

LUCRETIUS

ON THE NATURE OF THE UNIVERSE



THE PENGUIN CLASSICS

FOUNDER EDITOR (1944-64): E. V. RIEU Editor: Betty Radice

TITUS LUCRETIUS CARUS must have been born soon after 100 B.C., and was probably already dead when his poem was given to the world in 55 B.C. Almost nothing is known about his life. He was a Roman citizen and a friend of Gaius Memmius, an eminent Roman statesman, and his poem was read and admired by Cicero. It is doubtful if there is any truth in the story preserved by St Jerome and immortalized by Tennyson that he died by his own hand after being driven mad by a love philtre.

RONALD LATHAM has also translated *The Travels* of Marco Polo for the Penguin Classics. Born in Northumberland in 1907, he graduated from Balliol College, Oxford, before being apported Lecturer in Latin at Queen's University, Belfast. From 1934 until 1967, with the exception of the war years, he was an Assistant Keeper of the Public Records. Ronald Latham is an O.B.E. and a' Fellow of the Society of Antiquaries. His other publications include *In Quest of Civilization* and *Finding Out About the Normans*, and he is now engaged in editing a medieval Latin dictionary for the British Academy. He is married and has three children.

LUCRETIUS

ON THE NATURE OF THE UNIVERSE

*

TRANSLATED

AND INTRODUCED

BY R. E. LATHAM

*



PENGUIN BOOKS

Penguin Books Ltd, Harmondsworth, Middlesex, England Penguin Books, 625 Madison Avenue, New York, New York 10022, U.S.A. Penguin Books Australia Ltd, Ringwood, Victoria, Australia Penguin Books Canada Ltd, 2801 John Street, Markham, Ontario, Canada L3R 184 Penguin Books (N.Z.) Ltd, 182–190 Wairau Road, Auckland 10, New Zealand

This translation first published 1951 Reprinted 1952, 1956, 1957, 1958, 1959, 1960, 1961, 1964, 1965, 1966, 1967, 1968, 1970, 1971, 1974, 1975, 1976, 1977, 1978

> Copyright 1951 by R. E. Latham All rights reserved

Made and printed in Great Britain by Hazell Watson & Viney Ltd, Aylesbury, Bucks Set in Monotype Perpetua

Except in the United States of America, this book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form of binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser

CONTENTS

Introduction	7
Synopsis	21
Book I. MATTER AND SPACE	27
Book II. MOVEMENTS AND SHAPES OF ATOMS	60
Book III. LIFE AND MIND	96
Book IV. SENSATION AND SEX	130
Book V. COSMOLOGY AND SOCIOLOGY	171
Book VI. METEOROLOGY AND GEOLOGY	217
Select Bibliography	257
Index	259

MORTALIBUS AEGRIS

INTRODUCTION

*

If you woke up one morning to discover that some miracle had transported you to Athens in the early years of the third century B.C., you would find yourself in a social and spiritual atmosphere not altogether unfamiliar. The political ideals of the city-state – liberty, democracy, national self-sufficiency – had lost their appeal in a world dominated by large-scale despotisms and shaken by economic crises and social unrest. The old gods retained their temples and their sacrifices, but had ceased to inspire a living faith. The master minds of the preceding century, Plato and Aristotle, seemed to have no message for the rising generation – no medicine for the prevailing mood of disillusionment, scepticism, and fatalism.

In this setting, if you are one of those who believe that civilization with all its conventional values has been debunked, you would find congenial company among the followers of Diogenes the Cynic, whose simple and self-centred life in the tub had demonstrated how many valued assets of mind and body it is possible to do without. If you are a puzzled seeker after the Unknown God, you would find yourself no less at home among the Stoics, the devout company who gathered in the Painted Portico to hear that impassioned prophet Zeno of Cyprus proclaim his doctrine of submission to an all-wise Providence. And, if you are by temperament a rationalist, ready to welcome the assurance that modern science has disposed, once and for all, of the fairy-tales that pleased our grandparents and the bogeys that frightened them, then sooner or later you would find your way to that peaceful garden where Epicurus preached his gospel of salvation by common sense.

