ARGUMENTATION AND HERACLITUS’ BOOK

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Antiquity credits Heraclitus of Ephesus with a single book (D.L. 9. 5–6), but the nature, even the very existence, of this ‘book’ has been a topic of much dispute in modern times. Diels, who despaired of discerning any intrinsic order among the fragments of Heraclitus, concluded that his book was a collection of aphorisms, and, as a consequence, he printed Heraclitus’ fragments largely in an alphabetical arrangement based on the names of the authors who preserved them.1 Diogenes Laertius, however, tells us that the book credited to Heraclitus is ‘continuous’ (ἀπὸ τοῦ συνέχοντος), although divided into three parts: on the universe, politics, and theology. Kirk argues that this division has a Stoic origin and possibly shaped a late handbook of Heraclitus’ sayings. Like Diels, Kirk finds the fragments to be ‘isolated statements, or γνῶµαι’, and he even inclines to the view that the book attributed to Heraclitus is only a collection of his oral sayings put together by one of his students.2 More recently, J. Barnes identifies the aphoristic interpretation of Heraclitus’ style as the ‘orthodox view’ among contemporary scholars.3

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1 Preface of 1903. Unless otherwise noted, the texts and references to Heraclitus are those of H. Diels, Die Fragmente der Vorsokratiker, 6th edn., rev. W. Kranz (3 vols.; Berlin, 1951). For ease of reading iota subscripts replace the iota adscripts of Diels.


3 Barnes acknowledges that the orthodox are hardly homogeneous (‘Aphorism and Argument’ ['Aphorism'], in K. Robb (ed.), Language and Thought in Early Greek Philosophy [Language and Thought] (La Salle, 1983), 91–109 at 97). M. Marcovich declares himself a follower of Kirk and speaks of the ‘gnomes’ of Heraclitus (Hera-
Barnes, however, challenges the orthodoxy, and he argues that its champions have not provided it with sufficient evidence. Instead of a book of aphorisms, Heraclitus' book could have been a treatise with its contents unfolding in a continuous fashion, much like the prose works of his fellow natural philosophers, from which the treatises of Aristotle claim descent. The aphoristic-like fragments could simply be passages of a particularly quotable nature extracted by those citing them from the larger text in which they resided originally. Aside from discrediting the evidence of the orthodoxy, Barnes draws upon his observation that philosophy demands arguments and that aphorisms do not accommodate them. Aphorisms are brief, and argumentation strings together propositions that are usually clearly connected with one another through the aid of a variety of sentential connectives and inferential particles. The ancient critic Demetrius of Phalerum, reports Barnes, lays the blame for Heraclitus' infamous obscurity upon his not using connectives, which would have indicated how the sentences are laid out with respect to one another (Eloc. 192). The paucity of these connectives in Heraclitus' fragments argues for his writing in an aphoristic style. Barnes acknowledges that Heraclitus does not make much use of connectives in comparison with someone like Melissus, whose defence of his modified Eleatic metaphysics is a paradigm of philosophical prose with its tight, sustained argumentation, adorned with an abundance of inferential particles, above all γάρ, as well as τοίνυν, ὅτε, ὅτε, and the like. Heraclitus does, however,
make some use of connectives, insists Barnes, and he marshals examples of fragments that bear connectives and exhibit arguments. Heraclitus is not, Barnes concludes, an isolated eccentric, but an author of philosophical prose who takes his rightful place within the 'traditions of Presocratic thought'. Barnes is not entirely alone in his minority opinion. M. L. West had already produced a general interpretation much like his, and West also notes that no other early author composed a book as a collection of sayings.  

There are students of Heraclitus who do not think that he makes use of arguments. Argument is certainly evident in the fragments, and Barnes does a service in stressing the importance Heraclitus attaches to argumentation. It plays a significant role in his exhibition of the unity of opposites, which is a central tenet of his philosophy. Often he only cites an example of this paradox, as he does when he says 'The way up and down is one and the same' (fr. 60), or 'Beginning and end are common in a circle' (fr. 103). But Heraclitus will also give a reason for thinking that the object possesses opposing qualities or that opposing qualities are united, and he then offers his audience an argument. When he says 'Sea water is the purest and foulest of water', he does not leave it at that, but he continues with the reason for thinking sea water possesses these opposing properties: 'for fish it is drinkable and life-sustaining, for men it is undrinkable and deadly' (fr. 61). As unconvincing as this argument may be, it is still an argument, with its conclusion stated first and its single premiss stated afterwards. In the difficult fragment 88, the contrary pairs—the living and the dead, the waking and

