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Heraclitus

HERACLITUS OF EPHEBUS is reported to have flourished in the sixty-ninth Olympiad, 504 to 500 B.C., which is to say thirty-one years or more before the birth of Socrates. The city of Ephesus lay about thirty miles north of Miletus, the geographical scene of the preceding chapter. The patrician family into which Heraclitus was born held some kind of hereditary office, at once political and religious, which descended to the eldest son of each generation and required him among other things to supervise the city's official religious sacrifices. The task was not congenial to the philosopher, so he resigned in favor of a younger brother and went his own way. The banishment of his friend Hermadorus from Ephesus by the political party currently in power (we do not know on what charge, but see Frs. 95, 96) confirmed and increased Heraclitus' sharp opposition to the rule of "the many." Most of the rest of what Diogenes Laertius tells about his later years and the manner of his death is of doubtful credibility, except for the one plain fact that he died at the age of sixty, which would probably have been roughly between 490 and 480 B.C.

The traditional view of Heraclitus expressed by later ancient writers is that he was a pessimist and a snob, and that the latter trait caused him to write in deliberately obscure language in order

to restrict his readers to such as were worthy and willing to make the required effort. Both of these charges need careful qualification.

Pessimism has more than one meaning. As a colloquial ascription it may describe a mood, or it may mean something like a refusal to indulge in wishful thinking. Philosophical pessimism, on the other hand, (as illustrated for instance by Schopenhauer) is centered in the doctrine that there is more evil in the world than good, or that the evil is somehow more fundamental than the good; and to this one-sided view of reality Heraclitus, on grounds of logic and taste alike, did not subscribe. His philosophy, ever dynamically serene, asserts that good and evil are two sides of the same coin, interpenetrating aspects of the one manifold and ever-changing reality (cf. Frs. 106, 108, etc.), and that the wise man looks at the ambivalence unflinchingly, seeing the bright and the dark, the ugly and the fair, with calm freedom of mind.

The accusation of deliberate concealment ("He was fond of concealing his metaphysics in the language of the Mysteries," Clement of Alexandria says of him) stems from a misunderstanding of his temperament and his style alike. His aristocratic pride made him indifferent or even hostile to the masses, granted; but for that very reason he would not have allowed a thought of them to alter the things he wished to say or his manner of saying them. Besides, whatever may have been the case with those parts of his writings which have been lost, a sensitive and reflective reader of the Fragments, even in translation, is not so likely to find them obscure as to find them terse, challenging, and stimulating to the imagination. New semantic tones, amounting sometimes to new dimensions of meaning, may emerge from reflecting on certain groups of the Fragments in interrelation. Try the experiment, for instance, of considering as a group Frs. 2, 11, 15, 16, last clause of 43, 58, 117, 120, all dealing somehow diversely with the problem of knowledge; or again Frs. 17, 18, 111, 116, 121; or again Frs. 19, 65, 67. Other combinations an alert reader will wish to discover and test for himself. Heraclitus' utterances, both singly

and in groups, are characteristically marked by paradox and plurisignation, and in that character lies their special appeal to an active and mature mind. For there come stages in one's intellectual development when reality as actually encountered seems too dark, too riddling, ambiguous and irreducibly many-sided to be expressible in ordinary plain terms, and sometimes a well chosen paradox comes closer to representing our experienced view of the world than any logical tidiness can accomplish. Each reader must of course judge for himself, comparing Heraclitus' brief semantic vignettes with the testimonies of his own awareness, memory, and imagination.

The most central paradox, which provides the fulcrum on which Heraclitus' philosophy revolves, comes into focus when we compare the strong valuation expressed in Fr. 46 with the indifference of Fr. 108. Viewed with logical strictness the two Fragments clash; for how can the upward way be better than the downward if it is true that the two ways are "one and the same"? The paradox is a fundamental one, because the two opposing sides of it both represent indispensable truth-claims when a person reflects on his relation to the world seriously and without clichés. On the one hand we cannot live without some affirmation of value, and for Heraclitus the foremost value consists in the mental clarity and self-honesty represented by dry light as against the messy confusion of the downward way into sodden moisture, mud, and at length into stony immobility. The large half-truth of that valuation becomes evident when the direction of one's thought, one's governing perspective, is set by an initial affirmation of one's value as an individual endowed with the power of rational choice, which involves the ethical power of distinguishing between better and worse. But then comes the paradox. The same power of mind which enables us to distinguish between good and evil and so to make (occasionally) rational choices, proposes also another distinction, comprehensive and final—the metaphysical distinction between the temporal and the eternal. *Sub specie aeternitatis*

