

the mind of the younger poet. The unfinished state of the poem, the harshness and lack of polish in its language and rhythm, together with the atheistic character of its doctrines account for its unpopularity in an age so refined as that of the Empire, and at a time when the Roman religion had been revived by Augustus as a political and moral necessity, with greater splendour than ever.

Of late there has sprung up a revived interest in Lucretius, especially among men of science. His admirers fall into two classes, one class reading him for his splendid poetic genius, the other reading him because of his admirably clear and straightforward exposition of a scientific theory now universally accepted, the molecular or Atomic constitution of matter. He anticipates in a marvellous way many recent discoveries in chemistry and physics. His statements are certainly true or foreshadow the truth. The agreement of his theory with the results of modern science excites our wonder how near, without experiment, ancient students of science came to a true explanation of the facts of nature. By a sort of instinct they found the true path. This is the more wonderful when we reflect that the Atomic theory, like our wave-theory of light and heat, contradicts the evidence of the senses. Its startling originality illustrates the fertile insight of the Greek mind. Yet while we accept the theory as in the main true, the deduction from it, which gave the theory its chief value to the mind of Lucretius, we must reject as false. To Lucretius the existence of eternal uncreated atoms is important, specially because this enables him to prove that the world has made itself, and that there is no room for divine action in it. The Atomic theory was not original to Lucretius, but was derived by him from Epicurus.

As the works of Democritus and Epicurus have perished, this most astonishing fruit of human thought is to be found only in the pages of Lucretius. Lucretius has added nothing additional to the theory, but he far surpasses his master, so far as can be judged by what is left of Epicurus, in the clearness, distinctness and conciseness of his statements—whereas Epicurus in his style was careless, slipshod, formless and diffuse. In particular the illustrations of Lucretius are admirable, so apt are they to the case he is explaining.

The Atomic theory was revived in modern times by Gassendi, who by his influence interested Newton and Boyle with other thinkers of the 17th and 18th centuries, in the question.

The name of Dalton, the Chemist in whose hands it acquired new force, is now inseparably connected with it. Dalton is called the father of modern chemistry from the important discoveries he made

through his adoption of the theory. He assumed the existence of atoms, conjectured that the weight of the atoms making up each element is constant, assigned different specific weights to the different kind of atoms, and discovered the laws according to which they combine. The progress of chemical knowledge has been vitally connected with the hypothesis that there are such things as atoms, ultimate particles of matter. Professor Huxley says, "If there is one thing clear about the progress of modern science, it is the tendency to reduce all scientific problems, except those that are purely mathematical, to problems in molecular physics—that is to say, to attractions, repulsions, motions and co-ordination of the ultimate particles of matter."

Up to the time of Epicurus, nature was supposed to be the result of a combination of elements, such as air, earth, fire and water, or to originate from some one of these as the original principle of the universe. Between such theories and the Atomic theory there is a great gulf.

Lucretius saw at once that the atomistic view of matter favoured his attitude to religion better than any other. His scientific views, therefore, he expounded with such poetic ardor for the sake of a new theological view of the universe. His object was to dislodge the gods of heathenism from their supremacy and to rid men's minds from superstitious fears.

All through his poem there is a pathos and boundless pity felt for the victims of the superstitions of those days that prove the sincerity of his feelings and give to his verses the glow and fervor of a prophet of some new and ennobling faith.

His first proposition is that nothing can be begotten out of nothing, but that matter is the result of a previously existing matter. Through infinite ages the same matter has existed but has taken different forms. All things are under a reign of law, nothing happens without a cause, but the cause is *in* nature not outside of it.

His second proposition is that nothing is ever annihilated, but all things on their dissolution go back into their first bodies or atoms. In other words matter is imperishable, and the total quantity of matter is never diminished. Lucretius, as usual, illustrates this scientific principle by illustrations of a beautiful character—pictures of all that is most fresh and cheerful in the world. "The rains die when father Ether has tumbled them into the lap of mother earth, but as a consequence the crops spring up, the trees put forth leaves and fruit, men and animals are fed, the birds sing in the woods, the weak-limbed young of the herd gambol on the grass intoxicated with the pure new milk; and the children, human blossoms, make glad the city streets."