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9 Barnes too takes fr. 61 to be an argument (The Presocratic Philosophers, i. Thales to Zeno [PP] (London, 1979), 74).
the sleeping, and the young and the old—are each said to be the 'same' and all for the same reason, that the contraries of each pair mutually replace one another. Again, the conclusion is stated first and the premiss follows, although in this case the premiss is clearly indicated by the inferential particle γάρ. Barnes stresses the importance of fragment 88 for his interpretation, since this fragment ties together inferentially two important Heraclitean doctrines when it derives the unity of opposites from the doctrine of flux.\(^8\) The exquisite but mysterious fragment 62 may also be an argument with its conclusion making up the first two clauses, 'Immortals mortals, mortals immortals', and its single premiss the third and fourth clauses, 'living the death of these, the life of these having died'. Mortals and immortals may be thought to be the same, and thus interchangeable, because when something comes to life it does so through a transformation and thereby an incorporation of what has died. The dead live on in the living, so that what dies lives for ever through its transformation into different forms for ever. Most scholars take fragments 110 and 111 to fit together, which gives them the form of an argument in which fragment 110 is the conclusion, 'It is not better for men to get as much as they desire', and fragment 111 provides its reason, 'It is disease that makes health pleasant and good, hunger satiety, weariness rest.'\(^9\) In this argument, however, the unity of opposites is not what is argued for; rather the link between each of the pairs of contraries in fragment 111 is what gives the reason why it would be bad for men to get all they wish: if they received only what they wished for, which is only one contrary of a pair, then they would fail to enjoy what they desired because of the lack of contrast. These three arguments found in fragments 61, 88, and 110 together with 111 are not the only examples of explicit arguments that have come down to us from Heraclitus. Fragments 40, 56, 57, 85, and 94 may also be construed as arguments, and, aside from fragment 57, they do not argue for or make any use of the unity of opposites. All of these arguments also

\(^8\) Barnes, 'Aphorism', 104; PP 72.

\(^9\) T. M. Robinson denies the conjunction of frr. 110 and 111 because of the lack of any inferential particle, such as γάρ, and he argues that fr. 110 more probably goes with fr. 85 (Heraclitus: Fragments (Toronto, 1987), 152–3). There is, however, no inferential particle linking the two sentences of fr. 61, and yet it would be difficult to deny that it is an argument. For more on the connection between frr. 110 and 111, see Kahn, Art, 181–3 and n. 225. Besides Robinson, Kirk, Heraclitus, 130, and Marcovich, Heraclitus, 390, separate the two fragments.
lead with the conclusion followed by a single premiss, and, with the exception of fragment 94, their premisses are also introduced with the particle γάρ.

Only in fragment 114 do we have a more complex example of an argument. The opening sentence draws a parallel between the admonition that ‘those speaking with understanding’ must hold to what is ‘common to all things’ and the admonition that a city must hold to its law. The sentence ends with the additional exhortation that ‘the common’ should be held to ‘even more firmly’ than a city holds to its laws. The argument of fragment 114 would appear to have for its conclusion the wisdom of the admonition to hold to the common, and it establishes this admonition by arguing for the importance of the analogous admonition that calls for a city to hold to its law (cf. fr. 44). The clause that follows up the opening sentence is marked by γάρ, and it gives as the reason for holding to human laws the fact that they are ‘nourished by one, the divine (law)’. The third and final proposition, also introduced with the inferential particle γάρ, gives the reason why the divine can ‘nourish’ the human law: ‘it prevails as it will and suffices for all and is more than enough’. Fragment 114 is a fairly complicated argument chain, in which it is argued that since A and B are analogous admonitions, and B is important because of C, and C is based on D, so too must A be important by its analogy with B.

The argument of fragment 114 may be even more complex if fragment 2 should be appended to it as an additional conclusion, as Barnes and many others have argued. But even as it stands, fragment 114 is no aphorism, just as the other longer fragments—1, 5, 14, 56, 121—could not be counted as aphorisms or maxims. Because of these longer fragments a purely aphoristic interpretation is untenable. None the less, they do not require the sort of book that Barnes envisages for Heraclitus, a book of unbroken prose. Each of these longer fragments, like fragment 114, makes a clear point or related set of points, and nothing compels us to view them as extracted from a greater context, although equally, nothing rules this out either. Fragment 1 is the longest of the fragments, and it provides a

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10 In fr. 114 the phrase τοῖς θείοις in the clause γάρ πίστες οἱ διεργάζονται νόμοι ὑπὸ ἕνος τοῦ θείου, is ambiguous, since it might refer to ‘the divine’ simpliciter or ‘the divine law’. Kahn suspects that the ambiguity is intentional (Art, 117).