man's ethical judgements, his strivings toward clarity and away from confusion, look very small indeed. Will it be of any consequence a million years from now that somewhere in our era a dedicated individual chose to accept poverty and pain rather than compromise his ideals and convictions, whereas someone else was content to drift along with the push of circumstance? "Even sleepers are workers and collaborators" without knowing it (Fr. 124): that is to say, they are an inevitable part of the universe no less than the awakened ones. And yet Fragments 14, 15, and 16 show plainly enough where Heraclitus' allegiance lies—not, certainly, on the side of those who sleep. Hence the inevitability of the paradox: neither side of it can be abandoned, because each side expresses an inescapable truth, and the two opposed insights cannot be fitted into a neat conceptual package without dismissing or distorting one or the other of them. The paradox is thus ontological; and that is where the distinctive character of Heraclitus' thought most eminently shows itself—in his unusual sensitivity to, and his arresting and varied expression of, the ontological paradox.

There may well be a connection, deeper than appears at first glance, between Heraclitus' acceptance of ontological paradox and the aristocratic pride which shows itself especially in the Fragments grouped under "Men among Men." For the aristocratism which Heraclitus' social aphorisms express is something sturdier and worthier than a mere attitude of disdain toward those whose souls are moist; the attitude is shaped by what Nietzsche has called a "passion of distance." By this phrase, which can serve as one of the main keys to the Nietzschean philosophy, Nietzsche means to include at once the "Dionysian" passionate yet self-controlled affirmation of one's own selfhood with its peculiar values and the "Apollinian" power of self-overcoming, of utter serenity in the midst of battle. The same double attitude marks Heraclitus—the pride of self-affirmation standing in balance with the wisdom of self-transcendence. Now every genuine and deep

ontological paradox.
 i.e. Nietzsche's
 Dionysian and Apollinian
 one and the many

attitude (as opposed to attitudes that are imitative or self-advertised) creates its own epistemic, its own way of looking at the problems of being and value. The ambivalent attitude which gives life and shape to the aristocratic pride of the Heraclitean-Nietzschean sort of man generates a distinctive epistemic for him, a rooted perspective whereby to see and partly to understand the elements of experience, even the most hostile, without flinching. In that aristocratic outlook the ontological paradox shows and affirms itself. Aristocratic pride is thus the subjective correlative of the essential Heraclitean paradox which affirms with equal conviction the superiority of the upward way and the ultimate indifference of the ever-flowing universe to all human values of any and every kind.

But now let Heraclitus speak for himself; for no résumé or exposition can do him anything like justice. Seldom has a philosopher fashioned concepts of such power and flexibility combined. On first reading (for he needs to be read repeatedly, with meditation and excursion sandwiched between) let his terse remarks act on you as they will; some of them will speak more meaningfully than others. Then take the favored few, and with the memory of them in mind, including their meaning and tone and the suggestions they stir, read the body of Fragments a second time, and some that were at first obscure will now perhaps show gleams of intelligibility. By such oblique procedures must Heraclitus be approached, rather than by expository directness; for it is as true of his own utterances as he holds it to be of nature, that truth resides not in surface connections but in hidden depths.

FRAGMENTS*

THE WAY OF INQUIRY

1. *Although this Logos is eternally valid, yet men are unable to understand it—not only before hearing it, but even after they have heard it for the first time. That is to say, although all things come to pass in accordance with this Logos, men seem to be quite without any experience of it—at least if they are judged in the light of such words and deeds as I am here setting forth. My own method is to distinguish each thing according to its nature, and to specify how it behaves; other men, on the contrary, are as neglectful of what they do when awake as they are when asleep.* (1)

2. *We should let ourselves be guided by what is common to all. Yet, although the Logos is common to all, most men live as if each of them had a private intelligence of his own.* (2)

3. *Men who love wisdom should acquaint themselves with a great many particulars.* (35)

4. *Seekers after gold dig up much earth and find little.* (22)

5. *Let us not make arbitrary conjectures about the greatest matters.* (47)

6. *Much learning does not teach understanding, otherwise it would have taught Hesiod and Pythagoras, Xenophanes and Hecataeus.* (40)

* The present grouping and numbering of the Fragments, as well as the subtitles and most of the translations, are taken by permission of Atheneum Publishers from their paperback edition of the present editor's *Heraclitus*.

says, you know, that all things flow and nothing abides, and he likens the things that exist to the current of a river, saying that one cannot step into the same river twice. (*Cratylus* 401E, 402A)

