

# Epicurus and Atomism

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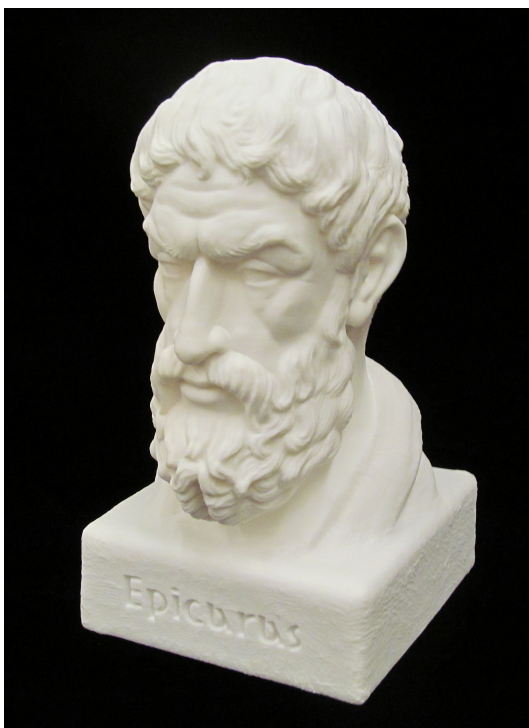


Figure 1. Our recently acquired bust of Epicurus (341-270 BC)

IN an earlier installment of *Museum Notes* I described the various busts and reliefs of famous scientists and philosophers acquired over the years by the Oesper Collections (1). More recently we have made a significant addition to this collection in the form of a bust of the Greek philosopher Epicurus (figure 1). The author has searched for such a bust for almost three decades and even asked a former graduate student in chemistry from Greece to look for one when he returned home for the summer, but with no success until quite recently, when they suddenly became available on the internet. Our example measures 6.5" x 12" and is unique in that it is not cast in either plaster or bronze but is rather made of a nylon-based polymer and was produced using a 3D printer.

It is the work of a modern-day artist but is apparently based on the bronze bust of Epicurus recovered

from the Villa of Papyri at Herculaneum in the 18th century (figure 2). This bronze bust was of great historical importance since the name of Epicurus was engraved on its pedestal thus allowing the proper identification of at least a dozen large unlabeled marble busts found in various museums throughout Europe as also being that of Epicurus.

Though most histories of science make mention of the atomic theories of the Greek philosophers Leucippus (5th century BC) and Democritus (c. 460-370 BC), in fact very little is known about either and it is actually the later version favored by Epicurus that dominates our present-day understanding of ancient Greek atomism, as may be verified by consulting the classic

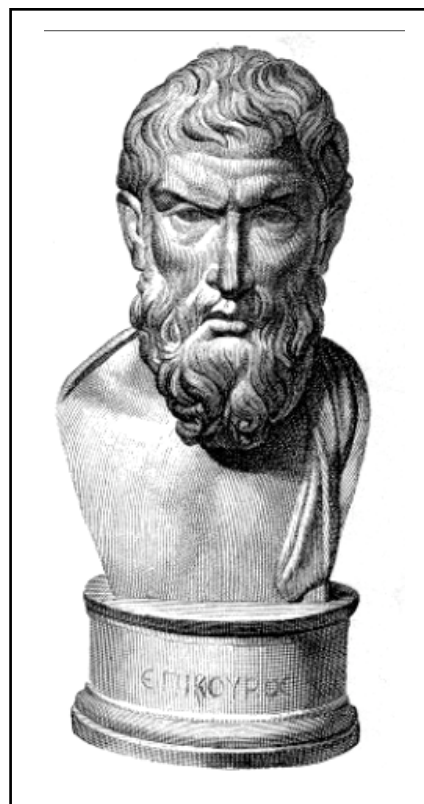


Figure 2. A 19th-century engraving of the bronze bust of Epicurus found at Herculaneum in the 18th century. Note his name on the pedestal.



Figure 3. A 19th-century drawing of a Roman finger ring thought to depict the Roman poet and Epicurean, Titus Lucretius Carus (c. 99-55 BC). This is the only known contemporary image of the poet.

study by Cyril Bailey (2). Even in the case of Epicurus, much of what we know about his version of the atomic theory comes, not so much from his own surviving writings, but from the epic poem, *On the Nature of Things*, composed by his Roman disciple, Titus Lucretius Carus (figure 3), sometime around 60 BC. As a result, many popular accounts of early atomism mention Lucretius while totally ignoring Epicurus (3), even though Lucretius intended his poem to be a faithful rendition of the ideas of Epicurus rather than an exposition of his own personal philosophical ideas (4).

The author, in his own writings on the history of chemistry, has attempted to emphasize the central role of Epicurus to both ancient atomism and to the European revival of atomism in the 17th century (5). More

recently he has called attention to the importance of Epicurean atomism, via the writings of Lucretius and Walter Charleton, to the atomic theory developed by Sir Isaac Newton (6). However, unlike Lucretius, Newton was willing to modify the ideas of Epicurus in keeping with his own theory of dynamic forces. Thus, while Epicurean atoms came in a wide variety of shapes and interacted via mechanic entanglement, Newton's atoms interacted via short-range interatomic forces – a view which fostered the notion that all atoms were, like the planets, spherical in shape.

### References and Notes

1. W. B. Jensen, "Famous Scientists in Plaster and Bronze," *Museum Notes*, November/December, 2012.
2. C. Bailey, *The Greek Atomists and Epicurus: A Study*, Clarendon: Oxford, 1928.
3. J. Masson, *The Atomic Theory of Lucretius Contrasted with Modern Doctrines of Atoms and Evolution*, Bell & Sons: London, 1884.
4. The fact that most followers of Epicurus remained faithful to his original writings rather than introducing their own interpretations and innovations has been commented on by several scholars of Epicureanism. See, for example, those in H. Jones, *The Epicurean Tradition*, Routledge: London, 1989.
5. W. B. Jensen, "Four Centuries of Atomic Theory," in C. J. Giunta, Ed., *Atoms in Chemistry: From Dalton's Predecessors to Complex Atoms and Beyond*, ACS Symposium Series, No. 1044, American Chemical Society: Washington, DC, 2010, pp. 7-19.
6. W. B. Jensen, "Newton and Lucretius: Some Overlooked Parallels," in T. J. Madigan, D. B. Suits, Eds., *Lucretius: His Continuing Influence and Contemporary Relevance*, RIT Press: Rochester, NY, 2011, pp. 13-17.