11 Barnes, ‘Aphorism’, 103; PP 103; e.g. Kirk, Heraclitus, 48–9, and Marcovich, Heraclitus, 91–2, who give additional references to those who argue for a connection between frs. 114 and 2.
closed text that neatly sets out in its three sentences the coalition of the logos, by which all things come to be, and the solitary Heraclitus against the incomprehension of the rest of humanity. Fragment 1 could stand as an introduction that presents economically the three main participants in Heraclitus’ book and their relationships to one another. Heraclitus certainly did not compose exclusively in an aphoristic manner. But he may have composed a book made up of short passages—in some cases aphorisms, in others more complex entries—which stand to one another in no particular order or bear no intrinsic relation to one another, logically or syntactically.\footnote{Perhaps the view of Kahn, \textit{Art}, 7.} Something of this style we find at points in Hesiod’s \textit{Works and Days}, when, for example, he comments on the ‘good neighbour’ with a string of proverbs or proverbial-like sentences, which stand as independent units, though they each have something to say about the good neighbour (342–51). This lack of intrinsic order among the fragments of Heraclitus does not mean that there could be no significant unity in his book. The unity could lie in the wide variety of significant combinations the texts may bear with one another, whereby one passage recalls another and that one still another, or in the way in which a number of passages may cast light upon one another, while each may yet stand well enough on its own.\footnote{For an interpretation of this sort, see Kahn, \textit{Art}, 89. Barnes justly points out that we are in no position to call upon the Hippocratic authors who are reputed to be imitators of Heraclitus because of their aphoristic style to help us determine his style unless we already know that he wrote in aphorisms. In addition to the Hippocratic \textit{Aphorisms}, which provides the physician with maxims on medical lore, the Hippocratic corpus includes a few minor works in which aphorisms play a role, one of which, \textit{On Regimen}, reflects something of Heraclitus’ opinions. Diels prints chapters 5–24 of the first book of \textit{On Regimen} and fifteen of the maxims of \textit{On Nutriment} as ‘imitations’ of Heraclitus. Barnes contends that the content of 1. 6–24 is not especially Heraclitean, aside from a few allusions, just as there are allusions to Anaxagoras (‘Aphorism’, 99–100).} This view of Heraclitus’ book as a collection of brief, independent entries Barnes surveys and dismisses as ‘highly implausible’ because the surviving passages contain too many inferential particles.

Most of Heraclitus’ explicit arguments are simple one-premiss arguments with the conclusion stated first. But he is certainly not the first to use this form. There is probably a long history of its use and, moreover, of the employment of this and similar argument forms as matrices for the display of aphorisms or maxims. In Aristotle’s discourse on \textit{γνωµολογία} in \textit{Rhetoric} 2. 21 he explains the
nature of the maxim in the light of argumentation.\textsuperscript{14} Maxims are
general statements about human actions and about the prescriptions
or proscriptions of those actions. The kind of argument that
concerns action is the enthymeme, which is only of a probabilist
nature. Maxims are its premisses or conclusions, but without the
reasoning, or syllogismos. Aristotle styles maxims ‘enthymematic’
(ἐνθυµηµατικός) when they fail to fit into the strict form of an en-
thymeme, which possesses clearly demarcated premiss and conclu-
sion, but yet the maxims are in a context in which a conclusion and
premiss are discernible, as in his example ἀθάνατον ὀργὴν µὴ φύλασσε
θνητὸς ὤν, ‘Immortal anger do not cherish, being mortal’, in which
the premiss comes in participial form with no inferential particle
(1394\textsuperscript{b}17–24).

A number of maxims have come down to us that are not merely
‘enthymematic’, but more often than not are what Aristotle would
identify as enthymemes. Prominent among these are the maxims
of the Seven Sages. Plato furnishes us with our earliest reference
to the collegium of Seven Sages and with our first full list. He
also provides us with our first version of the legend that the Sages
gathered together in Delphi to dedicate their aphoristic wisdom to
Apollo (Prot. 343 a–b). The Seven were historical figures, whom
tradition treats as contemporaries who knew one another.\textsuperscript{15} The

\textsuperscript{14} For efforts to distinguish between proverb, maxim, and apophthegm, see J.
Russo, ‘Prose Genres for the Performance of Traditional Wisdom in Ancient Greece:
Proverb, Maxim, Apophthegm’, in L. Edmunds and R. W. Wallace (eds.), Poet,
Public, and Performance in Ancient Greece (Baltimore, 1997), 49–64. Aristotle does
distinguish the παροιµία as what instructs through metaphors (Rhet. 3. 11, 1413\textsuperscript{17}),
as, for example, δὲ καλοῖς παρὰ καλοῖς (1. 11, 1371\textsuperscript{17}). Nice distinctions between
proverb, maxim, and apophthegm are not relevant to the topic of this paper, in which
‘aphorism’ and ‘maxim’ perform the same task.