T 2. There are wise men who tell us that all things are continually flowing both upwards and downwards. (*Philebus* 43A)

FROM ARISTOTLE:

T 3. All things are in motion, as Heraclitus says. (*Topics* 104b 21)

T 4. Hippasus of Metapontum and Heraclitus of Ephesus declare that fire is the first-principle. (*Metaphysica* 984a 7)

T 5. Heraclitus says that all things at some time become fire. (*Physica* 205a 3)

T 6. Some, such as Empedocles of Akragas and Heraclitus of Ephesus, say that there is alternation in the destructive process, which goes on now in this way, now in that, continuing without end. (*De Caelo* 279b 16)

T 7. It is logically impossible to suppose that the same thing is and is not, as some think Heraclitus said. (*Metaphysica* 1005b 24)

T 8. Supporters of the theory of Forms were led to it by means of Heraclitus' argument concerning truth, in which he holds that whatever is perceived by the senses is in a state of flux. [Accepting that much of his argument these philosophers go on to argue] that if there is to be science or knowledge of anything there must be other entities in nature besides those perceived by the senses, inasmuch as there can be no science of what is in a state of flux. (*ibid.* 1078b 12)

Whatever perceived
by senses is in a state
of flux

Fire - 1st principle

Strife is vastly important

T 9. Whereas some think of the like as a friend and the opposite as an enemy, . . . others think of opposites as friends, and Heraclitus blames the poet who wrote, "Would that strife might perish from among gods and men," arguing that there could be no harmony without both low and high notes, and no living things without the pair of opposites male and female. (*Ethica Eudemia* 125a 20, 25)

T 10. To punctuate Heraclitus is difficult because it is [often] unclear whether a given word should go with what follows or with what precedes it. When, for instance, at the beginning of his treatise he says, "Although this Logos exists always men are unaware [of it]," it is unclear whether "always" belongs with "exists" or with "are unaware." (*Rhetorikê* 1407b 13)

FROM LATER GREEK SOURCES:

T 11. Heraclitus, son of Blosson, was a native of Ephesus and flourished in the sixty-ninth Olympiad [504-500 B.C.]. He was lofty-minded to an unusual degree, but haughty and overbearing. When the Ephesians requested him to draw up a set of laws for the city, he refused because he considered the city's constitution to be hopelessly bad. He would retire to the temple of Artemis where he would play knuckle-bones with boys. To the Ephesians who stood around watching he burst out: "Why do you look surprised, you scoundrels? Isn't this a better pastime than taking part in your politics?" Eventually, becoming a hater of mankind, he retired into the mountains and stayed there nourishing himself on grass and roots—a mode of life that made him ill of dropsy. He died at the age of sixty.

He was nobody's pupil; he said that he sought to know himself and that he learned everything by his own efforts. Some declare, however, according to Sotion, that he had been a pupil of Xenophanes. Antisthenes, in his *Succession of the Philoso-*

phers, speaks of Heraclitus' magnanimity in renouncing his claim to the hereditary governorship [of Ephesus] in favor of his brother.

The book of which he was author is called *On Nature*, a continuous treatise divided into three parts—one on the universe, one on politics, and one on theology. Theophrastus thinks it is because of his melancholy that some parts of the work are unfinished while other parts are queerly put together. He dedicated the book in the temple of Artemis. Some say that he wrote it obscurely on purpose, in order to ensure that those who might read it would be worthy and that none should undertake it lightly. Sometimes, however, he writes with penetrating clarity, so that even the dullest can grasp his meaning and feel themselves stirred and challenged by it. For pithy profundity his exposition has no equal. (Diogenes Laertius, IX. 1, 5-7)

✱ T 12. Heraclitus' main tenets are these. Fire is the basic element. All things are interchangeable with fire, and they come-to-be by rarefaction and condensation, but how this occurs he has not clearly explained. All things come-to-be by conflict between opposites, and the universe in its entirety flows like a river. The All is limited, constituting a single world, which is alternately born from fire and dissolved into fire, and the succession of this endless cycle of alternating periods is fixed by Destiny. That phase of the cycle which involves a coming-to-be of things is called war and strife, while that which involves destruction by fire is called concord and peace. He refers to change as the road up-down, by which the cosmos comes-to-be.

