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LUCRETIUS  
THE NATURE  
OF THE  
UNIVERSE



A NEW TRANSLATION BY  
R. E. LATHAM

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THE PENGUIN  
CLASSICS

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THE PENGUIN CLASSICS

EDITED BY E. V. RIEU

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LUCRETIUS  
ON THE NATURE OF THE  
UNIVERSE

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TRANSLATED  
AND WITH AN INTRODUCTION  
BY RONALD LATHAM

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and the white milky juice oozes from their swollen udders. Hence a new generation frolic friskily on wobbly legs through the fresh grass, their young minds tipsy with undiluted milk. Visible objects therefore do not perish utterly, since nature repairs one thing from another and allows nothing to be born without the aid of another's death. X

Well, Memmius, I have taught you that things cannot be created out of nothing nor, once born, be summoned back to nothing. Perhaps, however, you are becoming mistrustful of my words, because these atoms of mine are not visible to the eye. Consider, therefore, this further evidence of *bodies whose existence you must acknowledge though they cannot be seen*. First, wind, when its force is roused, whips up waves, founders tall ships and scatters cloud-rack. Sometimes scouring plains with hurricane force it strews them with huge trees and batters mountain peaks with blasts that hew down forests. Such is wind in its fury, when it whoops aloud with a mad menace in its shouting. Without question, therefore, there must be invisible particles of wind which sweep sea and land and the clouds in the sky, swooping upon them and whirling them along in a headlong hurricane. In the way they flow and the havoc they spread they are no different from a torrential flood of water when it rushes down in a sudden spate from the mountain heights, swollen by heavy rains, and heaps together wreckage from the forest and entire trees. Soft though it is by nature, the sudden shock of oncoming water is more than even stout bridges can withstand, so furious is the force with which the turbid, storm-flushed torrent surges against their piers. With a mighty roar it lays them low, rolling huge rocks under its waves and brushing aside every obstacle from its course. Such, therefore, must be the movement of blasts of wind

eludes the most attentive scrutiny of our eyes. Conversely, you cannot see what objects lose by the wastage of age – sheer sea-cliffs, for instance, exposed to prolonged erosion by the mordant brine – or at what time the loss occurs. It follows that nature works through the agency of invisible bodies.

On the other hand, things are not hemmed in by the pressure of solid bodies in a tight mass. This is because there is vacuity in things. A grasp of this fact will be helpful to you in many respects and will save you from much bewildered doubting and questioning about the universe and from mistrust of my teaching. Well then, by vacuity I mean intangible and empty space. If it did not exist, things could not move at all. For the distinctive action of matter, which is counteraction and obstruction, would be in force always and everywhere. Nothing could proceed, because nothing would give it a starting-point by receding. As it is, we see with our own eyes at sea and on land and high up in the sky that all sorts of things in all sorts of ways are on the move. If there were no empty space, these things would be denied the power of restless movement – or rather, they could not possibly have come into existence, embedded as they would have been in motionless matter.

Besides, there are clear indications that things that pass for solid are in fact porous. Even in rocks a trickle of water seeps through into caves, and copious drops ooze from every surface. Food percolates to every part of an animal's body. Trees grow and bring forth their fruit in season, because their food is distributed throughout their length from the tips of the roots through the trunk and along every branch. Noises pass through walls and fly into closed buildings. Freezing cold penetrates to the bones. If there

on this foundation is not valid, there will be no standard to which we can refer any doubt on obscure questions for rational confirmation. If there were no place and space, which we call vacuity, these bodies could not be situated anywhere or move in any direction whatever. This I have just demonstrated. It remains to show that *nothing exists that is distinct both from body and from vacuity* and could be ranked with the others as a third substance. For whatever *is* must also be something. If it offers resistance to touch, however light and slight, it will increase the mass of body by such amount, great or small, as it may amount to, and will rank with it. If, on the other hand, it is intangible, so that it offers no resistance whatever to anything passing through it, then it will be that empty space which we call vacuity. Besides, whatever it may be in itself, either it will act in some way, or react to other things acting upon it, or else it will be such that things can be and happen in it. But without body nothing can act or react; and nothing can afford a place except emptiness and vacancy. Therefore, besides matter and vacuity, we cannot include in the number of things any third substance that can either affect our senses at any time or be grasped by the reasoning of our minds.

You will find that anything that can be named is either a property or an accident of these two. A *property* is something that cannot be detached or separated from a thing without destroying it, as weight is a property of rocks, heat of fire, fluidity of water, tangibility of all bodies, intangibility of vacuum. On the other hand, servitude and liberty, poverty and riches, war and peace, and all other things whose advent or departure leaves the essence of a thing intact, all these it is our practice to call by their appropriate name, *accidents*.

Similarly, time by itself does not exist; but from things

themselves there results a sense of what has already taken place, what is now going on and what is to ensue. It must not be claimed that anyone can sense time by itself apart from the movement of things or their restful immobility.