The Epicurean gospel was spread by zealous missionaries throughout the Greek world, and a century or so after the Master's death it was preached within the walls of all-conquering Rome (175 B.C.). The Roman aristocracy, whose system was founded on authority and tradition, expelled these first apostles as dangerously subversive. But a century later, with the spread of Greek culture and the decay of traditional standards among the educated classes at Rome, the new doctrine had made many converts. In particular, it impinged with all the force of a divine revelation on the sensitive soul of one Roman citizen, by name Titus Lucretius Carus, who happened also to be one of the world's supremely great poets. And Lucretius, like a true Epicurean, turned aside from the path of politics and war which was the normal career of the Roman gentleman and devoted his life to an exposition of his Master's teaching.

In form, the poem is addressed to Gaius Memmius, an eminent Roman statesman whose career is no great testimony to the moral efficacy of Epicurean doctrine. In fact, Lucretius was addressing a wider audience in the hope that, tempted by 'the sweet honey of the Muses' (1 947), they would 'swallow the bitter draught' of his doctrine and so find peace. Not least, he was addressing us. In the course of 2,000 years of scientific and religious experience, some articles of his creed have become incredible, some have become commonplace. But we can still feel the impulsive force of his tremendous personal conviction, even if at times our chief impulse may be to counter his arguments and urge him to think again. There is no ancient writer who speaks more directly to the modern reader.

Apart from this poem, Lucretius is scarcely more than a name. He must have been born soon after 100 B.C., on the eve of the murderous civil war between the aristocrat Sulla and the Popular leader Marius. He was probably already dead when his poem was given to the world about 55 B.C., during the uneasy lull that preceded the recrudescence of civil war under Pompey and Caesar. It is doubtful what truth, if any, lies behind the traditional story

1. His reference almost at the end of the poem to the British climate (VI 1106) prompts the question whether he may have lived to hear a report of Caesar's expedition of 55 B.C., possibly from Quintus Cicero, who was Caesar's lieutenant and was probably a friend of the poet.

(immortalized by Tennyson) that he died by his own hand after being driven mad by a love philtre. Certainly, there are omissions and loose ends, especially in the later books, which suggest that the author had not time to complete the work of revision. Few, however, will readily accept the statement of the ancient biographer that this masterpiece of logical coherence was created by a madman in his 'lucid intervals'. Readers are more likely to echo the surprise implied in the comment of his first critic, Cicero, in a letter to his brother Quintus (Feb., 54 B.C.), that it was written 'with many high-lights of genius, but with much art'. To the poet himself, the purple patches of lyric beauty and intensity were of secondary importance: they were woven with great care into the pattern of an exceedingly tough fabric.

Lucretius failed in his purpose. As a poet he has had no lack of admirers. From Virgil onwards they have been ready enough to sip the honey of his verse. But comparatively few were prepared to profit by his unpalatable physic. Under the Roman Empire there were many avowed Epicureans; but they were interested in the Master's tolerant and easy-going morality rather than its scientific and philosophic foundations. To the Christians the whole system was of course anathema, though some of the Fathers found Lucretius a useful arsenal of ammunition against the Pagan gods. From the collapse of Classical civilization, only one battered manuscript of the poem was preserved to form the basis of all existing copies. In the Renaissance Lucretius was rediscovered as a poet; but it is only since the seventeenth century, when the rationalizing French priest Gassendi advanced an atomic theory based on his teaching, that Epicureanism has been treated with respect as a serious attempt to explain the physical universe. As recently as 1918, when a defence of materialism by H. Woods appeared under the Lucretian title On the Nature of Things, it was possible to argue that with minor modifications Lucretius' teaching could be reconciled with the latest findings of modern science. Today, for better or for worse, the atom has been well and truly split, and it looks as though much of the mechanical materialism of the eighteenth and nineteenth centuries has been shattered with

it. But this change (which may not be permanent) in the content of current scientific theories does not lessen the value of Lucretius' poem as a poet's exposition of the scientific outlook - or at least of an outlook which has inspired much of the most fruitful work in the field of the natural sciences. Lucretius was one of the relatively small number who have accepted the evidence of the senses at its face value - have dismissed metaphysical abstractions, Divine Providence and the immortal soul as vain illusions - and at the same time have found ample grounds for wonder and joy in the perceptible universe and the omnipotent and omnipresent working of natural law. The present translator had the pleasure of introducing Lucretius to a scientific worker who had felt constrained to accept this materialist view at any rate as a working hypothesis. In his enthusiastic response to the Lucretian vision of the universe it was possible to see a reflexion (an 'image', as Lucretius would have called it) of the poet's own reaction to the teaching of Epicurus.