Fire by compression becomes moist, by further compression it turns into water, and then the water as it stiffens is transformed into stone. This process he calls the downward road. Then the reverse process takes place, starting with earth, which changes into water, and so on through the other phases [of the

Downward
Road
Fire → moist → H₂O → Stone

Upward
Road
Earth → H₂O → evaporation → Fire

continuous process of liquefying, evaporating, and finally bursting into flame]. This process is the upward road.

Most of the phenomena [along the upward way] he explains by reference to exhalations from the sea. But there are exhalations from the earth also; those from the sea are bright and pure, while those from the earth are dark. Fire is nourished and increased by the bright exhalations, moisture by the dark ones.

Although he does not explain clearly the nature of the surrounding medium, he does say that it contains bowls with their hollow side turned toward us, and that bright exhalations collect in these concavities, where they are vaporized into flame. The resultant phenomena are the stars. The sun's flame is the brightest and hottest of these; the other stars are farther away from the earth, which is why we receive less light and heat from them. The moon is nearer to the earth, but it has to travel in a region that is impure. The sun, on the other hand, moves in a region that is transparent and unmixed, which is why it gives us more heat and light. Eclipses of the sun and moon occur when the bowls are turned upwards. The monthly phases of the moon take place as its bowl is gradually overturned. Day and night, months, and seasons of the year are due to different exhalations. Bright exhalations, when they have been vaporized into flame in the hollow orb of the sun, produce day; when dark exhalations win mastery there is night. The former cause an increase of warmth and summer; the latter, an increase of moisture and winter. His explanations of other natural phenomena are along much the same lines. (Diogenes Laertius, IX. 8-11)

T 13. To cite the testimony of poets and mythographers regarding matters of which we are ignorant is to take, as Heraclitus says, untrustworthy and disputable claims for facts. (Polybius, *Histories* IV. xl. 3)

- 1) Being is one
 - 2) Being is unchanging
- } monism
Being cannot arise from non-Being

4

The Eleatic School

- 1) Parmenides
- 2) Zeno
- 3) Melissus

Pure Reason
Criterion
for truth

THE SCHOOL OF ELEA is of unique historical importance. It represents the first all-out attempt in the western world to establish pure reason, with its demands of logical consistency and relatedness, as the sole criterion of truth. The main Eleatic position, established by Parmenides, reaffirmed and developed with individual approaches and twists by Zeno and Melissus, can be summarized in the two propositions, (1) Being is one and (2) Being is unchanging. These are formidably abstract avowals, and they bring us to the very limits of what can be said and asked; some would complain, indeed, that they take us quite beyond those limits. At any rate the challenge which the two Eleatic propositions have presented to subsequent philosophers—notably to the critical pluralists who are the subject of the next two chapters and to Plato—was both forceful and pervasive, and a student of Greek philosophy cannot avoid coming to terms with them. Granted the dubious nature of the questions, or purported questions, “Is ultimate reality one or many?” and “Does ultimate reality change or remain always the same?” (questions which, more than any others, have brought metaphysics into disrepute in certain quarters), we should nevertheless agree that a school of powerful and serious thinkers, such as the surviving arguments of the Eleatics show them unmistakably to be, is not likely to dedicate its mental energies for two or more generations to ques-

tions that mean nothing at all. The meanings may be partisan and one-sided, sometimes quaintly so, and perhaps no one would care to uphold them today as offering a suitable procedure for philosophical inquiry. Nevertheless the very limitations of Eleaticism serve to delineate its monistic perspective the more clearly; and monism has long been, whatever its guises and combinations, one of the dominant ideas, even to its opponents, in the range of human thought.

i. Parmenides

The founder of the philosophy in question was Parmenides of Elea, by the name of which city the philosophy came to be designated. Even if, as an ancient tradition asserts, Parmenides may have studied in his younger days under Xenophanes, the temperaments of the two men are vastly different, as will be evident to anyone who compares their respective groups of utterances, and the alleged connection between the lively religious monotheism of the one and the abstract metaphysical monism of the other is too tenuous to be of any service in suggesting a view as to their relations.

