On the Nature of Things

LUCRETIUS

c. 99–55 BC

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De rerum natura

Translated from the Latin with AI (Claude) and edited



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On the Nature of Things · Lucretius (c. 99–55 BC)

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INTRODUCTION

Titus Lucretius Carus wrote *On the Nature of Things* in the middle of the first century BC, in the last troubled decades of the Roman Republic. Almost nothing is known of his life. The poem, some 7,400 lines of Latin hexameter in six books, is addressed to a Roman aristocrat, Memmius, and sets out the philosophy of the Greek thinker Epicurus.

Its claim is that everything—stars, mountains, animals, our own minds—is made of tiny, indivisible particles moving through empty space, combining and coming apart by natural laws. There is no need for gods to run the world, and the mind dies with the body. Lucretius offers this as a cure for fear: once we understand nature, we need not dread the gods or death. "Death is nothing to us."

The poem moves from atoms and the void (Books I–II) to the mortality of the soul (III), the senses, dreams and love (IV), the origin of the world, of life and of human society (V), and the causes of thunder, earthquakes and disease, ending with the plague of Athens (VI). It was nearly lost; a single manuscript, rediscovered in 1417, helped shape the scientific revolution.

Book I

Matter and void
Hymn to Venus; nothing comes from nothing; atoms and empty space; the universe is infinite.

1.1 Mother of Aeneas' people, delight of men and gods,
life-giving Venus, who beneath the gliding signs of heaven
fill the ship-bearing sea and the fruitful lands
with your presence, since through you every kind of living thing
is conceived and, rising, looks upon the light of the sun:
you, goddess, you the winds flee, you the clouds of heaven,
you and your coming; for you the inventive earth sends up
sweet flowers, for you the wide waters of the sea laugh,
and the sky, at peace, shines with light spread everywhere.
For as soon as the springtime face of day is revealed
and the west wind's breath of birth, set free, blows strong,
first the birds of the air, goddess, announce you
and your arrival, their hearts struck by your power.
Then the herds run wild and leap across the lush pastures
and swim the rushing rivers: so, captured by your charm,
each follows you eagerly wherever you go on to lead it.[1]

1 The Romans traced their descent from Aeneas, son of Venus.

/ Then, through seas and mountains and sweeping rivers,
through the leafy homes of birds and the greening plains,
striking the sweet enticement of love into every breast,
you make them eagerly carry on their generations, kind by kind.
Since you alone steer the nature of things,
and without you nothing springs up into the shining shores of light,
nothing comes to be that is joyful or lovely,
I long to have you as my partner in writing the verses
which I am trying to compose on the nature of things
for our Memmius, whom you, goddess, have willed at all times
to stand out, adorned with every gift.
So all the more, goddess, give my words an undying charm.[2]

2 Gaius Memmius, a Roman politician (praetor 58 BC), to whom the poem is addressed.

/ Meanwhile, make the savage works of war
fall asleep and lie at rest over every sea and land;
for you alone have power to bless with tranquil peace
mortal men, since the savage works of war are ruled by Mars,
mighty in arms, who often flings himself back into your lap,
conquered by the everlasting wound of love;
and so, looking up, his shapely neck laid back,
he feeds his greedy eyes on love, gazing open-mouthed at you, goddess,
and as he lies back his breath hangs on your lips.
As he reclines, goddess, on your holy body,
pour yourself around him from above, and pour sweet words
from your lips, glorious one, seeking quiet peace for the Romans.
For in this unfair time for our country I cannot
do this work with an even mind, nor can the noble son of the Memmii
in such circumstances fail the common good.

/ For the whole nature of the gods must of itself
enjoy immortal life in the deepest peace,
far removed and separated from our affairs;
for, free from all pain, free from dangers,
strong in its own resources, needing nothing from us,
it is neither won over by good service nor touched by anger.

1.50 For the rest, give empty ears and a keen mind,
set apart from cares, to true reasoning,
so that you do not scorn and cast aside my gifts, laid out for you with faithful care,
before you have understood them.
For I shall set out for you the highest workings of heaven and the gods,
and reveal the first beginnings of things,
from which nature creates all things, makes them grow and feeds them,
and into which, once they perish, nature dissolves them again.
In setting out our account we are accustomed to call these matter
and creative bodies of things, and to name them seeds of things,
and to refer to these same things
as first bodies, because from them, as first, all things exist.[3]

3 Lucretius never uses the Greek word "atom"; his first beginnings, seeds and first bodies are Epicurus's atoms.

EPICURUS AGAINST RELIGION

A man of Greece first dared to defy religion and, by reasoning, explored the whole universe.

1.62 When human life lay foully before our eyes on the ground,
crushed beneath the heavy weight of religion,
which showed its head from the regions of the sky,
looming over mortals with its horrible face,
a man of Greece was the first who dared to lift his mortal eyes
against it, and the first to stand against it.
Neither stories of the gods nor thunderbolts nor the sky with its menacing
rumble held him down, but they only spurred the more the keen
courage of his mind, so that he longed to be the first to break
the tight bolts of nature's gates.
So the living force of his mind won through, and he went forth
far beyond the flaming walls of the world,
and traveled the whole immeasurable universe in thought and mind,
and from there, victorious, brings back to us what can arise
and what cannot—in short, by what principle each thing
has its limited power and its deep-set boundary stone.[4]

/ So religion in its turn is cast beneath our feet / and trampled; his victory makes us equal to heaven.

4 The "man of Greece" is Epicurus (341–270 BC), never named here. For Lucretius, religion (religio) means fear-driven superstition and cult.

THE SACRIFICE OF IPHIGENIA

Religion, not philosophy, led the Greek leaders to kill a young girl at the altar.

1.80 In this matter I fear one thing: that you may perhaps think
you are entering on the elements of an impious reasoning
and setting out
on a road of crime. On the contrary, more often it is
religion that has given birth to criminal and impious deeds.
So it was at Aulis, when the altar of the virgin of the
Crossroads
was foully stained with the blood of Iphianassa
by the chosen leaders of the Greeks, the foremost of men.
As soon as the ribbon wound around her maiden hair
fell in equal lengths down either cheek,
and she saw her father standing sorrowful before the altar,
and near him the attendants hiding the knife,
and the people shedding tears at the sight of her,
speechless with fear, she sank to her knees and reached for
the ground.[5]

5 Iphianassa is Iphigenia, daughter of Agamemnon, sacrificed at Aulis to Artemis (Diana, "of the Crossroads") so that the Greek fleet could sail for Troy.

/ Nor could it help the poor girl at such a moment
that she had been the first to call the king by the name of father;
for, raised by the hands of men, and trembling, to the altar
she was led—not so that, when the solemn custom of the rites
was complete, she might be escorted by the ringing wedding hymn,
but so that, pure, she might impurely, at the very age of marriage,
fall, a grieving victim, slaughtered by her father's stroke,
so that the fleet might be granted a happy and favorable sailing.
So great the evils religion could prompt.

1.102 You yourself, sooner or later, overcome by the terrifying words
of the seers, will seek to fall away from us.
Indeed, how many dreams they can invent for you even now,
dreams that could overturn the course of your life
and throw all your fortunes into confusion with fear!
And with good reason; for if men saw that there was a fixed end
to their troubles, they would have some means, some strength
to stand against religion and the threats of the seers.
As it is, there is no means of resisting, no power,
since they must fear eternal punishment in death.

/ For no one knows what the nature of the spirit is,
whether it is born, or on the contrary slips into us at birth,
and whether it perishes together with us, torn apart by death,
or goes to see the darkness of Orcus and its vast pools,
or by divine power slips into other beasts,
as our Ennius sang, who first brought down from lovely
Helicon a crown of evergreen leaves,
to win bright fame among the peoples of Italy;
although, besides, that there are precincts of Acheron
Ennius sets forth, proclaiming it in his undying verses,
where neither our spirits nor our bodies remain,
but certain images, strangely pale;
and from there, he tells us, the shade of ever-flourishing Homer
rose up before him and began to shed salt tears
and to unfold the nature of things in words.[6]

/ Therefore we must give a good account of things above,
of how the courses of the sun and moon
come about, and by what force each thing happens
on earth; but above all, with keen reasoning,
we must see what the spirit and the nature of the mind are made of,
and what it is that confronts us waking and terrifies our minds
when we are stricken by illness, or buried in sleep,
so that we seem to see and hear face to face
those whose bones, now that death has come, the earth embraces.[7]

6 Ennius (239–169 BC), father of Latin epic, told in his Annals how Homer's ghost appeared to him. Helicon is the Muses' mountain; Orcus and Acheron are names for the underworld.

7 Lucretius's "mind" (animus) and "spirit" (anima) are the two parts of the soul; both, he will argue, are mortal.

1.136 Nor does it escape my mind that the dark discoveries of the Greeks
are hard to illuminate in Latin verse,
especially since much must be dealt with in new words
because of the poverty of our language and the novelty of the subject;
but still your worth and the pleasure I hope for
from our sweet friendship persuade me to endure any labor
and lead me to stay awake through the clear nights,
searching for the words, the poem, by which at last
I may hold out a bright light to your mind,
by which you may see deep into hidden things.
This terror of the mind, then, and this darkness must be dispelled
not by the rays of the sun or the bright shafts of day,
but by the face of nature and her reasoning.

NOTHING COMES FROM NOTHING

Nothing is made from nothing by divine power, and nothing is destroyed into nothing.

1.149 Our first principle will take its start from this:
nothing is ever made from nothing by divine power.
For fear holds all mortals in its grip
because they see many things happen on earth and in the sky
whose causes they can in no way see,
and they suppose these things happen by divine will.
Therefore, once we have seen that nothing can be created
from nothing, we shall then see more clearly from there what we seek:
both from what each thing can be created
and how all things come about without the work of the gods.

1.159 For if things came from nothing, then from all things
every kind could be born; nothing would need seed.
First, men could spring from the sea, and from the earth
the scaly tribe, and birds could burst from the sky;
cattle and other herds, every kind of wild beast,
born at random, would occupy farmland and wilderness
alike.
Nor would the same fruit stay constant on trees,
but would change: all trees could bear all fruit.
For if there were no creative bodies for each thing,
how could things have a fixed mother?
But as it is, since each thing is created from fixed seeds,
it is born and comes out into the shores of light
from where the matter and first bodies of each thing are;
and for this reason all things cannot be born from all
things,
because in particular things there is a distinct capacity.

1.174 Besides, why do we see the rose put forth in spring, grain in
the heat,
vines at the urging of autumn,
if not because, when the fixed seeds of things have flowed
together
in their own time, whatever is created comes into view
while the seasons are right and the living earth
safely brings its tender things out into the shores of light?
But if they came from nothing, they would spring up
suddenly
at unfixed intervals and at alien times of year,
since there would be no first beginnings that could be kept
from creative union by an unfavorable season.

1.184 Nor again, for things to grow, would there be need of time
for seed to come together, if they could grow from nothing;
for little infants would suddenly become young men,
and trees would leap up, suddenly risen from the earth.
Plainly none of this happens, since all things
grow little by little, as is right from fixed seed,
and as they grow keep their kind; so you may recognize
that each thing grows large and is nourished from its own matter.

1.192 Add to this that without fixed rains in the year
the earth could not send up its gladdening produce,
nor again could the nature of living things, cut off from food,
propagate its kind and preserve life;
so that you should rather think that many bodies are shared
by many things, as we see letters shared by words,
than that anything can exist without beginnings.[8]

1.199 Then again, why could nature not produce men so huge
that they could wade across the ocean on foot
and tear great mountains apart with their hands
and outlive many generations of living things,
if not because a fixed matter has been assigned to things
for their birth, from which it is settled what can arise?
So we must admit that nothing can come from nothing,
since things need seed, from which each, once created,
can be brought forth into the soft breezes of the air.

8 The Latin elementa means both “letters of the alphabet” and “elements”; Lucretius plays on the double sense throughout.

1.208 Lastly, since we see that cultivated land is better than untilled
and returns better yield to the work of hands,
there are evidently first beginnings of things in the earth
which we, turning the fertile clods with the plowshare
and working the soil of the earth, call forth to birth;
but if there were none, you would see everything, without our labor,
come into being far better of its own accord.

1.215 Add to this that nature dissolves each thing back again
into its own bodies and does not destroy things into nothing.
For if anything were mortal in all its parts,
each thing would be snatched suddenly from our eyes and perish;
for there would be no need of any force
that could cause its parts to break up and undo their bonds.
But as it is, since each thing consists of eternal seed,
until a force has met it that can shatter things with a blow
or pierce within through the void spaces and dissolve them,
nature does not allow the destruction of anything to be seen.

1.225 Besides, whatever things time removes through age,
if it destroys them utterly, using up all their matter,
from where does Venus bring back the race of living things, kind by kind,
into the light of life? Or, once brought back, from where does the inventive earth
nourish and increase them, kind by kind, providing food?
From where do native springs and rivers flowing from far away
keep the sea supplied? From where does the ether feed the stars?
For everything that is of mortal body must have been
consumed by infinite time and the days gone by.
But if in that span, in the age gone by, there have existed
those things from which this sum of things is made and remade,
they are surely endowed with an immortal nature.
So no single thing can return to nothing.

1.238 Then again, the same force and cause would destroy all things alike,
if eternal matter did not hold them together,
bound more or less tightly in its interlocking;
for mere touch would surely be cause enough of death,
since there would be nothing of eternal body, whose
fabric each force would need to undo.
But as it is, since the bonds of the beginnings with one another
differ, and matter is eternal,
things stay with their bodies intact until a force strong enough
is found to meet them, matched to the texture of each.
So nothing returns to nothing, but all things
return, by breaking up, into the bodies of matter.
Lastly, the rains perish when Father Sky
has flung them down into the lap of Mother Earth;
but shining crops spring up, and branches grow green
on the trees; the trees themselves grow and are weighed down with fruit.

