’ occurs in Archilochus, fr. 74, 7 Dieth, but in a reciprocal sense; meaning ‘to require’ it occurs in Archilochus and tragedy, though only at Aristophanes Thesm. 723 is the object for which requital is made expressed, by ἐρωτέω with the genitive. The simple genitive, however, would not be impossible here.—The use of the article with πάντα is not common, but can be paralleled in, for example, Heraclitus fr. 64 (τὰ πάντα πάντα ἐκαρπήσατο), and is retained in three doxographic versions of Theophrastus, including Diog. L. ix, 8 quoted above.

The fragment asserts that fire and ‘all things’ are equally exchanged for each other (ἀρμοδίου; reinforces the idea of exact reciprocity ἀρμοδίου), and the equality of these exchanges is emphasized by a simile. The exchanges of fire must obviously refer to the τινός πρωτοτοι described in fr. 31—fire is exchanged for πάντα, which means (as Cherniss points out in the passage quoted below) not ‘the whole’ as a homogeneous unit but all things individually in sum. Thus fire is exchanged for water and earth which, with fire itself, are the constituents of the world; both as cosmological world-masses (i.e. sky, sea, earth) and, in mixture (this may be inferred perhaps, though Heraclitus never directly discusses the material composition of individual things), as components of all different things. The πάντα which was found to underlie the large-scale changes of fr. 31 is emphasized here by the simile from the market.

Gold stands for fire and χρήματα for the different kinds of goods which gold can buy, and the different kinds of object in the world. Gold is not given without getting goods in exchange; these goods equal the gold in value, and a certain amount of gold will buy a determinate and fixed amount of goods. Similarly, goods are only given out when a proportionate amount of gold is exchanged for them. The simile has another application: one side of the exchange is homogeneous (i.e. gold, and fire), the other side is heterogeneous (goods of all kinds, and different physical things, or, in the last analysis, water and earth).

It sometimes used to be thought that this fragment could be used to show that Heraclitus postulated an eternity, and there is no doubt that Theophrastus took it to imply this (though Reinhardt, Hermes 77 (1947) 24, has no justification for the assertion that Aristotle did likewise). Gigon 470 developed this interpretation in spite of the clear objections of Burnet and Reinhardt; he held that fr. 90 gave material expression to a logical rule which he derives from frs. 10 and 30, that is, all things come from one and one from all things—there is a periodic alternation between τὸ πάντα on the one hand and the manifold κατὰ τὸ πάντα on the other. It was shown under fr. 10 that ‘one’ and ‘many’ are alternative ways of looking at things, not successive physical states; while fr. 30 simply asserts that ‘all things are one’, which is against Gigon’s interpretation. Gigon argues, however, that just as in fr. 88 the living and the dead, etc., are said to be ‘the same’ because they constantly replace one another, so τὸ πάντα and τὰ πάντα in fr. 90 constantly replace one another, and thus τὰ πάντα is an alternative state to τὸ πάντα—in Stoic terminology, ἀναπαράστασις as opposed to ἀντικατάστασις. I cannot do better in dealing with this contention than to quote the words of Cherniss in his brief but acute review of Gigon’s Untersuchungen, in Class. Phil. 35.344ff.: ‘The comparison of frs. 90 and 88 which Gigon believes makes the assumption of an ἀναπαράστασις necessary appears to me to show the danger of Gigon’s formalistic method, for the opposition τὸ πάντα is not analogous to τὸ πάντα τῶν, ἐφέρτω—καταφέρτω, etc., of the Platonic and Aristotelian views. If we are to take the terminology of Heraclitus as seriously as Gigon does, we must distinguish first between the identification of the apparent contrarieties in fragment 88 and the relation of equivalence in fragment 90 and also we must remark the plural τὰ πάντα, in the latter fragment which means not that the whole but that all things individually and collectively are equivalent to fire in varying amounts.’ Further, the simile quite clearly precludes complete alternation, for in the exchange of gold and goods neither element is ever absorbed into the other (as τὰ πάντα would have to be in τὸ πάντα).
but the total of each remains the same: the most extreme case which could theoretically occur would be if all the gold remained on one side, all the goods on the other; even so the goods still exist as such.

Cherniss went on to say that the reason why ἃνθρωπος, etc., can be called 'the same' is just that they can all be expressed in terms of fire. In this I think he is wrong: identity of opposites of all kinds depends either upon their inevitable succession or upon the fact that their opposition is only relative; this is a logical discovery which summarizes the nature of the Logos. The cosmological aspect of the connection of all things is that they are all πυρός-τροποί: this is something different. We have seen that Heraclitus perhaps did not fully integrate his opposite doctrine with his doctrine of fire, though they are connected by the idea of μίας. Nevertheless, it seems probable that he applied to the theory of cosmological changes an idiosyncrasy of thought which partly determined the doctrine of opposites: dead always turns into alive, he said in fr. 88 (or night into day, summer into winter, etc.), and alive into dead: therefore dead is the same as alive. Fire always turns into sea, and indirectly into earth, earth and sea turn back into fire: therefore sea and earth are 'the same' as fire, and 'this order' can be described in fr. 30 as being 'an ever-living' fire (though parts of it at any one time are not fire in the full sense but are extinguished, have been 'exchanged' for something else). To this extent, and to this extent only, are frs. 88 and 90 compatible.

There remains one slight difficulty with fr. 90. Fire is said to be an exchange for 'all things': but fire itself must be one constituent of 'all things' if this means all the individual things in the world, which are not restricted to water and earth alone. We know so little about Heraclitus' views on any except large-scale cosmological changes that we cannot properly elucidate this difficulty; but probably it is simply due to an unavoidable looseness of speech, and Heraclitus might argue that, just as some of the goods exchanged for gold might themselves contain a proportion of gold yet would not therefore be called gold, so τὸ μέσον includes mixtures of fire, which, however, can quite legitimately be contrasted with pure fire, whether this be isolated only in thought or also in fact, e.g. as celestial aether.

Hippolytus summarizes the difference between fire and pure aether, and the result is a discussion of the nature of fire.

He talks also of a resurrection of the flesh...[fr. 93]. He says also that a judgement of the world and of all in it comes to be through fire, in these words: Thunderbolt steers all things [fr. 64], that is, directs; by 'thunderbolt' he means the eternal fire; he says also that this fire is sagacious and cause of the management of the universe. He calls it Deprivation and satiety [fr. 67]: deprivation is the world-ordering, according to him, and the consumption by fire [ἐκπυρώσεις] is satiety. For, he says, fire having come upon them will judge and overtake all things. In this section he displayed together his own special meaning, and at the same time that of the heresy of Noetus...[fr. 67 follows].

This whole passage in Hippolytus from λέγει δὲ καὶ σοφῆς to καταλύεται appears to have been added as an afterthought—perhaps by Hippolytus himself, for the three quotations from Heraclitus are plausible enough, and suggest acquaintance with the kind of handbook (if not a book by Heraclitus himself) which Hippolytus must have used. The passage differs radically from the rest of the chapter in which it occurs. A number of quotations from Heraclitus occur in §§1-6 of Ref. 10, all of which illustrate the coincidence of opposites and thus are relevant to Hippolytus' purpose of showing that the Noetian heresy (that Father and Son,
most naturally refers not forward to what follows, but backward, either to what immediately precedes or to the context of all the fragments quoted so far. But if the fragments which immediately precede do not display Heraclitus’ "special meaning" (i.e., the opposite-doctrine) then they may be presumed to have been added afterwards. Frs. 65-6 do not contribute to this doctrine; therefore the passage in which they occur is seen to be heterogeneous, from yet another angle.

The possibility that our passage is an afterthought helps to explain its lack of clarity and logical consequence. The saying "thunderbolt strikes all things" is not an apt illustration of a belief in the judgement of the world; and after λέγει δὲ καὶ ὁ θεός ταύτα, a supporting quotation might have been expected, according to Hippolytus' normal practice. H. Fränkel's ingenious suggestion is recorded in DK, that the quotations were originally written in the margin and their proper order altered when they were brought into the text: originally πάντα γὰρ οὐσὶ καὶ τὸ πόρος ὁμός κτλ. (counted by Diels as fr. 66) came in the place of fr. 64, which itself (with its explanation τοῦτοι σῶματοι) belonged after τῶν θεῶν τοῖς. There are two serious objections to this solution: first, the expression λέγει οὖσιν indicates that one quotation at any rate came in the text; it cannot have been added to accommodate a quotation, since with the transposition suggested either it or the words γὰρ οὐσί καὶ τὸ πόρος κτλ. are superfluous and have to be removed. Secondly, it will be seen below that the so-called fr. 66 cannot be a genuine quotation from Heraclitus, but is merely a summary or paraphrase by Hippolytus; therefore, suitable as it may seem, it cannot stand as illustration of the statement that Heraclitus spoke of a judgement by fire. The lack of cogency in the whole passage is partly explained once it is seen that Hippolytus is simply readingapting the Stoic ekpyrosis-interpretation, but is unable to substantiate it with anything more apt than fr. 64 for the very reason that Heraclitus never postulated an ekpyrosis. That Hippolytus here is dependent on a Stoic source is shown by the paraphrase καταλείψην (cf. Cleanthes Ἰστ. 1: 12); by the phrase τὰ δικαιώματα τῶν θεῶν τοῖς; by the (which could hardly occur with a demonstrative adjective). A sentence can be a summary or can contain the sum of a doctrine: it cannot be that sum. Only if τὰ ἁρματα were in opposition to τὰ τοῦ θεοῦ τὸ λόγον or the like would the difficulty be met and this is out of the question.
epithet ἐφόνοιον applied to fire (cf. the Stoic πῦρ χαρέων; but see the discussion below); and by the correlation of κρατουμένην and διακόμησις, κόρος and ἐκδόρασις, which occurs elsewhere in Stoicizing contexts at Plutarch de E 9, 380c and Philo de spec. legg. 1, 206 (v. p. 50 Cohn). Philo is frequently dependent on Stoic interpretations, and Reinhart, Parmenides 164 n. 1, 173, suggested that his source here was Posidonius. The occurrence of all these factors cannot easily be accidental: Hippolytus here displays his acquaintance with the Stoic versions of Heraclitus as well as with the collection of sayings, though he does not abandon his own Christian interpretation (to which fr. 65 and comment is entirely due). Stoic influence is not detectable elsewhere in the chapters on Heraclitus and Nocetus, which is a further indication that the passage under discussion occupies a special position. The difficulty remains that ἐλεγει δὲ καὶ ἐφόνοιον is still in the air, and does not lead up (as one might expect) to a quotation illustrating the point that fire is endowed with intellect. It is certainly true that Fränkel's proposed rearrangement, by making fr. 64 the illustration required, gives a satisfactory sense; the word οἷσεα itself suggests an intelligent agent and might give rise to ἐφόνοιον, but the other objections to that rearrangement are too strong for this solution to be acceptable. It is possible that ἐφόνοιον looks backward to fr. 64 (in the conventional and probably correct arrangement of the passage), though ἐλεγει δὲ καὶ is against this; or Hippolytus may have had in mind some saying of Heraclitus which he did not quote (or which dropped out of the text), such as fr. 32 εἰ τὸ σφόνῳ μου ἐκκόμησα ὅποιος καὶ ἔδωκε Ἰησοῦς σόμαι, where the one thing which is described as wise might very well be identified with fire. More plausible perhaps is a solution proposed by Reinhart (Hermes 77 (1942) 256f.) and approved by Kranz in the Nachträge zu DK² (p. 493). According to this proposal ἐφόνοιον itself would be a quotation from Heraclitus (or rather, πῦρ φόνοιον) —the remainder of the sentence being, of course, Stoic in character. Reinhart quotes several passages from Clement in which the phrase τὸ πῦρ ἐφόνοιον occurs, e.g., Paschas. III, 44, 2 (p. 252, 13, St.) ἔδωκεν τῷ πῦρι ἐφόνοιον πῦρος ἐκκόμησα ἕπει τῇ ἐκκομήσει ἐγγέχθισαν (where ἐκκόμησα suggests that a reference to a well-known phrase is involved); Protrep. 13, 3 (p. 41, 14 St.) —καὶ τὸν ἐν Δελφῶν τῷ Ἀπελλάδων προστραμμένος ἐγγέχθισαν ἐπὶ τῷ κόροις τῷ κόροις. However, Reinhart omitted to quote in full a passage which seems to give the true origin of this phrase: Clement Strom. vii, 34, 4 (H. p. 27, 5 St.) ἔβαλε δὲ τὸ πῦρ ὅποιος τῷ κόροις τῇ ἐκκομήσει τῆς ἔργων τῷ πῦρ. Stählin comments that the distinction between two types of fire is Stoic; this is certainly the case, cf., for example, Cicero =N.D. ii, 15, 41: "Arquo hic noster ignis, quem usus vitae requirit, confecor est ut consumptor omnium... contra ille corporum vitals et salutis omnium conservat, alit, auget, sustinet, sensumque adictum." Anrich, who examined the origins of τὸ πῦρ ἐφόνοιον in his paper "Clemens u. Origenes als Begründer der Lehre vom Feuerzeug", Thol. Abh. f. H. J. Holtzmann (Tübingen and Leipzig, 1903) 27ff., reached the conclusion that it may be either Stoic in origin, or invented by Clement: the latter is unlikely (since, for example, Clement attributes the use of the phrase to the 'prophets' at Edl. proph. 25, 4 (III. p. 144, 8 St.)). The first explanation seems correct. Reinhart dismisses it on the ground that the Stoic term was τὸ πῦρ ἐφόνοιον or τὸ πῦρ τέχνηκον: but the difference between πῦρ ἐφόνοιον and πῦρ τέχνηκον, when they are applied to what is usually regarded as an inanimate substance, is not great. Indeed, there is evidence that Chrysippus used the word φόνοιον of fire: he certainly called the world ἀκατάφόνοιον (Ap. Philodem. de piet. c. 14 =SVT ii, 636), admitted perhaps in a Heraclizing context: more important is August. de civ. des ii, 5 (SVT ii, 443) 'Νανα Σωκράτης ἐστε καὶ φιλόσοφος καὶ λογικος, θαυμάζω διὰ τὸν ἐγγέχθισαν τῆς καὶ τῆς πάντως καὶ τῆς ἐγγέχθισαν ἐποίησον ἐνσέχθισαν καὶ ἐφόνοιον καὶ πῦρ τέχνηκον (ἐδέ). τὸ πῦρ τέχνηκον. Philo, de aet. mundi 19, 61 p. 102 Cohn, attributed to Chrysippus this description of the world: ἐποίησεν σώμα καὶ νοῦς, πρὸς δὲ καὶ φόνοιον... The evidence, then, suggests that τὸ πῦρ ἐφόνοιον is of Stoic origin: and Reinhart's case against this concludes lamely with an appeal back to our passage of Hippolytus—which was the original imponderable. Whether Heraclitus did in fact call his fire
rational or not will be discussed under frs. 41 and 52 in Group 12. There is no doubt that Diogenes of Apollonia attributed ἔναρξις to air (fr. 5), and that for him the soul consisted of warmer air; Heraclitus too thought the soul (the seat of reason) to be fiery, and though he may not have assigned reason to all fire, it would not be surprising in itself if he did to some.

