

# ON 'LOGOS' IN HERACLITUS

MARK A. JOHNSTONE

FEW issues in the study of early Greek philosophy have drawn as much attention—or provoked as much disagreement—as the question of how best to understand the meaning of the word 'logos' in the writings of Heraclitus.<sup>1</sup> The basic puzzle can be usefully understood as follows. Our evidence suggests that around the beginning of the fifth century BC, when Heraclitus was philosophically active,<sup>2</sup> the word 'logos' usually denoted a written or oral account or story presented to an audience to persuade or entertain them.<sup>3</sup> However, in certain key fragments—most strikingly fr. 1, 2, and 50—

© Mark A. Johnstone 2014

The topic of this paper is one I have returned to many times over the years. For their helpful comments and advice on earlier (sometimes much earlier) versions of the paper, I would like to thank especially John Cooper, Daniel Graham, Brad Inwood, Jessica Moss, and Rochelle Johnstone.

<sup>1</sup> The following (by no means exhaustive) list includes authors who have examined how best to understand 'logos' in Heraclitus in particular detail, or whose views have proven especially influential: A. Aall, *Geschichte der Logosidee in der griechischen Philosophie*, 2 vols. (Leipzig, 1896–9; repr. Frankfurt a.M., 1968); E. L. Minar, Jr., 'The Logos of Heraclitus' ['Logos'], *Classical Philology*, 34 (1939), 323–41; K. Freeman, *The Pre-Socratic Philosophers: A Companion to Diels*, *Fragmente der Vorsokratiker [Companion]* (Oxford, 1946); G. S. Kirk, *Heraclitus: The Cosmic Fragments [Cosmic Fragments]* (Cambridge, 1954); H. Boeder, 'Der frühgriechische Wortgebrauch von Logos und Aletheia' ['Logos und Aletheia'], *Archiv für Begriffsgeschichte*, 4 (1959), 82–112; G. S. Kirk, J. Raven, and M. Schofield, *The Presocratic Philosophers*, 2nd edn. (Cambridge, 1983); W. K. C. Guthrie, *A History of Greek Philosophy*, i. *The Earlier Presocratics and the Pythagoreans [History]* (Cambridge, 1962); W. J. Verdenius, 'Der Logosbegriff bei Heraklit und Parmenides', *Phronesis*, 11 (1966), 81–98; M. Marcovich, *Heraclitus: Greek Text with a Short Commentary*, 2nd edn. [*Heraclitus*] (Sankt Augustin, 2001); M. West, *Early Greek Philosophy and the Orient* (Oxford, 1971), 124–9; C. Kahn, *The Art and Thought of Heraclitus [Art and Thought]* (Cambridge, 1979); J. Barnes, *The Presocratic Philosophers* (London, 1982); R. Dilcher, *Studies in Heraclitus [Studies]* (Hildesheim, 1995); T. Robinson, 'Heraclitus and Logos—Again' ['Heraclitus and Logos'], in E. Hülsz (ed.), *Nuevos ensayos sobre Heráclito: actas del segundo Symposium Heracliteum [Nuevos ensayos]* (Mexico City, 2009), 93–102; L. Gianvittorio, *Il discorso di Eraclito [Discorso]* (Hildesheim, 2010).

<sup>2</sup> I accept an orthodox view on the period when Heraclitus was philosophically active. See e.g. Kirk, Raven, and Schofield, *The Presocratic Philosophers*, 181–2, for discussion of the dating of Heraclitus' work.

<sup>3</sup> I defend this claim, and discuss the earliest recorded appearances of the word 'logos', in sect. II below.

Heraclitus uses the term in ways that suggest that for him ‘the *logos*’<sup>4</sup> is something of great importance that exists independent of him or anything he happens to say. This makes it difficult to understand Heraclitus as using the word in an ordinary way. While some interpreters have insisted that even in fr. 1, 2, and 50 Heraclitus does use ‘*logos*’ in a perfectly ordinary and unexciting way, denoting by it simply his own philosophical account, the vast majority of more recent interpreters have adopted a different view. Many of them have supposed that Heraclitus denotes by the term ‘*logos*’ a kind of general principle or cosmic law: not his own account, then, but rather what his account is *about*. Yet the single biggest problem with this ‘cosmic-law’ interpretation, as it might be called, is that it risks completely detaching Heraclitus’ employment of the word ‘*logos*’ from any other attested use of it in and around his time.

In this paper I offer a way of understanding Heraclitus’ use of the term ‘*logos*’ that (i) explains the apparent strangeness of its employment in certain key Heraclitean fragments, while also (ii) maintaining a close connection to the most common uses of the word in his time. The account I offer has not, I think, been presented before, despite the large volume of literature on this topic, although some more recent scholars have come close to it and many have shown awareness of the issues that motivate it. I believe it has the potential to capture the main advantages of (what I shall call) a cosmic-law interpretation, while overcoming the most serious objection all such interpretations face: the charge of anachronism. This is because, on the view I defend, Heraclitus deliberately traded on the most common everyday use of the word in his time (to denote a written or spoken account of the way things are) to express his own novel philosophical ideas.

The paper is structured as follows. In Section I, I highlight the special interpretative problems raised by Heraclitus’ use of the word ‘*logos*’, examine the most common and influential ways of responding to these problems, and note the main difficulties each of these approaches faces. In Section II, I reflect on the ordinary use of the word ‘*logos*’ around the beginning of the fifth century and highlight certain features of this common use that I believe are relevant for understanding its employment by Heraclitus. In Sections III and IV, I draw on observations from Section II to

<sup>4</sup> In fr. 1, 2, and 50 the word ‘*logos*’ is always preceded by the definite article.

show how the interpretative problems highlighted in Section I can be resolved.

## I

Heraclitus uses the term '*logos*' in nine of the surviving fragments generally agreed to be authentic by scholars.<sup>5</sup> In four of these—fr. 108, 87, 39, and 31—its meaning and translation appear to raise no special difficulties. In fr. 108 and 87 '*logos*' seems to refer simply to what people say; the use of the term in these fragments therefore accords with its most common use in other literature from the period, and it is easily rendered into English as 'account', 'statement', or the like. In fr. 39 and 31 translation in accordance with attested fifth-century uses is also possible. Thus in fr. 39 '*logos*' is usually translated as 'worth', 'reputation', or 'esteem', while in fr. 31 the sense is generally taken to be that of 'ratio' or 'proportion'. Had Heraclitus employed the word '*logos*' in only these four fragments, it seems safe to say that his use of it would have generated no special interest.

In two further fragments—45 and 115—the term '*logos*' is applied in connection with the soul (*psuchē*). The application of '*logos*' in these passages is undoubtedly unorthodox, while the meaning of each fragment as a whole is difficult to discern. Nevertheless, many commentators have maintained that in these two cases the sense of '*logos*' is related to that of 'measure', as suggested by the adjective 'deep' (*βαθύς*) in fr. 45. I consider Heraclitus' use of '*logos*' in these two fragments in Section III below, where I criticize the 'measure' reading and offer an alternative to it.

Finally, in the three remaining fragments—1, 2, and 50—the term '*logos*' is applied in ways that appear highly unusual and striking. It is widely (if not universally) believed that in these fragments Heraclitus broke with the common contemporary usage of the word and

<sup>5</sup> I omit from this list fr. 72: Marcus Aurelius is clearly citing from memory here, and although this fragment contains echoes of others, there is no evidence of literal quotation. In this I follow Kahn, *Art and Thought*, 104, who observes that the formulation 'the *logos* which controls the universe' reflects, even in terminology (*διοικεῖν τὰ ὅλα*), the later Stoic conception of *logos*. Although some commentators have sought to extract fragments of original Heraclitean wording from paraphrase and gloss in this section of Marcus Aurelius, few would include the reference to *logos* among them; thus e.g. Marcovich, *Heraclitus*, 17–18; J. Burnet, *Early Greek Philosophy*, 4th edn. (London, 1930), 139 n. 3. In any case, if genuine this fragment is perfectly consistent with the interpretation I shall defend. On the authenticity of fr. 115 see n. 48 below.

adapted it to express some new philosophical notion of his own. For this reason, most of the literature on the meaning of 'logos' in Heraclitus has focused most closely on these three fragments, as I do in what follows. The three fragments in question read as follows:<sup>6</sup>

τοῦ δὲ λόγου τοῦδ' ἐόντος αἰεὶ ἀξύνετοι γίνονται ἄνθρωποι καὶ πρόσθεν ἢ ἀκούσαι καὶ ἀκούσαντες τὸ πρῶτον· γινομένων γὰρ πάντων κατὰ τὸν λόγον τόνδε ἀπειροισιν εἰοίκασι, πειρώμενοι καὶ ἐπέων καὶ ἔργων τοιούτων, ὁκοίων ἐγὼ διηγέμμαι κατὰ φύσιν διαιρέων ἕκαστον καὶ φράζων ὅκως ἔχει. τοὺς δὲ ἄλλους ἀνθρώπους λανθάνει ὁκόσα ἐγερθέντες ποιοῦσιν, ὅκωσπερ ὁκόσα εὐδοντες ἐπιλανθάνονται. (S.E. M. 7. 132=fr. 1)

This *logos* holds always, but humans always prove uncomprehending, both before hearing it and when they have first heard it. For though all things come to be [or, happen] in accordance with this *logos*, humans are like the inexperienced when they experience such words and deeds as I set out, distinguishing each in accordance with its nature and saying how it is. But other people fail to notice what they do when awake, just as they forget what they do while asleep.<sup>7</sup>

διὸ δεῖ ἔπεισθαι τῶι (ξυνῶι, τουτέστι τῶι) κοινῶι· ξυνὸς γὰρ ὁ κοινός. τοῦ λόγου δ' ἐόντος ξυνὸς ζῶουσιν οἱ πολλοὶ ὡς ἰδίαν ἔχοντες φρόνησιν. (S.E. M. 7. 133=fr. 2)

For this reason it is necessary to follow what is common. But although the *logos* is common, most people live as if they had their own private understanding.<sup>8</sup>

οὐκ ἐμοῦ, ἀλλὰ τοῦ λόγου ἀκούσαντας ὁμολογεῖν σοφόν ἐστὶν ἐν πάντα εἶναι. (Hipp. Haer. 9. 9. 1=fr. 50).