/ From this, in turn, our race and the race of beasts are fed;
from this we see glad cities blossom with children,
and leafy woods singing everywhere with new birds;
from this the weary flocks, all through the glad pastures,
lay down their fat bodies, and the white milky liquid
flows from swollen udders; from this the newborn young,
on unsteady legs, frisk and play in the soft grass,
their young minds giddy with the pure milk.
So none of the things that seem to perish perish utterly,
since nature rebuilds one thing from another and allows nothing
to be born unless helped by another's death.

1.265 Now come, since I have taught that things cannot be created
from nothing, nor, once born, be called back to nothing,
in case you should nevertheless begin to distrust my words
because the first beginnings of things cannot be seen with the eyes,
hear besides of bodies which you yourself must
admit exist in things and yet cannot be seen.

1.271 First, the force of the wind, once roused, lashes the body
and overwhelms huge ships and scatters the clouds;
at times it runs across the plains in a swift whirlwind,
strewing them with great trees, and harries the mountaintops
with forest-breaking blasts: so wildly, with a shrill
roar, the sea rages and storms with menacing rumble.

/ So winds, clearly, are unseen bodies
that sweep the sea, the lands, and the clouds of the sky,
harrying them and snatching them up in a sudden whirlwind;
they flow and spread destruction in no other way
than when the soft nature of water is carried along suddenly
in a brimming flood, which, after heavy rains, a great
rush of water down from the high mountains swells,
hurling along broken pieces of forests and whole trees;
and strong bridges cannot endure the oncoming water's
sudden force: so, churned up by the heavy rain,
the river runs against the piers with mighty strength,
wreaks havoc with a great roar, and rolls under its waves
huge rocks, rushing on wherever anything stands against its flood.

/ So the blasts of wind too must move in the same way:
when, like a mighty river, they have borne down
in any direction, they push things before them and sweep them away
with repeated onslaughts, and at times in a twisting eddy
seize them and carry them off in a swift, spinning whirlwind.
So, again and again, winds are unseen bodies,
since in their deeds and ways they are found to rival
great rivers, which have visible bodies.

1.298 Then again, we perceive the various smells of things,
yet we never see them coming to our nostrils;
nor do we see heat, nor can we take in cold
with our eyes, nor do we usually see sounds;
yet all these must consist of a bodily
nature, since they can strike the senses;
for nothing can touch or be touched except body.

1.305 Then again, clothes hung up on a wave-breaking shore
grow damp, and spread out in the sun they dry.
Yet no one has seen how the water's moisture settled in them,
nor again how it fled in the heat.
So the moisture is dispersed into tiny parts
which the eyes can in no way see.
Moreover, as many years of sun come round,
a ring on the finger is worn thin underneath by wearing,
the fall of dripping water hollows the stone, the curved plow's
iron share imperceptibly wears away in the fields,
and we see the paved stones of the streets
already worn by the feet of the crowd; then, by the gates, bronze
statues show their right hands worn thin
by the frequent touch of those who greet them and pass by.
So we see these things diminish, since they have been worn down.
But what bodies leave them at each moment,
grudging nature has shut off from our sight.

1.322 Lastly, whatever time and nature add to things
little by little, forcing them to grow in due measure,
no straining keenness of the eyes can see;
nor, again, whatever grows old with age and wasting;
nor, with rocks that overhang the sea, eaten by the gnawing salt,
could you see what they lose at each moment.
So nature does her work by unseen bodies.

THE VOID

Motion, seepage and differences in weight prove that there is empty space in things.

1.329 And yet all things are not held packed tight on every side
by the nature of body; for there is void in things.
To have learned this will be useful to you in many matters,
and will not let you wander in doubt and always be asking
about the sum of things and distrusting my words.
Therefore there is intangible place, void and empty.
If there were not, things could in no way
move; for what is the function of body,
to obstruct and stand in the way, would be present at all times
to all things; so nothing could advance,
since nothing would make a beginning of giving way.

/ But as it is, through seas and lands and the heights of heaven
we see before our eyes many things moving in many ways,
by varied means; and if there were no void, these things
would not so much be robbed of restless motion
as never have been born in any way at all,
since matter would have lain still, packed tight on every side.

1.346 Besides, however solid things may be thought to be,
you can see from this that they have loose-textured body.
In rocks and caves the liquid moisture of water
seeps through, and everything weeps with abundant drops.
Food spreads itself through the whole body of living things;
trees grow and put forth fruit in their season
because food is diffused through the whole of them, from the deepest roots
up through the trunks and through all the branches.
Sounds pass through walls and fly across the closed
rooms of houses; numbing cold seeps through to the bones.
If there were no voids through which the separate bodies
could pass, you would see this happen in no way at all.

1.358 Then again, why do we see some things outweigh others
though they are no larger in shape?
For if there is as much body in a ball of wool
as in lead, they should weigh the same,
since it is the function of body to press everything downward,
while the nature of void, on the contrary, remains without weight.
So what is equally large and yet seems lighter
plainly declares that it has more void in it;
but the heavier, on the other hand, shows that it has more body in it
and far less empty space within.
So there is, clearly, what we are seeking with keen reasoning,
mixed in with things: what we call void.

1.370 On this subject, so that it cannot lead you away from the truth,
I am compelled to forestall a notion some people invent.
They say that the waters give way to the scaly fish as they push forward
and open liquid paths, because the fish leave spaces behind them
into which the yielding waves can flow together;
so too, they say, other things can move among one another
and change their place, although everything is full.
Clearly this whole idea has been accepted on false reasoning.
For where, after all, will the scaly fish be able to advance
unless the waters have given them room? And where, again,
can the waves give way when the fish cannot move?
So either we must deprive all bodies of motion,
or we must say that void is mixed in with things,
from which each thing takes its first start in moving.

1.384 Lastly, if two broad bodies spring apart swiftly
after colliding, then surely the air must take possession
of all the void that comes to be between the bodies.
And however quickly it flows in with rushing currents
all around, it will still not be able to fill the whole space
at one moment; for it must first occupy
each place in turn, and only then will all be filled.
But if perhaps someone thinks that, when the bodies spring apart,
this happens because the air condenses itself,
he is wrong; for then a void comes to be that was not there before,
and likewise a void that existed before is filled;
nor can air condense in such a way,
nor, even if it could, could it, I think, without void
draw itself into itself and gather its parts together.

1.398 So, however long you delay by raising many objections,
you must still admit that there is void in things.
And besides, I could, by recounting many
arguments, scrape together belief in my words.
But for a keen mind these small traces are enough,
by which you can come to know the rest by yourself.
For just as hounds very often find by scent
the leaf-covered lairs of a mountain-roaming beast,
once they have picked up sure traces of its track,
so you yourself will be able, on your own, to see one thing
from another
in matters like these, and to work your way into all the dark
hiding places and drag out the truth from there.

/ But if you are slow or turn away a little from the subject,
this I can promise you plainly, Memmius:
such generous draughts from great springs
will my sweet tongue pour from my rich heart
that I fear slow old age may first creep through
my limbs and loosen the bolts of life in me
before the whole wealth of arguments on any one point
has been sent through your ears in my verses.

1.418 But now, to return to weaving the web I began in words:
all nature, then, as it is in itself, consists of two
things; for there are bodies and there is void,
in which they are placed and through which they move this way and that.
For the sensation shared by all declares that body exists
of itself; and unless trust in this is first firmly founded and stands,
there will be nothing to appeal to on hidden things
so as to prove anything by the reasoning of the mind.
Then again, if there were no place and space, which we call void,
bodies could not be situated anywhere
or move anywhere at all, this way or that;
as I showed you a little earlier, above.
Besides, there is nothing you can say is separate from all
body and set apart from void,
to be found as a third nature, as it were, in the count.

/ For whatever will exist must itself be something,
of large or small bulk, so long as it exists;
if it has touch, however light and slight,
it will increase the count of body and join its sum;
but if it is intangible, unable at any point
to keep anything passing through it from passing,
then this, of course, will be the empty space we call void.

1.440 Besides, whatever exists of itself will either act
or must itself be acted upon by other things acting,
or it will be such that things can exist and happen in it.
But nothing can act or be acted upon without body,
nor, again, can anything provide place except void and
empty space.
So besides void and bodies, no third nature
of itself can be left in the number of things,
neither one that ever falls under our senses
nor one that anyone could grasp by the reasoning of the
mind.

1.449 For whatever has a name, you will find it either a property
joined to these two things, or you will see it is an event of
them.
A property is that which can never, without fatal
breaking apart, be separated and set aside,
as weight is to rocks, heat to fire, wetness to water,
touch to all bodies, intangibility to void.
Slavery, on the other hand, poverty and riches,
freedom, war, concord, and other things whose
coming and going leave nature unharmed,
these we are accustomed, rightly, to call events.
Time likewise does not exist of itself, but from things
themselves
comes our sense of what has been done in the past,
then of what is present, and of what will follow after;
and we must admit that no one senses time of itself,
apart from the motion of things and their calm rest.[9]

9 "Properties" (coniuncta) cannot be removed without destroying a thing; "events" (eventa) come and go and leave it intact.

/ Then again, when people say that the carrying off of
Tyndareus' daughter and the conquest of the Trojan
peoples in war "exist," we must take care
that they do not perhaps force us to admit that these things
exist of themselves,
since those generations of men whose events these were
irrevocable time gone by has already carried off;
for whatever has been done can be called an event, in one
case of the lands,
in another of the regions themselves.[10]

/ Lastly, if there had been no matter for things
and no place and space, in which each thing happens,
never would the flame fanned by love for the beauty of
Tyndareus' daughter,
smoldering in the Phrygian breast of Alexander,
have lit the famous contests of savage war,
nor would the wooden horse, unknown to the Trojans, have
set Pergama
ablaze with its night-born brood of Greek-born men.
So you can see that all deeds whatever, from the ground up,
do not exist or have being by themselves, as body does,
nor are they spoken of on the same account as void,
but rather you may rightly call them events
of body and of place, in which each thing happens.[11]

10 Tyndareus' daughter is Helen, whose abduction by Paris led to the Trojan War.
11 Alexander is Paris, the Trojan (Phrygian) prince who carried off Helen. Pergama is the citadel of Troy.

SOLID, EVERLASTING FIRST BODIES

The first beginnings are solid, have least parts, and can never be broken or destroyed.

1.483 Bodies, moreover, are partly first beginnings of things,
partly those formed from a union of first beginnings.
But the first beginnings of things no force
can quench; for in the end they prevail by the solidity of their body.
And yet it seems hard to believe that anything
with a solid body can be found among things.
For the lightning of the sky passes through the walls of houses,
as shouting and voices do; iron glows white in fire,
and rocks leap apart in fierce, seething heat;
the rigid hardness of gold is shaken loose and melted by heat,
and the ice of bronze, conquered by flame, turns liquid;
heat seeps through silver, and so does piercing cold,
since we have felt both, holding cups in our hands as custom is,
when the dew of water was poured in from above.
So true is it that nothing among things seems to be solid.

/ But since true reasoning and the nature of things
compel us, stay with me, while in a few verses I set out
that there are things made of solid and everlasting body,
which we teach are the seeds of things and their first beginnings,
from which the whole sum of things now created is made.

1.503 First, since we have found that there exists a twofold nature
of two things far unlike each other,
body and place, in which each thing happens,
each of them must exist by itself, for itself, and unmixed.
For wherever there is empty space, which we call void,
there body is not; and again, wherever
body holds its ground, there is by no means empty void.
The first bodies, then, are solid and without void.

1.511 Besides, since there is void in things that have come to be,
solid matter must stand around it;
nor can any thing be shown by true reasoning
to hide void in its body and hold it within,
unless you allow that what encloses it is solid.
And that can be nothing but a union
of matter, able to enclose the void in things.
Matter, therefore, which consists of solid body,
can be everlasting, while all else is dissolved.

1.520 Then again, if there were nothing that was empty,
everything would be solid; if, on the other hand, there were
not definite bodies
to fill whatever places they occupied,
all the space there is would stand as empty void.
Clearly, then, body is marked off from void
in alternation, since the whole is neither completely full
nor again empty; there are, then, definite bodies,
which can mark off empty space from full.
These can neither be dissolved when struck by blows from
outside,
nor pierced deep within and unraveled,
nor assailed in any other way and made to totter—
as I showed you a little earlier.
For it seems that nothing can be crushed without void,
or broken, or split in two by cutting,
or take in moisture, or seeping cold either,
or piercing fire, by which all things are destroyed.

/ And the more void each thing contains within,
the more it totters when these assail it deep inside.
So if the first bodies are solid and without void,
as I have taught, they must be everlasting.

Besides, if matter had not been everlasting,
all things would long ago have returned utterly to nothing,
and whatever we see would have been reborn from nothing.
But since I have taught above that nothing can be created
from nothing, nor can what has been born be called back to nothing,
the first beginnings must be of immortal body,
into which all things can be dissolved at their last hour,
so that there may be matter to supply the renewal of things.
The first beginnings, then, are solid in their singleness,
nor could they in any other way have been preserved through the ages
to renew things from infinite time past.
Lastly, if nature had set no limit
to the breaking of things, the bodies of matter
would by now have been so worn down by the breaking of past ages
that nothing conceived from them after a fixed time
could reach the full limit of its life.