To turn specifically to fr. 64: that this is a genuine and reasonably accurate quotation from Heraclitus is confirmed by Philodemus de piét. 64 (p. 70 Gomperz): πονηθησθαι ἐκ τοῦ κόσμου ἐν δίκαιῳ ἐν δίκαιον [ξύλων]: Κεφανίος ἐκ τοῦ ἐν τῷ κόσμῳ καὶ τοῦ ἐν δίκαιῳ; εἰ ζῶ τῇ πάντως τῇ παντες *** (restit. Crônet, Diels). The latter part of this passage probably begins a version of fr. 67; fr. 64, at any rate, is unmistakable. Evidently Philodemus had πάντως, not τῇ πάντως as in Hippolytus: but πάντως is found in fr. 90, and Heraclitus may have been addicted to this use of the article. εἰ cannot be due to Hippolytus and may belong to the original form of the fragment, thus suggesting that it was not an isolated saying: it may, however, have been added by Hippolytus' source. The most interesting thing in the Philodemus version is the addition KAIZ: the restoration καὶ ζῶσ seems almost inevitable, as does the attachment of these words to fr. 64 rather than to what follows. Doubtless καὶ ζῶσ is only interpretation—one thinks of the statement that τὸ λέγει καὶ ζῶσ are the same, later in the same treatise of Philodemus (14, 26: p. 81 G.); this is presumably based on the use of a phrase normally descriptive of Zeus, ὑπΌν τοῦ ἄνθρωπον, to apply to war in fr. 53; similarly here the mention of the conventional weapon of Zeus, the thunderbolt, leads to the addition of its owner's name. It has been maintained, however, that kephatos in the fragment is simply a name for Zeus. The evidence for this is as follows: a fifth-century B.C. inscription from Mantinea, ΔΙΟΣ | ΚΕΦΑΛΟ | KEPAVNO | (IG v. 2, 288 p. 58; v. Usener KH, Schrift 4, 471 ff. = Rh.M. 60 (1908) 1); a Hellenistic inscription from Homs, ΚΕΠΑΧ | καὶ ζῶσ (Rev. Arch. 3rd series, 40, 388): Κεφανίος as the title of Orphic Hymn xix.; the cult of Κεφανίος at Seleucia in Pieria initiated by Seleucus Nicator (c. 358-280 B.C.), cf. Appian Syr. 58; and, less important perhaps, the variant version to Hesiod Theog. 886ff. ap. Galen de Hipp. et Plut. place. 117, 8, of which line 14 is as follows: (κεφανίος) δεινός μη τοῖς [sc. Μετίς] κορυφώσθων ἀλλὰ κεφανίον. Here Well and Usener write Κεφανίος: but it is perfectly possible that what Zeus was afraid of was that Metis should bear a son stronger than, i.e. able to resist, the thunderbolt on the use of which Zeus' authority depended (cf. Pindar Isthm. viii, 32ff.; Aesch. P. F. 912).

It is most unlikely that the name Κεφανίος should be applied by Zeus to himself. And so even if this variant version is an early one, it still provides no evidence that kephatos by itself could be used in place of Zeus; this was a Hellenistic development—in the fifth-century inscription it is notable that Zeus is named as well as Κεφανίος. The Orphic hymn, of course, cannot be of pre-Hellenistic composition. In sum it seems unlikely that in Heraclitus fr. 64 we should write (with DK) Κεφανίος with a capital letter, and accept this as a name for Zeus. Still more unlikely is Reinhardt's theory (Parrhénia 1897) that there is a reference in the fragment to an Orphic belief that the thunderbolt is the instrument of fate, by which the soul is propelled into the circle of birds as punishment for defilement (cf. the Orphic tablets from Thrace of the late fourth or third century B.C.: I.G. xiv, 641, 1–2; DK 4118–19. Lines 5–6 of the second of these are as follows: ἔτει με Ιησοῦ κατόενατο(?) *** στέρεωθεν κεφανίον, for which Reinhardt suggested... ἔτοις (ἔτοις στέρεωθεν κεφανίον). The suggestion that Heraclitus thought of matter as undergoing an analogous cycle at the instance of fate is ingenious rather than plausible, especially in view of the probably later date of these Orphic ideas, and the fact that, in spite of the contents of Nestle and others, Orphic influence is not otherwise apparent in Heraclitus.

The simplest account of the meaning of the fragment is perhaps that of Gigon 141 f., that kephatos is the mythical weapon of Zeus, and that what we are intended to conclude from the saying is that god is the motivator of all things. That Heraclitus was prepared to use the language of traditional religion is shown by fr. 32. Gigon further relates fr. 64 to fr. 11, ‘every creeping thing is driven to pasture with a blow’: in the case of the whole world the motivating blow is given not by a prick or goad, but by the all-powerful, directing weapon of the highest god; this is a different and higher symbol. The thunderbolt, too, is Zeus' weapon of war: as such it may be the underlying cause of the ‘war’ which is essential to the continuation of the world (cf. Group 8). This interpretation is partly based upon Cleanthes Hymn to Zeus off., see p. 259ff., where it is shown that the connexion between kephatos and πάντας in Cleanthes
is due not to an interpretation of fr. 64 in the sense of fr. 11, but to a technical Stoic sense of πανταγιγι and its connotation with fire, represented also by κασσαφός. Gigon’s interpretation, then, must stand or fall on its own merit; these are not inconsiderable, but I think he is too quick to reject another possibility, and one which is supported by Clearchus’ predication of δεισικις of κασσαφός: namely, that ‘thunderbolt’ is simply a symbol of fire, and that Heraclitus means only to assert that fire (and not Zeus, or the deity, or face) steers all things, in the sense of ‘is responsible for the way in which all things behave’.

Gigon 145 objects that ‘a simple identification Ὑψευρ- κασσαφός is unthinkable. The κασσαφός is fire and is not steered by fire.’ This is not so true as it looks: we saw under fr. 90 that Heraclitus sometimes, for the purpose of argument, dissociates fire from the world of which it forms a part, as he does indeed in fr. 31, where fire is implied to be logically separable from its πανταγιγι. In fr. 90, admirably, the κασσαφός is an ever-living fire, but one part of the cosmos (i.e. the sky and the heavenly bodies) is more truly fire at any one time than other parts (i.e. sea and earth)—it is kindled as opposed to extinguished, dormant, or ‘dead’ fire. Thus it seems legitimate for Heraclitus to have said that fire steers all things, and this may be thought preferable to other interpretations. Quite apart from any possibility that Heraclitus considered fire (not all, perhaps, but the purest and ethereal sort) to be rational—which is indeed implied in the metaphor δεισικις, though here it might be only the mechanical aspect of the operation of steering which is stressed—it is probable enough that this fragment may be understood in the light of the physical ‘turnings’ of fr. 31: the preservation of the πηρός in the changes of fire to sea to earth is in a sense due to the nature of fire itself (here we have to think of fire as itself exemplifying regularity of exchange, from fuel to smoke), and so those changes, and the variegated bodies that result from them, are in a sense due to the ‘steering’ of fire.—That κασσαφός, thunderbolt, may stand as a name for fire in general, or perhaps for celestial fire in particular, is indicated first by the fact that this is how the thunderbolt was primarily thought of (witness its common epithet τυφέρος in fifth-century literature, e.g. Pindar Nem. x. 77; Aesch. Septem 444; Soph. O.T. 200, O.C. 1658); and secondly by Heraclitus’ analogous use of τρυπτίπ in fr. 31 as a name for fire (though it must be admitted that the plausibility of that interpretation was supported partly by reference to the present case): ‘burner’ and ‘thunderbolt’ are sobriquets of a rather similar order.

The significance of the next fragment, 65, is unfortunately even less easy to determine with any degree of confidence. All that can be assigned to Heraclitus are the two words χρωσσούς and κόρος. The former is rather rare; it usually means ‘need’, ‘lack’, ‘poverty’, and occurs in pre-Hellenistic literature only at Tyrtaeus fr. 6, 8 Diehl and (in the sense ‘importunity’) at Hdt. ix. 33, κόρος, of course, means ‘satiety’, sometimes with the sense of ‘surer’; it occurs in two other fragments of Heraclitus (67 and 111), on both occasions in opposition to ἀυξός as an illustration of the opposite-doctrine. In identifying ‘deprivation’ with the world-forming process, ‘satiety’ with the ἐπερυσις (which is used for the state of total fire as well as for the process of consumption leading to this state), Hippolytus is simply following a well-known Stoic interpretation, though he of course takes επερυσις to refer to the Christian purging by fire. This is clearly indicated by the following passages: Philo de spec. legg. i. 208 (v. p. 10 Colin) ἐλπίς μὲν τοῦ γενέτευρος ἐκκαθάρισα ἐνάκτος ἐν τῷ τόπῳ ὅτι ὁ ἄγος ταῦ ἐν ἑτέρῳ, ὅτε ταῦτα καὶ ἐκεῖνα, ὅτε ταῦτα καὶ ἑκεῖνα, ὅτε ταῦτα καὶ ἑκεῖνα, ὅτε ταῦτα καὶ ἑκεῖνα. (Cf. idem, Leg. alleg. 111, 7 (1, p. 114 Colin) . . . Ἑρα- 