In trying to date Parmenides we are pulled in one direction by Diogenes Laertius' report that he flourished in the sixty-ninth Olympiad, which is to say 504 to 500 B.C., and in the contrary direction by Plato's statement that Parmenides had visited Athens while Socrates was a very young man (T 1, 2). Since we know, by deduction from Socrates' own statement in the *Apologia*, that he himself was born about 469 B.C., and since he could hardly have been less than eighteen or nineteen at the time of the philosophical encounter which Plato elaborates in his dialogue the *Parmenides*, we must suppose that Parmenides' visit to Athens occurred close to 450 B.C. Although in T 2 Plato speaks loosely of Parmenides as "very old" at that time, in T 1 he calls him

“elderly” and gives his age as sixty-five. It seems unlikely that Plato would have specified the exact age of so eminent a man unless it were known to be true; and the vaguer remark which in the *Theaetetus* he attributes to Socrates (T 2) is doubtless meant to suggest the impression made upon a nineteen-year-old youth by so venerable a man. Proceeding on the evidence of T 1, then, we must estimate that Parmenides was born close to 515 B.C.; which would knock out, of course, the statement (T 15) that he flourished between 504 and 500. But considering Plato’s strong interest in the Eleatic philosophy and the occasional participation by Eleatic visitors in the Socratic discussions (cf. T 5) it seems reasonable to accept Plato’s dates as the more probable ones. As a result we may take it as likely that Parmenides’ poem *On Nature* was completed at some time after 480 and probably between 470 and 460 B.C.

The poem, composed in the epic meter of dactylic hexameters, begins with a symbolic description of what was presumably a unique and central experience in Parmenides’ life—the passage out of darkness into light, away from illusion and into the presence of the Goddess of Truth. It is she who speaks forth the doctrines of the poem. That is not to say, however, that Parmenides is a passive hearer; he, too, is the speaker of the divinely received words, and he utters them on the authority of “true belief”—at once the rational intuition of his own mind and the yielding of his individual mind to the impersonal demands of rational self-evidence. The Goddess is a symbol, yes, but as with all deeply felt symbols there is continuity and interplay between image and meaning, between what is described and what is meant. Any attempt to sever the two aspects would at once reduce the description to triviality and subtly shift the focus of the doctrine. The passage from illusion to truth is not a trick to be mastered, nor a task for the conscious mind alone; it is, when genuine, a conversion of the whole self away from the trivial and toward the newly found point of ultimate concern. Plato in his parable of the cave

in *The Republic* and Dante at the outset of *The Divine Comedy* offer two of the most familiar symbolic accounts of this kind; Parmenides, hampered by the limitations of a more primitive language and with a less practiced literary skill, attempts in his opening lines to say much the same thing. But of course no two such experiences are ever the same, and it is never certain when and how far a particular symbolic description will speak inwardly to a particular reader.

After graciously welcoming the newly arrived postulant and assuring him of the divine nature of the forces that have guided his conversion, the Goddess makes her opening statement of the two "ways"—the two modes of consciousness between which man is capable of choosing: the way of strict rational coherence ("well-rounded truth") and the way of popular opinion, of custom, of yielding uncritically to familiar belief. The way of truth is rigorous; the fullest formulation of it is contained in the long passage (Fr. 7) which has been preserved for us by the ever admirable labors of Simplicius. The core of its meaning is put into a single word: *Esti*, "Is." Greek syntax permits, as English normally does not, the use of the verb without an expressed subject; our English linguistic habits make us want to say "It is," and then the purity of the utterance is spoiled, for the "it" appears to raise a question. Any such question is illegitimate, however, a mere by-product of our modern syntax, distorting the precarious meaning of the Greek. The truth which the Goddess is declaring lies in the simple verb "is," and to the Greek mind this word tends to stand in natural contrast to the word "becomes." Now as pointed out in the General Introduction, the verb "becomes," no less than the verb "is," tends in Greek to blend two usages—the absolute and the copulative. "Becomes" (*genetai*) taken absolutely means "comes-to-be"; taken copulatively it means "turns into," as when we might say of the sky at sunset "the blue becomes red." The meanings, as shown earlier, are never entirely separable, for when blue changes into red there is a coming-to-be of red. What the Goddess declares is

that in neither of its aspects can the word "become" describe what is real; that it expresses only popular prejudice, something like what Bacon calls an idol of the tribe, and that in reality there is no becoming—i.e., there is no changing from this to that, and there is no coming-to-be.

In attempting to utter so imposingly abstract a doctrine Parmenides is obliged to use metaphors; for in passing from simple and concrete affairs to complex and remote ones our preëxisting language is never adequate, and we have to stretch familiar words and images to new demanding uses. Consider, for example, in Sections A and C of Fragment 7, the metaphoric use of the ideas of Justice (*Dikê*), Necessity (*Anankê*), and Natural Law (*Themis*), and read what the Glossary has to say about the independent meaning of these words. Other functional uses of metaphor can be discovered with a little exploration.