/ For we see that anything can be undone more quickly
than made again; so whatever the long
and endless age of all time gone by
had broken up till now, disordering and dissolving,
could never be repaired in the time remaining.
But as it is, clearly, a fixed limit to breaking
has been set and stands, since we see each thing renewed,
and at the same time fixed periods established for things, kind by kind,
in which they can reach the flower of their age.

1.565 Add to this that, though the bodies of matter
are utterly solid, we can still give an account of all
the things that become soft—air, water, earth, heat—
of how they come to be and by what force each works,
since void is once and for all mixed in with things.
But if, on the other hand, the first beginnings of things were
soft,
there will be no accounting for how hard flints and iron
can be created; for all nature
will lack from the start a foundation to begin from.
They are strong, then, in solid singleness,
and by their denser union all things
can be packed close and show great strength.
Again, even if no limit had been set to the breaking
of bodies, still, from everlasting time, some bodies
must survive even now in things,
ones that have not yet been assailed by any danger.

/ But since they are endowed with a fragile nature,
it does not square that they could have lasted through
everlasting time,
battered by countless blows through the ages.

1.584 Lastly, since a limit has been set for things, kind by kind,
to their growth and their hold on life,
and since what each can do under the laws of nature,
and what it cannot, stands decreed,
and nothing changes, but all things hold so constant
that the many-colored birds, one generation after another,
all show the markings of their kind upon their bodies,
they must, clearly, have a body of unchanging
matter too; for if the first beginnings of things
could be overcome in some way and changed,
it would then be uncertain what can arise
and what cannot—in short, by what principle each thing
has its limited power and its deep-set boundary stone,
nor could the generations, kind by kind, so often repeat
the nature, habits, way of life and movements of their
parents.[12]

12 "The laws of nature" is literally "nature's treaties": the fixed terms governing what each thing can and cannot do.

1.599 Then again, since there is in each case an extreme point
of that body which our senses
can no longer make out, that point, clearly, exists without parts
and is of the smallest nature; it never was
separate by itself, nor will it ever be able to be hereafter,
since it is itself a part of something else, the first and single part;
then other and other similar parts in order
fill out, in close-packed ranks, the nature of the body;
and since these cannot exist by themselves, they must
cling to that from which they can in no way be torn.
The first beginnings, then, are solid in their singleness,
packed close, cohering tightly with their least parts,
not put together by a meeting of those parts,
but rather strong in everlasting singleness;
from them nature allows nothing to be torn away or diminished,
keeping them safe as seeds for things.

1.615 Besides, unless there is a least, the tiniest
bodies will each consist of infinite parts,
since the half of a half will always have
its own half, and nothing will set a limit.
So what will there be to distinguish the sum of things from the least?
Nothing; for however utterly
infinite the whole sum is, still the tiniest things
will consist of infinite parts just the same.
Since true reasoning protests against this and denies
that the mind can believe it, you must be won over and admit
that there exist things endowed with no parts at all,
of the smallest nature. And since these exist,
you must admit that those too are solid and everlasting.

1.628 Lastly, if nature, creator of things, had made a habit
of forcing all things to be broken down into least parts,
she could no longer renew anything from them,
because things that are enriched with no parts
cannot have what creative matter
must have—varied connections, weights, blows,
collisions, motions, by which each thing happens.

AGAINST THE EARLIER PHILOSOPHERS

Heraclitus, Empedocles and Anaxagoras are refuted: fire, four elements or like parts cannot explain the world.

1.635 Therefore those who have thought that the matter of things
is fire, and that the sum of things consists of fire alone,
seem to have strayed far from true reasoning.
Heraclitus leads them into battle, first of all,
famous for his dark speech—among the empty-headed,
rather
than among the serious Greeks who seek the truth;
for fools admire and love all the more
what they see lurking under twisted words,
and set down as true whatever can prettily tickle
the ears and is painted with a charming sound.[13]

13 Heraclitus of Ephesus (c. 500 BC), nicknamed "the Obscure", held that fire is the basic stuff of the world.

For how, I ask, could things be so varied
if they were created from fire alone, pure fire?
It would be no use for hot fire to be packed dense
or made rare, if the parts of fire had the same
nature that fire as a whole has too.
The heat would be fiercer when the parts were drawn together,
fainter when they were scattered and dispersed.
Beyond this there is nothing you could think could happen
in such conditions—much less could all the great variety
of things come from fires dense and rare.

This too: if they were to allow void mixed in with things,
fires could be packed dense or left rare;
but since they see many things that would contradict them,
and shrink from leaving pure void in things,
fearing the steep path, they lose the true road;
nor do they see, on the other hand, that if void is taken from things,
all would be packed dense, and from all things one
body would be made, which could send out nothing swiftly from itself,
as heat-bearing fire throws out light and warmth,
so that you can see it is not made of close-packed parts.

But if perhaps they believe that in some other way
fires can be quenched in their union and change their substance,
then surely, if they allow this with no part held back,
all heat, clearly, will perish utterly into nothing,
and whatever is created will come from nothing;
for whatever changes and passes out of its own bounds,
that is at once the death of what it was before.
So something must survive in them unharmed,
or else all things would return utterly to nothing for you,
and the store of things would be reborn from nothing and flourish.

1.675 Now then, since there are certain utterly fixed bodies
which keep their nature always the same,
by whose going or coming and change of order things
change their nature and bodies are transformed,
you may know that these bodies of things are not made of fire.
For it would make no difference that some depart and go away
and others are added and some change their order,
if all still kept the nature of heat;
for whatever they created would be fire in every way.
But, as I think, this is how it is: there are certain bodies whose
collisions, motions, order, position, shapes
produce fires, and when their order is changed they change
their nature; and they are not like fire, nor like any
other thing that can send off bodies
to our senses and touch our touch by striking it.

/ Moreover, to say that all things are fire, and that no
real thing exists in the number of things except fire,
as this same man does, seems the height of madness.
For he himself, from the senses, fights against the senses
and undermines them, on which all belief hangs,
from which he came to know this thing he calls fire;
for he believes the senses truly know fire,
but not the rest, which are no less clear.
This seems to me both empty and mad;
for to what shall we appeal? What can be more certain for us
than the senses themselves, to mark off true from false?

1.701 Besides, why should anyone rather do away with all things
and wish to leave only the nature of heat,
than deny that fire exists and yet let some other nature exist?
For it seems equal madness to say either.

1.705 Therefore those who have thought that the matter of things
is fire, and that the sum of things can consist of fire,
and those who have set up air as the source
for the birth of things, or whoever has thought that water
by itself forms things, or that earth creates
all things and turns into all the natures of things,
seem to have wandered far, far from the truth.
Add too those who double the first beginnings of things,
joining air to fire and earth to water,
and those who think all things can grow
from four things—from fire, earth, breath, and rain.

/ Foremost among these is Empedocles of Acragas,
whom the island bore within its three-cornered coasts,
around which the Ionian sea, flowing in great windings,
sprinkles salt spray from its gray-green waves,
and the rushing sea in a narrow strait divides with its waves
the shores of the Aeolian lands from the island's borders.
Here is vast Charybdis, and here the rumblings of Etna
threaten to gather again the wrath of their flames,
so that its violence may once more vomit fires burst from its jaws
and hurl again to the sky the lightning flashes of flame.
And though this great region seems in many ways a marvel
to the peoples of mankind and is said to be well worth seeing,
rich in good things, strongly guarded by a wealth of men,
yet it seems to have held nothing more glorious than this man,
nothing more holy, more wonderful, or more dear.[14]

/ His verses, too, born of his godlike heart,
cry out and set forth such glorious discoveries
that he scarcely seems born of human stock.

14 Empedocles of Acragas in Sicily (5th century BC), poet and philosopher, held that all things come from four elements. Charybdis is the whirlpool in the strait between Sicily and Italy.

1.734 Yet he, and those I spoke of above, far inferior
in many ways and much lesser than he,
though they discovered much that was good and divinely inspired,
and gave responses, as it were, from the inner shrine of the heart,
more holy and far more certain in reasoning than
the Pythia pronounces from Phoebus' tripod and laurel,
still, over the first beginnings of things, they came to ruin,
and there, great as they were, they had a great and heavy fall.[15]

1.742 First, because they posit motion while taking void from things,
and they leave things soft and rare—
air, sun, fire, earth, animals, crops—
yet do not mix void into their bodies;
then, because they will have it that there is no limit at all to the cutting
of bodies, no halt set to their breaking,
and nothing at all that is least in things,
though we see that the extreme point of each thing
is what seems to our senses to be least,
so that you may infer from this that in things you cannot see,
the extreme point they have is the least.

1.753 Add to this, too, that since they make the first beginnings of things
soft—things we see are born
and have mortal bodies—the sum of things
would by now have had to return utterly to nothing,
and the store of things be reborn from nothing and flourish;
and you will know by now how far both of these are from the truth.

15 The Pythia was the priestess who delivered the oracles of Apollo (Phoebus) at Delphi.

1.759 Then, these elements are in many ways hostile to one another,
poison to each other; so either they will perish when they meet,
or they will scatter, just as, when a storm has gathered,
we see lightning, rain, and wind scatter.

1.763 Lastly, if all things are created from four things
and all things are dissolved back into them again,
why should these be called the first beginnings of things
any more than, the other way round, things be thought theirs?
For they are born from each other in turn and change their color
and their whole nature among themselves, from all time.
[we see lightning, rain, and wind scatter.]
But if perhaps you think that the body of fire and of earth
and the airy breezes and the moisture of water come together
in such a way that none changes its nature in the union,
no thing can be created from them for you,
no living thing, nor one with lifeless body, like a tree;
for each, in the union of this motley heap, will show
its own nature, and air will be seen to remain mixed
together with earth and with moisture.[16]

/ But in the creation of things the first beginnings must
bring to bear a nature hidden and unseen,
so that nothing may stand out that would fight against and hinder
whatever is created from being properly itself.

16 Square brackets mark lines the editor judges not to belong where they stand; this one repeats 1.762.

1.782 What is more, they begin from the sky and its fires,
and make fire first turn into the breezes
of air, from this rain be born, and earth be created
from rain, and then all things return back from earth,
first moisture, after that air, then heat,
and these never cease to change into one another, to travel
from sky to earth, from earth to the stars of the heavens.
This the first beginnings must by no means do.
For something unchangeable must survive,
so that all things may not be reduced utterly to nothing;
for whatever changes and passes out of its own bounds,
that is at once the death of what it was before.

/ Therefore, since the things we spoke of a little before
undergo change, they must be made
of other things that can never be transformed,
or else all things would return utterly to nothing for you.
Why not rather suppose that there are certain bodies
endowed
with such a nature that, if they have perhaps created fire,
the same bodies, with a few taken away and a few added,
and their order and motion changed, can make the breezes
of air,
and so all things change into one another?

/ “But the plain facts show,” you say, “that all things grow
up into the breezes of air from the earth and feed on them;
and unless the season is kind in its favorable time
with rains, so that the trees sway beneath the melting of the clouds,
and the sun for its part warms them and gives its heat,
crops, trees, and living things could not grow.”
Of course—and unless dry food and soft moisture helped us,
our body would waste away, and all life too
would be loosed from all our sinews and bones;
for beyond doubt we are helped and nourished
by particular things, and other things by other particular things.
Clearly, because many first beginnings, common in many ways
to many things, are mixed in things,
different things are nourished by different things.

/ And with the same first beginnings it often matters greatly
with what others and in what position they are held together,
and what motions they give and receive among themselves;
for the same ones make up sky, sea, lands, rivers, sun,
the same make up crops, trees, living things,
but they move mixed with different things and in different ways.
Indeed, all through these very verses of mine
you see many elements—letters—common to many words,
and yet you must admit that verses and words
differ from one another both in meaning and in their ringing sound.
So much can letters do by a mere change of order;
but the first beginnings of things can bring
more means by which each of the various things can be created.

1.830 Now let us also examine the homoeomeria ("likeness of parts") of Anaxagoras,
as the Greeks call it, a word that the poverty of our native speech
does not allow us to say in our own tongue;
but still, the thing itself is easy to set out in words.
First, as for what he calls the homoeomeria of things:
bones, you see, from tiny, minute
bones, and from tiny, minute
bits of flesh, flesh is born, and blood created
from many drops of blood coming together—
so he thinks—and gold can form from specks
of gold, and earth grow together from little earths,
fires from fires, moisture from moistures;
the rest he imagines and thinks on the same principle.
And yet he does not allow that there is void anywhere in things,
nor that there is a limit to the cutting of bodies.
So on both counts he seems to me to go wrong
just as those did whom we spoke of above.[17]

17 Anaxagoras of Clazomenae (5th century BC) held that each substance is made of tiny particles like itself, and that everything contains portions of everything.

1.847 Add that he imagines his first beginnings far too feeble—
if they are first beginnings, these things endowed with a nature like
that of things themselves, which equally suffer
and perish, with nothing to rein them back from destruction.
For which of them will hold out under heavy pressure,
so as to escape death in the very teeth of destruction?
Fire, or water, or air? Which of these? Blood, or bones?
None, I think, since each thing will be utterly and equally
as mortal as the things we plainly see
vanish from our eyes, overcome by some force.
But that things cannot fall back into nothing, nor again
grow from nothing, I call to witness what I have already proved.