Clearchus probably considered that lightning belonged to the pure and creative fire which the Stoics distinguished from everyday fire (see the quotation from Cicero N.D. on p. 373). So Problem Herms 75 (1946) 119, citing Dion Per. Or. 36, 56.
or of fifth-century philosophy in general). Plutarch, again, is obviously drawing on a Stoic source, as the ratio of 5 to 1 for the length of ecyprosis and cosmogony may be his own, rather than a Stoic invention—the ratio of 3 to 1 for the 3-month tenure of Dionysus at Delphi as compared with the 9-month tenure of Apollo, and need not be taken seriously. The objections to the ecyprosis-interpretation of Heraclitus have already been stated (pp. 334ff.) and need not be repeated: the two words of fr. 65 can hardly be held to be a serious support for that interpretation. How they came to be applied to it by the Stoics we can only guess. The assumption is that they were previously somehow connected with fire, otherwise there would have been no cause whatsoever for the Stoic identification. Presumably, too, they originally referred to the cosmological changes of matter, which the Stoics following Theophrastus understood to refer to world-periods. That they are not simply developed out of the opposition κόρος-λέον in fr. 67 and 111 is suggested by the rarity of χρυσαυρός, which would not be accidentally substituted for λέον: λέον indeed would be unsuitable if the opposition came not in an anthropological context (as in fr. 111) but in a cosmological one. Here we may note Hippolytus' expression κατά οὔφων (σκλαφόν χρυσαυρόν κατα). This has led Gigon 49, followed by Walzer ad fr., to restore the fragment as τόπος χρυσαυρόν κόρος, (πόλεως όρη), the last pair being an illjudged deduction from the appearance of war and peace in fr. 67 and the fact that in Diog. L. ix, 8, after Theophrastus, it is said that Heraclitus called the processes leading to cosmogony πόλεως, that leading to ecyprosis όρην. This of course is an extension in the light of Empedocles of Heraclitus' emphasis on war as the essential condition for the existence of our cosmos. But even τόπος χρυσαυρόν κόρος may be too bold a conjecture. Hippolytus' κατά need not signify accurate quotation and the predicative which this would imply (see Reinhard Hermes 77 (1942) 22 n. 3), and there are difficulties in the statement that fire is deprivation and satiety, even if there is less precision in the opposition than the identity implied by the English 'is'. Even on the ecyprosis-interpretation accepted by Gigon, fire cannot be satiety, though there may be said to be a satiety of fire if all things become fire, and it may suffer a deprivation when parts of it change into a world. On the other hand, just as god is the opposites in fr. 67, so might fire be called the opposites; but the absolute identification of fire and god is difficult, and this would hardly explain the Stoic application of the fragment to worldperiods. If we continue to assume that this application must have arisen out of an original application of χρυσαυρόν and κόρος to the cosmological τόπος in the sense of fr. 31, it may be the case that 'satiety' described the world viewed as a whole, all of which is essentially fire though measures of this fire have been extinguished into sea and earth; while 'deprivation' describes the same situation from a different point of view (cf. fr. 10), according to which the pure, unextinguished fire 'lacks' those parts which have undergone τόπος to sea and earth. Alternatively, the two opposites may indeed be successive, not relative (in either case they are essentially connected); the 'lack' may refer to the measures which have to be restored, for example, when a portion of sea turns to earth; the subsequent κόρος, meaning in this case positive 'satiety' rather than mere satiety, might indicate a state in which the sum of sea had become temporarily too great by the accretion of extinguished fire, so that equivalent measures turn into earth and relieve the surfeit, only to cause a corresponding lack. In this 'satiety' and 'lack' could apply to any of the three world-masses, including fire, or to the 'turnings' of fire in general. These suggested explanations are obviously speculative, but they may be on the right lines: what is probable is that 'satiety' and 'deprivation' were intended to describe or qualify not cosmogonally, but cosmological and continuous alterations of things. Whether they applied to fire as the whole world-order, or to the unchanging atithetical fire within that order, and whether they were applied successively or simultaneously, must remain in doubt. See also p. 361 n.

There remains to be considered the sentence τόπος γάρ, φησι, τόπον ἐκδιπορεύεται κατανευρίσκεται: this has normally been accepted as a fragment (= fr. 66d, 26b), even by Burnet, who was forced to maintain that it did not necessarily imply that fire overtakes all things at once. But Reinhardt (Perenennes 164ff.) and, more specifically, Hermes 77 (1942) 22ff. has now demonstrated almost conclusively that the words belong to Hippolytus, and are simply a recapitulation of his κόρος στις interpretation of the Stoic ἀποτέλεσμα interpretation of Heraclitus. (i) φησι in Hippolytus does not necessarily introduce a quotation, but is often explanatory and implies no more than 'means': cf., for example, his explanation of
is shown also by Themistius, in An. post. p. 86f. Wallis: δεσπέροι Ηρακλείτου τῷ πῦρ ἀνέπται μόνον στοιχεῖον καὶ κεφάλα τοῦ γεγονότος τῷ τῶν ἀτομών γὰρ ἡμάς καὶ διδοτῖχου, οὐκ ἀνεικαζόμεθα ποτὲ τῷ πῦρ ἐπιλείφον... A more important parallel is provided by Clement Strom. V, 9, 3 (p. 331, 21 f.); ... καὶ μινιᾶ καὶ δίκη καταλαμβάνει γενόμενον τάκτονα καὶ μέσας [this forms the second part of Heraclitus fr. 28], δι ἔφεσις ἡμῶν, οὕτω γὰρ καὶ στόχος οὗ τὰς βουλήσεως κοινωνίας καθὼς τὴν διὰ πυρὸς καθαρέως τῶν κοινῶν βεβαιοτότως, ἢν ἀποκεφάλισα ἐκτός τοῦ Στοιχείου. This demonstrates in brief how Heraclitus' fire was adapted to Christian needs by the medium of the Stoic; but it does more than this, for Clement evidently interprets καταλαμβάνει in fr. 28 (= "overtake") in the precise eschatological sense in which the word is used by Hippolytus. There may very well be, in our passage of Hippolytus, a legitimate reminiscence of Heraclitus' use (also eschatological, though with different implications) of καταλαμβάνει in fr. 28—a use which is primarily legalistic and can properly be applied to δίκη or its officers. If so, Hippolytus is probably dependent here upon the same Stoic source as Clement.

1 To revert to fr. 65: it is possible that in the words χρησιμοποιοῦν and κἀτερον Heraclitus was referring to Anaximander's metaphor of the mutual encroachment and subsequent retribution of the world-masses. κατεροῖ would describe the state of ἀνάξιος, while χρησιμοποιοῦν calls for "retribution and punishment", ἀνάξιος καὶ ἀτιμῶν... On fr. 65D (p. 335f.), M. Matsuichi now has some observations in its defence: "On Heraclitus' fr. 66 DK" (Mérida, Venezuela, 1959).

2 Gigon 190 accepts Reinhardt's somewhat too drastic criticism of κατεροῦ, but maintains that the rest of the sentence, i.e. τῶν τῶν ἔσχατων κατολογηθην, is genuine. Even so an explanation on the level of fr. 28 is difficult, for καταλαμβάνει in the legalistic sense is appropriate with δίκη but not with πῦρ. Infradó appears weak, but would have some point if it referred to the successive "epochs" of fire.
Clement, *Paedagogus* II, 99, 5 (fr. 216, 28 St.) Ἄφηται μὲν γὰρ ἀκόα τὸ αὐθεντικὸν φῶς τῆς, τὸ δὲ νεφέλων αὐθεντικὸν εἶπεν, ἡ δὲ φήσιν Ἡρακλείτος: τὸ μὴ δύναν ποτε πώς ἐν τῆς λάβοις, μὴδὲν τούτων ἐπικαλυπτόμεθα τὸ σκότος... 

For perhaps one will escape the notice of the perceptible light, but of the intelligible light it is impossible so to do, or as Heraclitus says: How could anyone escape the notice of that which never sets? In no way, then, let us cover ourselves in darkness...

Cornutus, *Compendium* xi, after a reference to the all-seeing eye of Zeus, asks πῶς γὰρ ὁ τὸ θεόν τὴν διὰ τούτων διήκουσαν δύναμιν λανθάνων τι τῶν ἐν τῷ κόσμῳ γνωσόμεν; It is just conceivable that this contains a reminiscence of the present fragments; another reminiscence is possible in the *Cratylus* passage discussed below; but beyond this Clement is our sole testimony. There is no reason to disbelieve him; as far as can be judged from his other quotations from Heraclitus, and indeed from all other Greek authors, he is reasonably accurate—liable perhaps to combine two qumminations without warning (fr. 28), or to interpose an explanation (fr. 20), but only occasionally, as perhaps in fr. 14, to mislead the reader seriously about the extent of the quotation. In the present fragment there is little scope for any of these faults, and it must be accepted as it stands. On the other hand, Clement’s interpretation of it is of little or no value as such. He evidently extracted from his source for Heraclitus all the sayings to which a Christian eschatological sense could possibly be attached; with this motive he quotes frs. 24, 25, 27, 28, 30, 31. The last two of these, at all events, were plainly not intended by Heraclitus in the sense in which Clement interprets them, to refer to a κόσμον ἀρχηγῆς διὰ τούτων: it is therefore quite possible that fr. 16 100 did not originally refer to an omniscient and avenging power, even if the context of the fragment suggests that its original application must have been of this kind. Clement’s suggestion that the subject of τὸ μὴ δύναν ποτε is φῶς is, in itself,
some reference here to Heraclitean ideas, and it is possible that ἄλλο θάνατος ἡν to refers to this fragment. If this is so, then the amendment that 'justice' is not the sun, but fire, may reproduce what Heraclitus actually said; the further restriction that the heat should be distinguished from fire may be intended to refer rather to Diogenes of Apollonia. Unfortunately, in these quasi-jocular passages of Plato, in which the Cratylus and Theaetetus particularly abound, it is impossible to be sure what is simply invented, what adapted, and what accurately reproduced from historical predecessors.

It may be legitimate to conjecture, however, that 'that which never sets' is either fire or Zeus, and that either one or the other is contrasted with the sun. This would accord with the possible references in Plato and Cornutus. Between fire and Zeus there is less difference than might appear: the subject of fr. 32, which 'is willing and unwilling to be called Zeus', must be closely related to if not identical with fire (p. 396). In the using the name Zeus Heraclitus is conceding that in some respects the traditional religion has hit upon the truth (perhaps accidentally): the Zeus of Homer sees all things, as does the subject of Heraclitus' fragment. The point of the fragment is still conjectural; Gignac 130 followed an established interpretation in taking it closely with fr. 66b (which is discussed, and rejected as a genuine quotation, after fr. 65) as a reference to the epoikosis—fire will come upon all things, none will escape its notice. But the personal τε (as opposed to τι in Cornutus: Gignac proposed amending τι) is against any explanation in terms of physical, cosmic changes. It relates the activity of θανάτος with man-kind, and so makes it probable that the fragment is analogous to the second part of fr. 28, also quoted by Clement in a similar context: Δικαίος κατοικήσεις τηθανάτων και μάχες (κατοικήσεις in pseudo-fr. 60 may be a reminiscence of this). That is the limit of the connexion between frs. 16 and 66b. Thus fr. 16 may well be part of an attack upon Hesiod, upon Heraclitus' opponents who do not recognize the Logos; if so, it only bears indirectly upon his physical theories. Here it may be recalled that in the Cratylus passage Socrates' informants give the sun, or fire, as equivalents for θανάτος; yet the intermediary derivation of δικαίος from θανάτος may be due not to any Heraclitean but to Plato himself, sun, fire and heat being explanations merely of his ἀντιτύπων τε καὶ τάχυτων which controls (interprets: cf. fr. 64) all things. Or conceivably Heraclitus

...
The river-analogy: upon those who step into the same river different waters flow regularly down. The preservation of the river's identity and name, in spite of the constant change of its parts, is due to the regularity and balance of that change, just as the preservation of a body is due to the 'hupra' which governs all meteorological and cosmological change. Plato and all later ancient critics took the river-analogy to apply to changes in every individual thing, and to illustrate the continuity of those changes: actually it illustrates the measure which must inhere in large-scale changes taken as a whole. Heraclitus did not believe, any more than any of his predecessors, that everything was changing all the time, though many things are so changing and everything must eventually change.

On the subject of soul Cleanthes, setting out the opinions of Zeno for comparison with the other natural philosophers, says that Zeno is like Heraclitus in calling the soul a percipient exhalation: for Heraclitus, wishing to demonstrate that souls by being exhorted are for ever becoming intelligent, likened them to rivers in these words: Upon those who step into the same rivers different and again different waters flow; and souls also are exhaled from moisture. Zeno, then, declares the soul an exhalation similarly to Heraclitus, and percipient for the following reason....

It is almost certainly Cleanthes and not (as Bywater, Burnet, Gigon 104, etc. have always assumed) Zeno who quotes from Heraclitus: Arios tells us quite clearly that Cleanthes cited the doctrines of his master side by side with those of other thinkers—presumably to provide corroboration of Zeno's theories. Zeno described the soul as a percipient exhalation: this, adds Cleanthes, agrees with Heraclitus' description of it, which Cleanthes then quotes. This state of affairs is what might be expected; for although Zeno must have based his physical theories particularly upon Heraclitus' description of fire, he is never named in our sources as having quoted Heraclitus by name; while Cleanthes evidently initiated a detailed examination of Heraclitus with a view to the more careful foundation of Stoic physics upon ancient authority. Diogenes Laertius records that Cleanthes wrote four books of commentaries (Ἑρακλείτους) on
Heraclitus, and there is reason to believe that he made some modification of Zeno's system in the light of his special knowledge of the earlier thinker—in particular, the idea of the sun as τὸν ἡμεροκύκλον, and of ὄσος; in his version of cosmogony he may have avoided the addition of air to Heraclitus' three world masses. The results of his interest in Heraclitus are shown by the many unmistakable echoes in the Ἱησοῦς Κυρίας.