Again, when men say it is a fact that Helen was ravished or the Trojans were conquered, do not let anyone drive you to the admission that any such event *is* independently of any object, on the ground that the generations of men of whom these events were accidents have been swept away by the irrevocable lapse of time. For we could put it that whatever has taken place is an accident of a particular tract of earth or of the space it occupied. If there had been no matter and no space or place in which things could happen, no spark of love kindled by the beauty of Tyndareus' daughter would ever have stolen into the breast of Phrygian Paris to light that dazzling blaze of pitiless war; no Wooden Horse, unmarked by the sons of Troy, would have set the towers of Ilium aflame through the midnight issue of Greeks from its womb. So you may see that events cannot be said to *be* by themselves like matter or in the same sense as space. Rather, you should describe them as accidents of matter, or of the place in which things happen.

*Material objects are of two kinds, atoms and compounds of atoms. The atoms themselves cannot be swamped by any force, for they are preserved indefinitely by their absolute solidity.* Admittedly, it is hard to believe that anything can exist that is absolutely solid. The lightning stroke from the sky penetrates closed buildings, as do shouts and other noises. Iron glows molten in the fire, and hot rocks are cracked by untempered scorching. Hard gold is softened and melted by heat; and bronze, ice-like, is liquefied by flame. Both heat and piercing cold seep through silver, since we feel both alike

when a cooling shower of water is poured into a goblet that we hold ceremonially in our hands. All these facts point to the conclusion that nothing is really solid. But sound reasoning and nature itself drive us to the opposite conclusion. Pay attention, therefore, while I demonstrate in a few lines that there exist certain bodies that are absolutely solid and indestructible, namely those atoms which according to our teaching are the seeds or prime units of things from which the whole universe is built up.

In the first place, we have found that nature is twofold, consisting of two totally different things, matter and the space in which things happen. Hence each of these must exist by itself without admixture of the other. For, where there is empty space (what we call vacuity), there matter is not; where matter exists, there cannot be a vacuum. Therefore the prime units of matter are solid and free from vacuity.

Again, since composite things contain some vacuum, the surrounding matter must be solid. For you cannot reasonably maintain that anything can hide vacuity and hold it within its body unless you allow that the container itself is solid. And what contains the vacuum in things can only be an accumulation of matter. Hence matter, which possesses absolute solidity, can be everlasting when other things are decomposed.

Again, if there were no empty space, everything would be one solid mass; if there were no material objects with the property of filling the space they occupy, all existing space would be utterly void. It is clear, then, that there is an alternation of matter and vacuity, mutually distinct, since the whole is neither completely full nor completely empty. There are therefore solid bodies, causing the distinction between empty space and full. And these, as I have just

immediate death of what was before. It follows that they must leave something intact, or you would find everything reduced to nothing and the stock of things reborn and reinvigorated from nothing. As it is, there are certain definite bodies that always keep the same nature, and it is by the withdrawal or advent of these and their reshuffling that things change their nature and material objects are transformed. And these primary bodies cannot be fiery. So long as they possessed and retained a fiery nature, it would make no odds if some of them were detached and withdrawn and others tacked on and some were reshuffled. Whatever they created would still be simply fire. The truth, as I maintain, is this: there are certain bodies whose impacts, movements, order, position and shapes produce fires. When their order is changed, they change their nature. In themselves they do not resemble fire or anything else that can bombard our senses with particles or impinge on our organs of touch.

To say, as Heraclitus does, that everything is fire, and nothing can be numbered among things as a reality except fire, seems utterly crazy. On the basis of the senses he attacks and unsettles the senses – the foundation of all belief and the only source of his knowledge of that which he calls fire. He believes that the senses clearly perceive fire, but not the other things that are in fact no less clear. This strikes me as not only pointless but mad. For what is to be our standard of reference? What can be a surer guide to the distinction of true from false than our own senses? What grounds have we for taking away everything else and leaving fire, any more than for taking away fire and leaving some other thing? Either procedure appears equally insane.

For this reason those who have thought that fire is the raw material of things and the universe can consist of fire, and

among the very foundations of things they have come to grief. Great as they were, great has been their fall.

Their first error is this: they postulate movement while banishing empty space from the universe, and they admit the existence of soft and flimsy things – air, sun, fire, soils, animals, vegetables – without allowing their bodies an intermixture of vacuity.

Secondly, they acknowledge no limit to the splitting of things, no rest from crumbling, no prime unit of matter, although we see that every object has an ultimate point that seems to our senses to be the smallest, from which you may infer that the things you cannot perceive have also an ultimate point which actually is the smallest. Besides, since they rank as elements soft things which we perceive to be neither birthless nor deathless, the universe ought by now to have returned to nothing and whatever exists ought to be a new creation and growth out of nothing, both of which suppositions you already know to be false. Furthermore, these supposed elements are in many ways hurtful and lethal to one another, so that they will either be destroyed on contact or will rush apart, as we see lightning flashes, rain-clouds and winds rush apart when they have been driven together by a storm.