1.859 Besides, since food increases the body and nourishes it,
we may know that veins and blood and bones
...
Or if they say that all foods are of a mixed body
and contain in them tiny bodies of sinews,
and bones, and veins altogether, and parts of blood,
it will follow that all food, both dry and liquid itself,
must be thought to consist of things of other kinds,
of bones and sinews and gore and blood mixed together.[18]

1.867 Besides, if all the bodies that grow from the earth
are in the earth, the earth must consist
of things of other kinds, which spring up from the earth.
Carry this over too, and you may use just as many words:
if flame lies hidden in logs, and smoke and ash,
logs must consist of things of other kinds,
[besides, whatever bodies the earth feeds and increases]
of things of other kinds, which spring from logs.

18 One or more lines are lost here.

1.875 Here a slender loophole for hiding is left,
which Anaxagoras seizes: he thinks that all things
lie hidden, mixed in all things, but that only that one
shows itself of which most is mixed in,
placed more in view and in the front line.
But this is driven far from true reasoning;
for then crops too, when they are broken beneath the menacing
strength of the millstone, ought often to give off some sign
of blood, or of the things that are nourished in our body.

/ When we grind them stone on stone, blood ought, in the same way,
often to ooze from grasses too,
and the waters to give off sweet drops, of just such flavor
as the milk in the udders of the woolly flock;
and, of course, when clods of earth are crumbled,
kinds of grasses, crops, and leaves ought often to be seen
lurking in the earth, scattered in tiny bits;
and lastly ash and smoke ought to be seen in logs
when they are broken, and tiny fires hiding.
Since the plain facts teach that none of this happens,
we may know that things are not mixed in things in this way,
but that seeds, common to many things,
must lie hidden, mixed in things in many ways.

/ "But often on great mountains," you say, "it happens that the neighboring
tops of tall trees rub against each other
when strong south winds force them to,
until they blaze out as a flower of flame springs up."
Of course—and yet fire is not planted in the wood;
rather there are many seeds of heat, and when by rubbing
they have flowed together, they create fires in the forests.
But if flame were already made and hidden in the forests,
the fires could not be concealed for any length of time;
they would destroy the forests everywhere and burn the trees.
Do you now see, then, what I said a little before,
that with the same first beginnings it often matters very greatly
with what others and in what position they are held together,
and what motions they give and receive among themselves,
and that the same ones, a little changed among themselves, create
fires and wood?

Just as the words themselves
are made of elements a little rearranged,
when we name wood and fire with distinct sounds.[19]

1.915 Lastly, if you think that whatever you see among visible things
cannot come about unless you imagine that the bodies
of matter are endowed with a like nature,
on this reasoning the first beginnings of things are lost to you:
it will follow that they shake with quivering laughter and guffaw,
and wet their faces and cheeks with salty tears.

19 In Latin, ligna ("wood") and ignes ("fires") differ by only a letter or two.

HONEY ON THE CUP

Lucretius explains why he sweetens hard philosophy with poetry, as doctors sweeten bitter medicine.

1.921 Now come, learn what remains, and hear it more clearly.
I am well aware how obscure these things are; but a great hope
of praise has struck my heart with its sharp thyrsus
and at the same time driven into my breast a sweet love
of the Muses. Inspired by it now, with a vigorous mind,
I roam the pathless haunts of the Pierides, trodden
by no one's foot before. It is a joy to approach untouched springs
and drink from them, a joy to pluck new flowers
and seek for my head a splendid crown from places
where the Muses have never before wreathed anyone's brow:
first, because I teach of great things and press on
to free the mind from the tight knots of religion;
then, because on so dark a subject I compose such lucid
verses, touching everything with the Muses' charm.[20]

20 The thyrsus is the ivy-tipped wand carried by worshippers of Bacchus. The Pierides are the Muses, named after Pieria in northern Greece.

/ For this too seems not to be without good reason.
But just as doctors, when they try to give children
foul wormwood, first touch the rims all around the cups
with the sweet golden liquid of honey,
so that the unsuspecting age of childhood may be fooled
as far as the lips, and meanwhile drink down the bitter
juice of wormwood, and be tricked but not harmed,
but rather be restored by such means and grow well—
so I now, since this account of things often seems
rather grim to those who have not tried it, and the crowd
shrinks back from it, have chosen to set out our reasoning
for you in the sweet-voiced song of the Pierides
and, as it were, to touch it with the Muses' sweet honey,
in the hope that by such means I might hold your mind
on my verses, while you come to see the whole
nature of things, and the shape in which it is framed.

AN INFINITE UNIVERSE

Space and matter are unlimited, and there is no center toward which all things press.

1.951 But since I have taught that the utterly solid bodies of matter
fly about unconquered through all eternity,
now come, let us unfold whether there is some limit
to their sum or not; and likewise what we have found to be void,
or place and space, in which all things happen—
let us look closely whether it is wholly bounded
or stretches out immeasurable, vast and deep.

1.958 All that exists, then, is bounded in no direction
along any of its paths; for then it would have to have an edge.
But it seems that nothing can have an edge
unless there is something beyond to bound it, so that a point is seen
past which the nature of our senses cannot follow it.
Now since we must admit there is nothing outside the sum of things,
it has no edge, and so it lacks limit and measure.
Nor does it matter in which of its regions you stand;
so true is it that, whatever place anyone takes up,
the whole stretches away from him boundless, just as far, on every side.

1.968 Besides, suppose for a moment that all existing space
were bounded, and someone ran forward to its farthest
edges, the very last man, and threw a flying spear:
would you rather that, hurled with mighty strength,
it go where it was sent and fly far off,
or do you think that something can stop it and block its way?
For you must admit and adopt one or the other.
Yet each of them shuts off your escape and forces you
to grant that the universe stretches out, free of any limit.
For whether there is something that stops it and prevents it
from reaching where it was aimed and lodging itself at its limit,
or it is carried on beyond, it did not set out from the limit.
In this way I will follow you, and wherever you set
the farthest edges, I will ask: what then will become of the spear?
It will turn out that no limit can stand anywhere,
and that the room for flight will always prolong the escape.

1.984 Besides, if all the space of the whole universe
were shut in on every side by fixed borders
and were bounded, then the store of matter
would by now have flowed together from everywhere, by its solid weight, to the bottom,
and nothing could happen beneath the canopy of the sky,
nor would there be any sky at all, nor the light of the sun,
since all matter would lie heaped up,
having settled down through infinite time.
But as it is, no rest, of course, is given to the bodies
of the first beginnings, because there is no bottom at all
where they might, as it were, flow together and take up their seats.
Always, in ceaseless motion, all things go on
in every part, and from below, out of the infinite,
swift bodies of matter are supplied.

1.998 Lastly, before our eyes one thing is seen to bound another:
air walls off the hills, and mountains the air;
land bounds the sea, and sea in turn all lands;
but the universe has nothing outside to bound it.
There is, then, a nature of place, a space so deep
that neither could bright thunderbolts run through it in their course,
gliding on through the endless stretch of time,
nor by traveling make the distance left to go any less at all;
so vast is the room that lies open to things everywhere,
free of limits, in every direction on every side.

1.1008 Moreover, nature keeps the sum of things itself
from being able to set a limit for itself, for she forces body
to be bounded by void, and what is void to be bounded by
body,
so that by this alternation she makes the whole infinite;
or else, if one of the two did not bound the other,
it would still stretch out, by its single nature, beyond
measure—
and neither sea nor land nor the shining temples of the sky
nor the mortal race nor the sacred bodies of the gods
could hold their ground for the brief space of an hour;
for the store of matter, driven apart from its gathering,
would be swept along, dissolved, through the great void—
or rather it would never have come together and created
anything at all, since, scattered, it could never have been
forced together.

/ For certainly the first beginnings of things did not by design
place themselves each in its order with a shrewd mind,
nor, surely, did they bargain over what motions each should make;
but because, many and shifting in many ways through the universe,
they are harried from infinite time, stirred up by blows,
by trying every kind of motion and gathering
they come at last into such arrangements
as those by which this sum of things has been created and stands;
and, preserved through many great years
once it has been cast into fitting motions,
it brings it about that the rivers replenish the greedy sea
with the generous waters of their streams, and the earth, warmed by the heat
of the sun, renews its offspring, and the race of living things springs up
and flourishes, and the fires of the gliding sky live on.
This they could by no means do unless a store of matter
could rise up out of the infinite,
from which all things are wont to make good their losses in time.

/ For just as the nature of living things, deprived of food,
wastes away, losing its substance, so all things must
dissolve as soon as matter fails to be supplied,
turned aside in some way from its path.
Nor can blows from outside, from every side, preserve
every sum of things that has been brought together.
They can indeed strike often and hold back a part
until others come and the sum can be made up;
but at times they are forced to rebound, and at the same time
to grant the first beginnings of things space and time for flight,
so that they can be carried free from the gathering.
Therefore, again and again, many must rise up anew;
and yet, for the blows themselves to be in supply as well,
there is need of an infinite store of matter on every side.

1.1052 In these matters, Memmius, shun far the belief
that all things, as they say, press toward the center of the whole,
and that for this reason the nature of the world stands firm without any
blows from outside, and top and bottom cannot break apart
in any direction, because all things press toward the center —
if you believe that anything can stand upon itself—
and that the heavy things beneath the earth all press
upward and rest on the earth upside down,
like the images of things we now see in water;
and in the same way they contend that living creatures roam about
upside down, and cannot fall off the earth into the regions of sky
below them any more than our bodies
can of their own accord fly up into the temples of the sky;
that when they see the sun, we are looking at the stars of night,
and that they share the seasons of the sky with us by turns
and spend nights equal to our days.

/ But these things, to the foolish, an empty ...
since they cling to what they have embraced, wrong ...
For there can be no center ...
infinite; nor at all, even if there were a center,
could anything stand still there ...
rather than in any other way far ...
For all place and space, which we call void,
must, through center and not-center alike, give way
equally to weights, in whatever direction their motions carry them.
Nor is there any place where bodies, when they arrive,
can lose the force of their weight and stand still in the void;
nor must anything that is void give support to anything,
but it goes on giving way, as its nature seeks.
Things cannot, then, be held in this way
in union, overcome by a craving for the center.[21]

1.1083 Besides, since they do not imagine that all bodies
press toward the center, but those of earth and of liquid,
the moisture of the sea and the great waters from the mountains,
and whatever is held, as it were, in an earthy body,
while on the other hand they declare that the thin breezes of air
and hot fires alike are carried away from the center,
and that for this reason the whole ether round about twinkles with stars
and the sun's flame feeds through the blue of the sky,
because all heat, fleeing the center, gathers there,
and that the topmost branches of trees could not come into leaf
at all,

21 The manuscript is damaged here, and the ends of several lines are lost.

unless food came gradually from the earth to each of them
...
...
...
...
...
...
...
...
lest, in the manner of flying flames, the walls of the world
should suddenly scatter, dissolved, through the great void,
and lest all else should follow in like fashion,
and the thundering temples of the sky rush down from above,
and the earth swiftly withdraw from beneath our feet, and all of it,
amid the mingled ruins of things and of sky,
setting its bodies loose, pass away through the deep void,
so that in a moment of time nothing would be left
but deserted space and unseen first beginnings.[22]

/ For from whatever part you decide that bodies are first lacking,
that part will be the doorway of death for things;
through it the whole throng of matter will rush outside.

1.1114 These things you will come to know fully, led on with little effort;
for one thing will grow clear from another, and blind night
will not snatch away your path before you have seen through
to the farthest reaches of nature: so will things kindle light for things.

22 Eight lines are lost here; the text resumes in mid-sentence.

Book II

The motion of atoms
The swerve and free will; atomic shapes; countless worlds,
born and dying.

2.1 Pleasant it is, when winds whip up the waters of the great
sea,
to watch from land another's great distress;
not because it is a sweet pleasure that anyone should suffer,
but because it is pleasant to see what evils you yourself are
free from.
Pleasant, too, to watch great contests of war
arrayed across the plains, with no share of danger for
yourself.
But nothing is sweeter than to hold the well-fortified,
calm temples raised high by the teaching of the wise,
from which you can look down on others and see them
wandering everywhere, straying as they search for the path
of life,
competing in talent, contending over rank,
striving night and day with surpassing effort
to rise to the height of wealth and become masters of the
world.
O wretched minds of men! O blind hearts!
In what darkness of life and in how great dangers
this little span of time, whatever it is, is spent!

Do you not see
that nature barks for nothing but this for herself: that pain
be removed and absent from the body, and that the mind
enjoy
a pleasant feeling, set free from care and fear?
So we see that for the body's nature few things
are needed at all—such things as take away pain
and can also spread out many delights,
more welcome at times; nor does nature herself miss it
if there are no golden images of youths about the house
holding fire-bearing torches in their right hands
to supply light for banquets at night,
if the house does not gleam with silver and glitter with gold,
and paneled, gilded ceilings do not echo to the lyre,
when all the same, stretched out together on the soft grass
beside a stream of water, beneath the branches of a tall
tree,
they pleasantly refresh their bodies at no great cost,
especially when the weather smiles and the seasons
of the year sprinkle the green grass with flowers.

/ Nor do hot fevers leave the body any faster
if you toss about on embroidered pictures and blushing purple
than if you must lie in a common blanket.
Therefore, since treasures do our body no good,
nor noble birth, nor the glory of a kingdom,
we must further conclude that they are of no use to the mind either—
unless perhaps, when you see your legions swarming
over the plain, staging a mock war,
strengthened with great reserves and a mighty force of wealth,
equipped with arms and all alike in spirit,
then, because of these things, your religious fears
take fright and flee from your mind, and the terrors of death
then leave your heart empty and free of care.