<sup>6</sup> Translations are based on those of R. McKirahan, *Philosophy before Socrates: An Introduction with Texts and Commentary* (Indianapolis, 1994), sometimes slightly modified. The Greek text is from the sixth edition of H. Diels and W. Kranz, *Die Fragmente der Vorsokratiker* (Berlin, 1951).

<sup>7</sup> Both Sextus (*M.* 7. 132) and Aristotle (*Rhet.* 1407<sup>b</sup>14–15=DK A 4) tell us that this fragment came at the beginning of Heraclitus' book; Sextus also says that it was shortly followed by fr. 2. The adverb 'always' (αἰεὶ), which occurs only once in the Greek, is ambiguous in scope between ἐόντος and ἀξύνετοι, a fact noted already by Aristotle. The translation included here reflects the common policy of taking this ambiguity to be deliberate and adopts the strategy of rendering 'always' in English twice. Since on this construal αἰεὶ is read with ἐόντος, τοῦδ' can be read as qualifying λόγου, not as a predicate of ἐόντος (where we would usually expect τοιοῦδε) (*contra* e.g. Kirk, *Cosmic Fragments*, 34–5, who construes the phrase: 'of the *logos*, being *this* [i.e. as I describe it], . . .'). With most commentators, I take the genitives of the first phrase to be objective, depending on ἀξύνετοι, and not absolute.

<sup>8</sup> I omit from the translation the phrase ξυνὸς γὰρ ὁ κοινός, which (as is widely acknowledged) was clearly included as an explanatory gloss on the meaning of Heraclitus' word ξυνός.

Listening not to me but to the *logos*, it is wise to agree that all things are one.<sup>9</sup>

In the first place, it should be noted that not all commentators have accepted that the translation of '*logos*' in Heraclitus presents any special difficulty, even in frs. 1, 2, and 50. Some have maintained that even in these instances the term can be rendered straightforwardly in accordance with its most common contemporary use. On this 'simple' view, the word '*logos*' is derived straightforwardly from the verb *legein*, meaning 'to speak': a *logos* is just something someone says. On this view, there is no reason why this cannot hold also for the term as it is used by Heraclitus: '*logos*' in Heraclitus denotes simply what he says (i.e. his own account or discourse), and it is a mistake to look for any special philosophical significance in it. An influential early proponent of this view was John Burnet, who firmly rejected any attempt to attribute a distinctive '*logos doctrine*' to Heraclitus, identifying this view with the Stoic reading of '*logos*' found in Marcus Aurelius.<sup>10</sup> Some level of consensus appears to have formed for a period around this view.<sup>11</sup> However, in more recent decades the view has had fewer supporters. It was argued for at length by Martin West,<sup>12</sup> and also by Jonathan Barnes, who cites the arguments of West with approval. Barnes provides a neat summary of the position when he writes: 'a *logos* or "account" is what

<sup>9</sup> I adopt Bernays' universally accepted emendation *λόγον* for the manuscript reading *δόγματος*, and also Miller's widely accepted emendation *εἶναι* for *εἰδέναι*.

<sup>10</sup> In the first edition of his *Early Greek Philosophy*, published in 1892, John Burnet wrote: 'I have no hesitation in understanding the word "*logos*" . . . simply as "argument", "discourse", "theory", "description" or the like' (133 n.), and in the second edition, published in 1908: 'The "*logos*" is simply the discourse of Heraclitus himself; though, as he is a prophet, we may call it "The Word"' (146 n.). Interestingly, Burnet weakened this wording in the fourth and final edition of this work: 'The "*logos*" is *primarily* the discourse of Heraclitus himself; though, as he is a prophet, we may call it his "Word"' (*Early Greek Philosophy*, 133 n. 1, emphasis added).

<sup>11</sup> Thus in 1945 Kurt von Fritz was able to remark, in his '*Noos, Noein and their Derivatives in Presocratic Philosophy*' ['Derivatives'], *Classical Philology*, 40 (1945), 223–42; 41 (1946), 12–34, repr. in A. P. D. Mourelatos (ed.), *The Pre-Socratics* (New York, 1974), 23–85 at 42 in the reprint, that 'almost all recent commentators are rightly agreed that in Heraclitus [*logos*] is still nothing but the noun belonging to *legein*, "to say," and that he means by it simply what he is going to state'.

<sup>12</sup> West, *Orient*, 124–9. West contends that fr. 108, 87, and 39 contain the word in 'obviously ordinary senses' and can be set aside. In frs. 31, 45, 115, he claims, '*logos*' is to be understood as connected to 'the idea of a given quantity', and can be translated as 'measure'. In the remaining three fragments (1, 2, 50), he argues, '*logos*' can be translated simply as 'discourse'.

a man *legei* or says . . . the noun *logos* picks up, in an ordinary and metaphysically unexciting way, the verb *legei*'.<sup>13</sup>

However, despite the efforts of West and Barnes, the simple view is very much a minority position today. This is not without reason, since it faces serious (and widely observed) difficulties. The most significant of these can be briefly summarized as follows:

- (1) In fr. 1 the *logos* is said to 'hold always' and to be such that 'all things come to be in accordance with it'. These strong attributions suggest that '*logos*' denotes here more than simply the speaker's own account. Furthermore, people are said to be uncomprehending of the *logos* both after and also *before* hearing; but it makes little sense to accuse people of failing to understand one's own discourse before they have even had a chance to hear it. This suggests that what they fail to understand has some existence prior to and independent of the words of the speaker.
- (2) In fr. 2 the *logos* is described as '*xunos*' ('common', 'general', and 'universal' are frequent translations). However, it is hard to see how Heraclitus' own discourse or account could be 'common' in the sense implied. One possible response to this objection is that the account of Heraclitus is 'common' in the sense that it is 'true', or at least is claimed to be so by its author.<sup>14</sup> However, the term '*xunos*' occurs in several other surviving Heraclitean fragments, where it is consistently contrasted, not with the false, but with the private (*idios*).<sup>15</sup> These

<sup>13</sup> Barnes, *The Presocratic Philosophers*, 59. As Barnes rightly notes, this need not imply that the *content* of the *logos* ('account') of Heraclitus is metaphysically unexciting, but only that the *logos* is not itself some metaphysical entity. In my opinion, Barnes is right to reject a 'cosmic' interpretation of '*logos*' in Heraclitus, and to seek to retain a connection to speech or writing. Nevertheless, I believe he errs in overstating the ordinariness of Heraclitus' use of the word.

<sup>14</sup> e.g. von Fritz, 'Derivatives', 42.

<sup>15</sup> e.g. in fr. 89: 'For the waking there is one common world, but when asleep each person turns away to a private one', and in fr. 114: 'Those who speak with understanding must rely firmly on what is common to all as a city must rely on law [or, its law], and much more firmly . . .'. For discussion of fr. 114 see especially A. Mourelatos, 'Heraclitus Fr. 114', *American Journal of Philology*, 86 (1965), 258–66 at 259–60. Mourelatos rightly warns against taking the analogy between law (*nomos*) and *logos* as implying that the *logos* is itself a kind of 'divine law'. The analogy to the political sphere is intended not to equate *logos* with *nomos*, he argues, but rather to use a familiar example of something that is *xunos* to point towards a more difficult and comprehensive idea. On this point see also Kahn, *Art and Thought*, 118, and Dilcher, *Studies*, 51.

parallels with other fragments suggest that, for Heraclitus, 'the *logos* is common' means more than simply 'what I say is true'.

- (3) In fr. 50 Heraclitus exhorts people to 'listen not to me but to the *logos*'. It is hard to see how it could make sense to urge others so strongly to 'listen not to me but to what I am saying', as the simple view requires. A defender of this position might maintain that the intended contrast is between me (Heraclitus, the person) and my *logos* (my argument): Heraclitus is telling us to attend to the argument, not the man.<sup>16</sup> However, besides the fact that Heraclitus never refers to 'my' *logos* (as we might expect), the view that Heraclitus wished only to insist that his audience listen to his argument without pre-judgement threatens to reduce his weighty contrast between 'listening to me' and 'listening to the *logos*' to banality.<sup>17</sup> In any case, it is far from clear that Heraclitus meant to offer an *argument* at all, at least not primarily,<sup>18</sup> or that the distinction between the speaker and the independent authority of an argument was of great concern to him.

On the basis of such considerations, most recent commentators have rejected the simple reading of '*logos*' in Heraclitus and concluded that he sometimes uses the term to denote something existing independent of him or anything he happens to say. Although they differ over details, most of these commentators have maintained that Heraclitus denotes by the word '*logos*' a kind of 'general principle', 'formula', or 'law' that governs change in the

<sup>16</sup> Thus West: 'Heraclitus is telling men that they should be persuaded not by his personal authority but by the autonomous authority of his argument' (*Orient*, 127).

<sup>17</sup> Thomas Robinson, in his *Heraclitus: Fragments. A Text with Translation and Commentary [Fragments]* (Toronto, 1987), seeks to solve this problem by modifying the simple view, explaining the authority attributed to the *logos* by Heraclitus by claiming that he speaks as a 'representative' of 'that which is wise' (114). This solution strikes me as unconvincing: there is no clear evidence in the fragments that Heraclitus considered himself to be speaking as a mouthpiece for a divinity in the way this view requires. For Robinson's more recent view on the meaning of the word '*logos*' in Heraclitus see n. 61 below.