Again, if everything is created from four things and resolved into them, why should we say that these are the elements of things rather than the reverse – that other things are the elements of these? For one gives birth to another continually, and they interchange their colours and their entire natures throughout the whole of time. If, on the other hand, you believe that particles of fire and earth, airy wind and watery moisture, combine without changing their natures in combination, then nothing can be created from them, either animate or (like a tree) with inanimate body.

while you gain insight into the nature of the universe and the pattern of its architecture.

Well then, since I have shown that there are completely solid indestructible particles of matter flying about through all eternity, let us elucidate whether or not there is any limit to their number. Similarly, as we have found that there is a vacuum, the place or space in which things happen, let us see whether its whole extent is limited or whether it stretches far and wide into immeasurable depths.

Learn, therefore, that the universe is not bounded in any direction. If it were, it would necessarily have a limit somewhere. But clearly a thing cannot have a limit unless there is something outside to limit it, so that the eye can follow it up to a certain point but not beyond. Since you must admit that there is nothing outside the universe, it can have no limit and is accordingly without end or measure. It makes no odds in which part of it you may take your stand: whatever spot anyone may occupy, the universe stretches away from him just the same in all directions without limit. Suppose for a moment that the whole of space were bounded and that someone made his way to its uttermost boundary and threw a flying dart. Do you choose to suppose that the missile, hurled with might and main, would speed along the course on which it was aimed? Or do you think something would block the way and stop it? You must assume one alternative or the other. But neither of them leaves you a loophole. Both force you to admit that the universe continues without end. Whether there is some obstacle lying on the boundary line that prevents the dart from going farther on its course or whether it flies on beyond, it cannot in fact have started from the boundary. With this argument I will pursue you. Wherever you may place the ultimate limit of things, I will ask you: 'Well then,

what does happen to the dart?' The upshot is that the boundary cannot stand firm anywhere, and final escape from this conclusion is precluded by the limitless possibility of running away from it.

It is a matter of observation that one thing is limited by another. The hills are demarcated by air, and air by the hills. Land sets bounds to sea, and sea to every land. But the universe has nothing outside to limit it.

Further, if all the space in the universe were shut in and confined on every side by definite boundaries, the supply of matter would already have accumulated by its own weight at the bottom, and nothing could happen under the dome of the sky — indeed, there would be no sky and no sunlight, since all the available matter would have settled down and would be lying in a heap throughout eternity. As it is, no rest is given to the atoms, because there is no bottom where they can accumulate and take up their abode. Things go on happening all the time through ceaseless movement in every direction; and atoms of matter bouncing up from below are supplied out of the infinite. There is therefore a limitless abyss of space, such that even the dazzling flashes of the lightning cannot traverse it in their course, racing through an interminable tract of time, nor can they even shorten the distance still to be covered. So vast is the scope that lies open to things far and wide without limit in any dimension.

The universe is restrained from setting any limit to itself by nature, which compels body to be bounded by vacuum and vacuum by body. Thus nature either makes them both infinite in alternation, or else one of them, if it is not bounded by the other, must extend in a pure state without limit. Space, however, being infinite, so must matter be. Otherwise neither sea nor land nor the bright zones of the sky nor mortal beings nor the holy bodies of the gods could

selves could not be maintained without an unlimited supply of matter from all quarters.

2 | There is one belief, Memmius, that you must beware of entertaining — *the theory that everything tends towards what they call 'the centre of the world'*. On this theory, the world stands fast without any impacts from without, and top and bottom cannot be parted in any direction, because everything has been tending towards the centre — if you can believe that anything rests upon itself. Whatever heavy bodies there may be under the earth must then tend upwards and rest against the surface upside down, like the images of things which we now see reflected in water. In the same way they would have it that animals walk about topsy-turvy and cannot fall off the earth into the nether quarters of the sky any more than our bodies can soar up spontaneously into the heavenly regions. When they are looking at the sun, we see the stars of night; so they share the hours with us alternately and experience nights corresponding to our days. But this is an idle fancy of fools who have got hold of the wrong end of the stick. There can be no centre in infinity. And, even if there were, nothing could stand fast there rather than flee from it. For all place or space, at the centre no less than elsewhere, must give way to heavy bodies, no matter in what direction they are moving. There is no place to which bodies can come where they lose the property of weight and stand still in the void. And vacuum cannot stand in the way of anything so as not to allow it free passage, as its own nature demands. Therefore things cannot be held in combination by this means through surrender to a craving for the centre.

Besides, they do not claim that all bodies have this tendency towards the centre, but only those of moisture

## MOVEMENTS AND SHAPES OF ATOMS

\*

WHAT joy it is, when out at sea the stormwinds are lashing the waters, to gaze from the shore at the heavy stress some other man is enduring! Not that anyone's afflictions are in themselves a source of delight; but to realize from what troubles you yourself are free is joy indeed. What joy, again, to watch opposing hosts marshalled on the field of battle when you have yourself no part in their peril! But this is the greatest joy of all: to stand aloof in a quiet citadel, stoutly fortified by the teaching of the wise, and to gaze down from that elevation on others wandering aimlessly in a vain search for the way of life, pitting their wits one against another, disputing for precedence, struggling night and day with unstinted effort to scale the pinnacles of wealth and power. O joyless hearts of men! O minds without vision! How dark and dangerous the life in which this tiny span is lived away! Do you not see that nature is clamouring for two things only, a body free from pain, a mind released from worry and fear for the enjoyment of pleasurable sensations?