The words in heavy type seem genuine enough: the Ionic dative plural in -οντα, the consistent use of -ιν ἔρθομενον, and the archaic repetition of ἔργος, suggest that these are the original words of Heraclitus; quite apart from dialect forms (which could be and often were faked) the rhythm and phrasing of the sentence lead to the same conclusion. Nearly all editors (Zeller, ΖΝ 797 n. 2, being an honourable exception) have accepted the next sentence, too, as part of the quotation. Here, however, the case is very different: there are no complaints to aid identification as a quotation, and, on the other hand, there is a verb, ἀνανεὼντα, which in this compound form does not appear elsewhere before Aristotle. Admittedly Theophrastus and the doxographers attribute the use of this verb to several Presocratic thinkers (including Xenophanes, where its use is unlikely, though possible in uncontracted forms like ἀνανεοῦσαντα), but this means very little. That the concept of exhalation or evaporation was familiar to them is beyond doubt, but the natural expression of it would be by the noun ἐφαρμοσά, possibly by ἐφαρμογιον, and perhaps by the simple verb ἔρθομεν, which is common in fifth-century writers (particularly Herodotus) for the burning of incense, etc. An instance of ἔρθομεν normally assigned to Hippocrates (fr. 80 Diehl) is doubtful: all we are told is that the verb appears in a Hippocratic metre. If Heraclitus did indeed use the compound form it is strange that this is the only use of this highly convenient word to survive in over a century.1 Further, τὸν ὕγρανον (instead of ἔρθομεν or e.g. ἔρθομεν ἡμῖν ἐφαρμογίον) is not quite what one would expect of Heraclitus: the use of neuter adjectives as substantives in the singular is a favourite one with him (cf. for example, frs. 19, 88, 126), but usually to emphasize the particular attribute of a certain substance in terms of opposites. Yet here the generic expression would stress the common property of e.g. blood and water; so the language can hardly be said to form an inexpressible

1 Wilamowitz, Hermes 62 (1927) 276, attacks only the noun-form.

A more substantial difficulty is that of establishing any significant connexion between the river-sentence and the statement that souls are exhaled from moisture. Reinhardt, Parmenides 61, and Gigon 28, cf. 104, are satisfied that the quotation from Heraclitus (in which they include καὶ ψυχαὶ . . . ἀνανεῶντα τὸν ἥμεροκύκλον, τὸν ἥμεροκύκλον ἀνανεῶντα) "comes from a psychological context", i.e. they assume that this context clarified the link between the two sentences. Yet it is difficult if not impossible to imagine any context which would accomplish this. The river-sentence has nothing whatsoever to do with exhalation; the only formal connexion between the two sentences is the mention in both of moisture or water. Attempts have been made to supply words to the second sentence which would establish a significant link—Capelle (Hermes 59 (1924) 121) suggested ὡς ἐκ τῶν ὕγρων καλὰς, ἄγαμος, άνανεῶοντα (καὶ ἐρήμος καὶ ἔρημος). The former is the easier omission; the link would then be the continuity of each process, but even so the comparison would be without much point. In any event, these additions are superfluous, since Meewald's ψυκήν achieves the same end much more persuasively (Diels attempted an analogous solution by conjecturing that ψυξίος was a corruption of ἔρημος). The transition is still extremely abrupt, and nothing to help it is really added by ψυκήν, the sense of which is already present in ὡς ἐκ τῶν ὕγρων. None of these solutions, then, succeeds in giving the whole passage a satisfactory sense, and the 'psychological context' must for the present remain a doubtful hypothesis.

Here it may be helpful briefly to turn aside from the fragment to consider Plato's interpretation of Heraclitus' theory of natural change. This is, in short, that Heraclitus held all things to be in flux like rivers: Theaet. 160b κατὰ . . . ἔρθομεν ὑγρόν, . . . αὐτῶν ἀνανεῶον τὸ πάντα; Ἰαν. 402d καὶ Ἡράκλεστος ἐν ἱδρυμαῖς τὸν ἄνθρωπον τὸν ἄνθρωπον μὲν ὅταν ἄνθρωπος τὸν ἄνθρωπον μένει, καὶ ἡμέρας τῷ ἔρθομεν ἀνανεῶον τῷ ἔρθομεν τὸν ἤμερον. At Theaet. 152e Plato humorously attributed a similar doctrine to all early thinkers save Parmenides; but Heraclitus and his followers remained for him the chief serious exponents of these ideas. Aristotle subscribes to Plato's interpretation, ὡς ἐκ. A 2, 493a 28 ὡς καὶ τῷ ἔρημῳ β'
at this point, then, accurate as it is, is arbitrary. Yet why did he introduce it at all? For even if καὶ ψυχή κρίνει be attached to it, it still does not illustrate Cleanthes’ introductory summary, ‘Heraclitus likened souls to rivers’. And yet as an illustration to the main point that Heraclitus held that ψυχή ἅπαντα μεγαλοπρεπην αἰτεύεται, the appendix, καὶ ψυχή...ἀναθυμοῦτα, is adequate by itself; and what we have accepted as fr. 12 is totally irrelevant. This tells against the possibility that Cleanthes quoted two separate sayings of Heraclitus and connected them with καὶ (as, for example, Clement did, with the connexion καὶ ψυχή καὶ, in fr. 28); for there would be no point whatsoever in the first of these quotations. Therefore either Cleanthes must have accepted ποιηματοθετεῖ...ἀναθυμοῦτα, or one continuous quotation from Heraclitus—the difficulties of which have already been mentioned—or his quotation ended at ἐμετρηθή, καὶ ψυχή...ἀναθυμοῦτα, is intended as another summary of Heraclitus to make Cleanthes’ contention still clearer. Now καὶ ψυχή...ἀναθυμοῦτα could be a further paraphrase of part of fr. 36, ἦς ὀδότος καὶ ψυχή. In that fragment soul is put on a par with cosmological fire; the meteorological process by which sea turned to fire in the cosmological πῦρ τοῦ ἀρχαίου (fr. 31) was almost certainly evaporation or exhalation; therefore it is possible to conclude that ἦς ὀδότος καὶ ψυχή, too, represents a change accomplished by evaporation; therefore καὶ ψυχή ἦς ὀδότος τῶν ὕδατων ἀναθυμοῦσιν corresponds closely enough with this phrase. One may compare Aëtius’ Stoic-perverted assertion, iv, 3, 12 Ἡρακλεῖς τὴν τούτων ποταμῶν ὀθόνα ἐν Ὀμβρίῳ τῶν ὕδατων τῶν τῶν ἀναθυμοῦσιν τῶν ψυχῶν, τῆς ἦς ἦς τῶν ἀναθυμοῦσιν ἦς ὀδότος καὶ ψυχή (see also p. 342). There is almost a probability, then, that καὶ ψυχή...ἀναθυμοῦτα is a version in post-Heraclitean language (notice also the use of ἔγγραφον in the passage of Aëtius) of part of fr. 36 or a similar statement. Yet it still remains a problem why Cleanthes quoted the river-statement can it have seemed to him, in the light of his knowledge that according to Heraclitus souls are exhaled from moisture, to have implied that souls are like rivers? Only, surely, if his mind was more illogical than we have reason to believe. In this case the only remaining explanation is that Cleanthes was using a source in which the river-quotations and the soul-summaries were conflated, and the context in which each originally belonged not...
otherwise indicated: thus he might easily have been led to believe that the connexion between the river-quotation and a statement about souls implied that Heraclitus compared souls to rivers. In other words, Cleanthes believed that ποτηροι... τοιούτους came from a single context in Heraclitus, because he was using as source not Heraclitus himself but some collection of his sayings (both verbatim and in paraphrase) which were arranged by the most superficial criteria: thus a remark about τῶν ποταμῶν became juxtaposed to the river-statement. In this case the καὶ of καὶ ψυχή &c is a connective supplied in the source-collection, the &c perhaps belonging to the original form of the paraphrase of fr. 36. (If, on the other hand, καὶ ψυχή &c is intended to be logically consequent upon fr. 12, then &c is probably the connective and καὶ means 'also'; this no doubt is how Cleanthes interpreted it.)

Plato's version of the main river-statement has already been noted: Crat. 402a δι' &c τῶν σωμάτων σωμάτων, σωμάτων, σωμάτων, σωμάτων. Very similar is the sentiment assigned to Heraclitus in a famous passage of Aristotle, Met. G 9, 1000a13: Ἑρακλῆτου ἐπιστάμενος διέπεται ὅτι εἰς τῶν σωμάτων σωμάτων διέπεται: ὁ πάντως ὄν καὶ τοῦτο ἐνόσσου τοῦτος ἐνόσσου τοῦτος (Ἀριστοτέλειος: διαφορά τοῦτος τοῦτος τοῦτος τοῦτος τοῦτος). Aristotle's version differs only by the use of the simple dative (as in the fragment) instead of &c; after ἵππος, and of Ὅραμεν with the infinitive instead of the potential optative in the second person singular. This potential construction is paralleled in fr. 45, and it is possible (as Vlastos argues in AJP 76 (1955), 338ff.) that the potential construction and &c belong to an original form of the river-statement. It is also possible that both are paraphrases of fr. 12, Aristotle's being closely modelled on Plato's. That this is so may be suggested by Plutarch, who in different places reproduces both the Aristotelian and the Platonic versions, and combines the latter with a version of the final words of fr. 12. On all this see now, as well as Vlastos loc. cit., Kirk and Raven The Presocratic Philosophers 198 n. 2.

(a) de B 18, 392a
ποτηροὶ γὰρ οὐκ ἔστων
ἐντόσους διὰ τῶν σωμάτων... (fr. 91 follows).
[Aristotelian]

(b) de s. r. 15, 599e
ποτηροὶ... ἐν τοῖς ὄντοις
ἐν τοῖς σώμασι... [Platonic: ἤν ἡ ὁμονοματικά.

(c) Qua. ran. 92a 2
ποτηροῖς [plural form
original, cf. fr. 12] γὰρ
τοῖς ὄντοις οὐκ ἐν
ταῖς [Platonic]. ὅτι ἐν
τοῖς σώμασι... (fr. 12)
[original: cf. fr. 13]
215 n. 1, accepted Seneca's version as the correct one and therefore rejected Gigon's "only serious objection" against an original fr. 49. It is true that Seneca understands Heraclitus' meaning better than the author of the Homeric allegories, and that both are probably dependent on a slightly earlier common source: but how does "in idem flumen his descendimus et non descendimus" differ from the Platonic-Aristotelian summary of fr. 12, e.g. διός ή τον σωστόν ποταμον οὐκ ἴνει, except in the use of the first-person-plural construction and the acceptance of what is implicit in fr. 12, but suppressed in the Platonic paraphrase, that the river in one sense remains "the same" ἐμεβεβαίων τε καὶ οὐκ ἐμεβεβαίων is similar in form to the well-known οὐκ ἴνει καὶ ἴνει of fr. 32; this paradoxical form is imitated by the authors of de victu and de nuptiis, and misinterpreted by Aristotle, e.g. Met. 1012a24 ποίεις δὲ μὲν Ἡρακλείτου λόγος, λόγον πάντα ἴνει καὶ μὴ ἴνει, ἐπειδ' ἐποίησα ποταμόν—which is very probably the origin of the phrase ἰνεῖ τε καὶ οὐκ ἴνει. Nevertheless, the source of Seneca and Heraclitus Homericus may have been aware of the original as well as of the Platonic-Aristotelian version of fr. 12 (just as Plutarch evidently was; see in (2) above—though can Plutarch here be dependent on the source of Seneca and Heraclitus Homericus?); so much is suggested by the original plural ποταμος in Heraclitus Homericus, and perhaps by 'aqua transmissa est' (corresponding with οὐκ ἴνει καὶ ἴνει ἐβλαβείσα in Seneca). It will be noted that δια is a consistent feature of the paraphrases from Plato onwards (except in Heraclitus Homericus, where it has to be supplied to avoid a glaring anachronism); it is necessitated by the alteration in the grammatical form of the original.

Thus the sentence quoted so surprisingly by Clesantes and preserved by way of Arius Didymus and Eusebius seems to be the original river-statement (to which fr. 91 should probably be added; see p. 37a) from which the whole πώς you interpretation with its variant paraphrases was built up. A synopsis of these variants is given on p. 37b.