But it is not enough for a man to know the way of truth, the Goddess warns; it is needful also to learn about "the opinions of mortals which lack true belief"—in order to be able to appraise them judiciously and not be taken in by them. Sound advice no doubt, and a welcome antidote to the uncompromising strictness of the True Way. But now we meet with a difficulty. Men have established the habit, we are told, of "naming two thought-forms," described as fire and earth, or the bright and the dark (Fr. 9), light and night (Fr. 10), but *one* of these "ought not to be named." Does this mean that the fiery bright belongs to the way of truth while its contrary the dense dark belongs to the way of opinion? Is it the latter alone that "ought not to be named"? Taking the qualities symbolically we might find such an interpretation plausible, for it has long been the practice of man to connect the sun and the visible brightness of the upper sky (the *aether*) with the intellectual ideas of truth and wisdom. But if we consider the antithesis in its logical import, we clearly cannot affirm one member of the pair while denying the other. The opposites light and dark belong equally to the world of becoming; if the reality of that

world is denied, then light and darkness together (not just one of them) must fall into the shadowland of opinion. It does not seem that the difficulty is sufficiently resolved in the surviving Fragments.

FRAGMENTS

THE JOURNEY

1. *The steeds that draw my chariot were conducting me to the farthest reach of my desire, bringing me at length on to the resounding road of the Goddess, along which he who knows is borne through all cities. Along this road I was carried—yes, the wise horses drew me in my chariot while maidens led the way. The axle, urged round and round by the whirling wheels on either side, glowed in the sockets and gave forth a singing hum. The handmaidens of the sun, who had left the realms of night and had thrown back their veils from their faces, were driving the chariot speedily toward the light.*

We came to the gates of day and night, which are fitted between a lintel above and a stone threshold below. Although the gates are of aetherial substance they have the strength of mighty doors when closed, and retributive Justice secures them with bolts that both punish and reward. But the maidens cajoled her with gentle words and soon managed to persuade her to pull back the bolts from the gates. When these gates were flung back on their hinges, which were nailed to bronze posts on either side, a wide expanse was revealed through the open doorway: it showed a broad avenue, along which the maidens steered my horses and chariot. The Goddess greeted me kindly, and taking my hand in hers she spoke these words:

and entirely self-contained, since there is no empty place into which to move. (*Theaetetus* 180A)

T 5. *An unnamed visitor from Elea*: The Eleatic group in our part of the world, starting with Xenophanes or even earlier, says that all things, although many in name, are really one. (*Sophist* 242D)

FROM ARISTOTLE:

T 6. If there is only one first-principle in the universe and it is changeless, as Parmenides and Melissus say . . . (*Physica* 184b 16)

T 7. All these thinkers set up as first-principles some pair of opposites, despite the fact that they declare the All to be unchanging; for even Parmenides sets up hot and cold as first-principles, calling them fire and water. (*ibid.* 188a 19)

T 8. Whereas Melissus speaks of the Whole as unlimited, Parmenides offers a more acceptable view in declaring that the Whole is limited and extends equally in every direction from the center. (*ibid.* 207a 16)

T 9. Parmenides seems to have conceived of reality as one by definition, whereas Melissus conceived of it as one materially; therefore the former takes it as limited, the latter as unlimited. (*Metaphysica* 986b 19)

T 10. On the ground that not-being, as contrasted with being, is nothing at all, Parmenides is forced to conclude that Being is one and that there is nothing else. But again, like the others, he posits two basic principles, the hot and the cold, or, as he calls them, fire and earth; and of these he puts the hot on the side of Being, the cold on the side of Not-Being. (*ibid.* 986b 29)

T 11. None of those who have affirmed that the All is a unity have grasped clearly the meaning of that kind of causal

explanation, except perhaps Parmenides, and he in so far as he virtually postulates not a single cause but two. (*ibid.* 984b 2)

T 12. That which is other than Being is not; hence, by Parmenides' argument, it must follow that all things are Being, and hence one. (*ibid.* 1001a 32)

T 13. When dealing with apparent coming-to-be Parmenides described the being and not-being which it involves as fire and earth. (*De Generatione et Corruptione* 318b 17)

T 14. ~~Certain earlier thinkers maintained that What Is must necessarily be one and immovable; they argue that since the void does not exist What Is cannot be moved, and that there cannot be a plurality of things because there is no void to keep them apart.~~ (*ibid.* 325a 3)

FROM LATER GREEK SOURCES:

T 15. Parmenides, son of Pyres and a native of Elea, was a pupil of Xenophanes. But although he listened to Xenophanes' teachings Parmenides was no follower of his. According to Sotion's account he also associated with Ameinias the Pythagorean, who although poor was a most worthy man. After the death of Ameinias, whose teachings were more to his taste, Parmenides, who was of good family and quite wealthy, built him a shrine. It was Ameinias and not Xenophanes who led him to adopt the peaceful life of a student.