So we find that the requirements of our bodily nature are few indeed, no more than is necessary to banish pain. To heap pleasure upon pleasure may heighten men's enjoyment at times. But what matter if there are no golden images of youths about the house, holding flaming torches in their right hands to illumine banquets prolonged into the night?

What matter if the hall does not sparkle with silver and gleam with gold, and no carved and gilded rafters ring to the music of the lute? Nature does not miss these luxuries when men recline in company on the soft grass by a running stream under the branches of a tall tree and refresh their bodies pleurably at small expense. Better still if the weather smiles upon them and the season of the year stipples the green herbage with flowers. Burning fevers flee no swifter from your body if you toss under figured counterpanes and coverlets of crimson than if you must lie in rude homespun.

If our bodies are not profited by treasures or titles or the majesty of kingship, we must go on to admit that neither are our minds. Or tell me, Memmius, when you see your legions thronging the Campus Martius in the ardour of mimic warfare, supported by ample auxiliaries, magnificently armed and fired by a common purpose, does that sight scare the terrors of superstition from your mind? Does the fear of death retire from your breast and leave it carefree at the moment when you sight your warships ranging far and wide? Or do we not find such resources absurdly ineffective? The fears and anxieties that dog the human breast do not shrink from the clash of arms or the fierce rain of missiles. They stalk unabashed among princes and potentates. They are not awe-struck by the gleam of gold or the bright sheen of purple robes.

Can you doubt then that this power rests with reason alone? All life is a struggle in the dark. As children in blank darkness tremble and start at everything, so we in broad daylight are oppressed at times by fears as baseless as those horrors which children imagine coming upon them in the dark. This dread and darkness of the mind cannot be dispelled by the sunbeams, the shining shafts of day, but

only by an understanding of the outward form and inner workings of nature.

And now to business. I will explain *the motion by which the generative bodies of matter give birth to various things*, and, after they are born, dissolve them once more; the force that compels them to do this; and the power of movement through the boundless void with which they are endowed. It is for you to devote yourself attentively to my words.

Be sure that matter does not stick together in a solid mass. For we see that everything grows less and seems to melt away with the lapse of time and withdraw its old age from our eyes. And yet we see no diminution in the sum of things. This is because the bodies that are shed by one thing lessen it by their departure but enlarge another by their coming; here they bring decay, there full bloom, but they do not linger there. So the sum of things is perpetually renewed. Mortals live by mutual interchange. One race increases by another's decrease. The generations of living things pass in swift succession and like runners hand on the torch of life.

If you think that the atoms can stop and by their stopping generate new motions in things, you are wandering far from the path of truth. Since the atoms are moving freely through the void, they must all be kept in motion either by their own weight or on occasion by the impact of another atom. For it must often happen that two of them in their course knock together and immediately bounce apart in opposite directions, a natural consequence of their hardness and solidity and the absence of anything behind to stop them.

As a further indication that all particles of matter are on the move, remember that the universe is bottomless: there is no place where the atoms could come to rest. As I have already shown by various arguments and proved conclusively,

are rolled in the mouth, cause an agreeable sensation to the tongue. But bitter wormwood and astringent centaury screw the mouth awry with their nauseating savour. You may readily infer that such substances as agreeably titillate the senses are composed of smooth round atoms. Those that seem bitter and harsh are more tightly compacted of hooked particles and accordingly tear their way into our senses and rend our bodies by their inroads.

The same conflict between two types of structure applies to everything that strikes the senses as good or bad. You cannot suppose that the rasping stridulation of a screeching saw is formed of elements as smooth as the notes a minstrel's nimble fingers wake from the lyre-strings and mould to melody. You cannot suppose that atoms of the same shape are entering our nostrils when stinking corpses are roasting as when the stage is freshly sprinkled with saffron of Cilicia and a near-by altar exhales the perfumes of the Orient. You cannot attribute the same composition to sights that feast the eye with colour and to those that make it smart and weep or that appear loathsome and repulsive through sheer ugliness. Nothing that gratifies the senses is ever without a certain smoothness of the constituent atoms. Whatever, on the other hand, is painful and harsh is characterized by a certain roughness of matter. Besides these there are some things that are not properly regarded as smooth but yet are not jagged with barbed spikes. These are characterized instead by slightly jutting ridges such as tickle the senses rather than hurt them. They include such things as wine-lees and piquant endive. Hot fire, again, and cold frost stab the senses of our body with teeth of a different pattern, as we learn from the different way they affect our sense of touch. For touch and nothing but touch (by all that men call holy!) is the essence of all our bodily sensations, whether we feel

XX |  
with sight!

upward glance into the luminous regions of the sky. So has satiety blunted the appetite of our eyes. Desist, therefore, from thrusting out reasoning from your mind because of its disconcerting novelty. Weigh it, rather, with discerning judgment. Then, if it seems to you true, give in. If it is false, gird yourself to oppose it. For the mind wants to discover by reasoning what exists in the infinity of space that lies out there, beyond the ramparts of this world – that region into which the intellect longs to peer and into which the free projection of the mind does actually extend its flight.