/ But if we see that these things are laughable and a mockery,
and that in truth men's fears and the cares that dog them
fear neither the clash of arms nor cruel weapons,
but boldly move among kings and the masters of the world,
and are not awed by the glitter of gold
nor by the bright splendor of purple robes,
why do you doubt that all this power belongs to reason,
above all since the whole of life struggles in darkness?
For just as children tremble and fear everything
in blind darkness, so we in the light are afraid
at times of things no more to be feared than
what children shudder at in the dark and imagine will come.
This terror of the mind, then, and this darkness must be dispelled
not by the rays of the sun or the bright shafts of day,
but by the face of nature and her reasoning.

ATOMS ALWAYS IN MOTION

The first beginnings never rest; motes dancing in a sunbeam give a picture of their motion.

2.62 Now come, by what motion the creative bodies of matter
beget the various things, and break up what they have begotten,
and by what force they are compelled to do so, and what
power of movement has been given them to travel through the great void,
I will explain: be sure you give yourself to my words.
For certainly matter does not cling together
packed tight, since we see each thing grow less,
and we see all things, as it were, flowing away over the long years,
and age withdrawing them from our eyes,
while yet the sum of things is seen to stay unharmed,
because the bodies that leave each thing
lessen what they depart from and endow with growth what they come to;
they force the one to grow old, the other in turn to flourish,
and they do not linger there. So the sum of things is renewed
forever, and mortal creatures live by exchange with one another.

/ Some races increase, others diminish,
and in a short space the generations of living things are changed,
and like runners, they hand on the torch of life.[1]

1 An allusion to the Greek torch-race, in which a lit torch was passed from runner to runner.

2.80 If you think the first beginnings of things can stand still
and by standing still give birth to new motions of things,
you wander far astray from true reasoning.
For since they wander through the void, all the first beginnings
of things must be carried along either by their own weight
or perhaps by the blow of another. For when, speeding, they have often
met and collided, it happens that they suddenly leap apart
in different directions; and no wonder, since they are utterly hard,
with solid weight, and nothing behind them stands in their way.
And to see more clearly that all the bodies of matter
are tossed about, remember that in the whole universe
there is no bottom, and the first bodies have nowhere
to come to rest, since space is without limit or measure
and stretches out immeasurable in every direction on every side,
as I have shown at length and proved by sure reasoning.

/ Since this is established, surely no rest is
granted to the first bodies through the deep void;
rather, driven on in ceaseless and varied motion,
some, after colliding, rebound over great distances,
while others are buffeted by the blow over short spaces.
And those that, in a denser union,
are driven together and rebound over tiny distances,
entangled by their own interlocking shapes—
these form the strong roots of rock and the fierce bodies
of iron and the other things of their kind.
Those few others that wander on through the great void
leap far apart and spring back far and far again
across great distances; these supply us
with thin air and the shining light of the sun.
And besides, many wander through the great void
that have been thrown out of the unions of things and have nowhere
been able to be taken in and join their motions with others.

2.112 Of this, as I describe it, an image and likeness
is always moving and present before our eyes.
For look closely whenever the sun's rays are let in
and pour their light through the darkened rooms of houses:
you will see many tiny bodies in many ways through the void
mingling in the very light of the rays,
and, as if in everlasting conflict, waging wars and battles,
fighting in troops and never pausing,
driven on by frequent unions and separations;
so that you can guess from this what it is for the first beginnings
of things to be always tossed about in the great void.
So far as it goes, a small thing can give
a pattern of great things and traces of knowledge.

2.125 All the more fitting is it that you turn your mind to these
bodies that are seen tumbling in the sun's rays,
because such tumbling also shows that there are motions
of matter beneath, hidden and unseen.
For there you will see many, struck by unseen blows,
change their course and, driven back, return
now here, now there, in every direction on every side.
This wandering, you see, comes to all of them from the first beginnings.
For first the first beginnings of things move of themselves;
then those bodies that are formed in a small union
and are, as it were, nearest to the powers of the first beginnings
are set moving, driven by their unseen blows,
and they in turn stir up bodies a little larger.

/ So the motion rises up from the first beginnings and emerges
little by little to our senses, so that those bodies also move
that we can make out in the light of the sun,
though by what blows they do so is not plainly apparent.

2.142 Now what speed has been given to the bodies of matter
you may learn from this in a few words, Memmius.
First, when dawn sprinkles the lands with new light,
and various birds, flitting through the pathless woods,
fill the places through the soft air with their liquid voices,
how suddenly the sun, once risen at such a time,
is wont to clothe everything, flooding it with its light,
we see is plain and evident to all.
But the heat the sun sends out, and its clear light,
do not travel through empty void; so they are forced
to go more slowly, while they beat their way, as it were,
through waves of air;
nor do the tiny particles of heat travel one by one,
but entwined with one another and massed together;
so they are at once held back by one another and hindered
from outside, so that they are forced to go more slowly.

/ But the first beginnings, which are of solid singleness,
when they travel through empty void, and nothing outside
holds them back, and they, being one whole of their own
parts,
are carried, straining, toward the one, the one place they
set out for,
must surely excel in speed
and be carried far faster than the light of the sun,
and run through many times the space
in the same time that the sun's flashes spread across the
sky.
...
nor to follow each of the first beginnings one by one,
so as to see by what means each thing is brought about.[2]

2 At least one line is lost here.

2.167 But some, against this, ignorant of matter,
maintain that nature, without the will of the gods, could not,
so exactly suited to human purposes,
change the seasons of the year and create crops
and all the rest that divine pleasure, the guide of life,
urges mortals to approach, and itself leads them on,
coaxing them to propagate their generations through the acts of Venus,
so that the human race may not perish. When they imagine
that the gods set up all things for their sake, in every respect
they seem to have strayed far from true reasoning.
For even if I did not know what the first beginnings of things are,
I would dare to affirm this from the very workings of the sky,
and to show it from many other things:
that the nature of the world was by no means created
for us by divine power: it stands endowed with so great a flaw.
These things, Memmius, I will make clear to you later;
now I will set out what remains to be said about motions.

2.184 Now is the place, I think, in these matters to confirm
this too for you: that no bodily thing can by its own force
be carried upward or travel upward.
Do not let the bodies of flames deceive you in this;
for they are born moving upward and take on growth
upward,
and upward grow the shining crops and trees,
although all weights, so far as in them lies, are carried
downward.
Nor, when fires leap up to the roofs of houses
and with swift flame taste the rafters and beams,
must we think they do this of their own accord, without
force from below.
In the same way blood let out from our body
spurts out, leaping high, and splashes gore.
Do you not see, too, with what force the moisture of water
spits out rafters and beams?

For the more we push them down deep,
straight down, and many of us press them with great force
and effort,
the more eagerly it thrusts them up and sends them back,
so that they rise and leap out by more than half.
And yet we do not doubt, I think, that all these things,
so far as in them lies, are carried downward through the
empty void.
In the same way, then, flames too must be able, squeezed
out,
to climb upward through the breezes of air, although
their weights, so far as in them lies, struggle to draw them
down.
And the night torches of the sky, flying on high—
do you not see them draw long trails of flame
in whatever direction nature has given them a path?
Do you not see stars and constellations fall to earth?
The sun, too, from the summit of the sky scatters its heat
in every direction and sows the fields with light;
so the sun's heat, too, tends toward the earth.

/ You see thunderbolts flying crosswise through the rain;
now from here, now from there, fires break from the clouds
and clash together; the flaming force commonly falls to
earth.

THE SWERVE

Falling atoms swerve slightly, which makes collisions possible and frees the will from fate.

2.216 In these matters we are eager for you to learn this too:
that when bodies are carried straight down through the void
by their own weights, at quite uncertain times
and in uncertain places they push a little from their path,
just so much that you could say their motion has changed.
But if they were not in the habit of swerving, all would fall
downward like drops of rain through the deep void,
and no collision would have arisen, nor any blow been produced
for the first beginnings; and so nature would never have created anything.

2.225 But if perhaps someone believes that heavier bodies,
since they are carried faster straight through the void,
could fall from above on lighter ones and so produce
blows that could give rise to creative motions,
he strays far off from true reasoning.
For whatever falls through water and thin air
must speed its fall in proportion to its weight,
because the body of water and the thin nature
of air cannot delay every thing equally,
but give way sooner, overcome by heavier ones.
But empty void, on the other hand, cannot give support to anything
in any direction or at any time,
but it goes on giving way, as its nature seeks;
therefore all things must be carried through the still void
at equal speed, though driven by unequal weights.

/ So heavier things will never be able to fall on lighter ones
from above, nor of themselves produce blows
that vary the motions by which nature carries on her work.
Therefore, again and again, bodies must swerve
a little—and no more than the least amount, lest we seem to invent
oblique motions and the truth refute it.
For this we see is plain and evident:
that weights, so far as in them lies, cannot travel obliquely
when they plunge from above, as far as you can see;
but that nothing swerves at all from the straight line
of its path—who is there who can see that?

2.251 Lastly, if every motion is always linked to another,
and a new one always arises from the old in fixed order,
and the first beginnings do not, by swerving, make
some beginning of motion to break the laws of fate,
so that cause may not follow cause from infinite time,
from where does this free will arise for living things throughout the earth,
from where, I ask, comes this will wrested from the fates,
by which we go forward wherever pleasure leads each of us,
and likewise swerve our motions, not at a fixed time
nor at a fixed place, but where the mind itself has carried us?
For beyond doubt it is his own will that gives each one
the beginning in these things, and from it motions flow through the limbs.
Do you not see, too, that when the starting gates are thrown open
in an instant, the eager strength of the horses
cannot burst forth as suddenly as their mind itself desires?

/ For the whole store of matter throughout the whole body
must be roused, so that, roused through all the limbs,
it may strain together and follow the mind's eagerness;
so you can see that the beginning of motion is created by
the heart,
and proceeds first from the will of the mind,
and from there is passed on through the whole body and
limbs.
Nor is it the same as when we move forward, pushed by a
blow,
by the great strength and great compulsion of another;
for then it is plain that all the matter of the whole body
moves and is swept along against our will,
until the will has reined it in throughout the limbs.
Do you not see, then, that although an outside force pushes
many and often forces them to go forward against their will
and be swept headlong, yet there is something in our breast
that can fight against it and resist?

/ At its bidding, too, the store of matter
is forced at times to turn through the limbs and joints,
and, flung forward, is reined in and settles back.
So in the seeds, too, you must admit the same:
that there is another cause of motion besides blows and
weights,
from which this power is born in us,
since we see that nothing can come to be from nothing.
For weight prevents all things from happening by blows,
as by an outside force; but that the thing itself should not
have
an inner necessity in all its actions,
and be forced, as if conquered, to bear and suffer,
this is brought about by the tiny swerve of the first
beginnings,
at no fixed place and at no fixed time.

2.294 Nor was the store of matter ever more tightly packed,
nor again spread out at greater intervals;
for nothing is added to it, nor does anything perish from it.
Therefore, in the same motion that the bodies of the first beginnings
are in now, they were in ages past,
and hereafter they will always be carried in the same way;
and the things that have been accustomed to be born will be born
under the same conditions, and will exist and grow and flourish in strength,
as far as is granted to each by the laws of nature.
Nor can any force change the sum of things;
for there is nothing outside into which any kind of matter
could escape from the universe, nor anything from which a new force
could arise and burst into the universe and change the whole
nature of things and turn its motions aside.

2.308 In these matters it is no wonder why,
although all the first beginnings of things are in motion,
the whole of things still seems to stand wholly at rest,
except where something makes motions with its own body.
For the whole nature of the first bodies lies far
below our senses; so, since you cannot see the bodies themselves,
their motions too must be hidden from us;
especially since things we can see often hide
their motions all the same when set far off at a distance.
For often on a hillside, cropping the lush pasture,
the woolly flocks creep on to wherever, calling each one,
the grasses, jeweled with fresh dew, invite them,
and the lambs, well fed, play and frisk prettily;
all of which seems to us, from far off, blurred together,
like a patch of white resting on a green hill.

/ Again, when mighty legions fill the spaces of the plains
with their charges, staging a mock war,
when the glitter rises to the sky and all around
the earth flashes back with bronze, and underneath, by the force of men's
feet, a thunder is roused, and the mountains, struck by the shouting,
hurl the voices back to the stars of heaven,
and horsemen wheel about and suddenly cut
across the middle of the plains, shaking them with their mighty charge—
still there is some place high in the mountains from which
they seem to stand still, a glitter resting on the plains.

THE SHAPES OF ATOMS

First beginnings differ in shape, which explains pleasant and harsh sensations, hardness and fluidity.

2.333 Now come, learn next what the beginnings of all things
are like, and how widely they differ in form,
how varied they are in shapes of many kinds—
not that only a few are endowed with a like form,
but because, as a rule, they are not all identical to one another.
No wonder: for since their supply is so vast
that there is, as I have shown, no end to it and no total,
it must surely be that not all of them, in every case,
are of equal build and marked by a like shape.

2.342 Besides, take the human race, and the mute swimming
herds of scaly creatures, the glad cattle and wild beasts,
and the many-colored birds that throng the gladdening
haunts of water
around riverbanks and springs and lakes,
and those that fly all through the pathless woods and fill
them:
take any one of these you like, kind by kind,
and you will find they still differ from each other in shape.
In no other way could offspring know their mother,
or mother offspring; yet we see that they can,
and that they are known to one another no less than
humans are.