It is now possible to return to the question of what Heraclitus meant by the river-statement. We have already seen that Plato took...
it to mean that ‘all things move and nothing stays still’, and that Aristotle accepted this view. Plato elaborated it by attributing to the Heraclitans the idea that πάντα δὲ πάσης κινήσεως δεκαγένος (Theocr. 182a), while Aristotle refused this easy method of suppressing an evident uncertainty about the type of flux involved, *Phys.* Θ 3, 253b9 καὶ φαντάσαι τὸν δύναμιν αὐτὸ τὸ μὲν τὸ Δ' αὐτί, ἄλλα πάντα κατὰ ἄλλα, ἄλλα λαμβάνειν τὸ τὸν ἡμετέρων ατυχήματι. πρὸς οὗ κατάκεραν ὁ διαφόροντα πολλά κινήματα λέγοντο, ἢ πάντως, οὐ χειραποτάτῳ ἐπιστήμη. Now Aristotle here must be referring to the Heraclitans in general, and, presumably (since there is no mention of Cratylus’ emendation, that the flux is so extreme as to defeat significant utterance), to Heraclitus in particular. The statement that the perpetual change ‘escapes our perception’ is particularly significant, since it is the earliest explicit occurrence of an interpretation of Heraclitus followed by Heidel (*Arch. f. Gesch. der Philos.* 19 (1905) 350ff.), Bernet (*EGP* 146), to some extent by Zeller (*ZN* 80ff.), and others, which is very far indeed from the truth. According to this interpretation everything is constantly changing by an invisible and as it were molecular addition and subtraction of fire, water and earth. This is perhaps contrary to what Heraclitus tells us in the fragments; he believed strongly in the value of sense-perception, providing that it is interpreted intelligently, with φύσις, by souls which understand its language (fr. 15, 107, 101a; cf. fr. 17, 72b). His criticism of men is based upon the fact that the truth is there to be observed, is common to all, but they cannot see it: apprehension of the Logos is no abstract process but the result of using eyes, ears and common sense. Our observation tells us that this table or that rock are not changing at every instant; there is nothing in nature to persuade us that they are so changing; the very idea would be repulsive to Heraclitus. Nevertheless, Aristotle’s postulation of invisible changes (itself a legitimate deduction from Plato’s assertion that according to the Heraclitans ‘everything is undergoing every motion all the time’) is a logical development of the πάντα πάντως interpretation. Its implausibility is but another sign of the weakness of that interpretation. It was Schuster (p. 201f.) who first reacted from it, though in the wrong direction; a more fruitful departure was made by Reinhardt.

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1 The above lines are largely taken from my article ‘Natural Change in Heraclitus’, in *Mind* IX, n.s., no. 237 (Jan. 1951) 57 ff., esp. p. 51.

Parmenides 205f. According to him (he was of course trying to prove that Heraclitus followed Parmenides and attempted to circumvent his elenchus), the river-statement is simply an image (so also *Hermes* 77 (1942) 18); the dominating idea in Heraclitus is rest in change, not change in apparent stability. Reinhardt’s insistence on the idea of the river-statement as a Giichttis was badly stated: of course it is an image, but it must have been an image designed to throw light on some particular belief. Plato took that belief to be that all things are constantly changing. He went beyond Heraclitus in making the river-analogy into a metaphor, not a simile; but his apprehension of the underlying idea is unlikely to have been completely at fault. The mistake he made was one of emphasis; what Heraclitus meant to illustrate in the river-statement was the coincidence between stability (of the whole river) and change (of the waters flowing past a fixed point), rather than continuity of change. Both these aspects are exemplified by rivers, but that the former was the one in which Heraclitus was interested is demonstrated both by the trend of his physical theory in general, and by the form of fr. 112: why the mention of the *infeoetois*, and of the same river, if only the perpetual flow of water was to be stressed? Yet if the two distinct and opposed characteristics of rivers are to be emphasized the mention of their sameness as well as of their flow is necessary, while the mention of a different class of observer from the long-distance or abstract one to whom the river remains unchanged, is desirable; hence ‘those who step into it’. Not that this fragment is merely another specific instance of the coincidence of opposites, in this case of ‘the same’ and ‘other’; the examples of coincidence are more concrete than this—e.g., summer-winter, the young-the old, the straight-the crooked (regarded not as abstractions but as real things). Those examples are clearly described as such: ‘the way up and the way down is one and the same’, and so on. In addition, the identification of ‘same’ and ‘other’ would destroy all differentiation; though this is not an insuperable objection, since on one plane Heraclitus was anxious to do this, i.e. in the *aporiai* *aporiai*. Fr. 12, then, appears to be an instance of identity of a kind persisting through change. Yet not all change preserves such an identity, and here a special quality of rivers is relevant: only because the waters flow regularly and replace each other by balanced amounts is the identity preserved. This, of course, is precisely the principle of
that for Heraclitus this saying was a corroboration of the determinability of change in nature, not an exaggeration of the extent of that change. The Milesians had all assumed that all things were imbued with a kind of life-principle of movement and alteration, so much so that Theophrastus had assigned to them (mislittingly, it is true) an ἀοίδος κόσμος. Heraclitus, too, must have seen that the world is a place of change, a fact that is immediately obvious to anyone. Even things which are now stable, like mountains, rocks and trees, must eventually perish (though ‘death’ for him was merely alteration, fr. 30); otherwise the πάντασις ἀποθανίας which ensured the continuance of change between opposites, and so of the unity which underlay those opposites, would be destroyed, and the κόσμος as such cease to exist. To have said that everything changes, like rivers, would have been for him either an absurdity or a loosely expressed commonplace; what he did say was that natural changes occur in the way that rivers change, i.e. in measures, and thereby maintain in spite of change the unity of the whole κόσμος and the balance of its essential constituents.

Further confirmation of the above interpretation might be provided by an important passage of Aristotle, Meas. B.3, 377b27: ‘Does the sea always remain numerically one and consisting of the same parts, or is it, too, one in form and volume while its parts are in constant change, like air and sweet water and fire? For each of these is in a constant state of change [literally, “is always becoming other and other”], ὅτι γὰρ ἄλλο καὶ ἄλλο γίνεται τοῦτον ὄστον, but the form and the quantity of each of them are fixed [accepting Boétry’s καὶ τὸ πληθὺς σὲ τοῦ πληθὺς], just as with the flux of flowing waters and the flame [καὶ κατὰ τὸν μύριστον ὑδάτων καὶ τὸ τῆς φωλεύς ἔλεος]. The answer is clear, and there is no doubt that the same account holds good of all these things alike. They differ in that some of them change more rapidly or more slowly than others; and they are all involved in a process of perishing and becoming which results for all of them in a regulated manner [τοὐτα γράφει].’ (translation after E. W. Webster). There is no mention of Heraclitus here, but the mention of the example of the river, which maintains its ‘form’ only because its flux is regulated, may well be due to a reminiscence of the real import of the river-statement. The instance is not in itself an abstruse one, and might have occurred to Aristotle independently; but ἄλλο καὶ ἄλλο is strongly reminiscent of ἑπὸν.
What is perhaps particularly significant is that Aristotle links the river with fire; it has been seen that one of the reasons for Heraclitus’ assignment of a special position to fire was probably that it patently undergoes regular changes, burning fuel and emitting smoke proportionately and so retaining its stability. The possibility cannot be excluded that Heraclitus himself compared the behaviour of cosmic fire with that of a river; but neither, unfortunately, can it be confirmed any further.¹

¹ I see no reason to change the above discussion in view of A. Rivier’s essay “Le Fragment 12 d’Héraclite,” Un Épigraphique Archéologie de l’Archéologie (Lausanne, 1952) 9–39. Rivier, who accepts Gigon 124f, attempts to find a genuinely significant connection between the river statement and καὶ νεφελέτες καὶ θεομακρινής πυρός καὶ δόκησθαι καὶ ἐνυβρεῖς καὶ ἐβήθαις πτών. I propose γὰρ on καὶ ἐκ τεσσάρων ἐμβιώνει, διὰ τοῦτο καὶ Ἠρακλείτου, ὡς ὑποτής ὑπότης διὲ αὐστρικαὶ κατὰ ἢ Ἠρακλείτου καὶ τὰ ἡμέρᾳ μετεκείσαι καὶ πάλιν συνάγει, μεθάλων δὲ αὐτῶν πάλιν ὡς ἰστός ἵνα συνιστάση καὶ ἀπολείπει καὶ πρὸς ταῖς καὶ ἀπειθεῖς ἐπί πάντως ἐπί τε ἐννοεῖ παραιστέεν τὸ γιγαντιανὸν σώματος.

Plutarch de E 18, 392b . . . πάσα τε ὑποτής ὑπότης ὑπὸ καὶ ἐνυβρεῖς καὶ δόκησθαι καὶ πυρὸς καὶ ἐβήθαις πτών. ὡς Ἰσακλείτου, ὡς ὑποτής ὑπότης διὰ αὐστρικαὶ κατὰ ἢ Ἢρακλείτου καὶ τὰ ἡμέρᾳ μετεκείσαι καὶ πάλιν συνάγει, μεθάλων δὲ αὐτῶν πάλιν ὡς ἰστός ἵνα συνιστάση καὶ ἀπολείπει καὶ πρὸς ταῖς καὶ ἀπειθεῖς ἐπί πάντως ἐπί τε ἐννοεῖ παραιστέεν τὸ γιγαντιανὸν σώματος.

· Every mortal nature, being in the middle of coming-to-be and passing away, provides a phantom, a daimon and uncertain apparition of itself. . . . for it is impossible to step twice into the same river according to Heraclitus, or to lay hands twice on mortal substance in a fixed condition: but by the swiftness and speed of its change it scatters and again gathers, or rather not ‘again’ or ‘afterwards’, but at the same time it comes together and flows away, and approaches and departs; therefore its [see mortal substance]’ becoming does not terminate in being.

It is obvious that ποτομεῖς . . . τὸς ὅμοιος reproduces the Aristotelian form of Plato’s paraphrase of the river-statement (see p. 372), and not (as Bywater, Dieis, Kranz and others believed) the original words of Heraclitus. τὸς . . . κατὰ ἢ ἐν ἡμέρᾳ is an explanation, after Plato, added by Plutarch himself: no one now denies this (though Nestle saw fit to draw attention to an attempt by Briegeur to do so, ZN 791 n. 2). Kranz in DK retains Dieis’ conjecture κατὰ ἢ ἐναῖς, but this is quite unnecessary, since ἢ ἐν (in its Aristotelian-Stoic sense, as Zeller rightly saw) means ‘fixed condition’ and therefore implies identity. Plutarch goes on to apply, formally to ὑποτής ὑπότης and not to the river, as is shown by the gender of ὅμοιος in τὸ γιγαντιανὸν σώματος, three pairs of contrasted verbs which are evidently intended to suggest accretion and dispersal. The actions of the first pair are first implied to be successive, by δακρύω, but Plutarch then retracts this as though it were an oversight, and demonstrates the simultaneity of the action by qualifying the remaining pairs by ὅμοιος. The pairs of
verbs are not in Plutarch's manner, and it has always been assumed, with justification, that some of them at any rate are a quotation; the source is obviously Heracleitus, and it is reasonable to suppose both from the nature of the verbs themselves and from the context that they referred to the behaviour of water in a river. That Plutarch makes them describe the behaviour of 'all mortal substance' is no impediment, since it is clear that he accepts the river of Heracleitus as a symbol for all existence.

As for the separate pairs of verbs, Bywater and Zeller, Diels and Kranz accepted the first and third as genuine, the second as by Plutarch; they regarded παλω in παλω συνέγα γεγονέναι as by Heraclitus, and so thought that not only παλω but also the two verbs which followed belonged to Plutarch's correction. But Heraclitus can never have written παλω, for the kind of change described—如果它发生，as it obviously originally did, to rivers—is not of the type of fr. 88, where παλω γεγονέναι was written παλω γεγονέναι [παλω] metaσεινα ἐν τοῖς παλῶν; on the contrary, the two opposite states are simultaneous, as in the fragments of Groups 2, 4. It is difficult to see what συνέγα and συνέγα describe, if they are really intended to be successive; on the other hand, the deliberate but natural error, and then the correction, are in Plutarch's manner and serve effectively to increase the emphasis. Reinhardt (Parmenides 207 n.; cf. Herm. 77 (1942) 242) argued for the acceptance of συνιστάται καὶ ἐπολεμοί, but doubted συνιστάται καὶ . . . συνέγα, apparently because they contained the offensive παλω: he did not see that this could easily have been attached by Plutarch to a perfectly good quotation. I tentatively accept all three pairs of verbs as belonging to Heraclitus, though there is some doubt about the first, as will appear below, for reasons other than the presence of παλω.