\textsuperscript{15} The list of the Sages varies; the names that show up most often are Thales of
Miletus, Bias of Priene, Solon of Athens, Cleobulus of Lindus, Pittacus of Mity-
lene, Chilon of Sparta, and Periander of Corinth. Plato substitutes Myson of Chen
(in Oeta) for the tyrant Periander, and the Scythian Anacharsis often serves as a
substitute. D. Fehling has argued that the collegium of the Seven Sages is noth-
ing more than Plato’s literary invention and was never a part of oral tradition (Die
sieben Weisen und die frühgriechische Chronologie: Eine traditisongeschichtliche Studie
(Bern, 1983)). Fehling sparked a vigorous response. For the Seven as a cohesive
group within oral tradition well before Plato, see R. P. Martin, ‘The Seven Sages
as Performers of Wisdom’ (‘Seven Sages’), in C. Dougherty and L. Kurke (eds.),
Cultural Poetics in Archaic Greece: Cult, Performance, Politics (Cambridge, 1993),
168–28; for convincing arguments against Fehling, see J. Bollansée, ‘Fact and Fic-
tion, Falsehood and Truth’, Museum Helveticum, 56 (1999), 65–75. A. R. Burn
argues for a date for the collegium before the Persian conquest of the Asiatic Ionians.
Since four of the Sages are eastern Greeks, the legend of the tripod (D.L. 1. 27–8,
maxims are largely prudential imperatives and practical advice for a sound life, although they also include judgements upon a wide variety of human characteristics and upon a number of vices and virtues. Diogenes Laertius provides the most information about the legends of the Sages, and Stobaeus preserves collections of maxims put together by the Peripatetic philosophers Demetrius of Phalerum and Clearchus of Soli, who probably had access to material on the Sages as old as what was available to Aristotle.\(^\text{16}\)

Possibly, Heraclitus was under the influence of the gnomic style of the Seven Sages. He shows a certain affection for one of the Seven, Bias of Priene, whom he praises (fr. 39) and paraphrases (fr. 104), and the alliance of the Seven with Delphi could provide another reason for Heraclitus to emulate them because of his admiration for the Pythian Apollo, whose oracles, as most scholars believe, provide the model for his own obscure mode of expression (fr. 93).\(^\text{17}\) Perhaps more important, Heraclitus, Delphi, and the Sages share important values. Three maxims traditionally credited to the Sages were prominently displayed at the Alcmaeonid temple at Delphi, and two of these acquired great reputations:

30–3), which binds the Sages together, would probably have an eastern origin, and since the story includes the tyrant Periander, this too would indicate a date for the collegium before his universal condemnation (The Lyric Age of Greece (London, 1960), 268).

\(^\text{16}\) Martin urges (‘Seven Sages’, 126 n. 22) that if the testimony of Aristotle is acceptable, that should also apply to accounts by members of the Peripatetic school. Diels prints only Stobaeus’ rendition of Demetrius’ record of the maxims of the Sages (references to his collection given here are those of Diels). Stobaeus records at 3. 1. 173, under the name of ‘Sosiades’, what epigraphical evidence indicates is the collection of Clearchus, a student of Aristotle; for the epigraphical evidence, see L. Robert, ‘De Delphes à l’Oxus: inscriptions grecques nouvelles de la Bactriane’, Comptes rendus d’Academie des inscriptions et belles lettres (1968), 416–57. In the 3rd cent. Clearchus had inscribed on a stele in a Graeco-Bactrian city 147 maxims, and in an epigraph on its base he declares that he has copied these maxims ‘very carefully’ from a stele dedicated at Delphi.