Here, then, is my first point. In all dimensions alike, on this side or that, upward or downward through the universe, there is no end. This I have shown, and indeed the fact proclaims itself aloud and the nature of space makes it crystal clear. Granted, then, that empty space extends without limit in every direction and that seeds innumerable in number are rushing on countless courses through an unfathomable universe under the impulse of perpetual motion, *it is in the highest degree unlikely that this earth and sky is the only one to have been created* and that all those particles of matter outside are accomplishing nothing. This follows from the fact that our world has been made by nature through the spontaneous and casual collision and the multifarious, accidental, random and purposeless congregation and coalescence of atoms whose suddenly formed combinations could serve on each occasion as the starting-point of substantial fabrics – earth and sea and sky and the races of living creatures. On every ground, therefore, you must admit that there exist elsewhere other congeries of matter similar to this one which the ether clasps in ardent embrace.

When there is plenty of matter in readiness, when space is available and no cause or circumstance impedes, then

surely things must be wrought and effected. You have a store of atoms that could not be reckoned in full by the whole succession of living creatures. You have the same natural force to congregate them in any place precisely as they have been congregated here. You are bound therefore to acknowledge that in other regions there are other earths and various tribes of men and breeds of beasts.

Add to this the fact that nothing in the universe is the only one of its kind, unique and solitary in its birth and growth; everything is a member of a species comprising many individuals. Turn your mind first to the animals. You will find the rule apply to the brutes that prowl the mountains, to the children of men, the voiceless scaly fish and all the forms of flying things. So you must admit that sky, earth, sun, moon, sea and the rest are not solitary, but rather numberless. For a firmly established limit is set to their lives also and their bodies also are a product of birth, no less than that of any creature that flourishes here according to its kind.

Bear this well in mind, and you will immediately perceive that *nature is free and uncontrolled by proud masters* and runs the universe by herself without the aid of gods. For who — by the sacred hearts of the gods who pass their unruffled lives, their placid aeon, in calm and peace! — who can rule the sum total of the measureless? Who can hold in coercive hand the strong reins of the unfathomable? Who can spin all the firmaments alike and foment with the fires of ether all the fruitful earths? Who can be in all places at all times, ready to darken the clear sky with clouds and rock it with a thunderclap — to launch bolts that may often wreck his own temples, or retire and spend his fury letting fly at deserts

quantities to make good the copious effluences it exudes. For everything must be restored and renewed by food, and by food buttressed and sustained. And the process is doomed to failure, because the veins do not admit enough and nature does not supply all that is needed. It is natural, therefore, that everything should perish when it is thinned out by the ebbing of matter and succumbs to blows from without. The food supply is no longer adequate for its aged frame, and the deadly bombardment of particles from without never pauses in the work of dissolution and subdual.

In this way the ramparts of the great world also will be breached and collapse in crumbling ruin about us. Already it is far past its prime. The earth, which generated every living species and once brought forth from its womb the bodies of huge beasts, has now scarcely strength to generate animalcules. For I assume that the races of mortal creatures were not let down into the fields from heaven by a golden cord, nor generated from the sea or the rock-beating surf, but born of the same earth that now provides their nurture. The same earth in her prime spontaneously generated for mortals smiling crops and lusty vines, sweet fruits and gladsome pastures, which now can scarcely be made to grow by our toil. We wear down the oxen and wear out the strength of husbandmen, and the ploughshare is scarcely a match for fields that grudge their fruits and multiply our toil. Already the ploughman of ripe years shakes his head with many a sigh that his heavy labours have gone for nothing; and, when he compares the present with the past, he often cries up his father's luck and grumbles that past generations, when men were old-fashioned and god-fearing, supported life easily enough on their small farms, though one man's holding was then far less than now. In the same

despondent vein, the cultivator of old and wilted vines decries the trend of the times and rails at heaven. He does not realize that everything is gradually decaying and nearing its end, worn out by old age.

seized with a divine delight, and a shuddering awe, that by your power nature stands thus unveiled and made manifest in every part.