/ For often, before the fine shrines of the gods, a calf
falls, slaughtered beside the incense-burning altars,
breathing out a hot stream of blood from its chest;
but the bereaved mother, roaming the green glades,
knows the prints pressed into the ground by cloven hooves,
scanning every place with her eyes, to see if anywhere
she can catch sight of her lost young; standing still, she fills
the leafy grove with her laments, and again and again goes
back
to the stall, pierced through with longing for her calf.
Neither tender willows nor grass fresh with dew
nor any rivers gliding brimful between their banks
can delight her mind and turn aside that sudden care,
nor can the sight of other calves in the glad pastures
divert her mind and lighten it of care:
so much does she long for something of her own,
something she knows.

/ Again, tender kids with their quavering voices
know their horned mothers, and frisky lambs
the flocks of bleating sheep; so, as nature demands,
each runs, as a rule, to its own udder full of milk.

2.371 Lastly, take any grain you like: still you will not find
every one of its kind like every other,
without some difference in form running between them.
In the same way we see the tribe of shells
painting the lap of the earth, where with soft waves
the sea pounds the thirsty sand of the curving shore.
So again and again, by like reasoning, it must be
that, since the first beginnings of things exist by nature
and were not made by hand to one fixed pattern,
some of them fly about with shapes unlike each other.

2.381 It is very easy for us to explain by reasoning of the mind
why the fire of lightning flows far more piercingly
than our own fire, which springs from earthly torches:
for you could say that the heavenly fire of the thunderbolt
is finer, made of small shapes,
and so passes through openings that this fire
of ours, sprung from wood and born of the pine torch,
cannot.
Again, light passes through horn, but rain
is thrown back. Why, unless those bodies of light
are smaller than those that make up the nourishing liquid
of water?

/ And though we see wine flow through a strainer
as quickly as you like, oil, by contrast, lingers sluggishly,
either because, of course, it consists of larger elements,
or of ones more hooked and more entangled with one
another,
and so it comes about that its first beginnings cannot so
quickly
be drawn apart from one another, each one
seeping singly through each single opening.

2.398 Add to this that the liquids of honey and milk
roll over the tongue in the mouth with a pleasant sensation,
while the foul nature of wormwood and of harsh
centaury twists the mouth with its loathsome taste;
so you may readily see that from smooth and round
elements
are made the things that can touch the senses pleasantly,
while whatever seems bitter and harsh
is held together by elements more hooked,
and for that reason tends to tear open paths into our
senses and to break into the body as it enters.

/ Lastly, all things good and bad to the senses by their touch
are at war with each other, being made of unlike shapes;
you must not think, perhaps, that the grating screech
of a shrieking saw consists of elements just as smooth
as the musaea mele (melodies of the Muses) that musicians
wake with nimble fingers and shape upon the strings;
nor must you think first beginnings of similar shape pierce
into people's nostrils when foul carcasses are burning
and when the stage has just been sprinkled with Cilician
saffron
and a nearby altar breathes out the perfumes of Panchaea;
nor decide that the pleasing colors of things consist of
similar
seed—those that can feast the eyes—
and those that prick the sight and force it to shed tears
or look foul and ugly with their loathsome aspect.[3]

/ For every thing that soothes your senses
was never created without some smoothness in its first
beginnings;
whereas whatever proves troublesome and harsh
was never produced without some roughness of matter.

3 Saffron from Cilicia (southern Asia Minor) was sprayed in theaters as a perfume; Panchaea was a legendary incense-bearing land in Arabia.

2.426 There are also some that cannot rightly be thought smooth
nor altogether hooked with bent-back points,
but rather have tiny angles jutting out a little, so that they
can tickle the senses rather than hurt them;
of this kind is wine lees, and the taste of elecampane.

2.431 Then again, that hot fire and icy frost,
toothed in different ways, prick the body's senses,
the touch of each gives us proof.
For touch—yes, touch, by the holy powers of the gods!—
is the body's sense, whether when something from outside
works its way in, or when something born in the body hurts
it
or gives pleasure as it goes out in the generative acts of
Venus,
or when, after a collision, seeds riot within the body itself
and, stirred up, throw sensation into confusion among
themselves—
as when, perhaps, you strike some part of your own body
with your hand, and try it for yourself.
Therefore the first beginnings must differ widely in their
shapes,
since they are able to produce such varied sensations.

2.444 Then again, things that seem to us hardened and dense
must consist of elements more hooked together
and be held fast, deeply knit, as if by branching parts.
In this class, foremost of all, adamantine rocks
stand in the front line, accustomed to scorning blows,
and stout flints, and the strength of hard iron,
and bronze bolts that cry out as they hold firm at the doors.
Those things, on the other hand, must be made rather of
smooth and round
elements which are liquid, with a flowing body.
For a scoop of poppy seed pours as easily as water;
for the little globes do not hold one another back,
and when struck, each rolls just as readily downhill.

/ Lastly, all things that you see in a moment of time
fly apart, like smoke, mists, and flames, must,
if they are not wholly made of smooth and round elements,
at least not be hampered by tangled ones,
so that they can prick the body and pass into rocks
and yet not cling together; so whatever we see
that feels toothed to our senses, you may easily recognize
to be made not of tangled but of pointed elements.
But that you see the same things bitter which are fluid,
as the sweat of the sea is, ought to be no wonder at all
...
For because it is fluid, it is made of smooth and round
elements, but with the smooth are mixed hooked bodies
of pain. Yet these hooked ones need not be held fast
together:
clearly they are globular all the same, though rough,
so that they can roll along together and hurt the senses.

/ And to make you believe more readily that rough first
beginnings are mixed
with smooth ones, making Neptune's body bitter,
there is a way of separating them and seeing them apart:
when that same water, becoming sweet, is filtered again
and again
through the earth, so that it flows into a pit and grows mild;
for it leaves behind, above, the first beginnings of the foul
brine,
since, being rough, they are more apt to stick in the earth.

2.478 Now that I have taught this, I will go on to link a fact that,
fastened to this, draws its proof from it: that the first
beginnings of things
vary within a finite range of shapes.
For if this were not so, then some seeds
would have to be of infinite bodily size.
For within the same small compass of any one
body, the shapes cannot vary much
among themselves. Suppose that first bodies consist of
three
smallest parts, or enlarge them by a few more:
surely, when you have taken all the parts of one body,
placing them top and bottom, switching right with left,
and tested in every way what look of form
each arrangement gives to that whole body,
then, if you want to vary the shapes further,
you will have to add other parts.

It will follow from this
that, by like reasoning, the arrangement will call for still
others,
if you should want to vary the shapes yet further.
So growth of body follows upon novelty
of shape. Therefore it cannot be that you believe
seeds differ in infinitely many shapes,
or you will force some of them to be
of monstrous size, which I showed above cannot be proved.
Otherwise barbarian robes, and gleaming Meliboean
purple dipped in the Thessalian color of shells,
and the golden race of peacocks steeped in laughing charm
would lie outdone by some new color of things;
the scent of myrrh and the taste of honey would be scorned,
and the cycnea mele (swan songs) and the intricate strains
of Phoebus on the strings
would, in like manner, be overwhelmed and fall silent;
for one thing would always spring up surpassing another.[4]

4 Meliboea, a town in Thessaly, was famed for its purple dye. The swan was sacred to Phoebus Apollo, god of music.

/ Likewise, all things could fall back toward the worse
in the same way as we said they could advance toward the better;
for going backward, too, one thing would be more foul than another
to nostrils, ears, and eyes, and to the taste of the mouth.
Since these things are not so, but a fixed limit is assigned
to things and holds the sum at either end, you must admit
that matter too differs in a finite number of shapes.
Again, from fires to the icy frosts of winter
the range is finite, and it is measured back in like manner.
For all heat and cold and the lukewarm between them
lie between the two, filling up the sum in order.
So things created differ within a finite range,
since they are marked at both ends by a double point,
beset by flames on this side and by stiff frosts on that.

2.522 Now that I have taught this, I will go on to link a fact that,
fastened to this, draws its proof from it: that the first beginnings of things
that are made with a like shape
are infinite in number. For since the difference
of shapes is finite, those that are alike must
be infinite, or else the sum of matter
must be finite—which I have proved is not so.
...
I will show in verse that the little bodies of matter
from infinity keep up the sum of things
on every side by an unbroken succession of blows.

/ For as to your seeing that some creatures are rarer,
and perceiving nature to be more fruitful in them,
yet in another region and place, in distant lands,
there may be many of that kind, making up the count;
as we see, first among four-footed beasts,
the snake-handed elephants, whose many thousands
fortify India with an ivory rampart,
so that it cannot be entered deep inside: so great is the host
of those beasts, of which we see only a very few specimens.
But still, to grant this too, let there be, if you like,
some one unique thing, alone in its birth-given body,
with nothing like it in the whole round of the lands;
yet unless there is an infinite store of matter
from which it could be conceived and brought forth, it will
not
be able to be created nor, further, to grow and be
nourished.

/ For suppose some were to claim that a finite number
of creative bodies of one thing are tossed through the
universe:
from where, where, by what force, and how will they meet
and come together
in so vast an ocean of matter, amid an alien throng?
They have, I think, no means of union.
But just as, when many great shipwrecks have come about,
the great sea is wont to toss about thwarts, hulls,
yards, prow, masts, and swimming oars,
so that along all the shores of the lands floating stern-
ornaments
are seen, and give a sign to mortals
to want to shun the snares of the faithless sea, its might and
guile,
and never at any time to trust it
when the calm deep's treacherous enticement smiles—
so, if once you posit a finite number of some first
beginnings,
they must, scattered through all time,
be tossed apart by the conflicting tides of matter,
so that they can never be driven into union and come
together,
nor linger in union, nor grow and increase;
yet plain fact shows that both of these openly happen:
things are brought forth, and once born they can grow.

/ It is clear, then, that in every kind the first beginnings of things / are infinite, and from them all things are supplied.

2.569 So the motions of destruction cannot prevail
forever and bury health for all eternity,
nor, again, can the motions that beget and increase
things preserve forever what they have created.
So, in an even contest, the war of the first beginnings
is waged, a war joined from infinite time.
Now here, now there, the life-giving forces of things conquer,
and in turn are conquered. With the funeral mingles the wail
that babies raise as they look upon the shores of light;
and no night has followed day, nor dawn night,
that has not heard, mingled with the feeble cries of newborns,
the laments that attend on death and the black funeral.

2.581 In these matters it is fitting also to keep this sealed
and hold it stored in a mind that remembers:
that there is nothing whose nature is plain to see
that consists of one kind of first beginnings,
and nothing that is not made of mixed seed.
And the more forces and powers a thing possesses
within itself, the more it shows that there are in it the most kinds
of first beginnings and varied shapes.

THE GREAT MOTHER

The earth's worship as Cybele is explained as allegory; the gods take no part in our affairs.

2.589 First, the earth holds within her first bodies
from which springs, rolling cool waters,
constantly renew the boundless sea; she holds the source of fires;
for in many places the ground of the earth is kindled and burns,
and from the depths the onslaught of Etna rages with fire.
Then, too, bright crops and thriving orchards
she has the means to raise up for the races of humankind,
and the means, too, to offer rivers, leaves, and glad pastures
to the mountain-roaming tribe of wild beasts.
So she has been called Great Mother of the gods, mother of beasts,
and begetter of our body—she alone.

2.600 Her the ancient learned poets of the Greeks have sung
as driving, seated in a chariot, a pair of yoked lions,
teaching that the great earth hangs in the expanse of air
and that earth cannot rest upon earth.
They yoked wild beasts to her because offspring, however wild,
ought to be tamed and softened by the loving care of parents.
And they ringed the top of her head with a mural crown
because, fortified in commanding places, she upholds cities.
Adorned with this emblem, the image of the divine Mother
is carried now through great lands, striking awe.
Her the various nations, by an ancient rite of worship,
call the Idaean Mother, and they give her Phrygian bands
as companions, because they declare that from those regions first
crops began to be produced throughout the world.
They assign her Galli because, as for those who have outraged the power
of the Mother and been found ungrateful to their parents,
they wish to show that these must be thought unworthy
to bring forth living offspring into the shores of light.[5]

5 The Great Mother is Cybele, the Phrygian goddess of Mount Ida, whose cult reached Rome in 204 BC; the Galli were her castrated priests.

/ Taut drums thunder under their palms, and hollow
cymbals
all around, and horns threaten with their hoarse-sounding
blare,
and the hollow pipe goads their minds with Phrygian
rhythm;
they carry weapons before them, tokens of violent frenzy,
able to make the ungrateful minds and impious hearts of
the crowd
quake with fear of the goddess's power.
So, as soon as she is borne through great cities
and silently blesses mortals with her wordless grace,
they strew her whole path along the streets with bronze
and silver,
enriching her with lavish coins, and snow down rose
blossoms, shading the Mother and her band of attendants.

/ Here an armed band, whom the Greeks call by name
Curetes, if they happen to sport among the Phrygian troops
and leap in rhythm, rejoicing in blood,
shaking with a nod the terrifying crests upon their heads,
recall the Dictaean Curetes, who are said once
to have hidden that famous wailing of Jupiter in Crete,
when, boys around a boy, in a swift dance,
[arms and in rhythm with a swift dance]
armed, in rhythm, they beat bronze on bronze,
so that Saturn might not seize him and consign him to his jaws
and deal the mother an everlasting wound deep in her heart.
That is why they escort the Great Mother in arms;
or else because they signify that the goddess bids men, with arms
and courage, to be willing to defend their native land,
and to prepare to be a protection and a glory to their parents.
But though these things are told in fine and excellent order,
they are far removed, all the same, from true reasoning.[6]

6 The Curetes, on Crete's Mount Dicte, clashed their arms to drown the infant Jupiter's cries so that his father Saturn would not swallow him.