\(^\text{17}\) The obscurity of Heraclitus’ style has been commented upon since antiquity; for the ancient references, see W. K. C. Guthrie, A History of Greek Philosophy, i, The Earlier Presocratics and the Pythagoreans (Cambridge, 1962), 411. Hölscher argues that Heraclitus’ obscurity is in imitation of the oracular style of Delphi and that his obscurity is required in order to remain true to the obscure nature of reality. For the same view, which is all but the standard view these days, see Kahn’s commentary on fr. 93 (Art., 123–4). Barnes, however, questions this common interpretation of fr. 93 (‘Aphorism’, 101). H. W. Parke and D. E. W. Wormell argue that Heraclitus, along with Parmenides and Empedocles, borrow the ‘elevated language’ of the oracular style to express their mysticism and their reception of a ‘revelation’ (The Delphic Oracle (2 vols.; Oxford, 1956), vol. ii, p. xxxiv.
‘Know yourself’ (DK 10. 3 Chilon 1) and ‘Nothing too much’ (DK 10. 3 Solon 1). Although these maxims were never attributed to Apollo, they provide the epitome of Delphi’s moral wisdom.¹⁸ Delphi and the maxims of the Sages stress self-knowledge as a means of achieving a measured life of prudent self-interest, which serves as a safeguard against hubris and any other emotion or desire or vice—anger, pleasure-seeking, drunkenness, and the like—which draws men into peril and away from their proper moral realm and their prudential judgement. This self-interested restraint was associated with the virtue of ἱσώφρονει in the time of Heraclitus, who also praises this excellence in the form of σωφρονεῖν, ‘sound reasoning’ (fr. 112),¹⁹ which is a virtue he also strongly connects with self-knowledge: ‘It belongs to all men to know themselves and to reason soundly’ (fr. 116).

The Sages make considerable use of simple arguments, where the conclusion is stated first and the premiss follows marked by γάρ. Of the 150 maxims Demetrius highlights in his collection, there are twelve arguments of this sort, and Diogenes provides six examples that differ from Demetrius’. Clearchus’ collection includes no arguments, and it is mostly made up of maxims of only two words, many of which are found in the collections of Demetrius and Diogenes. Cleobulus argues: γαμεῖν ἐκ τῶν ὁμοίων· ἐάν γὰρ ἐκ τῶν κρειττῶν, δεσπότας, οὐ συγγενεῖς κτήσονται, ‘Marry from your equals; for if you should marry from your betters, despots, not kinsfolk, you shall get’ (DK 10. 3 Cleobulus 18). The argument πίνων µὴ πολλὰ λάλει· ἁµαρτήσει γάρ, ‘While drinking do not talk much; for you shall err’, is credited to Chilon (DK 10. 3 Chilon 2), who is also credited with ζηµίαν αἱροῦ µᾶλλον ἢ κέρδος αἰσχρόν· τὸ µὲν γὰρ ἅπαξ λυπήσει, τὸ δὲ αἰεί, ‘Take a loss rather than a shameful profit; for the one you shall suffer once, the other always’ (DK 10. 3 Chilon 10). Fragment 85 of Heraclitus is a good example of an argument of this form: θυµή µάχεσθαι χαλεπόν· ὃ γὰρ ἂν θέλησται, ψυχῆς ὑπηρετεῖ, ‘It is hard to fight with anger; for whatever it should want it buys with the soul’, and it also expresses a sentiment in keeping with those of the maxims (e.g. DK 10. 3 Chilon 15). There are a number of overlaps in the collections of Demetrius and Diogenes, in which the wording may vary little or not at all (e.g. DK 10. 3 Cleobulus 16

¹⁸ Parke and Wormell, The Delphic Oracle, i. 386–7, 389–90.
¹⁹ For the meaning of ἱσώφρονει at this period, see e.g. H. North, Sophrosyne: Self-Knowledge and Self-Restraint in Greek Literature (Ithaca, NY, 1966), 1–31.
and D.L. 1. 92). One author may also preserve a maxim in the form of an argument (D.L. 1. 88), whereas the other may preserve only a version of the conclusion (DK 10. 3 Bias 16). In one interesting case Diogenes attributes to Bias a maxim in the form of an argument that ties together the first part of a maxim Aristotle ascribes to Bias (Rhet. 2. 13, 1389b24) and the best-known of Bias’ maxims (DK 10. 3 Bias 1), so that the latter maxim becomes the justification for the former: φιλεῖν ὡς µισήσοντας τούς γὰρ πλείστους εἶναι κακοῦς, ‘Love as though you may hate; for most are bad’ (D.L. 1. 87).  