I have already shown what the component bodies of everything are like; how they vary in shape; how they fly spontaneously through space, impelled by a perpetual motion; and how from these all objects can be created. The next step now is evidently to elucidate in my verses the nature of mind and of life. In so doing I shall drive out neck and crop that fear of Hell which blasts the life of man from its very foundations, sullyng everything with the blackness of death and leaving no pleasure pure and unalloyed. I know that men often speak of sickness or of shameful life as more to be dreaded than the terrors of Hell; they profess to know that the mind consists of blood, or maybe wind, if that is how the whim takes them, and to stand in no need whatever of our reasoning. But all this talk is based more on a desire to show off than on actual proof, as you may infer from their conduct. These same men, though they may be exiled from home, banished far from the sight of their fellows, soiled with some filthy crime, a prey to every torment, still cling to life. Wherever they come in their tribulation, they make propitiatory sacrifices, slaughter black cattle and despatch offerings to the Departed Spirits. The heavier their afflictions, the more devoutly they turn their minds to superstition. Look at a man in the midst of doubt and danger, and you will learn in his hour of adversity what he really is. It is then that true utterances are wrung from the recesses of his breast. The mask is torn off; the reality remains.

Consider too the greed and blind lust of power that drive unhappy men to overstep the bounds of right and may even

blood. If it could do this, then surely it could much more readily function in head or shoulders or the tips of the heels and be born in any other part, so long as it was held in the same container, that is to say in the same man. Since, however, even in the human body we see a determined and allotted place set aside for the growth and presence of spirit and mind, we have even stronger grounds for denying that they could survive or come to birth outside the body altogether. You must admit, therefore, that when the body has perished there is an end also of the spirit diffused through it. It is surely crazy to couple a mortal object with an eternal and suppose that they can work in harmony and mutually interact. What can be imagined more incongruous, what more repugnant and discordant, than that a mortal object and one that is immortal and everlasting should unite to form a compound and jointly weather the storms that rage about them?

Again, there can be only three kinds of everlasting objects. The first, owing to the absolute solidity of their substance, can repel blows and let nothing penetrate them so as to unknit their close texture from within. Such are the atoms of matter, whose nature I have already demonstrated. The second kind can last for ever because it is immune from blows. Such is empty space, which remains untouched and unaffected by any impact. Last is that, which has no available place surrounding it into which its matter can disperse and disintegrate. It is for this reason that the sum total of the universe is everlasting, having no space outside it into which the matter can escape and no matter that can enter and disintegrate it by the force of impact.

Equally vain is the suggestion that the spirit is immortal because it is shielded by life-preserving powers; or because it is unassailed by forces hostile to its survival; or because

such forces, if they threaten, are somehow arrested before we are conscious of the threat. Apart from the spirit's participation in the ailments of the body, it has maladies enough of its own. The prospect of the future torments it with fear and wearies it with worry, and past misdeeds leave the sting of remorse. Lastly, it may fall a prey to the mind's own specific afflictions, madness and amnesia, and plunge into the black waters of oblivion.

From all this it follows that *death is nothing to us* and no concern of ours, since our tenure of the mind is mortal. In days of old, we felt no disquiet when the hosts of Carthage poured in to battle on every side — when the whole earth, dizzied by the convulsive shock of war, reeled sickeningly under the high ethereal vault, and between realm and realm the empire of mankind by land and sea trembled in the balance. So, when we shall be no more — when the union of body and spirit that engenders us has been disrupted — to us, who shall then be nothing, nothing by any hazard will happen any more at all. Nothing will have power to stir our senses, not though earth be fused with sea and sea with sky.

If any feeling remains in mind or spirit after it has been torn from our body, that is nothing to us, who are brought into being by the wedlock of body and spirit, conjoined and coalesced. Or even if the matter that composes us should be reassembled by time after our death and brought back into its present state — if the light of life were given to us anew — even that contingency would still be no concern of ours once the chain of our identity had been snapped. We who are now are not concerned with ourselves in any previous existence: the sufferings of those selves do not touch us. When you look at the immeasurable extent of

outlive all living creatures, or even though you should never die at all.' What are we to answer, except that Nature's rebuttal is justified and the plea she puts forward is a true one?

But suppose it is some man of riper years who complains — some dismal greybeard who frets unconscionably at his approaching end. Would she not have every right to protest more vehemently and repulse him in stern tones: 'Away with your tears, old reprobate! Have done with your grumbling! You are withering now after tasting all the joys of life. But, because you are always pining for what is not and unappreciative of the things at hand, your life has slipped away unfulfilled and unprized. Death has stolen upon you unawares, before you are ready to retire from life's banquet filled and satisfied. Come now, put away all that is unbecoming to your years and compose your mind to make way for others. You have no choice.' I cannot question but she would have right on her side; her censure and rebuke would be well merited. The old is always thrust aside to make way for the new, and one thing must be built out of the wreck of another. There is no murky pit of Hell awaiting anyone. There is need of matter, so that later generations may arise; when they have lived out their span, they will all follow you. Bygone generations have taken your road, and those to come will take it no less. So one thing will never cease to spring from another. To none is life given in freehold; to all on lease. Look back at the eternity that passed before we were born, and mark how utterly it counts to us as nothing. This is a mirror that Nature holds up to us, in which we may see the time that shall be after we are dead. Is there anything terrifying in the sight — anything depressing — anything that is not more restful than the soundest sleep?

course escape, he grows to hate him, because he is a sick man ignorant of the cause of his malady. If he did but see this, he would cast other thoughts aside and devote himself first to studying the nature of the universe. It is not the fortune of an hour that is in question, but of all time – the lot in store for mortals throughout the eternity that awaits them after death.