Parmenides was the first to declare that the earth is spherical and is situated at the center. He maintained that there are two elements, fire and earth, the one playing the role of craftsman, the other of material. The coming-to-be of man he explained as originating from the sun. Heat and cold he regarded as more basic than the sun, and indeed as the basic constituents of everything. Soul and mind he held to be identical. He divided philosophy into two parts, the one dealing with truth, the other with opinion.

man from the sun (fire)

ii. Zeno

Zeno of Elea, the most eminent disciple of Parmenides, flourished about the middle of the fifth century B.C. Evidently he was a man who combined cleverness and fortitude to an unusual degree; the one virtue being shown by the skill of his arguments, the other by the well attested tale of his accepting death by torture rather than reveal the names of the friends who had conspired with him unsuccessfully to overthrow a local tyrant. He was about twenty-five years younger than Parmenides, according to Plato, and devoted himself largely to devising arguments to confute opponents of the doctrine of the One.

Zeno's method of counter-attack consisted in undertaking to prove that the thesis of pluralism, the not unusual assumption that a plurality of things does really exist, runs into even greater absurdities than Parmenides' own doctrine. In order to do so he employed, and some say he first invented, the method of *reductio ad absurdum*—the form of argument which then or soon afterwards came to be called the *epicheirêma*. Aristotle, in Book VII of his *Topica*, defines an *epicheirêma* as "a dialectical syllogism"; that is to say, a connected piece of reasoning which takes as its initial premise not an independently chosen proposition, but something which an opponent has affirmed and which the disputant undertakes to break down. Zeno is said to have devised forty different *epicheirêmata* in support of one or another aspect of Parmenides' monism. He carried his destructive method of argument so far and so effectively as to draw from Seneca a few centuries later the remark: "If I accede to Parmenides there is nothing left but the One; if I accede to Zeno, not even the One is left."

Unfortunately not much is available that can be accepted as direct quotation of Zeno's actual words. The ever resourceful

Simplicius, in his commentary on Aristotle's *Physica*, has quoted the three passages which constitute the Fragments that follow. Zeno's more celebrated arguments, those concerning spatial movement, are not preserved in his own words, but only as paraphrased by later philosophers, particularly Aristotle. The loss of the exact words is comparatively unimportant, however, because the logical shape of the argument is what counts, and this is discoverable from the paraphrase which Aristotle has given in the sixth book of his *Physica* (T 2).

FRAGMENTS

1. *If things are many they must be finite in number. For they must be as many as they are, neither more nor less; and if they are as many as they are, that means they are finite in number.*

On the other hand, if things are many they must be infinite in number. For there are always other things between any that exist, and between these there are always yet others. Thus things are infinite in number. (3)

2. *If a thing exists, then either it has magnitude or it does not.*

A. *Say it has no magnitude. Then if added to another existing thing it would not make the latter any larger. That is to say, if something without magnitude is added to another thing, the other thing cannot thereby increase in magnitude. It follows that the thing added is nothing. For if something does not lessen the thing it is subtracted from, and does not increase the thing it is added to, then surely that something is nothing.*

B. *[We conclude from the foregoing argument that] if anything lacks size [and bulk] it does not exist. If something*

exists, then, its parts must have size and bulk, and moreover they must be at a certain distance from each other. By the same reasoning each part of a part must have size and bulk, and the same is true of each lesser part, and so on. In short, the same reasoning holds good without limit: no part, however small, can be the ultimate part, nor will any part ever lack parts of its own. Therefore, if things are many, they must be both small and large—so small as to have no size, so large as to be infinite.
(2, 1)

3. *If anything is moving, it must be moving either in the place in which it is or in a place in which it is not. However, it cannot move in the place in which it is [for the place in which it is at any moment is of the same size as itself and hence allows it no room to move in], and it cannot move in the place in which it is not. Therefore movement is impossible. (—)*

4. *If place existed, it would have to be in something, i.e., in a place. (—)*

TESTIMONIA

FROM PLATO:

T 1. I see, Parmenides, said Socrates, that Zeno wishes to associate himself with you not only in friendship but also in his writings. What he has written represents virtually the same position as your own, but by altering the form of his arguments he tries to delude us into thinking he says something new. For you in your verses declare that the All is One, and you set forth admirable proofs in support of your thesis; while he, on the

other hand, says that the All is not many, and he too adduces many weighty proofs in support. One of you affirms unity, the other denies plurality. Your expressions are so diverse that on the surface your arguments appear to have nothing in common, although you are really both saying almost the same thing. Such ingenuity of expression is quite beyond the power of most of us.