In essence Epicureanism is the simplest of all philosophies - so simple that it is hard to find words for it in a language that teems with names for objects which Epicurus believed to be non-existent. He believed that all knowledge is derived from the senses (cf. Lucretius I 422-5, etc.). Things are exactly as they appear to be to our senses, or rather as they would appear to be if our senses were slightly more acute. Material objects are perceived. Therefore they exist. When the wind blows through the tree tops, we perceive that the branches toss; but the wind itself is not perceived (I 271-97). Must we then suppose that it is something different in kind from the things we do perceive? Not at all. We can imagine it (i.e. form an image of it) as a stream of material particles, like motes in a sunbeam (II 126) but even smaller, knocking against the boughs. By similar reasoning Epicurus sought to explain everything we perceive without positing the existence of anything other than material objects and the space in which they move, which is simply the absence of material objects. From this primary assumption everything else follows. Astronomers are wrong in supposing the moon to be something other than that shining disc (or part-disc) whose image strikes on our eyes (V 577-8, etc.). Psychologists are wrong in thinking that the mind is anything other than an assemblage of very mobile particles that easily group themselves into patterns or images in conformity with other images that impinge upon them from outside objects (see below, pp. 17-18). Moralists are wrong in supposing that anything can be good except those pleasurable sensations (or movements of the mind atoms) which the senses themselves immediately perceive to be good (II 258, 966; VI 26, etc.). We are all wrong when we delude ourselves with dreams, or torment ourselves with nightmares, of invisible powers interfering to upset the regular and determinate working of the perceptible universe (V 76-90, etc.).

Most of the Epicurean dogmas, however startling they may appear at first sight, can be readily grasped as attempts to apply this central principle in the absence of microscopes or other aids to sense-perceptions and of any technique for testing hypotheses by practical experiment. As expounded by Lucretius, they fit easily into place with no more explanation than he himself supplies. Of course every dogma has a history. The historically minded reader will be intrigued to catch the echoes of forgotten controversies - a tirade against the Stoic hero Hercules or an elephantine mockery of Anaxagoras for a theory that he probably never held. He will also trace the debt of Epicurus to the fifth-century atomists, Leucippus and Democritus. But it is possible to know nothing of these things and still to understand and enjoy Lucretius. For these problems lie below the surface; and Epicurus was consciously and deliberately superficial. Epicurus, one might say, believed that truth was not at the bottom of the well, but very near the surface, scarcely veiled in the outward appearance of things. For this reason his language was pictorial, and in the hands of a poet easily became picturesque. For the same reason he was remarkably free from the tyranny of words and the disguised assumptions implied in them. He was less inclined than most philosophers to regard the common beliefs of his contemporaries as universal truths, Plato and Aristotle were

doubtless far more profound thinkers; but they are unmistakably dated as fourth-century Greeks, thinking in terms of Hellene and Barbarian, citizen and alien, free man and slave. For Epicurus, these distinctions which eluded the senses were not part of the essence of man, but mere accidents (I 455-8).

In one notable particular, Epicurus failed to escape the limitations of his age. He accepted the word 'god' (in the Classical, not the Christian, sense) as the name of an object. He could not believe that those stately figures that caught his eye at every street corner, that were stamped on every coin and painted on every jar, were 'images' that had formed themselves in the mind atoms of the original artists without pressure from without. They must correspond to some external object. So he found a home for the blessed Olympians far away from human affairs, in the interspaces between the worlds (II 1090-1104; III 18-24; V 146-73, etc.), and worshipped them as models of felicity in the happy assurance that they were as impotent as they were indifferent.