/ For the whole nature of the gods must of itself
enjoy immortal life in the deepest peace,
far removed and separated from our affairs;
for, free from all pain, free from dangers,
strong in its own resources, needing nothing from us,
it is neither won over by good service nor touched by anger.
The earth, in truth, is at all times without sensation,
and because it possesses the first beginnings of many
things,
it brings forth many things in many ways into the light of
the sun.
Here, if anyone decides to call the sea Neptune, and grain
Ceres, and prefers to misuse the name of Bacchus
rather than utter the proper name of the liquid,
let us allow him to keep calling the round world
the Mother of the gods, provided that in reality he himself
refrains from tainting his mind with base religion.

2.660 And so, often, cropping the grass of a single field,
woolly flocks and the warlike breed of horses
and herds of horned cattle, under the same canopy of sky,
slaking their thirst from a single stream of water,
live with unlike appearances, and keep their parents'
nature, and each after its kind copies their ways.
So great is the difference of matter in any kind of grass,
so great in any river too.

2.668 Then again, any single living creature among them all
is made up of bones, blood, veins, heat, moisture, flesh,
sinews,
which in turn differ widely,
made of first beginnings of unlike shape.

2.672 Then again, take whatever things are set aflame and burned by fire:
if nothing else, they still carry in their body
the means to throw out fire and send up light
and shoot out sparks and scatter ash far and wide.
Ranging over everything else with the same reasoning of mind,
you will find, then, that they hide the seeds of many things
in their body and hold within them varied shapes.

2.679 Again, you see many things to which color and taste together
are given along with smell—above all, most fruits.
These, then, must consist of varied shapes;
for smell penetrates into our limbs where color does not go,
and color likewise separately, separately taste, steals
into our senses; so you may know they differ in their first shapes.
Unlike forms, then, come together into one mass,
and things consist of mixed seed.

2.688 Indeed, all through these very verses of mine
you see many elements—letters—common to many words,
and yet you must admit that verses and words
are made up of letters that differ from one another;
not that only a few common letters run through them,
or that no two consist of exactly the same,
but because, as a rule, they are not all identical to one another.
So too in other things, though much is shared in common
by many things, the first beginnings of things
can still make up wholes unlike each other;
so that it may rightly be said that from different ones are made
the human race, and crops, and thriving trees.

2.700 Yet you must not think that all things can be joined
in every way; for you would see monsters arise everywhere,
half-beast forms of men come into being, and tall
branches sometimes sprouting from a living body,
and many limbs of land creatures joined to those of sea creatures,
and Chimaeras breathing flame from foul mouths
fed by all-begetting nature throughout the lands.
Plainly none of this happens, since we see that all things,
created from fixed seeds by a fixed mother,
can preserve their kind as they grow.
Clearly this must happen according to a fixed principle.
For from all foods, its own proper bodies pass inside
into the limbs of each creature and, joined together, produce
the fitting motions; but on the other hand we see
nature throw alien bodies back onto the earth, and many, with unseen
bodies, flee from the body, driven out by blows,
which could neither join anywhere nor, within,
move in harmony with the vital motions and imitate them.

/ But lest you think that living creatures alone are bound
by these laws, a certain principle sets limits to all things.
For just as things begotten are unlike one another
in their whole nature, so each must
consist of first beginnings of unlike shape;
not that only a few are endowed with a like form,
but because, as a rule, they are not all identical to one another.
Further, since seeds differ, there must be differences in their
intervals, paths, connections, weights, blows,
collisions, motions; and these not only separate
the bodies of animals, but divide the lands and the whole sea
and hold all the sky apart from the earth.

ATOMS HAVE NO COLOR

Color, heat, sound, smell and sensation belong to compounds, not to the first beginnings.

2.730 Now come, learn words sought out by my sweet labor,
lest you perhaps suppose that the white things you see
shining before your eyes are made of white first
beginnings,
or that black things are born of black seed;
or believe that things steeped in any other color
bear it because the bodies of matter
are dyed with a color like it;
for the bodies of matter have no color
at all, neither like things nor unlike.
And if perhaps it seems to you that no casting of the mind
can reach such bodies, you wander far off the path.
For since the blind from birth, who have never
beheld the light of the sun, still know bodies by touch
that from the beginning of their life were joined to no color,
you may know that our mind too can come
to a notion of bodies that are coated with no color.

/ Again, whatever we ourselves touch in blind darkness / we do not perceive as tinged with any color.

2.748 Since I have won the point that this can be, I will now teach
that it is so.
For every color changes entirely into every other;
and this the first beginnings must by no means do;
for something unchangeable must survive,
so that all things may not be reduced utterly to nothing;
for whatever changes and passes out of its own bounds,
that is at once the death of what it was before.
So beware of tinging the seeds of things with color,
or else all things would return utterly to nothing for you.

2.757 Besides, if no nature of color has been given
to the first beginnings, and they are endowed with various shapes
from which they produce and vary colors of every kind,
then, since it matters greatly for all the seeds
with what others and in what position they are held together,
and what motions they give and receive among themselves,
you could at once very easily give an account
of why things that were black in color a moment ago
can suddenly become as white as marble—
as the sea, when great winds have churned its surface,
turns into white-capped waves of gleaming marble.
For you could say that what we often see as black,
once its matter has been mixed up, and the order
of its first beginnings changed, and some things added and some taken away,
at once comes to look gleaming and white.

/ But if the waters of the sea were made of blue
seeds, they could in no way turn white;
for however you stir up things that are blue,
they can never pass over into the color of marble.
But if the seeds are dyed now one color, now another,
and together produce the sea's one pure sheen,
just as often from other forms and varied shapes
something square and of a single shape is made,
then, just as we see in a square that there are
unlike forms, so we ought to see in the surface of the sea,
or in anything else of one pure sheen,
colors widely unlike one another and varied.
Besides, unlike shapes do not hinder or stand in the way
of the whole being square on the outside;
but the various colors of things obstruct and prevent
the whole thing from being of one single sheen.

2.788 Then again, the reason that leads and lures us
at times to assign colors to the first beginnings of things
falls away, since white things are not created from white,
nor things called black from black, but from varied seeds.
For indeed white things will arise far more readily
from no color at all than from black
or any other color that fights against it and resists.

2.795 Besides, since colors cannot exist without light,
and the first beginnings of things do not come out into the light,
you may know that they are clothed in no color at all;
for what color could there be in blind darkness?
Indeed, color changes in the light itself, according to whether
it gleams when struck by direct or slanting light:
so the plumage of doves appears in the sun,
the plumage that sits around the nape and rings the neck;
for sometimes it happens to be red as a bright garnet,
at other times, as one sees it, it seems
to mix green emeralds with blue.
And the peacock's tail, when it is filled with abundant light,
changes its colors in just the same way as it turns;
and since these are produced by a certain impact of light,
you may know that they must be thought unable to arise without it.

2.810 And since the pupil receives a certain kind of blow
when it is said to perceive the color white,
and another kind again when it perceives black and the rest,
and it does not matter what color the things you touch
may have, but rather with what shape they are fitted,
you may know that the first beginnings have no need of color,
but produce varied touches by their various forms.

2.817 Besides, since color is not fixed by nature
to fixed shapes, and all the forms of the first beginnings
can exist in any sheen whatever,
why are the things made of them not likewise,
in every kind, suffused with colors of every sort?
For then crows too, as they fly, ought often
to flash white color from white wings,
and swans to become black from black seed,
or any other color, single or varied.

2.826 Moreover, the more each thing is pulled apart
into tiny pieces, the more you can see
its color gradually fade and die out,
as happens when purple cloth is torn into small shreds:
the purple, the scarlet, far the brightest of colors,
when pulled apart thread by thread, is entirely lost;
from this you may learn that the particles breathe out all
their color
before they are broken down to the seeds of things.

2.834 Lastly, since you grant that not all bodies give out
a voice or a smell, it follows for that reason
that you do not assign sounds and smells to all:
so, since we cannot perceive all things with our eyes,
you may know that some things exist as bereft of color
as some are without any smell and removed from sound,
and that the keen mind can recognize these no less
than it can mark things deprived of other qualities.

2.842 But in case you think that the first bodies remain
stripped of color alone: they are also set apart from warmth
and cold entirely, and from hot vapor;
they move along barren of sound and starved of flavor,
and throw off from their body no odor of their own.

/ Just as, when you set out to make the soothing liquid of marjoram
and myrrh, and the flower of nard that breathes nectar to the nostrils,
it is right first of all to look for,
as far as you may and can find it, an olive oil without scent,
of a nature that sends no breath to the nostrils,
so that it may least be able to corrupt the scents mixed into its body
and blended there by touching them with its own tang—
for the same reason the first beginnings of things must
bring no scent of their own to the things they produce,
nor sound, since they can send nothing out from themselves,
nor, in the same way, any flavor at all,
nor cold, nor likewise hot or warm vapor,
and all the rest—things that, being what they are, are mortal in make-up:
the pliant with soft body, the brittle with crumbling, the hollow with porous—
all these must be kept apart from the first beginnings,
if we wish to lay immortal foundations
under things, on which the sum of their survival may rest;
or else all things would return utterly to nothing for you.

2.865 Now, whatever we see to have sensation, you must
still admit is all made up of first beginnings
without sensation. Nor do the plain facts refute this
or fight against it, the things known to us and ready to hand;
rather, they themselves lead us by the hand and compel us to believe
that living creatures, as I say, are born from things without sensation.
For we can see living worms emerging
from foul dung, when the sodden earth has taken on
a rot from untimely rains.

2.874 Besides, all things likewise change themselves.
Rivers change themselves into leaves, and lush pastures
into cattle; cattle change their nature into
our bodies; and from our bodies, often,
the strength of wild beasts grows, and the bodies of the
mighty-winged birds.
So nature turns all food into living bodies
and from it brings forth all the senses of living creatures,
in much the same way as it unfolds dry wood
into flames and turns it all into fire.
Do you see now, then, that it matters greatly
in what order the first beginnings of things are each placed,
and with what others they are mixed, to give and receive
motions?

2.886 Then again, what is it that strikes the mind itself,
that moves it and compels it to express various feelings,
so that you won't believe the sentient is born from the
insentient?
Surely it is that stones and wood and earth, mixed
together, still cannot yield living sensation.
In these matters, then, it will be well to remember
that I do not say that sensations are born at once from any
and all
things whatever that create sentient beings,
but that it matters greatly, first, how tiny they are,
the things that make the sentient, and with what shape they
are endowed,
and lastly what they are in motions, orders, positions.

/ None of these do we see in wood and clods;
and yet these, when they have been rotted, as it were, by
rains,
give birth to little worms, because the bodies of matter,
stirred from their old orders by a new event,
are brought into union in such a way that living things must
be born.

2.902 Next, those who maintain that the sentient can be created
from sentient things, and these in turn from others used to
feeling,
...
when they make them soft; for all sensation is joined
to flesh, sinews, veins—all things that we see
are soft and made of mortal body.
But still, grant for now that these could remain eternal:
surely, even so, they must either have the sensation of a
part
or be thought to be like whole living creatures.
But parts, necessarily, cannot feel by themselves:
for the mind rejects every sensation of the limbs on their
own,
and neither a hand cut off from us nor any
part of the body at all can keep sensation by itself.
It remains that they must resemble whole living creatures,
so that they can feel in harmony with living sensation
throughout.

/ How, then, can they be called the first beginnings of
things
and avoid the paths of death, since they are living
creatures,
and living creatures are one and the same as mortal ones?
Yet even supposing they could, by meeting and union
they will make nothing but a crowd and throng of living
creatures,
just as, surely, men, herds, and wild beasts cannot
beget any other thing by coming together with one another.
So likewise the things we feel must themselves feel.
But if perhaps they shed their own sensation from their
body
and take on another, what need was there to assign what
is taken away? Then besides, as we set out before,
since we see the eggs of birds turn into living
chicks, and worms swarm up out of the earth
when rot has seized it after untimely rains,
you may know that sensation can be born from what has
none.

2.931 But if someone perhaps says that sensation can arise
from non-sensation only through change,
or through a kind of birth by which it is brought forth,
it will be enough to make plain to him and prove
that there is no birth unless a union has first been formed,
and that nothing changes without uniting.

2.937 First of all, there can be no senses in any body
before the nature of the living creature itself is born,
because, of course, its matter is held scattered
in air, rivers, earth, and the things born from earth,
and has not come together in the right way and brought
the fitting vital motions together, by which the all-seeing
senses are kindled and watch over each living creature.

2.944 Besides, a blow heavier than nature can bear
suddenly strikes down any living creature, and goes on to throw
all the senses of body and mind into confusion.
For the positions of the first beginnings are broken up,
and the vital motions are deeply obstructed,
until the matter, shaken throughout the limbs,
loosens the knots of the vital spirit from the body
and, scattering it, drives it out through all the pores;
for what else can we suppose a blow can do
when dealt, except shatter and dissolve each thing?

/ It also happens, when a blow is dealt less sharply,
that the remaining vital motions often win—
win, and calm the huge disturbance of the blow,
call each thing back again into its own courses,
shake off the motion of death, as it were already master in the body,
and rekindle the senses nearly lost;
for why else could creatures, from the very threshold of death,
rally their minds and come back to life,
rather than go on to where their course is nearly run, and pass away?