<sup>18</sup> Barnes (*The Presocratic Philosophers*, 63–4; 'Aphorism and Argument', in K. Robb (ed.), *Language and Thought in Early Greek Philosophy* (La Salle, Ill., 1983), 91–109 *passim*) argues that Heraclitus *did* mean to offer an extended argument for his view, written in continuous prose. However, few subsequent writers have been convinced by Barnes's arguments for this conclusion. For measured discussion of the issue see H. Granger, 'Argumentation and Heraclitus' Book', *Oxford Studies in Ancient Philosophy*, 26 (2004), 1–17.

cosmos. This view can be roughly summarized as follows: (i) although change is universal, on Heraclitus' view it is neither random nor chaotic, but rather patterned, regular, and ordered; (ii) there is a principle or law underlying this constant change and imparting order to it, a principle or law that persists through these changes and hence serves as the proper object of human knowledge; (iii) Heraclitus chose the word '*logos*' to denote this principle or law, deriving this meaning from the sense of 'proportion', 'ratio', or 'measure'.

Examples of this view in the literature are numerous; I select three as representative:<sup>19</sup>

This Logos is not merely the process of change; it is the orderly process of change. The Everlasting Fire is kindled *in measure* and quenched *in measure*, and it is this Measure, by which the process and its material are ruled, that makes our world intelligible. This is the true One in Heraclitus' system; it is the only thing that persists in change, and it is everywhere . . . The Logos is not an arbitrary creator, but a Law, the source of all that is intelligible.<sup>20</sup>

What we are trying to summarize is an idea like 'the organized way in which (as Heraclitus has discovered) all things work'; 'plan' (in a non-teleological sense), 'rule', even 'law' (as in the laws of force) are all possible summaries. 'Principle' is too vague; I suggest the less ambiguous if more cumbersome phrase 'formula of things' as a translation of *logos* in fr. 1, 2, 50.<sup>21</sup>

If there is an orderly world—and that there is is a fact—there must be some universal pattern of transformation, some law of change . . . The world is,

<sup>19</sup> Similarly Marcovich, *Heraclitus*, 113: 'it becomes clear that Logos has an *objective* existence, not depending on Heraclitus himself; i.e. that it is a universal Law operating in all things around us' (emphasis original); McKirahan, *Philosophy before Socrates*, 133: "'General principle" probably comes closest to his intent'; P. Curd, *The Legacy of Parmenides: Eleatic Monism and Later Presocratic Thought* (Princeton, 1997), 122: 'a principle of orderly change'; Curd, 'Presocratic Philosophy' in the Winter 2012 edition of E. N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy* (<http://plato.stanford.edu/archives/win2012/entries/presocratics/>): 'it is clear from 22B1 and B2 as well as B50 and other fragments that he refers to an objective law-like principle that governs the cosmos'; D. Graham, *Explaining the Cosmos: The Ionian Tradition of Scientific Philosophy* (Princeton, 2006): 'the unseen but ever-present structure of nature' (132–3), 'the Law of Change' (ibid. 144); J. Palmer, *Parmenides and Presocratic Philosophy* (Oxford, 2009): 'there is something everlasting and permanent in the cosmos, namely the Logos, the rational principle governing its changes and ensuring that they operate in a cyclic and thus ceaseless pattern regulated by the divine law of measure and proportion' (11). Guthrie, *History*, and Kahn, *Art and Thought*, appear to vacillate, but both eventually incline towards the cosmic view. Thus Guthrie: 'the law by which the world is ordered' (428); Kahn: 'the universal principle in accordance with which all things come to pass' (22).

<sup>20</sup> Freeman, *Companion*, 116 (emphasis original).

<sup>21</sup> Kirk, *Cosmic Fragments*, 39.

in its broad outlines, stable, though it is built upon a process of transformations. There must then be a constancy in the pattern of transformations, i.e. in the ratios which determine how much of one substance becomes another. Heraclitus-R needs a term to express this law of transformations. He hits on one delightful in its ambiguity, but which expresses both structural order and mathematical ratio: *Logos*. Everything happens in accordance with *Logos*.<sup>22</sup>

Such readings conveniently accommodate the 'objective' predications and weighty significance associated with the word '*logos*' in Heraclitus, while enabling his discovery of this general principle or cosmic law to serve as his distinctive philosophical insight, the stable proper object of knowledge in a world of perpetual change. However, all such readings face a basic difficulty, since they struggle to maintain any connection between the term '*logos*' as it is used by Heraclitus and spoken or written stories or accounts. Three main arguments can be offered in support of the claim that such a connection is required:<sup>23</sup>

- (1) In the surviving fragments, the *logos* is described as such that it can be 'listened to' or 'heard' (*ἀκούσαι, ἀκούσαντες*, fr. 1; *ἀκούσαντας*, fr. 50); but it makes little sense to speak of 'listening to' and 'understanding' upon 'hearing' a 'formula of things', 'general principle', or 'cosmic law', unless this has somehow already entered into language.
- (2) Fr. 1, widely agreed to have appeared at or near the start of Heraclitus' book,<sup>24</sup> conforms to some extent to a conventional pattern for book openings that was present already around 500 BC and that became well established among fifth-century prose authors.<sup>25</sup> An author using the word '*logos*' in the way Heraclitus does at the beginning of this fragment would most naturally have been understood to mean by it something like 'discourse', as in 'this discourse of mine'.

<sup>22</sup> D. Graham, 'Heraclitus' Criticism of Ionian Philosophy', *Oxford Studies in Ancient Philosophy*, 15 (1997), 1–50 at 36. In this article Graham adopts the device of initially using the label 'Heraclitus-R' to denote an imaginary astute critic of his Ionian predecessors, then arguing that Heraclitus was precisely this critic.

<sup>23</sup> All three of these arguments are found in West, *Orient*, 124–9.

<sup>24</sup> See n. 7 above.

<sup>25</sup> The earliest extant examples are from the preamble to a prose treatise by Hecataeus (the *Historiai* or *Genealogiai*, *FrGrH* 1 F 1) and from Alcmaeon (24 B 1 DK). Salient examples from the fifth century include Antiochus (*FrGrHist* 555 F 2), Ion's Triagmos (36 B 1 DK), and Diogenes (64 B 1 DK).

- (3) By far the most common use of the term '*logos*' in Heraclitus' time was to denote a 'story', 'statement', or 'account' (see below). By contrast, if we set Heraclitus aside, there is not a single instance in extant Greek literature from the fifth or even the fourth century in which the word '*logos*' is used to denote something like a 'general principle'.<sup>26</sup> Attempts to derive the meaning of 'general principle' or 'cosmic law' from the sense of 'ratio' or 'proportion'—itself only weakly attested in Heraclitus' time—are stretched at best.<sup>27</sup> Thus the cosmic-law interpretation involves assigning to the word '*logos*' in Heraclitus a meaning unattested in any other text of even similar age and entirely detached from what was undoubtedly its most common use in his time.<sup>28</sup>

If these arguments are accepted—and they certainly have troubled many commentators—then we face a basic problem in trying to understand the word '*logos*' in Heraclitus. The problem is that neither of the two most common ways of understanding Heraclitus' use of this word in these fragments—the 'cosmic' interpretation of Kirk, Freeman, Marcovich, and Graham or the 'simple' reading

<sup>26</sup> Guthrie, *History*, 422–3, attempts to find instances of '*logos*' meaning 'general principle' in the fourth century (even he acknowledges that none can be found in the fifth). However, his evidence is unconvincing: for example, he takes as his clearest example the phrase  $\delta\rho\theta\delta\varsigma$   $\lambda\acute{o}\gamma\omicron\varsigma$  in Aristotle's *Nicomachean Ethics* (as used e.g. at *NE* 6, 1138<sup>b</sup>20); yet it is unclear, to say the least, that Aristotle used '*logos*' to mean 'general principle' there, where it is more commonly translated as 'reason' (as in 'right reason').

<sup>27</sup> Minar, 'Logos', provides the first—and still the most detailed—attempt to address the charge of anachronism by seeking to derive the meaning of '*logos*' as 'cosmic law' from that of 'ratio' or 'proportion' (Minar was influentially followed in his argument by Kirk, *Cosmic Fragments*, 39). However, as Dilcher, *Studies*, 40–3, has shown, the textual evidence in favour of a widespread use of '*logos*' to mean 'ratio' or 'proportion' in the sixth (or even early fifth) century is sparse and tenuous at best. Minar tries to make his case by leaning heavily on the notoriously problematic evidence of early Pythagoreanism (Minar 'Logos', 337–8); yet all the examples he cites are later in date (e.g. Archytas, Philolaus). This is not to say that it would be impossible for someone to use the word '*logos*' to mean 'ratio' or 'proportion' in Heraclitus' day; indeed, Heraclitus may himself provide the earliest such example in fr. 31. But regardless, there is still quite a leap from the meaning of 'proportion' or 'ratio' to that of 'general principle' or 'cosmic law' considered here.

<sup>28</sup> The charge that the cosmic-law interpretation involves anachronistically reading much later (perhaps Stoic) ideas back into the fragments of Heraclitus is made forcefully by West, *Orient*, 129: 'it would indeed have been surprising to find an Ionian philosopher explaining the world in terms of a metaphysical entity that no one else had heard of before him and no other philosopher was to use for a good two centuries after him'.

of Burnet, West, and Barnes—can accommodate all of the relevant texts. Both readings face serious difficulties, with each struggling to account for exactly those aspects of Heraclitus' employment of the term that motivate the other.