Συνιστάται, ἐπολεμοί, πρότεσι, ἐπολεμοί, are all intransitive: that is certain. Therefore, as Kranz remarks in DK, συνέγασι and συνέγα should be intransitive too. Neither, as far as I know, occurs elsewhere intransitively, but Kranz draws comfort from this and remarks 'das ist archaische Ausdrucksform'. This may be so; it may be that we should understand a reflexive. συνέγασι is an Ionic collateral of the commoner συνέγασι; in the passive it occurs in epic, in Herodotus (e.g. viii. 23; ix. 86), and occasionally in the Hippocratic corpus; for some reason Plutarch also uses it (and in the active, which is rare) at de fac. in orb. 20, 933b and 24, 939c. In both these contexts there is found also the verb διογείω, which occurs, of course, in fr. 31: possibly Plutarch was intentionally using what he knew to be Heracleitan terminology. I In the middle or passive συνιστάται is unquestionable and indeed occurs in Parmenides fr. 4, ὄστε συνιστάται πώλη τοῦ παλῶν κατὰ κόσμον ὡς συνιστάται. I do not understand Reinhardt's contention (Parmenides 208 n.) that this is not comparable, a criticism which applies more apply to the parallels he adduces for the Stoic usage of συνεγασις, συνέγας, etc., of the final dissolution of bodies (Marcus Aurel. vi. 4; vii. 32, etc.). As for συνέγα, it was used by Plutarch himself, in the context of our fragment, to describe the compression of water: ἐσπευρή ἡ σφακία περίπολης ἐβαθομενος, τοῦ πέλαγος ἐκ παλῶν καὶ συνεγασις, ἐπολεμοῖσι ἐφάνοντο τῷ περισσαμενων. This occurrence may have motivated, or been motivated by, the one which follows; it might be argued that Plutarch himself would hardly have used the verb intransitively on the second occasion, after its normal use just before, except in a quotation. Diels pointed to the sixth pseudo-Heraclitan letter, ἐν τούᾳ μισθὼ ἐπεστο ἐπιφανείᾳ ἐπανοίγος ὡς τῷ περισσαμενῳ τῇ ἐπολεμοῖσι, συνέγα τῷ συνιστάται καί. One cannot be sure (contra Reinhardt) that there is nothing imitative of Heraclitus in this, though the reference to περισσαμενῳ is presumably Posidonian. συνεγασις here is transitive, as indeed it could be in the fragment except for the parallelism of the other verbs. In that case, the original subject would have here been the river itself; the object, its waters.

Συνιστάται καὶ ἐπολεμοί, rejected for so long until Reinhardt came to its rescue, is the most obviously Heraclitan phrase of all: both verbs were regularly used by Presocratics, though mainly to describe formation and dissolution (which indeed suits Plutarch's 'mortal substance' better than the river); but they do not appear to be used elsewhere in this way by Plutarch). Cf. Empedocles fr. 17, 3, δόναι ἐκ ἐκείνου γένεσις, δόναι ἐκ ἐπολεμοίς; Emp. fr. 17, 3, δοθησάμενος ἄλλοις ἄλλα; Diog. Arm. fr. 2 . . . ὡς ἄλλο γενέσις ὡς ὃς ἐκ τοῦ συνιστάται ἐκ τοῦ παλῶν. The final pair, πρότεσι καὶ ἐπολεμοί, are obviously appropriate to the flow of water past a fixed point, though
they are also used of material accretion and diminution (in the body) by Plato Tim. 42a, καὶ τὸ μὲν προϊόν, τὸ δ' ἀπὸ τοῦ σώματος αὐτῶν; similarly Tim. 33c. It is unlikely that Plutarch would have found it necessary to add them as a gloss after a quotation so clear in meaning, rhythmically they complete the material derived from Heraclitus. It is not certain how many of the καὶ's can be credited to him.

Thus this fragment consists of a string of verbs which probably describe the simultaneous flowing to and flowing away of water past a fixed point in a river. It is possible, even probable, that these verbs belong at the end of fr. 12: ἐπελευσθεὶς αὐτὸς ἐπερετέρεισκεν καὶ συνέλησε, συνεστάθησα καὶ ἐπολίσθησα, πρόεσε καὶ ἐπεσε. The question whether the first pair can be taken intransitively or not (they must be if used as above) remains. In any event these verbs, if they describe (as they surely must) the movement of water in a river, confirm the interpretation which was placed upon fr. 12, and particularly upon ἐπελευσθεὶς αὐτός: what is significant here is the exact quantitative balance which must subsist between the water flowing to a fixed point, and that flowing away from it. Only if this μέτρια, analogous to that preserved in the cosmological changes between the three world-masses, is maintained, does the river as such retain its being and its identity.⁵

⁵ Kratz refers to the conjecture of Heth, de Gregorv, N. v. or. funkt. (Diss. Argent. xiii, 1, 77), that the phrase ἴμματος κόσμον in Gregory Naz. de hum. nat. 27 (Migne P.G. xxxvii, col. 777) and Lucian V. 44, lines 14—both Heraclitus passages—records the words of Heraclitus himself. This is most unlikely: the phrase belongs to the Platonic (possibly 'Hermetic') trend of interpretation, and it was far from Heraclitus' purpose to deny stability to every separate thing absolutely. The preservation of μέτρια meant for him that things were, from one point of view, ἴμματα. The lines of Gregory are as follows:

ἴμματος κόσμον ἐγένετε ἡ πόλη τοῦ πατρίδος
καὶ ἰσούς ἤτοι ὅταν κόσμον ἰσούς,
οὖν δὲ ἢ ἰσούς ἦτοι πάντα πατρίδος
ἴμματος, οὐκ ἵππον ἔφεσεν ἢ τὸ τόκος.

It is interesting to note how often the river-analogy is applied to changes in the human frame, in later versions of Heraclitus; but even then there is no mention of the 'psychological context' assigned by Reinhardt and Gigon to fr. 12.

GROUP 12

Fr. 41 [† 112D], 32, 108

Only one activity can be described as genuinely wise, that is, the understanding of the way in which everything in the world is part of an ordered whole: everything is guided along a determinate path so as to produce a complex but essentially unified result. Furthermore, only one entity can have this wisdom to the full, and so be properly called 'wise': this is the divine entity (both 'force' and 'substance' in modern terms) which itself accomplishes the ordering of the whole—fire according to fr. 64, the Logos according to the more analytical approach of the fragments of Group 1. The divine entity corresponds in pre-eminence, power, and intelligence, but in no other respect, with the chief god of the Olympian religion. Human wisdom, which is the same in kind as the divine (and which, judging by fr. 78, was so rarely achieved as to be statistically negligible), is quite separate from other forms of cleverness. It is of greater importance, it may be inferred, because only by possessing it can a man adequately assimilate himself to the ordered whole of which he is a part; and yet it remains within reach of all (Group 1).
Difficult. H. Gomperz (Wiener Jr. 43 (1922-3) 117) was equally ingenious but no more convincing; he proposed that the true subject of ἡλεν has to be supplied from the preceding fragment (40) upon which fr. 41 followed directly, in Heraclitus as in Diogenes: ἡλεν γὰρ [σὲ τὸ νῦν ἔχει] ἐν τοῖς σοφῶν ἐπισκέψεσιν, γνῶμην ὑπὸ ἑκατέρου πᾶν, τὸ καθερμασταί 1 πάντα διὰ πάντων (seq. fr. 42).

1 ὑπὸ ἑκατέρου 2  Πτ Β: ἦν ἐκατέρους 3  ᾽Ιάκω: ὑπὸ ἑκατέρους 4  Βιβλίου: ὑπὸ ἑκατέρους 5  Γιγάς: ὑπὸ ἑκατέρους 6  Διέας.

He [sc. Heraclitus] grew up to be conceited and scornful beyond anyone else, as is plain also from his book, in which he says 'Learning of many things does not teach sense... (= fr. 40); for Wisdom is one thing; to be skilled in true judgement, how all things are steered through all (= fr. 42 follows).

The corruption of the text has given rise to a number of different interpretations of this fragment: all except two agree that τὸ σοφὸν here applies primarily to human wisdom. The same phrase, ἐν τὸ σοφὸν, occurs also in fr. 32, treated next in this group, and there it must describe divine wisdom or the deity as characterized by wisdom. Th. Gomperz (Wiener Sitzungsbl. 113 (1886) 1004) held that it was improbable for the same phrase to be used in two different senses by Heraclitus; so also Reinhardt, Parmenides 62 n. 1. The latter, op. cit. 200, tried to avoid this result by the ingenious conjecture that Diogenes misinterpreted the indirect speech which he found in his source, and supplied ἔν τὸ σοφὸν: the indirect form was ἐν τὸ σοφὸν ἐπισκέπτεσιν γνῶμην ἐν τῷ καθερμασταί πάντα διὰ πάντων, which he translates (p. 206) as follows: 'Wahrer Einsicht hat allein das Eine, das Allweise, als die da ist: alles durch alles zu regieren.' But even, though textually possible, is surely impossibly clumsy after ἐπισκέπτεσιν, and on any other emendation Reinhardt's interpretation becomes impossible. In addition, the infinitive καθερμασταί is
but even here Zeus himself is not equated with γνώμη, but is said to rely on it for the steering of all things: γνώμης ἡ πιστοῖς ὡς ἡ τρίτη μετὰ τῶν κατωτέρων. Nevertheless, this suggests that Cleanthes took γνώμην in Heraclitus as the direct object of ἢρμοστασία; but that would be the natural interpretation for an exponent of the Stoic Logos as a separate intelligent force. In this matter one can only state one’s own feeling, based upon the degree of abstraction one is prepared to attribute to Heraclitus.

This being so, I incline to accept Heidel’s interpretation of ἢρμοστασία γνώμην as a verbal phrase in which γνώμην is an internal accusative. ἢρμοστασία is then seen to be a corruption of ἢρμοστασία, which is perhaps more correctly written ἢρμοστασία but occurs without the iota in 1.117, εἰς ἢρμοστασίαν ἢ ρηματομένα, also in some ms. of Heraclitus; ὡς occurs in Empedocles fr. 110, 5 (but ὡς at fr. 112, 9). is an easy change from a loosely written k. Quite apart from the expediencies of interpretation, this is textual the best explanation of ἢρμοστασία. As for γνώμη as internal accusative, Heidel defends it by pointing out that ἢρμοστασία has not yet developed the exclusive sense of ‘to know’, but can mean ‘to be convinced’ (as in fr. 50) or ‘to be acquainted with’, as in Archilochus fr. 1 Dielh, Μενόκαιον... ἀπὸ τοῦ ἐρμοστασίας. Often quoted as a parallel use is Ion of Chios fr. 4, 4 ἐκδοτῶν γνῶμης ἐκ τοῦ ἐκεῖνον (so Krantz, probably correctly contra Diels ἐκ τοῦ κατονόμου: ἐκτὸς must mean ‘perceived’, as opposed to ‘known’, though the distinction between the two is sometimes very slight); but γνώμη here is direct object. More appropriate is Theognis 60 οὕτω καθὼς γνῶμης ἐπικεφαλής οὕτω ἐγνωμον, though here there are two possible interpretations. Gignon 144 (whose discussion of this fragment, and indeed of the others of this group, is particularly incisive and sound) simply says that ἢρμοστασία γνώμην is equivalent to γνώμην ἢρμοστασίαν, cf. fr. 78. There γνώμην means ‘right judgement’, and perhaps this gives a clue to the meaning of our phrase: ‘to be acquainted with right judgement.’ This gives an adequate sense; and is closer to the meaning of the separate Greek components than paraphrases like Reinhardt’s ‘die Verunst. besitzen’ (he is forced to support this internal-accusative explanation because of his reading τρίτη): nevertheless, one would prefer to have a good parallel for this use, and the emendation γνώμη (cf. Αὐτόφρον Soph. fr. 1, ὡς ἢρμοστασία... γνώμην γνωσικότερ) would be grammatically easier, as Heidel admitted.