In one particular, again, Epicurus indulged in a metaphysical subtlety foreign to the spirit of his materialist doctrine. As a moralist, he believed in free will. If the movements of the atoms were absolutely determined, as Democritus had taught, it seemed to him that all human actions must be equally determinate. Therefore the atoms must swerve, very rarely and very little, from the paths ordained for them by nature (II 216–93). To contemporaries this seemed an absurd notion. We may doubt whether it was really relevant to the moral question at issue. But it was the one concession in a dogmatic system to that element of the inexplicable and unpredictable in nature which some modern physicists have been driven to acknowledge by a somewhat similar concession.

This then was the raw material of Lucretius' poem. And, because he was a disciple first and a poet second, he assigned a place in the plan to every jot of the Master's teaching, however dull or trivial. He must deal as painstakingly with knotty problems of optics or meteorology as with the inspiring topic of human progress and the origin of civilization. He might add a little honey

of his own, but he would not alter the prescription. Only, as a poet, he could not help colouring the mixture with the lights and shades of his own strongly marked personality.

Like Epicurus, Lucretius was an enemy of 'religion' – all the more so because the omens and taboos that made up the substance of Roman religio² were even more obviously designed than Greek mythology to terrorize and bewilder. He accepted the shadowy gods of Epicurus, but was not interested in them. He reserved his religious emotions for an impersonal Nature, invoked at the opening of the poem under the conventional guise of Venus. He found Nature blind, soulless and purposeless, but with a breathtaking beauty and majesty that could dispense with any personal attributes.

Above all, Lucretius took delight in the fruitfulness of Nature. With this went, not unnaturally, a deep appreciation of domestic happiness (III 894–6), and an antipathy to the barren cult of 'love' as glorified by contemporary poets. This, like the romantic love of the troubadours, was entirely dissociated from marriage. But, unlike romantic love, it was not praised as an incentive to heroic deeds. It was a sentiment indulged in for its own sake. And as such it was condemned by Lucretius (IV 1058–1191), from the Epicurean standpoint, with a bitterness never excelled by the sternest of Puritans.

Epicurus disapproved of intense pleasure because of the inevitable reaction. His goal was tranquillity; and, since he seems to have enjoyed an equable temperament, he may have come near to attaining it. Lucretius did not. By temperament he was more poet than philosopher, a man of moods. He may have intended to end his poem on a more cheerful and Epicurean note than that struck by the actual conclusion of the text (VI 1138–1286) – a highly coloured version of Thucydides' grim account of the plague

2. This was a neutral term, neither good nor evil. Since it normally excluded some essential elements of our word 'religion' (e.g. righteous conduct and the sense of mystic communion), it has generally been translated here as 'superstition'; but in itself it did not convey the derogatory implications of superstitio and its English derivative.

14

S. F. E. H. C. L.

of 430 B.C. at Athens. But a man so sensitive to human suffering must have found himself at best a lonely figure among his tough contemporaries. He could sympathize with Nature. But, in that age of mad ambition and murderous class-war (I 29–43; III 59–86), he found it hard to sympathize with his fellow men. He was oppressed at times (as Epicurus, apparently, was not) by the unfriendliness of the world (II 573–80; V 195–234) and the thought of its impending dissolution (II 1150–74; V 91–109; VI 596–607). We may suspect that the childish terrors, of which he speaks so feelingly (II 55–8, etc.), were not so much banished by his philosophy as diverted into other channels. Yet the great attraction of Lucretius is undoubtedly his defiant conviction that he has honestly faced these fears and trampled them underfoot – that he is, as Virgil saw him, happy in having understood the causes of things (I 78–9; III 14–40, 319–22; Virgil: Georgics, II 490).

For the translator the poem of Lucretius poses an awkward problem. There are indeed several English versions that admirably fulfil the purpose of aiding the student in his study of the original text. But in achieving this object they can scarcely fail to strike a reader unversed in Latin idiom as strangely contorted and at times barely intelligible. When such a reader is confronted by the sentence, 'And therefore their seats as well must be unlike our seats, fine, as their bodies are fine' (V 153-4), or 'But that you may not by chance think that after all only those idols of things wander abroad which come off from things, there are those too which are begotten of their own accord, and are formed of themselves in this sky that is called air' (IV 129-32), he may be pardoned if he decides that Lucretius is beyond his comprehension. In fact these scholarly translators (to one of whom, incidentally, I owe a deep debt of gratitude for his illuminating and exciting lectures) set themselves an impossible task. The present version was undertaken in the hope that, by abandoning all attempt to reproduce the grammatical structure of the Latin, it might prove possible to express the poet's meaning and something of his spirit without any wide departure from normal English usage.