This basic tension between the simple and cosmic-law interpretations of 'logos' in Heraclitus has led many commentators to seek middle ground. One common response is to gesture towards the vagueness of the Greek term and to suggest that Heraclitus probably intended to mean several different things at once by using it.<sup>29</sup> According to one version of this view, Heraclitus used 'logos' to denote both, and at the same time, a general principle of the cosmos and his own particular account of it. However, it is difficult to see how the *logos* could be *both* this particular account—what Heraclitus is saying or has written—and at the same time some kind of general principle eternally at work in the cosmos.<sup>30</sup> Simply running the simple and cosmic views together does not resolve the tension between them. Indeed, in the absence of some further explanation as to how this could work, such a conclusion suggests not so much a stimulating ambiguity on Heraclitus' part as that his view was simply confused. Some have argued that it is anachronistic to see a problem with this, as we should not expect a figure who stands so early in the history of philosophy to conform to our modern standards of consistency.<sup>31</sup> Yet while Heraclitus *may* simply have

<sup>29</sup> Thus, for example, Guthrie, *History*, 434, claims that the term denoted simultaneously for Heraclitus 'the everlasting truth to which he is giving verbal expression, but which is independent of his utterance of it', 'the subject of that truth, the one which is everything', 'the divine, intelligent principle which surrounds us and causes the ordering of the cosmos', 'that within us to which we owe whatever intelligence we possess', and 'fire, hot and dry'. Kahn, *Art and Thought*, 21–2, adopts a similarly 'multitiered' view: 'the ignorance of men lies in their failure to comprehend the *logos* in which this insight is articulated, the *logos* which is at once the discourse of Heraclitus, the nature of language itself, the structure of the psyche and the universal principle in accordance with which all things come to pass'.

<sup>30</sup> Bruno Snell, 'Die Sprache Heraklits', *Hermes*, 61 (1926), 353–81 at 365, attempts to bring the two sides together by trading on ambiguity in the notion of 'meaning': 'Logos ist das Wort, soweit es sinnvoll ist . . . nicht nur die sinnvolle menschliche Rede, sondern auch der Sinn, der in den Dingen ruht.' While this is not quite a matter of running the simple and cosmic views together, the idea here is still hard to understand: *things* do not seem to have 'meaning' in the same way that *words* do, and it is difficult to see how the same concept could apply to both at the same time.

<sup>31</sup> Thus e.g. Guthrie, *History*, 461: 'we need not expect Heraclitus' thought to be by our standards completely logical or self-consistent'. Similarly, Barnes claims that we should not chastise Heraclitus for the evident contradictions he was committed to, since he lacked the resources of Aristotelian logic (*The Presocratic Philosophers*,

been confused, even a weak principle of charity in interpretation demands that we try to do better. In fact, a better interpretation is available, one that makes good sense of Heraclitus' most unusual applications of the word while still retaining a tight connection to its most common contemporary use. In order to see this, a closer look at our evidence for the early Greek use of the word '*logos*' is required.

## II

As is well known, no single word in English can cover the full range of things called '*logos*' in Greek; the word is applied in an extraordinary variety of ways, in situations where we would expect several different translations. Thus, in different contexts '*logos*' can be rendered into English as 'statement', 'story', 'account', 'rumour', 'report', 'explanation', 'saying' or 'proverb', 'reputation', 'esteem', 'ratio', 'proportion', 'thinking', 'reasoning', 'argument', and 'reason' as a faculty; even this list is by no means comprehensive.<sup>32</sup> Most commentators reflecting on the use of '*logos*' in Heraclitus begin by remarking on this striking feature of the Greek term. A common approach involves compiling a list of distinct 'meanings' of '*logos*' commonly found in ancient Greek literature in the fifth and fourth centuries and comparing its use in Heraclitus with this list. However, while different English words are undoubtedly appropriate translations of '*logos*' in different contexts, this list approach is problematic when it comes to understanding the word's use in Heraclitus. First, it risks obscuring possible connections between the different 'meanings' of what was, after all, a single word. Moreover, such approaches tend to be ahistorical, while the word '*logos*' changed and broadened its range of application considerably over time.

What is needed in this context, it seems to me, in preference to the list approach, is a historically sensitive enquiry into the 'semantic career' of the term and an attempt to gain some feel for what a *logos* was for the Greeks of the early fifth century who used the word. In what follows I offer a series of observations along these lines about the early recorded use of the Greek word '*logos*'. My aim is not to

80). Incidentally, this all seems to me wrong-headed: an explicit knowledge of a system of formal logic can hardly be considered necessary for consistent reasoning.

<sup>32</sup> See LSJ and Guthrie, *History*, 420–1, for lists of different possible translations.

provide an exhaustive analysis of the concept (this lies beyond the scope of this paper—and in any case much of the work has been done before<sup>33</sup>). Rather, more modestly, I aim merely to highlight certain characteristics of the word that may prove helpful for understanding its use by Heraclitus.

The first thing to observe in this connection is that if we restrict ourselves to those writers known to have been read by Heraclitus (Homer, Hesiod, Archilochus, Hecataeus, Xenophanes),<sup>34</sup> and also those whose work is distinctly prior in date, we find, not the much-remarked diversity of later texts, but rather a distinctly narrow range of uses.<sup>35</sup> The term 'logos' is relatively infrequent in these early writers. When it does occur, it refers in an almost formulaic way to stories which are said to be pleasing or enthralling. In Homer, for example, the term is very rare, and applies exclusively to stories or tales that are not only enthralling but also beguiling, especially those designed to disguise or cause forgetfulness of the true state of affairs.<sup>36</sup> The same is true of Hesiod, where *logoi* are always 'stories' and are overwhelmingly depicted as deceptive,<sup>37</sup> and of Xenophanes, where 'logos' consistently means 'story'.<sup>38</sup> More

<sup>33</sup> For example by Dilcher, *Studies*, 31–47. I draw on Dilcher's excellent study of the early uses of the word 'logos' throughout this section, although (as will become clear) my conclusions about the meaning of 'logos' in Heraclitus ultimately differ from his.

<sup>34</sup> Heraclitus was certainly also familiar with the views of Pythagoras, whom he mentions (and rebukes) in fr. 40, 81, and 129. However, if Pythagoras wrote anything at all (and the vast majority of the ancient testimony counts against it), then none of these texts has survived, in whole or in part. The works of later Pythagoreans such as Philolaus must be regarded as unreliable guides to early fifth-century linguistic usage. For a recent discussion of Heraclitus' relationship to Pythagoras see C. A. Huffman, 'Heraclitus' Critique of Pythagoras' Enquiry in Fragment 129', *Oxford Studies in Ancient Philosophy*, 35 (2008), 19–47.

<sup>35</sup> This basic point has been made before, for example by Martha Nussbaum, 'Psuchê in Heraclitus' [*Psuchê*], *Phronesis*, 17 (1972), 1–16, 153–70 at 3–4, and by Dilcher, *Studies*, 32–3.

<sup>36</sup> Thus, for example, in the *Iliad* Patroclus entertains and distracts the injured Eurypylus with stories (*logoi*) while attending to his wounds (*Il.* 15. 393), while in the *Odyssey* Calypso works to charm Odysseus into forgetting Ithaca with soft and flattering words (*logoi*) (*Od.* 1. 56). These are the only two passages in Homer in which the word 'logos' is used. Similarly, in the *Homeric Hymn to Hermes* Hermes tried to deceive Apollo with tricks and cunning *logoi* (317).

<sup>37</sup> In the *Theogony* Strife (Eris) gives birth to *Logoi* along with an array of other hateful offspring (229), while Zeus deceives Metis by means of 'wily words' (*αἰμυλλοῖσι λόγοισιν*, 890). Similarly, in *Works and Days* 'wily words' (*αἰμυλλοῖς . . . λόγοις*) are paired with 'lies' when both are implanted together in Pandora (78), and when it is claimed that boys born on a certain day of the month will be fond of both (789). The word *logos* appears only once in the whole of Hesiod without some connection

[See p. 14 for n. 37 cont. and n. 38

commonly in Homer, people are said to address each other not with *logoi* but rather with individual 'words' (*epea*).<sup>39</sup> In this way, use of 'logos' in early writings is infrequent, while its range of application remains particular and confined.

Over the course of the fifth century, the range of uses of 'logos' broadened considerably.<sup>40</sup> Nevertheless, throughout this period the term was still most commonly used to refer to something said in words or appearing in language.<sup>41</sup> The important point for present purposes is that even in these early uses a *logos* was not just *anything* that happened to be said.<sup>42</sup> Rather, the term consistently denoted a presentation in words of things as being a certain way. This did not require any connection to the way things really were; hence the power of a *logos* to enthral or deceive. Nevertheless, a *logos* aimed at *conveying* something, at presenting some subject matter so that it was believed or understood. A particular *logos* was a structured,

to deceive, namely in *Works and Days* 106, where Hesiod refers to a 'tale' (*lógon*) told skilfully and well.

<sup>38</sup> Fr. 1. 15; 7. 1; 21. 2.

<sup>39</sup> In Homer, *epea* are frequently described in strikingly atomistic and almost physical terms: they are compared to wintry snowflakes (*Il.* 3. 222), birds in flight (*Il.* 1. 201 and elsewhere), or aerial arrows (*Il.* 5. 493), and are said to be shaped and herded by the tongue (*Il.* 20. 248–9) and to escape through the barrier of the teeth (*Il.* 4. 350). The contrast between *logoi* (connected, meaningful accounts) and *epea* (individual words) is well emphasized by J. Leshner, 'Heraclitus' Epistemological Vocabulary' ['Epistemological'], *Hermes*, 111 (1983), 155–70 at 168, and by Nussbaum, '*Psuchē*', 4; the latter also stresses the way in which the word 'logos' is generally reserved in epic poetry for 'negative' cases involving deception, and suggestively compares this to the way in which the term '*psuchē*' is used in the same texts only to refer to the shade of the dead man, or to cases where death is threatened.

<sup>40</sup> The diverse uses of the word 'logos' in fifth-century Greek are well known. In addition to LSJ, see Guthrie, *History*, 420–1, for a fairly comprehensive list. Dilcher, *Studies*, 33–4, provides further examples and extensive discussion, with a focus on the word's historical development.