Additional maxims can be made out as arguments, three of which in Demetrius’ collection take a form different from the arguments surveyed, although they too lead with the conclusion. Ascribed to Cleobulus is the argument οἰκέτας παρ᾿ οἶνον µὴ κολάζειν εἰ δὲ µή, δόξεις παροινεῖν, ‘Do not punish a household slave when you are drinking; otherwise, you shall be thought to be violent in your drink’ (DK 10. 3 Cleobulus 17). What links the conclusion to the rest of the passage is the clause εἰ δὲ µή, which is usually translated ‘otherwise’. More literally it may be rendered as ‘but if not that’, and then the argument can more easily be appreciated as a *reductio* or something very close to it. After the admonition to be proved is stated, its contradictory is assumed, but its assumption yields a consequence that is unacceptable, viz. some result any ordinary Greek should find objectionable: ‘you shall be thought to be violent in your drink’ (DK 10. 3 Cleobulus 17) or ‘you should be hateful to those apprehended’ (DK 10. 3 Solon 2). The pattern these arguments take looks like this: p, but if not-p, then q (where the negation of q and the deduction of p are left unexpressed). This sort of argument shows up in one fragment of Heraclitus, fragment 94 in the version Plutarch hands down to us (De exilio 604α): ‘The sun will not step over his measures, but if that is not the case [εἰ δὲ µή], the Furies, assistants of Justice, shall find him out.’ Fragment 94 may, however, be part of a slightly longer, but perhaps not

20 The arguments with γάρ that are not common to the collections of Demetrius and Diogenes are: Cleobulus—DK 10. 3. 16, 18, 19; D.L. 1. 91–2; Chilon—DK 10. 3. 2, 3, 16, 18; D.L. 1. 70; Pittacus—DK 10. 3. 2, 5, 8; Bias—DK 10. 3. 4; D.L. 1. 87; Periander—DK 10. 3. 13; D.L. 1. 97. D.L. 1. 87–8 gives a different conclusion from that of DK 10. 3 Bias 4, and D.L. 1. 88 adds a premiss with γάρ to DK 10. 3 Bias 16 so that an argument results.

21 Diogenes preserves a close version of this maxim, which in place of εἰ δὲ µή, δόξεις παροινεῖν has δοκεῖν γὰρ ἂν παροινεῖν (1. 92). The other two arguments in Demetrius’ collection which contain εἰ δὲ µή are DK 10. 3 Solon 2 and DK 10. 3 Chilon 4, and the latter Diogenes duplicates at 1. 69–70.
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more complex, argument. In a highly damaged passage from the recently discovered Derveni papyrus, its author appears to quote fragment 94 just after he quotes the content of our fragment 3, ‘width of a human foot’, which is known from other testimonies to be a reference to the width of the sun, and the Derveni papyrus corroborates this interpretation. The wording of fragment 3 in the papyrus differs slightly from what has come down to us, but the deviation in wording is more marked in the case of fragment 94, which among other significant differences appears to have the positive phrase εἰ γάρ in place of the negative εἰ δὲ µή of Plutarch’s rendition. The two renditions are equivalent, but the character of the argument as a reductio that negates what is to be established is lost in the rendition of the Derveni papyrus. The author of the papyrus may be paraphrasing Heraclitus or quoting from memory, although the same may also be said of Plutarch.

The heart of Barnes’s case lies in Heraclitus’ use of inferential particles. Barnes points to ten fragments in which inferential particles are used, mostly γάρ. Fragment 2 is among Barnes’s examples, which he believes belongs with fragment 114. Fragment 2 offers him questionable support because the portion of the text that contains the inferential particle διό is disputed by scholars. Fragment 48 also creates difficulties, since one source introduces it with οὖν and another with δέ, and in neither of these sources is the particle the contribution of the reporter. In the remaining eight examples the particle is γάρ, but in only one of them, fragment 78, does the

22 Derveni papyrus, col. iv. D. Sider defends the unity of frs. 3 and 94 on the basis of the papyrus (‘Heraclitus in the Derveni Papyrus’, in A. Laks and G. W. Most (eds.), Studies on the Derveni Papyrus (Oxford, 1997), 129–48). Kahn, however, is not convinced that the two fragments belong together (‘Was Euthyphro the Author of the Derveni Papyrus?’, in Laks and Most, 55–63 at n. 14). Fragment 94 provokes even more curiosity because of its similarity in wording to a Pythagorean saying: see Kirk, Heraclitus, 284, and Marcovich, Heraclitus, 275.