What is this deplorable lust of life that holds us trembling in bondage to such uncertainties and dangers? A fixed term is set to the life of mortals, and there is no way of dodging death. In any case the setting of our lives remains the same throughout, and by going on living we do not mint any new coin of pleasure. So long as the object of our craving is unattained, it seems more precious than anything besides. Once it is ours, we crave for something else. So an unquenchable thirst for life keeps us always on the gasp. There is no telling what fortune the future may bring – what chance may throw in our way, or what upshot lies in waiting. By prolonging life, we cannot subtract or whittle away one jot from the duration of our death. The time after our taking off remains constant. However many generations you may add to your store by living, there waits for you none the less the same eternal death. The time of not-being will be no less for him who made an end of life with yesterday's daylight than for him who perished many a moon and many a year before.

*If anyone thinks that nothing can be known, he does not know whether even this can be known, since he admits that he knows nothing.* Against such an adversary, therefore, who deliberately stands on his head, I will not trouble to argue my case. And yet, if I were to grant that he possessed this knowledge, I might ask several pertinent questions. Since he has had no experience of truth, how does he know the difference between knowledge and ignorance? What has originated the concept of truth and falsehood? Where is his proof that doubt is not the same as certainty?

You will find, in fact, that the concept of truth was originated by the senses and that the senses cannot be rebutted. The testimony that we must accept as more trustworthy is that which can spontaneously overcome falsehood with truth. What then are we to pronounce more trustworthy than the senses? Can reason derived from the deceitful senses be invoked to contradict them, when it is itself wholly derived from the senses? If they are not true, then reason in its entirety is equally false. Or can hearing give the lie to sight, or touch to hearing? Can touch in turn be discredited by taste or refuted by the nostrils or rebutted by the eyes? This, in my view, is out of the question. Each sense has its own distinctive faculty, its specific function. There must be separate discernment of softness and cold and heat and of the various colours of things and whatever goes with the colours; separate functioning of the palate's power of taste; separate generation of scents and sounds. This rules out the possibility of one sense confuting another. It will be equally out of the question for one sense to belie itself, since it will always be entitled to the same degree of credence. Whatever the senses may perceive at any time is all alike true. Suppose that reason cannot elucidate the cause why things that were square when close

at hand are seen as round in the distance. Even so, it is better, in default of reason, to assign fictitious causes to the two shapes than to let things clearly apprehended slip from our grasp. This is to attack belief at its very roots — to tear up the entire foundation on which the maintenance of life is built. It is not only reason that would collapse completely. If you did not dare trust your senses so as to keep clear of precipices and other such things to be avoided and make for their opposites, there would be a speedy end to life itself.

So all this armament that you have marshalled against the senses is nothing but a futile array of words. If you set out to construct a building with a crooked ruler, a faulty square that is set a little out of the straight and a level ever so slightly askew, there can be only one outcome — a crazy, rickety, higgledy-piggledy huddle, sagging here and bulging there, with bits that look like falling at any moment and all in fact destined to fall, doomed by the initial miscalculations on which the structure is based. Just as rickety and just as defective must be the structure of your reasoning, if the senses on which it rests are themselves deceptive.

After this the problem that next confronts us — to determine *how each of the remaining senses perceives its own objects* — is not a particularly thorny one.

In the first place, all forms of *sound and vocal utterance* become audible when they have slipped into the ear and provoked sensation by the impact of their own bodies. The fact that voices and other sounds can impinge on the senses is itself a proof of their corporeal nature. Besides, the voice often scrapes the throat and a shout roughens the windpipe on its outward path. What happens is that, when atoms of voice in greater numbers than usual have begun to squeeze out through the narrow outlet, the doorway of the

wounded normally fall in the direction of their wound: the blood spurts out towards the source of the blow; and the enemy who delivered it, if he is fighting at close quarters, is bespattered by the crimson stream. So, when a man is pierced by the shafts of Venus, whether they are launched by a lad with womanish limbs or a woman radiating love from her whole body, he strives towards the source of the wound and craves to be united with it and to transmit something of his own substance from body to body. His speechless yearning is a presentiment of bliss.

This, then, is what we term Venus. This is the origin of the thing called love – that drop of Venus' honey that first drips into our heart, to be followed by numbing heart-ache. Though the object of your love may be absent, images of it still haunt you and the beloved name chimes sweetly in your ears. If you find yourself thus passionately enamoured of an individual, you should keep well away from such images. Thrust from you anything that might feed your passion, and turn your mind elsewhere. Vent the seed of love upon other objects. By clinging to it you assure yourself the certainty of heart-sickness and pain. With nourishment the festering sore quickens and strengthens. Day by day the frenzy heightens and the grief deepens. Your only remedy is to lance the first wound with new incisions; to salve it, while it is still fresh, with promiscuous attachments; to guide the motions of your mind into some other channel.