<sup>41</sup> Some authors have identified a second 'strand' in the use of the term 'logos,' subsidiary in the fifth century yet genuinely independent of the sense of the linguistic account, to mean 'counting' or 'calculation'. Thus e.g. Boeder, '*Logos* und *Aletheia*', and also Verdenius, 'Logosbegriff', who identifies two distinct 'strands' of meaning: one as 'Aufzählung, Erzählung', the other as 'Zählung, Rechnung' (82). Although this may be correct, the distinction between these two strands is not always clear in particular cases, while the word's use to denote counting and reports of financial transactions can be understood as related to the more common sense in various ways, especially through the idea of figuring things out and making one's results clear (compare the English word 'accounting' and our talk of financial 'accounts'). Regardless, it remains the case that throughout the fifth century the term 'logos' most commonly denoted a spoken or written story or account.

<sup>42</sup> This point is well observed by Dilcher, *Studies*, 33–4.

extended exposition of a particular topic. In contrast to individual words (the Homeric *epea*), it was a connected, meaningful statement that presented the matter at hand in such a way that it made sense. Moreover, the term 'logos' did not denote the actual words used, or the external manifestations of speaking—such as movements of the lips and tongue—so much as that which came into being *through* words: the argument, explanation, or story delivered. Thus many different forms of speaking or writing, including 'stories', 'accounts', 'statements', 'legends', 'rumours', and 'reports', could be called 'logoi'—not because the term was inadequately precise, but because it picked up on certain features all could share.

As the term 'logos' became more common, its rational shadings, implicit in the earliest recorded uses of the word, became progressively more prominent. Since a *logos* was an extended, meaningful exposition of some topic, giving one typically required a certain mastery of the subject matter and a level of thought and reflection on the part of the speaker or writer (not to mention the listener or reader). As an extended exposition of the matter at hand, a *logos* could be interrupted (in which case it was not complete), and could even be completed by a different speaker.<sup>43</sup> This kind of independence from any particular speaker had the effect of lending a *logos* a certain authority, leading many writers to refer to their *logoi* as having a kind of life of their own.<sup>44</sup> In such cases a *logos* was not so much the actual exposition in particular words, but rather its content, the case made, or the argument advanced.<sup>45</sup> Furthermore, a *logos*, being an extended exposition of some matter intended to persuade,

<sup>43</sup> A nice example is found in Aeschylus' *Eumenides*, where, after the Erinyes have pleaded their case, Athena responds that 'two parties are present: only half the *logos* is heard' (δνοῖν παρόντων ἡμισυς λόγου πάρα, 428), thus making it clear that a whole *logos* involves a full presentation of the matter at hand, not just the account of one party in the dispute.

<sup>44</sup> This helps explain the widespread tendency among classical authors to speak of a *logos* as enjoying a kind of independent existence, distinct from the person of its original speaker or writer. This is especially common in Plato, e.g. at *Theaet.* 191 A 4, c 8. In such contexts the term is usually translated as 'argument'. West, *Orient*, 127, is right to draw attention to this feature of the Greek term, the fact that a *logos* is often considered to be something that speaks, rather than as something that is spoken. It should be noted, however, that this was a general feature of *logoi*, and was not peculiar to those cases where we might normally wish to translate the term as 'argument'.

<sup>45</sup> As evident in the claim, often associated with the sophists, that one can 'make the weaker *logos* the stronger'. The idea here is clearly that one can use rhetorical ploys to make one's case more persuasive than it deserves to be on its own merits. Note the distinction contained in this phrase between the inherent strength of a *lo-*

often included reasons in support of its claims. As the fifth century advanced, new kinds of rational enquiries in pursuit of knowledge were emerging in the Greek-speaking world, the results of which were increasingly commonly written down in prose. In such texts there was an increasing emphasis on presenting the arguments and reasons for one's own views and against those of others. This probably contributed to the development of the more objective, independent, and rational shadings of the word, shadings that became increasingly evident towards the end of the fifth century.<sup>46</sup> Hence 'logos' took on the connotation of 'investigation', 'argument', and 'definition' (a presentation in words that aims to make its subject matter clear), and increasingly came to be used for 'justification', 'reasoning' (the process or activity, as might be displayed in one's work),<sup>47</sup> or 'reason' (in the sense of an explanation or ground—not yet a mental faculty).

To summarize: while the term 'logos' most commonly referred to something appearing in language, it was not merely anything that happened to be said. Rather, a *logos* was an organized presentation of things as being 'thus and so'. Since this is commonly done in words, 'logos' was a common Greek term for a thing written or spoken—especially when this took the form of an extended exposition—and hence can often be well translated into English as 'account', 'statement', 'report', and the like. Nevertheless, even in these cases the word 'logos' denoted not so much the words used as that which came into being through them: the explanation, argument, or story delivered. In the earliest uses it was applied more often to beguiling or enthralling tales than to the cool exposition of matters of fact. However, with time its implicit rational connota-

*gos*, in virtue of its content, and its forcefulness as delivered by a speaker on some particular occasion.

<sup>46</sup> The basic shape and direction of this development, from 'story' to 'reason' as it might be put, are well known. Dilcher, *Studies*, 32–40, does a good job of tracing this development, with numerous examples. For an interesting discussion of the relationship of 'logos' to 'muthos', for which it was originally an approximate synonym yet against which it came eventually to be sharply opposed, and the relationship of this conceptual movement for the self-definition of the newly emerging practice of philosophy, see K. Morgan, *Myth and Philosophy from the Presocratics to Plato* (Cambridge, 2000).

<sup>47</sup> Cf. Parmenides fr. 7. 5, where the narrator is encouraged to 'judge by logos' (κρίναι δὲ λόγῳ) the truth of what the goddess says. Here, near the beginning of the fifth century, 'logos' presumably denotes not the *faculty* of reason, but rather the process or activity of reasoning.

tions became more prevalent, and it began to be used in contexts where we would employ the terms 'argument', 'reason' (as in explanation or ground), or 'definition'. Eventually, the term came to denote the activity or process of figuring things out, and hence 'reasoning' or 'calculation', and then still later, from the fourth century onwards, the *power* that allows us to do these things, the power of 'reason'. Nevertheless, it remained the basic function of a *logos* (or simply of *logos*) to present things as being a certain way, so that they make sense as a whole and can be understood.

### III

If we keep in mind these features of the common contemporary use of the Greek word, it becomes possible to view Heraclitus' employment of it in certain key fragments in a new light. I begin with some brief thoughts on fr. 45 and 115, two fragments in which the term 'logos' is used in relation to the *psuchē* or soul. These read as follows:

*ψυχῆς πείρατα ἰὼν οὐκ ἂν ἐξεύροιο, πᾶσαν ἐπιπορευόμενος ὁδὸν οὕτω βαθὺν λόγον ἔχει.* (D.L. 9. 7=fr. 45)

You would not discover the limits of the soul although you travelled every road: it has so deep a *logos*.

*ψυχῆς ἐστι λόγος αὐτὸν αὐξων.* (Stob. 3. 1. 180a=fr. 115)<sup>48</sup>

[The?] soul has a self-augmenting *logos*.

As noted, the most frequent translation of 'logos' in both of these fragments is 'measure', suggested to those adopting it by the adjective 'deep' (*βαθύς*) and by the sense of ratio or proportion found in fr. 31.<sup>49</sup> However, despite its popularity, this reading faces

<sup>48</sup> It is far from certain that fr. 115 is correctly assigned to Heraclitus. Stobaeus originally attributed it to Socrates, and it is not attested elsewhere. Diels based his case for attributing it to Heraclitus on its similarity to fr. 45, which also attributes a *logos* to the soul; its proximity to fr. 114, which Stobaeus cites under the heading 'Heraclitus'; and on references in Hippocratic writings to the *ψυχῆ* growing and feeding itself from the body. This evidence is, to be sure, hardly conclusive, although it has proven sufficient for most subsequent editors (a notable exception is Marcovich, *Heraclitus*, 569, while Kahn, *Art and Thought*, 237, also expresses doubts). Here, I offer a way of making sense of the unusual use of the word 'logos' in this fragment, on the assumption that it is authentically Heraclitean. However, my central claims about Heraclitus' use of the word 'logos' in other key fragments do not depend on this assumption.

<sup>49</sup> e.g. Kirk, *Cosmic Fragments*, 39: 'In Fr. 31, 45 and 115, the sense of *logos* is

serious problems. First, it is difficult to see how to make sense of the idea of a ‘deep measure’, if ‘measure’ here is taken to mean a fixed quantity. It is even more difficult to see how this ‘measure’—regardless of whether it is conceived of as a set proportion or as a set amount—could ‘increase itself’, or what the point of this comment about augmentation might be. Second, this reading would assign to the term in these fragments a meaning detached from that attributed to it in fr. 1, 2, and 50, while again maintaining at best a stretched connection to contemporary use.<sup>50</sup> Finally, this reading would effectively reduce these remarks on the soul to comments on the dimensions and material constitution of physical objects. While Heraclitus clearly had views on the material composition of soul(s),<sup>51</sup> other fragments indicate that he was also greatly interested in the *psuchē* as a feature of the living person that is a seat of cognition and that can be in a better or worse condition, thus imbuing the ‘soul’ with new psychological and ethical significance.<sup>52</sup>

undoubtedly that of “measure”, and also in Kirk, Raven, and Schofield, where the translation ‘measure’ is retained and where it is claimed that the soul is a ‘representative portion of the cosmic fire’, the limits of which cannot be reached (fr. 45) because the cosmic fire is so vast (*The Presocratic Philosophers*, 204). Similarly Robinson, *Fragments*: ‘One would never discover the limits of the soul, should one traverse every road—so deep a measure does it possess’, ‘The soul possesses a *logos* (measure, proportion) that increases itself’; and D. Graham, *The Texts of Early Greek Philosophy: The Complete Fragments and Selected Testimonies of the Major Presocratics*, pt. 1 (Cambridge, 2010): ‘measure’ (fr. 45), ‘ratio’ (fr. 115). Kahn, *Art and Thought*, translates ‘*logos*’ in both of these fragments as ‘report’, yet remarks approvingly on the translation of it as ‘measure’ in fr. 45 in his commentary (129). He tentatively claims that the ‘self-augmentation’ of the soul’s *logos* in fr. 115 should be understood on the model of the exhalation or ‘boiling up’ of heated vapour (237).