1 Snell, Ph. U. 29 (1924) 72, stresses the coincidence of the power of knowing with the thing known of Empedocles fr. 109, 11, de an. A 2, 497 c 25 (but not, contra Snell, Parmenides fr. 3). This does nothing to aid the interpretation of γνώμη as equivalent to ἀνακαταγωγή.
Kubera calls to mind fr. 64, τὰ δὲ πάντα αἰσχρὰ καρποῦσι. It must be something akin to fire which 'steers all things through all', a phrase the precise meaning of which is in doubt. δὲ πάντα ὁμοιασθείσαι must be distinguished from δὲ πάντας, in, for example, Parmerides fr. 1, 32 (and the imitation in ps.-Linus and de viam quoted on p. 388), where it means 'continually'. Doubtless, as Gigon 145 remarks, our phrase is an essentially poetic formula: but his own explanation of it, 'alles his einzelnem', may be too unspecific. I suggest that δὲ πάντας has a locative sense, as in 'I steer a boat through the narrow'; the whole course of each separate thing is the result of 'steering'; that is, of an operation either dependent on a mind or at least similar to that which a mind would have devised. In fr. 50 wisdom is declared to be the admission that all things are one; fr. 41 is very similar, because to understand how all things are steered through all is tantamount to the understanding of the underlying unity.

Another saying is attributed to Heraclitus in which he defines human wisdom in far more general terms: fr. 1129 (1078) ap. Stob. Flor. 1, 178 Ἡρακλείτου... σοφοῖες ὑπάρκῃ μεγάλη, καὶ σοφία ἡ ἐν λόγῳ λέγων καὶ ποιεῶν κατὰ σοφὸν ἐπικότοις. Heidel, op. cit. 713 ff., attacked the whole fragment (as had Schleiermacher and Bernays), and particularly the first three words; Diels proposed τὸ φιλόσοφον for σοφοῖες (as in the even more suspect fr. 1169, also in Stobaeus' anthology), but even so these words can safely be rejected as a bald paraphrase in the language of late fifth-century ethical investigations.

Against the rest of the saying Heidel has two semantic objections: first that σοφία did not mean 'wisdom' in Heraclitus' time, but 'skill' (and particularly, as in Xenophanes fr. 2, poetic skill). This, indeed, may be the meaning in fr. 129 (certainly genuine), where Heraclitus rebukes Pythagoras for laying claim to a σοφία of his own, which is described as τὸ λόγον κατά πράξεις: but that context cannot be taken as decisive either way. Second, φιλόσοφος does not yet mean 'Nature'. The second objection is invalid: μισθὸς φιλόσοφος can mean here exactly what it means in fr. 1, that is, 'according to the real constitution (of a thing or things)'—see p. 43 and n. 1. The translations of Diels and Kranz ('nach der Natur') are impossible for Heraclitus. Even so, I do not believe the saying is genuine: it appears to be a rather clever fusion of Heraclitean phrases which give a possible, but thoroughly banal, resultant sense. λέγων καὶ ποιεῶν is a familiar polar
power, for example, and unrivalled wisdom. In other respects it is quite different; it is not appealed by senseless eulogies (fr. 5), and like Xenophanes' one god is entirely devoid of the more obvious anthropomorphic qualities. Naturally it is impossible entirely to avoid anthropomorphic metaphors in describing it. The transcendentalization of Zeus was carried on, of course, by Aeschylus, and a striking instance of this had been quoted by Clement immediately before the introduction of our fragment: Aesch. fr. 70 (from the Helenae). Zeus non est olympus, Zeus est, universus; Zeus, qui est, est. Heraclitus thus formed an important stage in a process started by Xenophanes, and if Gigon usually tends to exaggerate the influence of Xenophanes on Heraclitus' thought, there is no doubt that in this context the dependence is considerable.

For ἁθεά see also Aesch. Ag. 160 f., and parallels cited by Frend. I doubt if the personification in our fragment is so extensive.

The sense of ἄν τὸ σοφόν μοῦνον has been more variously interpreted. First, μοῦνον must, I think, belong with the noun phrase and not modify ἀθεά; this latter connexion would give no very good sense unless one were prepared to follow the extreme interpretation of Cron, who punctuates strongly after ἀθεά τοι and thus makes τοι the subject and τὸ σοφόν, like Ζηνὸς μοῦνον, a predicate; but the sentence-rhythm is heavily against this, and especially the use of καί (one would expect ἁθέας γάρ καί Ζηνὸς μοῦνον ἀθεάς). Secondly, the phrase ἄν τὸ σοφόν μοῦνον might conceivably mean any one of five different things: (i) 'one thing, the only wise thing'; (ii) 'one thing alone, the wise'; (iii) 'the one wise thing alone'; (iv) 'the wise thing is one thing only' (punctuating strongly after μοῦνον); (v) 'the only wise thing is one' (punctuating as in (iv)). Of these (v) may be dismissed as improbable, in view of its ratiocination; (ii), with its separation of ἄν from μοῦνον, is syntactically unusual, though the frequency of ἄν μοῦνον etc. makes it attractive. In (iii), ἄν τὸ σοφόν forms a convenient subject-group; but in both (ii) and (iii) the sense of μοῦνον is weak: why stress by this addition the exclusiveness of a wise description for which no other entity could possibly be a candidate? The words ἄν τὸ σοφόν occurred also in fr. 41, where τὸ σοφόν is undoubtedly subject, and ἀθεά predicate; but 'the wise thing' there refers primarily to wisdom for men, and is certainly not interchangeable with 'the wise thing' in the present fragment, which must be a description of something like a deity—at any rate the
possessor of wisdom rather than the thing possessed. However, it was suggested on p. 387 that the content of the wisdom in each case was not radically different, which might help to explain how the same words, ὀσύν, can be used in each case. It is possible, of course, that Clement added the word ὀσύς in the present fragment because he had fr. 41 in his mind; I should prefer this kind of explanation to drastic exponents like that of Th. Gomperz (Wien. Sitzungsbl. 113 (1882) 204f.), who combined the two fragments as follows: ὀσύν τὸ οὐρανόν, ἐπιγονων γίνεσθαι μὲν ἡ κυβερνάτα τῶν πάντων. Καιρικόμενον ὦν ἔδιδε καὶ ἔδαθε Ζηνός κύριος—or that of Reinhardt mentioned on p. 386. Yet it is possible to accept both fragments as they stand, and in default of more concrete evidence this course should provisionally be followed. In these circumstances (iv) above is seen to be unsuitable, since it would indeed be difficult if ὀσύς in each fragment played an exactly parallel grammatical role: the use of the same words in different (though not opposed) senses is certainly more tolerable if their emphasis is different.

A further objection against (iv) is that the strong punctuation would diminish the logical cohesion between the first four and the remaining words of the sentence. Neither (ii) nor (iii) is impossible, yet in each of them ὀσύς, used to reinforce ὀσύς, is superfluous. I prefer (i), the interpretation of ὀσύς, by which ὀσύς limits the attribution of ὀσύς; though this is syntactically less easy. In any case, τὸ ὀσύς is not a name for god on the like, but a description appended to the neutral ὀσύς. It is true that even with interpretation (i), which I have tentatively adopted, the exact force of ὀσύς is not immediately apparent; perhaps the prominence of ὀσύς is due to Heraclitus' wish to emphasize the unique character of the Logos, further described as the only possessor of perfect wisdom, in contrast to the divergent attributes of Zeus. This leads to another point: τὸ ὀσύς must, on any interpretation, imply absolute wisdom (as opposed to approximations, however close, to perfection in this respect), for otherwise any possessor of 'true wisdom, how all are guided through all' (fr. 41) might also claim a share in the name of Zeus. Yet fr. 41 certainly applies to human wisdom, primarily: this is not explicitly stated there, but there are many other fragments which show that apprehension of the Logos (which certainly must involve an understanding of the way in which things as a whole are ordered) is theoretically attainable by some men, even if few of Heraclitus' contemporaries were of the kind to attain it.

This wisdom cannot, obviously, be completely achieved by men; only that which itself accomplishes the 'seeing of' things can completely know how things are steered. The close attachment of ὀσύς to τὸ ὀσύς helps considerably to make it clear that the adjective must here be understood in its absolute sense.

Gigon 140 has drawn attention in this context to the doctrine attributed to Pythagoras by Heraclides Ponticus (op. Diog. L. i, 12, that μάνικα ἦν τὸ ὀσύς ἃν τὸν ἐκιν). Heraclides also tells us that Pythagoras (perhaps for this reason) first applied to himself the term φιλόσοφος, and Heraclides fr. 35 may be directed against this claim. If Heraclides' information is true—and it should be treated with great caution—then τὸ ὀσύς was in fr. 32 might express agreement with Pythagoras; but this in itself is an unlikely eventuality, and it is more probable that the idea of perfect wisdom being a divine and not a human attribute was widespread; Heraclitus at all events re firms the idea in quite different terms in fr. 78. It is possible that Epicharmus fr. 4, Diels, which at first sight seems to contradict fr. 32, refers to Pythagoras rather than to Heraclitus, if indeed there is a reference to any specific person: Ἐμές, τὸ ὀσύς ἡμών ὑπὲξ ὀσύς, ἠθευμένοι τῷ ἄσυσι τῷ ἀναχαίνει καὶ γενέσθαι ἐκείνη τῇ ἐκείνη [the hen knows how to lay an egg] τὸ ὀσύς ἀ γάτω τόσον ὀσύς ὑπὲξ ἐκείνῃ τῇ ἐκείνῃ. The use of ἀ γάτω here has been thought to show that this fragment cannot be by Epicharmus himself; certainly in the early fifth century ὀσύς does not mean 'Nature', but in the present context it could be akin to Pindar's use of ὀσύς as 'nature' or 'genius'. I accept the fragment as by Epicharmus, but largely agree with Gigon 140ff. in his scepticism about the Heraclitizing tendencies of the Sicilian playwright. All the supposedly Heraclitean ideas were ones which were held by many others too, were a part in fact of popular wisdom. Certainly the first two lines of fr. 4, with τὸ ὀσύς, ἡ ὑπὲξ and ἠθευμένοι ἐκείνη, have remarkable verbal coincidences with Heraclitus frs. 32 and 78, and this, I think, is the strongest evidence for Epicharmus' knowledge of Heraclitus. But Epicharmus does not materially assist the interpretation of Heraclitus, and is too uncertain for a terminus ante quem, if one is needed (p. 2).

The implication that human wisdom is analogous to but less than divine wisdom is important; it confirms the evidence
of Group 1, that the Logos is both something independent, a θεῖος νόμος (fr. 114), and something perceptible by men. The Logos was discovered to be more than a principle; it is a materialized formula, an aspect of the operation of fire. So also is τὸ σοφὸν μοῖραν: this too is one, as the Logos is one and the divine law is one (see Brücker, Gnomon 13 (1937) 535), and it, too, on the evidence of fr. 64, is an aspect of fire. No doubt Heraclitus, for the purpose of presentation, abstracts this wisdom from fire; probably he did not always retain its fiery nature in the forefront of his mind, but reverted to the language of the more advanced philosophical-religious thought of his day. Xenophanes, after all, had stressed that his one god exerted power by means of intellect, fr. 25 ὅτα ὄντων πόνοι σοφός ἔργα πάντα τε νοτά τοῦ κράτους. On the face of it, this represents a more advanced, less concrete conception than the material θεῖος of Anaxagoras; though Xenophanes is perhaps still using metaphorical language. Heraclitus' metaphors ('steering', 'Zeus', etc.) are not so liable to mislead, since for him there was no rigid distinction in kind between the Logos as comprehended in a human mind and the Logos operating in nature. Above all it is important to remember that Heraclitus did not possess our own logical apparatus. Precise identifications, the distinction between an activity, a mode of activity, and a concrete object, or exact knowledge of where literal description ended and metaphor began, were beyond his logical range—perhaps even beyond his conscious aims, for in spite of his workmanlike approach he still lived, as his language shows, in the tradition of poetical thought. None the less, we can be sure that fire is not a metaphor: the cosmos is a fire, part of it temporarily changed; unchanging fire is the most active kind of matter and in its purest form or at least (so we may conjecture) it possesses directive capacity, it is the embodiment of the Logos, or formula of that direction, and it is wise. It is not surprising, then, that τὸ σοφὸν in its unadulterated form is fiery. Thus Heraclitus uses different terms to describe the single factor which he detected in the plural world of phenomena; perhaps the substantial term fire was of less importance for him than the others, especially Logos. Sometimes the descriptions overlap; thus in fr. 53 πάλαιος is described in a phrase normally applied to Zeus—but πάλαιος is not by any means the same as the σοφὸν of fr. 52. 'Wise' is an essential pre-condition of a unified cosmos, because without the change between opposites which it implies the connection between opposites would cease; but it is ordered change, not mere change alone, which composes the cosmos. The only wise' is the ordering agent, associated with λέγεις and μίμησις. Thus the distinction made by Gignob 139 is a false one: 'Das ist die Frucht der gerade bei Heraklit mächtig werdenden Logik: Ein logisches Gesetz des Weltlaufs und ein Weltbegriff, dessen Wesen es ist, das logische Gesetz zu kennen.' Reinhart is also misleading (Parmenides 203): 'Heraclitus Prinzip, das, was bei ihm dem ἐστίτη des Anaximander und dem ὁ δε τοῦ Parmenides entspricht, ist nicht das Feuer, sondern τὸ σοφὸν oder noch deutlicher ἄνθρωπος.' It is true that Anaximander, in particular, may have said of his Unbounded that 'it embraces all and steers all' (περιέχει ἐστίν and πάντα κυβερνητέ τοῦ, an idea however which Aristotle, Phys. 14, 203b 12, formally assigns to all early thinkers who did not postulate a separate cause of motion); but just as 'steering' was not the whole of his τὸ σοφὸν, so σοφὸν cannot be isolated from the more complex character of Heraclitus' divine principle at the expense of other descriptions of it, as Logos or fire.