INTRODUCTION

After all, what Lucretius himself was trying to do was to convey a fundamentally simple message in direct and forcible language. Where he failed (which was not in fact very often), this was not usually due to any intrinsic complexity or abstruseness in the 'dark discoveries' (I 136) of his Master. Still less was he hampered by any personal bent towards over-subtlety or pretentiousness that might have made him unable or unwilling to express himself clearly. His main difficulty, as he fully recognized, was 'the poverty of his native speech' (I 139, 832; III 260) - the speech of a semi-barbarous people who had displayed unequalled aptitude for the arts of government and war but had so far devoted very little thought to 'the nature of the universe'. The Latin of Lucretius' day had no accepted philosophic or scientific vocabulary, and his generation had to create one for themselves on the Greek model. In this task Lucretius was handicapped by his resolve to 'honey his medicine' (I 947) by writing in the exacting medium of heroic verse. This automatically debarred him from using any of the numerous Latin words that eannot be squeezed into a hexameter. It also imposed certain literary conventions. In modelling himself on the 'immortal verses' (F 121) of Ennius, the great epic poet of the preceding century. Lucretius committed himself to a style rich in archaisms and indirect allusions ('fleecy tribes', 'vinebegotten fluid', and the like) and in striking effects of alliteration and assonance that occasionally degenerated into jingles. Obviously he found this style congenial. But his choice of it was not just a personal eccentricity. While a phrase like mutae natantes squamigerum pecudes (II 342-3) was not the normal Latin way of saying 'fish', it was the sort of phrase a poet of the old school was expected to use: it can scarcely have affected a contemporary Roman as a twentieth-century Englishman would be affected by 'voiceless swimming flocks of scaly ones'.

If Lucretius could achieve lucidity and dignity in the teeth of an intractable vocabulary and a stylistic convention not altogether appropriate to his purpose, they should not be beyond the reach of a relatively unfettered translator. But the latter soon discovers, not only that he is not Lucretius but that his freedom means loss

as well as gain. In writing twentieth-century English, he must often choose between an archaic expression with pleasing associations and a baldly scientific one. The distinction was not so clearcut in the seventeenth century, when the adjective 'massy', for instance, was equally at home in the languages of Milton and of Newton. But since then poetry and science have gone different ways, and recent attempts to reunite them have not yet been wholly successful. So, where Lucretius could so wield his limited vocabulary as to combine the Biblical stateliness of 'every beast of the field after his kind eating green herb' with the scientific precision of 'every species of herbivorous mammal', the translator often finds it hard not to sacrifice one or the other. By injudicious compromise he may easily sacrifice both. I have tried to steer a middle course, but a somewhat zigzag one. My aim has been to match passages of close reasoning with a suitably technical terminology. In other passages, where the surging music of the Latin has imposed on the translation an unescapable rhythmic beat, the vivid Lucretian imagery has demanded a language more native to verse than to scientific prose. In theory, I believe, this course can be convincingly justified. How far I have actually succeeded in dodging the reefs that beset it is another matter.

Lucretius naturally indulges far less freely than most Classical poets in those mythological allusions that agreeably flattered the intelligence of ancient readers but on modern ones are more likely to act as an irritant. A few such passages, however, have seemed to me sufficiently obscure to merit elucidation by a somewhat free rendering: e.g. a literal translation of I 739 (= V 112) would be, 'those that the Pythian woman pronounces from Phoebus' tripod and laurel', an expression that would not have puzzled any educated reader in a society which accepted Greek mythology as one of the main vehicles of education. There is in any case no need to increase the mythological element in Lucretius by making him refer to the sun as 'he' and to the moon as 'she' because the rules of Latin grammar prevent him from doing otherwise.

Particular problems are presented by some of Lucretius' keywords. Since his primordia rerum correspond to the atomoi of