Do not think that by avoiding grand passions you are missing the delights of Venus. Rather, you are reaping such profits as carry with them no penalty. Rest assured that this pleasure is enjoyed in a purer form by the healthy than by the love-sick. Lovers' passion is storm-tossed, even in the moment of fruition, by waves of delusion and incertitude. They cannot make up their mind what to enjoy first with

x // sky. These three bodies so different in nature, three distinct forms, three fabrics such as you behold — all these a single day will blot out. The whole substance and structure of the world, upheld through many years, will crash. I am well aware how novel and strange in its impact on the mind is this impending demolition of heaven and earth, and how hard it is for my words to carry conviction. This is always so when you bring to men's ears something outside their experience — something you cannot set before their eyes or lay hold of by hand, which is the shortest highway for belief to enter the human breast and the compartments of the mind. But, for all that, I will proclaim it. It may be that force will be given to my arguments by the event itself; that your own eyes will see those violent earthquakes in a brief space dash the whole world to fragments. From such a fate may guiding fortune steer us clear! May reason rather than the event itself convince you that the whole world can collapse with one ear-splitting crack!

Before I attempt to utter oracles on this theme, with more sanctity and far surer reason than those the Delphic prophetess pronounces, drugged by the laurel fumes from Apollo's tripod, I will first set your mind at rest with words of wisdom. Do not imagine, under the spell of superstition, that lands and sun and sky, sea, stars and moon, must endure for ever because they are endowed with a divine body. Do not for that reason think it right that punishment appropriate to a monstrous crime should be imposed, as on the rebellious Titans, on all those who by their reasoning breach the ramparts of the world and seek to darken heaven's brightest luminary, the sun, belittling with mortal speech immortal beings. In fact these objects are so far from divinity, so unworthy of a place among the gods, that they may rather serve to impress upon us the type of the lifeless

ought to praise this eminently praiseworthy piece of divine workmanship and believe it eternal and immortal and think it a sin to unsettle by violence the everlasting abode established for mankind by the ancient purpose of the gods and to worry it with words and turn it topsy-turvy - this theory, Memmius, with all its attendant fictions is sheer nonsense. For what benefit could immortal and blessed beings reap from our gratitude, that they should undertake any task on our behalf? Or what could tempt those who had been at peace so long to change their old life for a new? The revolutionary is one who is dissatisfied with the old order. But one who has known no trouble in the past, but spent his days joyfully - what could prick such a being with the itch for novelty? Or again, what harm would it have done us to have remained uncreated? Are we to suppose that our life was sunk in gloom and grief till the light of creation blazed forth? True that, once a man is born, he must will to remain alive so long as beguiling pleasure holds him. But one who has never tasted the love of life, or been enrolled among the living, what odds is it to him if he is never created?

Here is a further point. On what pattern did the gods model their creation? From what source did an image of human beings first strike upon them, so that they might know and see with their minds what they wished to make? How was the power of the atoms made known to them, and the potential effect of their various combinations, unless nature itself provided a model of the creation? So many atoms, clashing together in so many ways as they are swept along through infinite time by their own weight, have come together in every possible way and realized everything that could be formed by their combinations. No wonder, then, if they have actually fallen into those

starting-point in time, why have no poets sung of feats before the Theban war and the tragedy of Troy? Why have so many heroic deeds recurrently dropped out of mind and found no shrine in lasting monuments of fame? The answer, I believe, is that *this world is newly made*: its origin is a recent event, not one of remote antiquity. That is why even now some arts are still being perfected: the process of development is still going on. Many improvements have just been introduced in ships. It is no time since organists gave birth to their tuneful harmonies. Yes, and it is not long since the truth about nature was first discovered, and I myself am even now the first who has been found to render this revelation into my native speech.

Alternatively, you may believe that all these things existed before, but that the human race was wiped out by a burst of fiery heat or its cities were laid low by some great upheaval of the world or engulfed by greedy rivers which persistent rains had driven to overflow their banks. All the more reason, then, to concede my point and admit that an end is coming to earth and sky. If the world was indeed shaken by such plagues and perils, then it needs only a more violent shock to make it collapse in universal ruin. There is no clearer proof of our own mortality than the fact that we are subject to the same ailments as those whom nature has already recalled from life.

Again, there can be only three kinds of everlasting objects. The first, owing to the absolute solidity of their substance, can repel blows and let nothing penetrate them so as to unknit their close texture from within. Such are the atoms of matter whose nature I have already demonstrated. The second kind can last for ever because it is immune from blows. Such is empty space, which remains untouched and unaffected by any impact. Last is that which has no available

37-8: Vacuities - a hypothesis in  
order to understand world as  
given to the senses.

Hypothesis is what we need  
to trust our senses, to make  
them function = own  
sense.

40. / Whether corresponds to senses & vacuum  
to reasoning!

42. ? Vacuum = space in which  
things happen.

Arendt PA6483.E5 L4 1951  
Lucretius Carus, Titus  
Lucretius on the nature of  
the universe