<sup>50</sup> Perhaps motivated by this concern, Kahn, in *Art and Thought*, attempts to tie the use of ‘*logos*’ in fr. 45 to the meaning of ‘general principle’ or ‘cosmic law’ by arguing that ‘the *logos* of the soul goes so deep that it coincides with the *logos* that structures everything in the world’ (130). However, besides being entirely speculative, the image of ‘depth’ involved here strikes me as difficult to follow, while the fragment so understood would imply (contrary to Heraclitus’ apparent intent) that we can never understand the world (since according to fr. 45 we can never fully understand the soul).

<sup>51</sup> For a plausible and well-worked-out account of the ‘physical dimension’ of Heraclitus’ theory of soul, including the difficult question of how best to understand his views on its material composition, see G. Betegh, ‘On the Physical Aspect of Heraclitus’ Psychology’ [‘Physical Aspect’], *Phronesis*, 52 (2007), 3–32. My suggestions here are, I believe, perfectly consistent with Betegh’s main claims in this article.

<sup>52</sup> For example, Heraclitus claims that a dry soul is ‘wisest and best’ (fr. 118) and attributes the impairment of a drunk to the fact that his soul is wet (fr. 117). In addition, in fr. 107 he maintains that the soul is in some sense the seat of understanding (‘eyes and ears are bad witnesses to people if they have barbarian souls’). The novelty

Heraclitus' claims in these fragments that the soul's *logos* is 'deep' and 'self-increasing' may well be best understood in such terms, rather than in terms of physical dimensions and spatial extension.

A full discussion of these difficult fragments lies beyond the scope of this paper. Nevertheless, I believe a more plausible way of understanding the use of '*logos*' in them is possible. If '*logos*' is read along the lines suggested here, as meaning something like 'presentation of things as thus and so', Heraclitus can be understood in fr. 45 as claiming, not that the soul has certain physical dimensions, but rather that its nature never becomes available to us in such a way as to admit of a comprehensive understanding. On this interpretation, Heraclitus is highlighting the distinctiveness of self-understanding and its peculiar limitations. His point in describing the *logos* of the soul as 'deep' is that the soul is for us (as we might say) unfathomable,<sup>53</sup> while his claim that we could not discover its limits even by travelling every road adds the familiar Heraclitean idea that the mere accumulation of information is not sufficient for understanding the soul.<sup>54</sup> Similarly, in fr. 115 Heraclitus may be

of Heraclitus' use of the term *ψυχή* to denote part of the *living* person (as opposed to the Homeric shade) that is in some sense the seat of cognition and ethical status has been widely observed. Thus e.g. K. Reinhardt, *Parmenides und die Geschichte der griechischen Philosophie* (Frankfurt a.M., 1959; originally published 1916), 201: 'bei ihm zum ersten Male eine Psychologie begegnet, die des Namens wert ist'; U. von Wilamowitz-Moellendorf, *Der Glaube der Hellenen*, vol. 1, 2nd edn. (Berlin, 1955; originally published 1931), 369: 'Herakleitos ist der erste, der über die Seele im Menschen tief nachgedacht und mancherlei gesagt hat', meaning by 'the soul in man' the soul of the living person while still alive; and B. Snell, *The Discovery of the Mind [Discovery]*, trans. T. G. Rosenmeyer (Oxford, 1953) (originally published as *Die Entdeckung des Geistes* (Hamburg, 1946)), 17: 'the first writer to feature the new concept of the soul is Heraclitus'. The novelty and originality of Heraclitus' use of the term *ψυχή* are also emphasized and discussed by Nussbaum, '*Psuchê*'. Possible connections between the new cognitive and ethical import of the Heraclitean soul and its physical constitution (e.g. its wetness or dryness) are explored by Betegh, 'Physical Aspect', 23–4.

<sup>53</sup> Snell, *Discovery*, 17–18, observes that the use of *βαθός* to refer to the incomprehensibility of the 'mental' is well attested among lyric poets preceding Heraclitus (although it is not found in Homer). Snell draws attention to such terms as *βαθύφρων* ('deep-pondering') and *βαθυμήτης* ('deep-thinking'). Dilcher, *Studies*, leans heavily on the description of the soul's *logos* as 'deep' to defend his preferred way of understanding the meaning of the term '*logos*' in Heraclitus as denoting a kind of thinking (see below, n. 56).

<sup>54</sup> As in Heraclitus' famous claim that 'much learning' (*πολυμαθία*) does not teach 'insight' (*νόος*) (fr. 40). His point in fr. 45, I take it, is that travel to far-flung lands is not sufficient to attain complete self-understanding (I take Heraclitus to be referring to ordinary travel, not to an 'inward journey of reflection', as claimed by Dilcher (*Studies*, 76)). Such travel might reveal the limits (*πείρατα*) of, say, the land in which

expressing, not the view that the *logos* of the soul augments itself in some spatial way, but rather the interesting idea that a kind of regress occurs when one tries to take oneself as the object of an exposition, or to grasp and comprehend one's own mind as a whole. These suggestions are admittedly—and inevitably—speculative. I claim here only that understanding the meaning of '*logos*' in them in the way I recommend creates room for a more plausible—and in many ways more satisfying—reading than the major alternatives.<sup>55</sup>

#### IV

Most debate over the meaning of '*logos*' in Heraclitus has focused on three fragments—1, 2, and 50—and on the unusual and striking uses of the word they contain. Proponents of the simple view (on which the term denotes Heraclitus' own account) have struggled to make good sense of Heraclitus' claims that the *logos* 'holds always', that 'all things come to be in accordance with' it, and that people remain uncomprehending of it even *before* hearing him. On the other hand, proponents of the cosmic-law interpretation (on which the term denotes a 'general principle' or 'formula of things' structur-

one lives; but the 'limits of the soul' cannot be discovered by such means, even if one travels *every* road (since the task of understanding a soul is simply not of this kind—and is in any case uncompletable, according to Heraclitus). The idea that Heraclitus took an interest in self-understanding is supported by other extant fragments, such as fr. 101 ('I searched myself') and fr. 116 (if genuinely Heraclitean).

<sup>55</sup> In suggesting that fr. 45 should be understood in terms of self-understanding, I find myself disagreeing with the conclusions reached by G. Betegh in a recent article ('The Limits of the Soul: Heraclitus B 45 DK', in Hülsz (ed.), *Nuevos ensayos*, 391–414). Betegh claims that the *logos* in question in this fragment is the 'report' of the traveller (not just of any soul) and is 'deep' in the sense of being 'profound', due to the great wisdom this individual has acquired by travelling 'every road'. Somewhat paradoxically, on Betegh's interpretation, only such a wise, seasoned traveller will *fail* to discover the limits of the soul, since only such a traveller will be *aware* of the ultimate incomprehensibility of the (cosmic) soul (due to its vast spatial extent). One problem with this interpretation is that it is not clear why *only* the traveller should be 'unable to discover the limits of the soul' (surely others are similarly unable to do this, even if they remain unaware of their inability). Furthermore, Betegh's interpretation requires that Heraclitus actively recommended extensive travel as the necessary route to wisdom, an idea unattested elsewhere. In any case, Betegh's interpretation is (as he makes clear) largely motivated by a desire to avoid the common translation of '*logos*' in this fragment as 'measure'. Betegh too finds this way of understanding '*logos*' in these fragments unsatisfactory, for the very reasons I have emphasized. What I have sketched here, then, is another alternative to the 'measure' interpretation, one that avoids the problems facing Betegh's account.

ing the cosmos) require that we take Heraclitus to have used 'logos' in a way unattested in any other text of similar age and altogether detached from its most common use in his time. However, there is a way of accounting for the strong objective predications in these fragments while simultaneously maintaining a closer connection to the term's most common contemporary use. To be clear, my claim will not be that Heraclitus uses the word 'logos' in a perfectly ordinary way in these fragments. In fact, contrary to the claims of proponents of the simple view, I believe that his employment of the term here was intended to be striking and surprising. My proposal is rather that in these fragments Heraclitus played on the most common contemporary use of the word 'logos' in order to express his own distinctive philosophical ideas.

Stated simply, my suggestion is that the peculiarity of Heraclitus' use of the term 'logos' in these three fragments is best explained, not by supposing that the *logos* is itself a law of change at work in the cosmos, but rather by taking Heraclitus to be denoting by this term the world's constant, common presentation of itself to us as an ordered and intelligible whole. In other words, Heraclitus denotes by the term 'logos' neither his own discourse nor a cosmic law, but rather the world's orderly and intelligible (i.e. comprehensible, understandable) presentation of its nature to us throughout our lives. On this view, to understand 'this *logos*' is to understand the world as it presents itself to us—that is, as it becomes available to us in our experience—much as one might understand (or fail to grasp) the meaning of a written or spoken account. The novelty in Heraclitus' employment of the term 'logos' is real. However, it stems not from his use of the word 'logos' to denote a general principle, formula, or plan of the universe, but rather from his use of a term most commonly applied to a presentation *in words* of things as being a certain way to describe a kind of cosmic self-revelation.