1 Α. Τ., δυτ. Μ. 2 γίγνεται Α. Τ., γίγνεται Μ. Post γίγνεται verba ἀ παραθετεῖ ς οὐράνιος ἔθαλος, scilicet ex Aristot. *Pol.* A. 2, 1853 a 59.

By Heraclitus: Of all whose accounts I have heard no one reaches the point of recognizing that wisdom is separated from all (fr. 109–114 follow).

Here λέγειν is more likely to mean "accounts" (almost "theories") than "words", though the distinction is not a large one. At any rate it is not implied that Heraclitus had heard these accounts in person; ἄνθρωποι may mean no more than "heard of", implying quite a superficial acquaintance. Heraclitus is obviously thinking of philosophical interpretations like those of the Milesians, Pythagorians, and Xenophanes, as well as the great poets. According to Heracleides, Pythagoras called god alone wise (p. 305); fr. 32 modified this by suggesting that the divine alone is all-wise. It is a question whether the present fragment is intended to confirm this view, or whether it refers to human wisdom like fr. 41. The omission of the article before σοφὸν (if it is not simply a textual error) is not very surprising. Whatever may have been the general practice in the archaic style, Heraclitus was prepared on occasion to use neuter participles and adjectives without the article, as nouns: cf. especially frs. 88, 136. σοφὸν therefore probably means either 'wise' or 'a wise thing'. The gender of πάντων remains in doubt. The possibilities then are: (i) wisdom is separated from all men; (ii) wisdom is separated from all things; (iii) the wise [cf. 19 το σοφὸν μοιῶν in fr. 12] is separated from all men; (iv) the wise is separated from all things.

1 Zeiler, ZN 793 n. a., rightly rejects his own suggestion that the meaning could be 'wisdom is foreign to all of them', i.e. 'those whose accounts I have heard'.

Now (i) is incompatible with fr. 41, which defines a kind of wisdom which is to some extent within reach of men (though admittedly generally neglected). (iiii) might be possible as another statement, like frs. 78, 79, 82–3, 102, of the immense inferiority of man to god; but those fragments do not necessarily assert an absolute separation between the two (for fr. 78 is perhaps exaggerated in its claim that the human character in general has no γιγνομένα, and is modified by fr. 41), and the use of σοφὸν in frs. 41 and 32 suggests that human wisdom, rare as it may be, is a lesser part of divine wisdom. There is no absolute transcendentism in Heraclitus. (iv) is at first sight impossible, for frs. 32, 64, and 41, together show that the divine thing characterized as wise actually steers all things. Yet κεχωρισμένον may imply not complete isolation but simply a great difference in form. This difference might actually increase the power (cf. Pindar *Nem.* vi, 2 f. διώρυγα πάντων κεχωρισμένον ἄνυμνον; *fr. xv, 108 (Zeus) καταφέτει εὐθείας το δικαίωμα εὑρίσκομεν, cf. 12). Anaxagoras' νοῦς had power over all things (πάντων...κρατεῖ, fr. 14), because it was unmingled with anything else (ἐν μίασι σοφίας χρυσοῦ, ὡσε μύδρος σοφὸς ἐν τῶν πάντων ἔστιν, fr. 12). The choice of interpretation must lie, then, between (iv) and (iii), against which there is no obvious objection. According to interpretation (ii) the fragment would emphasize that wisdom, which in fr. 41 is said to be one, is not to be confused with other things claiming the name of σοφόν. This was commonly applied to any skill, for example, music or the composition of poetry, and our fragment perhaps insists that these have nothing to do with true wisdom—the recognition, according to fr. 41, of how all things are steered through all; the understanding of the Logos. In the same intellectual context would come the attack on παντοκράτορα in fr. 40, which has been seen was perhaps originally connected with fr. 41. σοφὸν is something to be aimed at by all men in general, quite apart from their special proficiencies; the way in which the world-order operates—the order of which men's own behaviour and actions are part—transends the idiosyncrasies of the individual; once again it is the contrast between the 'common' and the individual's private assessment (cf. fr. 2).

It will already have been noted that I prefer interpretation (ii), just outlined, to (iv)—prefer, that is, to take the present fragment closely with fr. 41 rather than with fr. 32, as describing human rather than divine wisdom. This is mainly because I am slow to believe that
The Milesians are not named in the extant fragments, save for a brief reference to Thales, nor is there any direct reference to details of their speculation. Xenophanes and Pythagoras are criticized for the mere acquisition of knowledge (πολυπλοκή); in addition it is suggested that the latter was dishonest. Heraclitus must have known about the Milesian accounts of world-structure; in particular, his theory of opposites is a development in one respect of Anaximander's view that natural events are due to the alternate expansion ('injustice') and diminution ('retribution') of opposed substances (primarily the great cosmological conglomerates, viewed simply as 'the hot' etc.). Heraclitus' statement (fr. 80) that 'strife is justice (the normal course of events) is almost certainly a criticism of Anaximander's metaphor. Yet Heraclitus accepted the same assumption that things in the world can be analysed into opposites, and that events are reactions between opposites; the fifth-century Pythagoreans and Alemaeans adopted the same view (with slight differences), which may have been a general one; though whether Pythagoras himself held it is uncertain. Heraclitus understood that the interaction between opposites is natural, i.e. is necessary for the continuance of the world as men know it, yet he saw that no single opposite must permanently predominate: a balance or ρεπτον must be preserved in all physical changes, so that the total quantity of

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1 Bernays rejected the whole fragment; Th. Gomperz made it end at χωλόσωκτε; Hdt. tried to punctuate strongly after that word. There is no reason whatever for accepting any of these conjectures.

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2 This brief epilogue is not intended to be a summary of the contents of this book; it merely adds a few synthetic impressions, and attempts in a few sentences to outline Heraclitus' relation to his philosophical environment. The time for an inclusive assessment of Heraclitus has not yet come; certainly none could be made without a detailed consideration of the anthropopoeic fragments also. Nevertheless, some of the fundamental tendencies of his thought may have been revealed by the examination of the cosmic fragments; indeed, the anthropopoeic fragments disclose no separate fundamental concepts except that of the importance of the soul and its close relation to the outside world. For brief assessments of Heraclitus' beliefs on the constitution of the world of nature see my short article 'Natural Change in Heraclitus', Mind 66, nos. 237 (January 1951) pp. 351ff., H. Gomperz, Toxaraktistarin Theosophiai Botes (Athens, 1942), 76, and the whole Heraclitus-chapter in G. S. Kirk and J. E. Raven, The Presocratic Philosophers (Cambridge, 1960), 182-211.
every essential constituent of the world remains stable. Long-term excess is punished by the servants of Dike (fr. 94); thus, after all, Heraclitus accepted a similar metaphorical and anthropomorphic explanation of the operation of opposites to Anaximander's, but by commonly expressing it in terms of what he took to be a normal human activity (πολιτεία), and not of an aberration (ἄνθρωπος), he avoided the accidental implication that change is in any way 'wrong' or undesirable.

Heraclitus evidently shared the surprising but universal Ionian presupposition that the world is explicable, and (for this reason) that it is essentially one; but instead of seeing its unity in its origin from a single substance (with the attendant difficulties of cosmogonical differentiation), he conceived of a single arrangement or formula in all separate things which connected them into a determinate whole. This formula, the Logos, he deduced from the fact that opposite extremes are essentially connected, are in his terms 'one and the same', either because they automatically succeed one another (as, for example, in natural cycles), or because their difference is only relative. This Logos is to be regarded as an actual constituent of things (and so in the last analysis is material); it provides 'a backward-stretching connexion' between opposed extremes, that is, one which operates equally in each direction and ensures the retention of measures by the fact that action of itself promotes, sooner or later, an equivalent reaction. Most of Heraclitus' energy was directed to proving that opposite extremes in each continuum are connected; the connexion of different continua is probably to be deduced from the presence in each continuum or genus of the same Logos, which is indeed 'common to all things'.

The physical scheme is related to the logical analysis of things by the common element of measure, of which the Logos is a manifestation. Cosmology is not analysed entirely in terms of opposites; Heraclitus' primary analysis of the physical world was the more empirical one into its three main components, fire, sea, and earth. Of these, fire has a special position, and sea and earth are variant forms of fire. Alterations of fire into sea, of sea into earth, and vice versa, are constantly taking place in the meteorological processes, and are quantitatively regulated. Fire occupies the directive position, and as such is probably to be regarded as a specialized aspect of the Logos; it is by nature kinetic, and its own alterations are exemplary of quantitative regularity. Sea and earth are temporarily extinguished fire, and the whole order of things is spoken of as a fire of which parts are kindling and other parts extinguishing themselves; because these processes are in balance the fire as a whole is 'ever-living'. Heraclitus also thought of the directive fire, or Logos, as 'wise', because it organizes all change; nor can the concept of god as subsuming all the opposites be separated from that of Logos and fire. It is impossible, however, precisely to interrelate these different aspects of the cosmic unity, mainly because Heraclitus himself did not (and probably could not) do so, but used different terms according to different moods and in different contexts—e.g. fire in meteorological-cosmological contexts, god in synthetic ones where he is accepting traditional thought-patterns, Logos in logical-analytical ones. The concepts of process and measure are re-expressed in the analogy of the river, according to which there must always be change, but ordered change between proportionate parts. Stability is possible for a time, and it is obvious that many parts of the world are stable, but all things must eventually change and so play their part in the maintenance of balance and plurality.

Heraclitus made it far clearer than his immediate predecessors that man himself is a part of his surroundings; he cannot exist without fire, which serves as a productive principle of all change. This emphasis upon the positive value of the right kind of knowledge is a point of contact with Pythagoreanism, though in Heraclitus there is no mystical motive; he had learned from Xenophanes that god is a cosmic phenomenon, and for him the state of the soul, though important, was expressible in terms of fire or moisture. The principle of measure, too, was anticipated by Pythagoras with his probable discovery of the mathematical basis of the musical scale; the deduction from this that all things are numerically constituted may have been made not by Pythagoras himself but by his immediate successors, roughly contemporary with Heraclitus. The discovery of and emphasis on the arrangement of things, rather than their gross material constitution (though arrangement and order were not separable, but themselves material), is perhaps the most important one in the history of archaic speculation. Heraclitus, though perhaps initially indebted to Pythagoras here, must be given full credit for having developed this concept so as to produce the first reasonably
coherent explanation of the world of experience. That he was able to do so was partly due to his common sense (surprising perhaps in a man of such passionate convictions), which expressed itself in the view that the evidence of the senses may be accepted provided that it is interpreted with prudence and understanding. Unfortunately, subsequent thinkers were diverted by the Parmenidean fallacy (the ultimate solution of which was, however, of the utmost importance for the progress of philosophy), and Heracleitus had no direct followers of note; doubtless this was partly due to his cryptic style of utterance.1

1 For a further discussion of the interrelations of different parts of Heracleitus' thought, and the connections of Logos, strife, and fire, see my short article 'Logos, ōdysseía, luta, dieu et feu' in Revue Philosophique, 147 (1956) 188-99.
Xenophon (continued)

314. 319–5, 396; the sun according to, 319, 379, 378
388, 389; etymology of, 393; the stroke of, 385; the boundary of, in fr. 215, 298; 393; the bright sky named, 291–2; Krappea: a name for, 314–5; it is also 356, 364; description of, applied to War, 294, 349, 354; in fr. 24, 392–3, 394; Olympian, 14

Zeno of Citium, 11, 327, 367
Zeno, 60, 118, 177, 198, 246, 247, 387, 388, 389; etymology of, 393; the stroke of, 365; the boundary of, in fr. 180, 298; 393; the bright sky named, 291–2; Krappea: a name for, 314–5; it is also 356, 364; description of, applied to War, 294, 349, 354; in fr. 24, 392–3, 394; Olympian, 14