Yes Socrates, Zeno replied, but you have not quite grasped the true purport of my writings. In pursuing arguments you are like a Spartan hound tracking his quarry, but it escapes your notice that my treatise is not by any means so pretentious as to have been written with the aim you ascribe to it. I was not trying to dress it up to make it appear a great performance in men's eyes. The appearance that you speak of is mere accident. Actually the purpose of my writings has been to support the argument of Parmenides against those who try to make him look foolish by deriving absurd consequences from his doctrine that all is one. What my arguments are designed to do is turn the tables on those who believe in plurality; I try to show that on close examination their thesis involves more absurd consequences than the doctrine of the One. In just that argumentative spirit I wrote my book when I was a young man, but after it was written someone stole it, so that I did not have the option of deciding whether or not I wanted to make it public. (*Parmenides* 128A-E)

FROM ARISTOTLE:

T 2. Zeno argues fallaciously that since a body is [defined to be] at rest when it is in a place of the same size as itself, and since a [supposedly] moving body would be at any given instant in just such a place, it follows that the arrow in flight does not move at all. This is a false conclusion, however; for time is not made up of instantaneous moments. . . . Actually there are

four logical conundrums which Zeno has formulated with regard to spatial movement, and there is need to find solutions to them.

The first of his arguments denies that movement exists on the ground that a moving body would have to go half the distance before it could go the entire distance.

The second is the so-called "Achilles" argument. It declares that even the swiftest runner will never overtake the slowest, because the pursuer must first reach the point from which the pursued has set out [at which moment the latter will have reached a new point, which the pursuer will then have to reach, and so on], so that the slower runner will always be some distance ahead. The argument is essentially the same as the one that depends on repeated bisection; the difference is that in this one we are not limited to dividing the distance into halves.

The third is the argument that an arrow in flight is really stationary. The proof rests upon the assumption that time is composed of instantaneous moments; if this is not granted there will be no syllogism.

The fourth argument deals with two equally spaced columns of men in the stadium marching in opposite directions, the one column starting from the outset of the race-course and the other from the turning-point. Marching at equal speeds they pass an equally placed column of stationary men. [On the ground that the two moving columns pass each other, man for man, in half the time that the men of each moving column take to pass those of the stationary column] the conclusion is drawn that the half is equal to the whole. The fallacy lies . . . in failing to distinguish between a comparison with something moving and a comparison with something at rest. (*Physica* 239b 5 ff.)

T 3. It is not hard to solve Zeno's difficulty that if place is something it must be *in* something; . . . for the vessel is not part of its contents. (*Physica* 210b 20, 28)

FROM LATER GREEK SOURCES:

T 4. Zeno was a citizen of Elea. Apollodorus in his *Chronology* speaks of him as the son of Teletagoras by birth but of Parmenides by adoption. At any rate he was a pupil of Parmenides and was his special friend. Aristotle attributes to Zeno the discovery of dialectic.

He was a man of excellent character both as philosopher and as citizen. His extant books bear the marks of a deep intellect. As a citizen he plotted the overthrow of Nearchus the tyrant but was arrested. On being questioned after his arrest as to who his accomplices were who smuggled arms into Lipara he gave the names of the tyrant's own friends, in order to deprive him of supporters.

Zeno was as indifferent to worldly reputation as Heraclitus had been. He spent his life in his native town of Elea, whose only outstanding virtue was the rearing of brave men, preferring it to the splendors of Athens which he visited very rarely. He flourished in the seventy-ninth Olympiad [464-460 B.C.].

Zeno was the first to propound the "Achilles" argument, although Favorinus ascribes its origin to Parmenides. Some of the beliefs that he held are as follows. [From the standpoint of appearance] there are many universes, but there is no empty space between them. The nature of things arose out of the pairs hot and cold, dry and moist, and these get transformed into one another. Man's coming-to-be is from the earth, and the soul is formed by a union of the qualities just mentioned, so blended that no single element predominates. (Diogenes Laertius IX. 25-29)

T 5. Aristotle regarded Parmenides' pupil Zeno as the originator of dialectic. (Sextus Empiricus, *Against the Logicians* I. 7)

T 6. A puzzle which Zeno the Eleatic propounded to Pro-