This interpretation has many advantages. In the first place, it makes good sense of the otherwise puzzling objective predications associated with 'the *logos*' in these fragments. When Heraclitus claims that the *logos* is 'common' (*ξυνός*), on this view, he is insisting that there just is this one, common way in which all things present themselves to us. Similarly, in insisting that it 'holds always', and that 'all things come to be in accordance with' it, he is claiming that things always and everywhere present themselves to us as being this same way. The relevant contrast is not with

the false—as it must be for those who would claim that ‘the *logos* is common’ simply means it is true—but rather with the *private*. In fact, Heraclitus insists that there is no such thing as a ‘private understanding’ (*ιδίαν φρόνησιν*): most people live *as if* (*ὡς*) they had such a thing of their own (fr. 2). If the *logos* is ‘common’ in this way, then true *phronēsis* will be ‘common’ too,<sup>56</sup> since there will be just one single way of understanding things that is appropriate to the one common reality.<sup>57</sup> Nevertheless, Heraclitus clearly thought that most people lack understanding of the way things really are. The basic problem, he seems to claim, lies neither in the nature of things nor in some deficiency in our perceptual and other cognitive

<sup>56</sup> This is strongly implied by the contrast in fr. 2, and is explicit in fr. 113, assuming this quote from Stobaeus is genuinely Heraclitean: ‘[right] thinking is common to all’ (*ξυνόν ἐστι πᾶσι τὸ φρονέειν*). Heraclitus’ point here is presumably not that all people do think rightly, but rather that thinking rightly is possible for—and proper to—us all. So too e.g. fr. 116: ‘It belongs to all people to know themselves and think rightly’ (*ἀνθρώποισι πᾶσι μέτεστι γινώσκειν ἑαυτοὺς καὶ σωφρονεῖν*). It is perhaps worth noting, with A. A. Long (‘Heraclitus on Measure and the Explicit Emergence of Rationality’, in D. Frede and B. Reis (eds.), *Body and Soul in Ancient Philosophy* (Berlin, 2009), 87–109), that the idea that ordinary human beings are *capable* of understanding the fundamental nature and workings of an orderly cosmos was a profoundly original (and optimistic) one in Heraclitus’ day, which may have inspired many later ideas in epistemology.

<sup>57</sup> This is an apt point at which to express my disagreement with the way of understanding the word ‘*logos*’ in Heraclitus favoured by Roman Dilcher. According to Dilcher, the term ‘*logos*’ in Heraclitus denotes sound, reasonable thinking, the one right way of thinking that alone is adequate to reality, as exemplified in Heraclitus’ own discourse: ‘the *logos* is sound and sensible thinking with which everyone has to associate, even if he does not really comprehend it’ (*Studies*, 47). Similarly, U. Hölscher, *Anfängliches Fragen* (Göttingen, 1968), 141–2: ‘die richtige Überlegung’, and E. Hussey, ‘Heraclitus’, in A. A. Long (ed.), *The Cambridge Companion to Early Greek Philosophy* (Cambridge, 1999), 93–4. I agree with Dilcher that for Heraclitus there will be just one right way of thinking that is appropriate to understanding the world. However, Dilcher goes further by effectively identifying *logos* and *φρόνησις* in Heraclitus (esp. p. 46). This view has some appeal: it makes good sense of the fragments attributing a *logos* to the soul (fr. 45, 115), offers a way of bridging the gap between the ‘subjective’ sense of Heraclitus’ own discourse and the ‘objective’ sense of something applicable everywhere, and is not clearly anachronistic, since, as noted, the term ‘*logos*’ bore connotations of ‘reasoning’ and ‘reasonableness’ even in early texts. Nevertheless, I believe it must be rejected. In the first place, it is difficult to make sense of the idea that ‘all things come to be in accordance with’ a way of thinking—for surely the way of thinking in question should be fitted to the reality we need to understand, not the converse. In any case, as Heraclitus makes clear, ‘this *logos*’ is what people remain uncomprehending *of*, and what they should attend more closely *to*; it is, in short, the proper *object* of human understanding. Yet while right thinking may be required in order to understand the *logos*, it is not *itself* the object of human understanding: it is the world as it presents itself to us in our experience, and not the right way of thinking *about* it, that people forever fail to comprehend.

capacities,<sup>58</sup> but rather in a failure of comprehension (or, we might say, interpretation) on our part: most people simply fail to understand what is always and everywhere right before their eyes. It is for this failure to grasp the world as it continually presents itself to them, I suggest, and not (or not simply) their failure to understand what Heraclitus has to say, that they are castigated and chastised.<sup>59</sup>

The present account shares these advantages with the cosmic-law interpretation. At the same time, it avoids the most serious problems faced by all such interpretations, chief among them the need to maintain some close connection between Heraclitus' use of the word 'logos' and its ordinary use in his time, to denote a written or oral account. The key idea, on the present interpretation, is that Heraclitus understood the cosmic *logos* as something that can be understood by us in much the way that a written text or spoken account can be understood by us.<sup>60</sup> On this interpretation, the one

<sup>58</sup> Indeed, as is well known, Heraclitus sometimes explicitly praises the senses, as in fr. 55 ('all that can be seen, heard, experienced—these are what I prefer'). In fr. 107 Heraclitus claims that eyes and ears are 'good witnesses' for those whose souls are in the appropriate condition.

<sup>59</sup> *Why* do most people fail to understand what the world is really like? For Heraclitus, I suggest, penetrating into the true nature of things requires insight and interpretative work on our part. An understanding of the way things hang together may not be beyond our reach, but achieving it is not supposed to be easy. There are, I speculate, two main problems. First, the natures of things—and certain kinds of connections between them—are not evident (fr. 123: 'Nature is wont to hide'; fr. 54: 'an unapparent connection is stronger than an apparent one', cf. fr. 93). Second, there is the pervasive influence of bad authorities, who continually lead people astray—thus Heraclitus' contempt for those with a popular reputation for wisdom, such as Homer (fr. 42), Hesiod (fr. 40, 57), and Pythagoras (fr. 40, 129), famous people in general (fr. 28), and those ordinary people who 'put their trust in popular bards and take the mob for their teacher' (fr. 104).

<sup>60</sup> This idea—that Heraclitus considered the task of understanding the world as a whole to be analogous to the task of understanding a written text or spoken account—is by no means new. For variations on it see Kahn, *Art and Thought*, 107–8; Leshner, 'Epistemological', 167–8; Hussey, 'Heraclitus,' 90–1. Compare also in this connection Alexander Mourelatos's discussion of the development of the idea that the world as a whole is 'logos-textured', in his 'Heraclitus, Parmenides and the Naïve Metaphysics of Things', in E. N. Lee, A. P. D. Mourelatos, and R. M. Rorty (eds.), *Exegesis and Argument: Studies in Greek Philosophy Presented to Gregory Vlastos* (Assen, 1973), 16–48. A recent and sophisticated advocate of this basic idea is Gianvittorio, *Discorso*. Gianvittorio maintains that Heraclitus thought there was a structural resemblance between discourse and world, in that each can only be properly understood as an 'articulated unity' ('unità articolata') and not simply as a collection of discrete elements. While agreeing with this basic idea, my interpretation differs from Gianvittorio's in denying that *logos* (discourse, in her view) serves for Heraclitus as a mere 'heuristic device' ('uno strumento euristico', e.g. at 249) for understanding reality.

common cosmic *logos* is, like oral and written *logoi*, an orderly, intelligible (i.e. understandable, comprehensible) presentation of things as 'thus and so'. Understood in this way, Heraclitus' opening lines deliberately and skilfully play with his audience's expectations by highlighting similarities and differences: for while the cosmic *logos* can be better or worse understood, much like a written or oral account, it differs in that, in contrast to the plethora of written and verbal accounts, there is just this one cosmic *logos*, common to us all. While it may not literally be 'listened to' in the way that human speech can be listened to, it can be attended to and comprehended, perhaps even 'hearkened to', as if it were a kind of message. This explains both the sense of conventional familiarity and also the strangeness of the use of the word '*logos*' in fr. 1; for on the present interpretation Heraclitus twists his audience's expectations to serve his own ends, trading on the familiar idea of failing to understand a written or spoken *logos* to introduce the novel idea of failing to understand this one common cosmic self-revelation.<sup>61</sup>

Finally, this interpretation provides an excellent way of making sense of the distinction that lies at the heart of fr. 50. In particular, it allows us to understand Heraclitus as claiming that if we are to achieve true insight into the way things are, we should attend not simply to him and what he says, but rather to the world and the way it always and everywhere presents itself to us. Heraclitus might provide us with valuable guidance on how to regard things if we are to understand them rightly, and might help us avoid certain kinds of mistake—it is not as if attending to him and what he has to say has no value. But what Heraclitus is aiming for, on this interpretation, is not simply that his audience should listen to him and accept what he is saying as true, but rather that they should attend

<sup>61</sup> In many respects this view resembles that of Thomas Robinson, who has recently argued ('Heraclitus and *Logos*') that '*logos*' in frs. 1, 2, and 50 should be translated as 'account' but that Heraclitus uses it to denote, not his own account, but rather the 'account' of God. Robinson is motivated to adopt this interpretation by his dissatisfaction with both 'simple' and 'cosmic-law' readings of '*logos*' in these fragments. However, I do not believe there is any need to understand the *logos* referred to in these fragments as the 'account' of God; and in my view there are good reasons to resist doing so. For one thing, if this had been Heraclitus' view he could easily have made his meaning clear, as he apparently did not. More importantly, Robinson's interpretation requires attributing to Heraclitus the view, not only that understanding the world is *like* understanding a linguistic account in certain respects (as I have maintained), but that understanding the world quite literally *is* understanding a language (the language of God). As I say, I see no need to make this overly literal move.

to the way the world presents itself to them in their own experience and understand things rightly for themselves. This, I suggest, is what explains the point of weighty contrast between 'me' and 'the *logos*': a true understanding of the way things are will require us to orient ourselves *not* towards Heraclitus and his particular account ('his' *logos*), but rather *away* from him and towards the totality of things as they present themselves to us in our experience (the one 'common' *logos*). In short, Heraclitus is exhorting his audience to 'wake up'<sup>62</sup> and see things as they are for themselves. Should they do this, he claims, they will be in a better position to agree with the fundamental insight of his philosophy, the one thing that he urges his audience to recognize above all else, namely that ἐν πάντα εἶναι: 'all things are one'.<sup>63</sup>

## V

In this paper I have argued for a way of understanding Heraclitus' use of the term '*logos*' that makes good sense of its employment in key surviving fragments, especially fr. 1, 2, and 50, without anachronistically assigning to the word a meaning unattested in any even approximately contemporary text. On this view, Heraclitus did not use the word in a perfectly ordinary and straightforward way in these fragments; but nor did he use it in a way altogether detached from normal everyday use. Rather, I have argued, Heraclitus traded on the usual meaning of the term in his day—to denote

<sup>62</sup> Heraclitus compares most people to sleepwalkers in fr. 1, and by implication at fr. 73 (if genuine) and fr. 89; he compares them to deaf people at fr. 34. The claim seems to be that most people are simply oblivious to what they continually encounter (cf. fr. 72, if genuinely Heraclitean: 'they are at odds with the *logos*, with which they are in continuous contact . . .').

