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(fl. Greece, fifth century B.C.),

Philosophy.

The first of the Greek atomists, Leucippus was probably the founder of the school of Abdera, whose most famous exponent was Democritus. Although at the end of the fourth century B.C. Epicurus denied that there had ever been any such person as Leucippus, the evidence of Aristotle is sufficient to establish that he existed and that he was earlier in date than Democritus. Aristotle treated his theories as providing a logical alternative to those of Parmenides, and a later tradition actually made him a pupil of Zeno, of the school of Parmenides. This, taken with the late chronology for Democritus, has led some scholars to date Leucippus' activity as late as 430 B.C. But neither the chronology of Democritus nor the relationship of Leucippus to Parmenides is in any way certain. Leucippus probably came from Miletus in Ionia and may have brought knowledge of the physical theories of the Ionians with him to Abdera in Thrace, either sometime after its refoundation as a colony about 500 B.C. (when it soon became an important city in the Persian system of government in Thrace) or sometime after its accession to the Athenian league in the period after 478.

By the fourth century B.C. Leucippus' basic doctrines and probably his writings as well seem to have become incorporated into a kind of corpus of atomist writings, the whole of which was attributed to his more famous pupil and successor, Democritus. Therefore, at many points it is no longer possible to distinguish what originated with Leucippus from what may have been added by Democritus. But Theophrastus attributed to Leucippus a *Megas diakosmos* ("Great World System") later listed among Democritus' writings, and one quotation is preserved from a work *On Mind*. (For the origins of atomism and the theories given in the Democritean corpus, see Democritus.)

As the last writer in a position to distinguish Leucippus' views from those of Democritus, Theophrastus makes it clear that the essentials of atomism were already held by Leucippus. Both matter and void have real existence. The constituents of matter are elements infinite in number and always in motion, with an infinite variety of shapes, completely solid in composition. We can be sure that a great deal more of Democritus' doctrine was also to be found in Leucippus, but we cannot say how much more.

On the other hand, we have preserved from Theophrastus a summary of Leucippus' account of the creation of physical worlds that is ascribed to him alone, so that it is likely to be correct in essentials. The earth and stars originated from a single whirl of colliding bodies, cut off from the infinite. The further details, which are strongly reminiscent of earlier Ionian cosmologies, include a doctrine of a surrounding membrane that has a typical early biological sound.

BIBLIOGRAPHY

The fragments and testimonia are collected in H. Diels and W. Kranz, *Die Fragmente der Vorsokratiker*, 6th ed., II (Berlin, 1952). For translation and discussion of the more important texts, see G. S. Kirk and J. E. Raven, *The Presocratic Philosophers* (Cambridge, 1957); and for more extended treatments, see C. Bailey, *The Greek Atomists and Epicurus* (Oxford, 1928); and W. K. C. Guthrie, *History of Greek Philosophy*, II (Cambridge, 1965), ch. 8.

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