23 Barnes brings up the issue of the contested text of fr. 2 (‘Aphorism’, n. 39). West, Early Greek Philosophy and the Orient, 118–19, and Kahn, Art, 28, follow Bywater in placing the particle in brackets, as the addition of Sextus, διό δὲ ἐπεσθα ὁ κοινὸς γὰρ ὁ κοινὸς, which as it stands lacks full coherence. J. Bollack and H. Wismann also reject this material (Héraclite ou la séparation (Paris, 1972), 65). After the τοῦ of the opening clause Bekker inverted (τοῦτω τουτέστι) so that he might retain the opening clause as the words of Heraclitus and might thereby excuse the second clause, along with τοῦτο τουτέστι, as the gloss of Sextus. Diels, Kirk, Marcovich, and Robinson follow Bekker. For comments on this text, see Kirk, Heraclitus, 57–8, West, loc. cit., and Robinson, Heraclitus, 76–7.

24 As Barnes points out (‘Aphorism’, 109 n. 40). The Etymologicum Magnum introduces fr. 48 with οὗ, Tzetzes with δέ. Marcovich, Heraclitus, 192, thinks that
particle show that the surviving words were definitely linked to a lost piece of text. In the remaining seven cases, \( γάρ \) links two sentences within the text of the fragment, and the inference they express is complete as it stands. In five of these seven cases, the patterns of the texts match closely, fragment 85 providing the simplest illustration: "θυμ/Alphasubiotaῶ µάχεσθαι χαλεπόν/periodcentered.0 ὃ γάρ ἄν θέλ/etasubiotaη, ψυχῆς ὠνεῖται, 'It is hard to fight with anger; for whatever it should want it buys with the soul", in which the conclusion is stated first, followed by the premiss with \( γάρ \) as the linking particle. Between them Demetrius and Diogenes record eighteen maxims of the Seven Sages which match this pattern exactly. Therefore, merely on the basis of these five texts of Heraclitus we would have no reason to expect any more explicit argumentation in his book than what we find in the maxims, since the Sages’ maxims furnish several arguments that match in form the arguments found in these five fragments. In addition, there are other fragments that probably preserve simple arguments that use no more than two propositions but make do without any inferential particle, such as fragments 61, 62, and 110 with 111. Fragment 1 presents a slightly different case from the other five examples that contain \( γάρ \); the first two complicated sentences of fragment 1 are linked by \( γάρ \), and these two sentences in their complexity and length go beyond the simpler patterns we typically find in the arguments of Heraclitus and in the maxims. Fragment 114 is also among Barnes’s examples; it does provide a more complex argument, which uses \( γάρ \) twice, but it is also an argument complete in itself. The single example of fragment 114 indicates only that Heraclitus is capable of arguing beyond a single premiss, not that he wrote texts of argumentation, or any other texts, beyond the length of the longest of the surviving texts. If anything, then, the fragments that Barnes cites for his case largely provide evidence for Heraclitus’ style as sharing an important feature with that of the Sages and therefore provide evidence that could be used on behalf of the aphoristic interpretation or any interpretation that takes his book to be made up of brief, independent entries. The Derveni papyrus closely associates fragments 3 and 94, and it is possible that the two belong together and provide a slightly longer passage of argument, although the author of the Derveni papyrus does not retain the \( γάρ \) that appears in Plutarch’s rendition of fragment 94. the \( δέ \) may be genuine; Kirk, *Heraclitus*, 116, has no confidence in the authenticity of either particle.
Even if fragments 3 and 94 do form a larger argument that contains the argument of fragment 94, their unity would not provide Barnes with evidence of a significantly larger or more complicated argument that makes use of inferential particles. Barnes concludes by admitting that in a significant number of cases Heraclitus does not make use of connecting terms and that consequently Demetrius’ estimation of Heraclitus’ style ‘receives some support from the surviving texts’. Barnes is correct in judging that the orthodox view has not been proved, and the longer fragments, like fragments 1 and 114, bar any purely aphoristic interpretation. Barnes, however, has established nothing that renders the interpretation of Heraclitus’ book as a collection of brief, independent passages ‘highly implausible’.

There is nothing striking in the character of the argument forms common to the maxims of the Seven and the fragments of Heraclitus, and these forms are hardly unique to them. Arguments of a similar form, and of other related forms, may be found in the poems of Theognis of Megara and Phocylides of Miletus, whom the *Suda* takes to be contemporaries who flourished some fifty years (544–541) before Heraclitus. Theognis recommends to his protégé, Cyrnus:

\[
\text{μήποτε, Κύρν’, ἀγορᾶσθαι ἔπος µέγα: οἴδε γὰρ ἄνδρεις ἀθυρώσων ὃ τι νεὶς χήμερῃ ἄνδρὶ τελει.}
\]

(159–60)

Never, Cyrnus, talk big; for knows no Human what night or day will bring to a man.