<sup>63</sup> I speculate that Heraclitus may have had something like the following idea in mind. Things tend to present themselves to us in our experience as particular, as being this or that, as a plurality: as τὰ πάντα ('all things', considered as a plurality of distinct individuals). But merely understanding them as a plurality in this way is inadequate, since no thing is just one thing alone; rather, all things are interdependent (in various ways) and pass over into one another by degrees. An adequate understanding of the nature of the cosmos therefore requires an appreciation of the underlying unity (ἐν) of all things. Yet this unity does not involve the *collapse* of all plurality and diversity: on the contrary, the persistence of the whole across time *requires* diversity, conflict, and change. Thus true understanding requires appreciating *both* the underlying unity of all things *and* the dependence of this unity on diversity, change, and strife. Comprehending that this is so (and *how* this is so) is what 'understanding the *logos*' requires.

a written or oral presentation of things as being a certain way—to express his novel philosophical ideas. He did this, I have claimed, by applying a term usually reserved for a written or oral presentation of things as ‘thus and so’ to denote the one common cosmic self-revelation. This allowed him to compare most people’s failure to comprehend the fundamental nature of things, based on their own experience, to a failure to grasp the meaning of a spoken or written account.

If this account of the meaning of ‘*logos*’ in Heraclitus is accepted, it suggests a certain way of thinking about Heraclitus’ project as a whole. It is tempting to read Heraclitus as a relatively orthodox natural philosopher, presenting his view of the way things are and arrogantly berating people for being too foolish to understand the truth of what he says. However, if the present account is correct, Heraclitus was berating people not for their failure to understand *him* (or his *logos*), but rather for their failure to understand the world as it constantly reveals itself to them (the one common cosmic *logos*). In this way, his focus lay from the very beginning of his work on human understanding and its lack. The basic problem with most people, according to Heraclitus, on the present interpretation, is a failure of comprehension.<sup>64</sup> What is needed to address this lack of comprehension, he seems to say, is not more information, but rather a more adequate understanding of what is already everywhere right before our eyes. On this view, Heraclitus aimed in his work to startle his audience out of their complacency and to steer them towards grasping the true nature of things rightly for themselves. There just is this one common *logos*, he insists, which continually confronts all of us alike; yet in the face of it most people remain uncomprehending, even after they have heard what Heraclitus has to say.

*McMaster University*

<sup>64</sup> Thus I am in broad agreement with Daniel Graham when he writes that ‘what is needed is not simply more sense experience or more information, but an improved way of comprehending the message (*logos*) that the world offers’ (‘Heraclitus’, in E. N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*, Summer 2011 edn. (<http://plato.stanford.edu/archives/sum2011/entries/heraclitus/>)).

## BIBLIOGRAPHY

- Aall, A., *Geschichte der Logosidee in der griechischen Philosophie*, 2 vols. (Leipzig, 1896–9; repr. Frankfurt a.M., 1968).
- Barnes, J., 'Aphorism and Argument', in K. Robb (ed.), *Language and Thought in Early Greek Philosophy* (La Salle, Ill., 1983), 91–109.
- Barnes, J., *The Presocratic Philosophers* (London, 1982).
- Betegh, G., 'On the Physical Aspect of Heraclitus' Psychology' ['Physical Aspect'], *Phronesis*, 52 (2007), 3–32.
- Betegh, G., 'The Limits of the Soul: Heraclitus B 45 DK', in Hülsz (ed.), *Nuevos ensayos*, 391–414.
- Boeder, H., 'Der frühgriechische Wortgebrauch von *Logos* und *Aletheia* ['Logos und *Aletheia*']', *Archiv für Begriffsgeschichte*, 4 (1959), 82–112.
- Burnet, J., *Early Greek Philosophy*, 4th edn. (London, 1930).
- Curd, P., 'Presocratic Philosophy', in E. N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*, Winter 2012 edn. (<http://plato.stanford.edu/archives/win2012/entries/presocratics/>).
- Curd, P., *The Legacy of Parmenides: Eleatic Monism and Later Presocratic Thought* (Princeton, 1997).
- Diels, H., and Kranz, W., *Die Fragmente der Vorsokratiker*, 6th edn. (Berlin, 1951).
- Dilcher, R., *Studies in Heraclitus* [*Studies*] (Hildesheim, 1995).
- Freeman, K., *The Pre-Socratic Philosophers: A Companion to Diels*, *Fragmente der Vorsokratiker* [*Companion*] (Oxford, 1946).
- Fritz, K. von, 'Noos, Noein and their Derivatives in Presocratic Philosophy' ['Derivatives'], *Classical Philology*, 40 (1945), 223–42; 41 (1946), 12–34, repr. in A. P. D. Mourelatos (ed.), *The Pre-Socratics* (New York, 1974), 23–85.
- Gianvittorio, L., *Il discorso di Eraclito* [*Discorso*] (Hildesheim, 2010).
- Graham, D., *Explaining the Cosmos: The Ionian Tradition of Scientific Philosophy* (Princeton, 2006).
- Graham, D., 'Heraclitus', in E. N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*, Summer 2011 edn. (<http://plato.stanford.edu/archives/sum2011/entries/heraclitus/>).
- Graham, D., 'Heraclitus' Criticism of Ionian Philosophy', *Oxford Studies in Ancient Philosophy*, 15 (1997), 1–50.
- Graham, D., *The Texts of Early Greek Philosophy: The Complete Fragments and Selected Testimonies of the Major Presocratics*, pt. 1 (Cambridge, 2010).
- Granger, H., 'Argumentation and Heraclitus' Book', *Oxford Studies in Ancient Philosophy*, 26 (2004), 1–17.

- Guthrie, W. K. C., *A History of Greek Philosophy*, i. *The Earlier Presocratics and the Pythagoreans* [History] (Cambridge, 1962).
- Hölscher, U., *Anfängliches Fragen* (Göttingen, 1968).
- Huffman, C. A., 'Heraclitus' Critique of Pythagoras' Enquiry in Fragment 129', *Oxford Studies in Ancient Philosophy*, 35 (2008), 19–47.
- Hülsz, E. (ed.), *Nuevos ensayos sobre Heráclito: actas del segundo Symposium Heracliteum* [Nuevos ensayos] (Mexico City, 2009).
- Hussey, E., 'Heraclitus', in A. A. Long (ed.), *The Cambridge Companion to Early Greek Philosophy* (Cambridge, 1999), 93–4.
- Kahn, C., *The Art and Thought of Heraclitus* [Art and Thought] (Cambridge, 1979).
- Kirk, G. S., *Heraclitus: The Cosmic Fragments* [Cosmic Fragments] (Cambridge, 1954).
- Kirk, G. S., Raven, J., and Schofield, M., *The Presocratic Philosophers*, 2nd edn. (Cambridge, 1983).
- Leshner J., 'Heraclitus' Epistemological Vocabulary' ['Epistemological'], *Hermes*, 111 (1983), 155–70.
- Long, A. A., 'Heraclitus on Measure and the Explicit Emergence of Rationality', in D. Frede and B. Reis (eds.), *Body and Soul in Ancient Philosophy* (Berlin, 2009), 87–109.
- McKirahan, R., *Philosophy before Socrates: An Introduction with Texts and Commentary* (Indianapolis, 1994).
- Marcovich, M., *Heraclitus: Greek Text with a Short Commentary*, 2nd edn. [Heraclitus] (Sankt Augustin, 2001).
- Minar, E. L., Jr., 'The Logos of Heraclitus' ['Logos'], *Classical Philology*, 34 (1939), 323–41.
- Morgan, K., *Myth and Philosophy from the Presocratics to Plato* (Cambridge, 2000).
- Mourelatos, A., 'Heraclitus Fr. 114', *American Journal of Philology*, 86 (1965), 258–66.
- Mourelatos, A., 'Heraclitus, Parmenides and the Naïve Metaphysics of Things', in E. N. Lee, A. P. D. Mourelatos, and R. M. Rorty (eds.), *Exegesis and Argument: Studies in Greek Philosophy Presented to Gregory Vlastos* (Assen, 1973), 16–48.
- Nussbaum, M., 'P $\psi$ ch $\acute{\epsilon}$  in Heraclitus' ['P $\psi$ ch $\acute{\epsilon}$ '], *Phronesis*, 17 (1972), 1–16, 153–70.
- Palmer, J., *Parmenides and Presocratic Philosophy* (Oxford, 2009).
- Reinhardt, K., *Parmenides und die Geschichte der griechischen Philosophie* (Frankfurt a.M., 1959; originally published 1916).
- Robinson, T., *Heraclitus: Fragments. A Text with Translation and Commentary* [Fragments] (Toronto, 1987).
- Robinson, T., 'Heraclitus and Logos—Again' ['Heraclitus and Logos'], in Hülsz (ed.), *Nuevos ensayos*, 93–102.

Snell, B., 'Die Sprache Heraklits', *Hermes*, 61 (1926), 353–81.

Snell, B., *The Discovery of the Mind* [*Discovery*], trans. T. G. Rosenmeyer (Oxford, 1953) (originally published as *Die Entdeckung des Geistes* (Hamburg, 1946)).

Verdenius, W. J., 'Der Logosbegriff bei Heraklit und Parmenides', *Phronesis*, 11 (1966), 81–98.

West, M., *Early Greek Philosophy and the Orient* (Oxford, 1971).

Wilamowitz-Moellendorff, U. von, *Der Glaube der Hellenen*, vol. i, 2nd edn. (Berlin, 1955; originally published 1931).