And Phocylides gives the advice:

\[
\text{χρηίζων πλοίστου μελέτην έχε πίωνος ἄγρου: ἄγρον γὰρ τε λέγουσι Αµαλθείης κέρας εἶναι.}
\]

(Stob. 4. 15. 6)

Lacking wealth, have a care for a rich farm;
For a farm, they say, is a horn of Amaltheia.

---

26 A few related forms found in Hesiod: οἶκοι βέλτερον εἶναι, έπει βλαβερὸν τὸ θύρηφιν (WD 365), in which ἐπεί performs the task of γάρ; καὶ κύνα καρχαρόδοντα κοµεῖν, μὴ φείδεο σίτου, Νὴ µὴ ποτε σ᾿ ἡµερόκοιτο ἀνὴρ ἀπὸ χρήµαθ᾿ ἐλθε (WD 604–5). Examples of the latter sort of argument can be found in Theognis (75–6) and Phocylides (Σ Αr. Clouds 240). The inference behind ‘p lest q’ would seem to be: not-\(q\) implies \(q\), but \(q\) is unwanted, i.e. not-\(q\), which yields \(p\).
27 The horn of Amaltheia is a bull’s horn that yields an unlimited supply of meat.
These poets are well known for their aphoristic couplets, and Denniston even suggests that they may have made of the γνώμη a 'literary form in itself'. Indeed, aphorisms couched in arguments go all the way back to Hesiod:

\[
\begin{align*}
\text{μηδ’ ἀναβάλλεσθαι ἐς τ’ αὔριον ἐς τ’ ἔνηφι· \\
οὐ γὰρ ἐτωσιοεργὸς ἀνὴρ πίμπλησι καλιὴν \\
οὐδ’ ἀναβαλλόμενος. \\
\end{align*}
\]

(\textit{WD} 410–12)

Do not delay till tomorrow and the day after;
For a sluggish man does not fill his barn
Nor one who delays.

\textit{Akousmata} credited to Pythagoras, whom Heraclitus despised (frs. 129, 81), sometimes come as arguments of the same sort as those we find in Heraclitus and Hesiod: \(\text{δεὶ τεκνοποιεῖσθαι· δεὶ γὰρ ἀντικαταλιπεῖν τοὺς θεραπεύοντας τὸν θεόν, ‘One must beget children; for one must leave behind worshippers of god’ (Iambl. \textit{VP} 83).\)

Yet no author need look to any model within the literary or oral tradition for these argument forms, since they were doubtless part of the Greek of everyday life.

Altogether there are ten explicit, or probably explicit, arguments among the surviving fragments of Heraclitus, and thus he depends to some degree upon explicit argumentation for the truth of his opinions. Heraclitus’ ‘argumentation’, however, is not limited to these simple explicit arguments. He is not interested in merely arguing in fragment 61 for the truth of sea water’s possession of conflicting properties. The argument of fragment 61 provides simply another contribution towards illuminating the general truth, endorsed by Heraclitus, of the unity of opposites and towards establishing the truth of the overall unity of reality (fr. 50). Since Heraclitus does argue for the unity of opposites, Holscher’s contention must be rejected that instead of argumentation for the truth and drink (Apollodorus 2. 7. 5); see J. G. Frazer’s note on this passage in the Loeb edition of Apollodorus.

20 Iamblichus, or Aristotle, whom Iamblichus probably plagiarizes, reports that the \textit{akousmata} were presented ‘undemonstrated and without argument’ (\textit{VP} 82) and that their appearance in the form of arguments was the work of later generations, who tried to find explanations for the \textit{akousmata} (\textit{VP} 86).
of the unity of opposites Heraclitus depends upon ‘intuition’, or in place of ‘proof’ upon ‘simile’, when, for example, he compares in fragment 51 the workings of the world order to those of the bow and lyre. Above all, these surviving arguments of Heraclitus severely undercut Cornford’s erstwhile contention that Heraclitus displays a ‘mystical tendency’, the exercise of which provides him with his insight into the unity of life and death and motivates his ‘violent rejection’ of Ionian historiè. The rationalism of Heraclitus, which Barnes rightly wishes to protect, need not be put in jeopardy by an interpretation that takes his book to be a collection of independent passages of a brief and in some cases aphoristic nature.

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Argumentation can be thought of as a knowledge-sharing mechanism where construction of arguments and counter-arguments towards reaching mutually agreed upon conclusions is modelled after the rational discussion of knowledge-sharing. The procedural approach of generation and exchange of arguments is with the intention of reaching a definite conclusion at the end of discussion irrespective of the winning or losing of the individual arguments.