2.963 Besides, since pain occurs when the bodies of matter,
disturbed by some force through the living flesh and limbs,
tremble within in their seats,
and when they move back into place sweet pleasure arises,
you may know that the first beginnings cannot be assailed
by any pain, nor take any pleasure from themselves,
since they are not made up of any bodies
of first beginnings by whose change of motion they might suffer
or reap some fruit of life-giving sweetness.
They should not, then, be endowed with any sensation.

2.973 Lastly, if, so that every living creature can feel,
sensation must now be assigned to its first beginnings,
what of those from which the human race is specifically made?
No doubt they shake with trembling laughter and guffaw,
and sprinkle their faces and cheeks with dewy tears,
and are skilled at saying much about the mixture of things,
and go on to ask what their own first beginnings are;
since, being made like whole mortal beings,
they too must be made up of other elements,
and those in turn of others, so that you never dare to stop;
for I will follow you: whatever you say speaks and laughs
and is wise must be made of others that do these same things.

/ But if we see that this is raving madness,
and that one can laugh without being made of laughing things,
and be wise and give an account in learned words
without being made of wise and eloquent seeds,
why could the things we see have sensation not be
compounded of seeds wholly lacking in sensation?

2.991 Lastly, we are all sprung from heavenly seed;
all have that same father, from whom our nourishing mother,
the earth, when she has received the liquid drops of moisture,
grows pregnant and bears shining crops and lush trees
and the human race, bears every species of wild beast,
providing the food on which all feed their bodies
and lead a sweet life and propagate their young;
and so she has rightly won the name of mother.
Likewise what came from earth before goes back
into the earth, and what was sent from the shores of the upper air
is carried back again and received by the temples of the sky.

/ Nor does death destroy things in such a way that it annihilates
the bodies of matter; it breaks up their gathering.
Then it joins one to another, and brings it about that all
things change their forms and alter their colors
and take on sensation and give it up in an instant;
so that you may know it matters, for those first beginnings of things,
with what others and in what position they are held together,
and what motions they give and receive among themselves,
and so that you may not think that there can reside in the eternal
first bodies what we see floating on the surface
of things, at times being born and suddenly perishing.

/ Indeed, even in these verses of mine it matters
with what others and in what order each letter is placed;
for the same letters denote sky, sea, lands, rivers, sun,
and the same, crops, trees, living creatures;
if not all, still by far the greatest part
is alike; but by position the words differ.
So too in real things, likewise, when of matter
[the intervals, paths, connections, weights, blows,]
the collisions, motions, order, position, shapes
are changed, the things too must change.

COUNTLESS WORLDS

Ours is one of many worlds, made by nature without the gods, and it is already growing old.

2.1023 Now turn your mind to me, to true reasoning.
For a new thing is struggling hard to reach
your ears, and a new aspect of things to show itself.
But there is nothing so easy that it does not at first
prove harder to believe, and likewise
nothing so great or so wonderful
that everyone does not, little by little, wonder at it less.
Take first the clear, pure color of the sky
and all it holds within it, the stars wandering everywhere,
the moon, and the sun's radiance with its brilliant light:
if all these were now shown to mortals for the first time,
if they were suddenly, unexpectedly, set before them,
what could be called more wonderful than these things,
or what would the nations beforehand have dared less to
believe could be?
Nothing, I think: so marvelous would this sight have been.

/ Yet now no one, weary and sated with seeing it,
deigns to look up at the shining temples of the sky.
So stop being terrified by mere novelty
into spitting reasoning out of your mind; rather, weigh it
with keen judgment, and if it seems true to you,
surrender; or, if it is false, arm yourself against it.
For the mind seeks a reason, since the sum of space is
infinite outside, beyond these walls of the world,
for what lies there, out where the mind longs to gaze
and where the free leap of the mind itself flies through.

2.1048 First of all, for us, in every direction all around,
on either side, above and below, through the whole,
there is no limit, as I have shown; the fact itself
proclaims it aloud, and the nature of the deep shines clear.
In no way, then, should it be thought likely,
when space lies empty and infinite in every direction,
and seeds in countless numbers, in a bottomless sum,
fly about in many ways, driven by eternal motion,
that this one world of lands and sky alone was created,
and that all those bodies of matter outside do nothing—
especially since this world was made by nature, as the seeds of things
themselves, of their own accord, colliding by chance,
driven together in many ways, at random, in vain and to no purpose,
at last grew together—those which, suddenly cast together,
were to become each time the beginnings of great things,
of earth and sea and sky and the race of living creatures.

/ Therefore again and again you must admit
that there are elsewhere other gatherings of matter
like this one, which the upper air holds in its greedy embrace.

2.1067 Besides, when much matter is ready,
when space is at hand, and no thing and no cause
stands in the way, surely things must be carried out and brought to be.
Now, if the store of seeds is so great
that the whole lifetime of living creatures could not count it,
and the same nature remains in them, able to throw the seeds of things
together into every place in the same way
as they have been thrown together here, you must admit
that there are other worlds in other regions
and various races of men and species of wild beasts.

2.1077 Add to this that in the sum of things there is no one thing
that is born unique and grows unique and alone
without belonging to some species, with very many
of the same kind. Take living creatures first: with your mind as guide
you will find that so it is with the mountain-roaming race of wild beasts,
so with the twofold offspring of humankind, so, lastly, with the mute
flocks of the scaly ones and all the bodies of flying things.
Therefore, by the same reasoning, you must admit that sky
and earth and sun, moon, sea, and all the rest that exist
are not unique, but rather beyond all number,
since a deeply fixed boundary of life
awaits them just as surely, and they are made of a body that was born
just as much as every species that abounds here in its kinds.

2.1090 If you hold these things well learned, nature is seen
at once to be free, stripped of proud masters,
doing all things by herself, of her own accord, without the gods.
For—by the holy hearts of the gods, in tranquil peace,
that pass a calm age and a serene life!—
who can rule the sum of the immeasurable, who can hold
in hand and steer the mighty reins of the deep,
who can turn all the heavens alike and warm
all the fruitful lands with fires from the upper air,
or be present in every place at every time,
to make darkness with clouds and shake the clear
sky with thunder, then hurl lightning bolts, and often
wreck his own temples, and, withdrawing into deserts,
rage there, practicing with his weapon, which often passes by
the guilty and kills the innocent and the undeserving?

2.1105 And after the birth-time of the world and the first day
of sea and earth, and the rising of the sun,
many bodies were added from outside, seeds added
all around, which the great universe brought together by hurling,
from which sea and lands could grow, and from which
the dwelling of the sky could gain space and raise its lofty roof
far from the earth, and the air could rise up.
For by blows from every place all bodies are allotted,
each to its own, and withdraw to their own kinds:
moisture goes to moisture, earth grows with earthy body,
fires forge fire, and ether ether,
until nature, creator of things, the perfecter,
has brought all things to the final limit of growth,
as happens when no more is now given within
the vital veins than flows out and departs.

/ Here the life-span of all things must come to a halt;
here nature reins in growth with her own strength.
For whatever you see growing big with joyful increase
and little by little climbing the steps of full-grown age
takes into itself more bodies than it sends out from itself,
as long as all the food is easily taken into the veins, and as long as
it is not so widely spread out that it gives off much
and spends more than its age feeds on.
For certainly it must be granted that many bodies flow
and depart from things; but more must come in
until they have touched the topmost peak of growth.
From then on, little by little, age breaks their strength and full-grown vigor,
and melts away into decline.

/ For indeed, the larger a thing is once growth has ceased,
and the broader, the more bodies it now scatters
in every direction and sends out from itself;
nor is the food easily spread through all its veins,
nor is there enough, in proportion to the rich tides it pours out,
from which as much can spring up anew and be supplied.
Rightly, then, all things perish when they have been thinned by flowing out
and when they succumb to blows from outside,
since in great old age food at last runs short,
and the bodies pounding from outside never cease to wear down
any thing and subdue it with hostile blows.

2.1144 So, then, the walls of the great world all around, too,
will be stormed and collapse into crumbling ruins;
for food must restore all things by renewing them,
food must prop them up, food must sustain all things—
in vain, since neither do the veins take in
enough, nor does nature supply as much as is needed.

2.1150 And indeed, even now the age is broken, and the exhausted earth
barely creates tiny creatures—she who created all
species and gave birth to the huge bodies of wild beasts.
For, I think, no golden rope let down the mortal species
from heaven above onto the fields,
nor did the sea and the waves that beat the rocks create them,
but the same earth bore them that now feeds them from herself.
Besides, the shining crops and lush vineyards
she herself first created for mortals, of her own accord;
she herself gave sweet fruits and lush pastures,
which now scarcely grow large though increased by our labor;
and we wear out oxen and the strength of farmers,
we wear out the iron plow, and the fields barely provide for us:
so sparing are they of their fruits, and so they increase our labor.[7]

/ And now the old plowman shakes his head and sighs,
more and more often, that his great labors have come to nothing,
and when he compares present times with times
past, he often praises his father's fortunes.
Gloomy too, the planter of the old and shriveled vine
blames the drift of the times and wearies the age with complaint,
and grumbles that the men of old, full of piety,
easily sustained their lives within narrow bounds,
though each man's share of land was once much smaller;
nor does he grasp that all things little by little waste away and go
to the grave, worn out by the long span of their age.

7 The golden rope recalls the golden chain let down from heaven in Homer, *Iliad* 8.

Book III

Mind and soul
The soul is mortal, made of fine atoms; therefore death is nothing to us.

3.1 You who first could raise so clear a light from such deep darkness,
shedding light on the blessings of life,
you I follow, glory of the Greek people, and in your
deep-pressed tracks I now firmly set my own footprints,
not so much eager to compete as out of love,
because I long to imitate you; for why would a swallow vie
with swans, or what could young goats on trembling limbs
achieve in a race to match the strong horse's might?
You, father, are the discoverer of things; you give us
a father's precepts, and from your pages, famous one,
as bees in flowery glades sip from everything,
so we likewise feed on all your golden words—
golden, and ever most worthy of everlasting life.
For as soon as your reasoning begins to proclaim aloud
the nature of things, sprung from a divine mind,
the terrors of the mind scatter, the walls of the world
open wide.

I see things happening throughout the whole void.
The majesty of the gods appears, and their quiet dwellings,
which no winds shake, nor clouds spatter
with rain, nor does snow, congealed by sharp frost,
falling white, violate them; and an ever cloudless ether
covers them and smiles with light spread wide.
Nature, moreover, supplies them with everything, and nothing
at any time nibbles away at their peace of mind.
But on the other side, the regions of Acheron appear nowhere,
nor does the earth prevent everything from being seen clearly,
whatever goes on below, beneath our feet, through the void.
At these things a kind of divine pleasure
takes hold of me, and a shudder, that nature by your power
has been so plainly laid open and uncovered on every side.

THE FEAR OF DEATH

Fear of the underworld poisons life and drives greed, ambition and crime.

3.31 And since I have taught what the beginnings of all things
are like, and how, differing in their varied shapes,
they fly about of their own accord, driven by eternal motion,
and in what way each thing can be created out of them,
next after these matters, it seems, the nature of the mind
and of the spirit must now be made clear in my verses,
and that fear of Acheron driven headlong out of doors,
which troubles human life from its very depths,
suffusing everything with the blackness of death, and leaves no
pleasure clear and pure.

/ For when men often declare that disease is more to be
feared,
and a life of disgrace, than the Tartarus of death,
and that they know the nature of the mind is blood,
or else wind, if their fancy happens so to incline,
and that they have no need at all of our reasoning,
you may observe from this that it is all tossed out
for the sake of praise rather than because the thing itself is
believed.
These same men, exiled from their country and banished
far
from the sight of their fellows, defiled by some foul charge,
afflicted in short with every misery, still live on,
and wherever the wretches go, they make offerings to the
dead,
slaughter black cattle, and send down gifts
to the divine shades, and in bitter times
turn their minds far more keenly to religion.

/ So it is all the more fitting to watch a man in doubt and
danger,
and to learn in adversity what he is;
for only then are true words drawn up from the depths
of the heart; the mask is torn away, the reality remains.
Then again, greed and the blind craving for office,
which drive wretched men to overstep the bounds
of right, and at times, as partners and agents of crime,
to strive night and day with surpassing effort
to rise to the height of wealth—these wounds of life
are fed in no small part by the fear of death.[1]

1 The Latin text is corrupt at the end of 3.58; we follow the usual correction, "manet res" ("the reality remains").

/ For base contempt and bitter poverty, as a rule,
seem far removed from a sweet and settled life,
and to be loitering, as it were, already before the gates of death;
and while men, driven by a false terror, wish
to escape far from these and drive them far, far away,
they amass a fortune from civil bloodshed and greedily
double their riches, heaping slaughter on slaughter;
cruelly they rejoice at a brother's sad funeral,
and they hate and fear the tables of their kin.
In just the same way, and often from the same fear,
envy wastes them: that man before their eyes is powerful,
that man is gazed at, who walks in the splendor of office,
while they complain that they themselves wallow in darkness and mire.
Some perish for the sake of statues and a name.

/ And often, through fear of death, so great a hatred of life
and of seeing the light takes hold of human beings
that with grieving hearts they bring death upon themselves,
forgetting that this fear is the source of their cares:
that this harries their sense of shame, this bursts the bonds of friendship,
and, in short, urges them to overturn all piety:
for often before now men have betrayed their country and their dear parents,
seeking to escape the regions of Acheron.
For just as children tremble and fear everything
in blind darkness, so we in the light are afraid
at times of things no more to be feared than
what children shudder at in the dark and imagine will come.
This terror of the mind, then, and this darkness must be dispelled
not by the rays of the sun or the bright shafts of day,
but by the face of nature and her reasoning.

MIND AND SPIRIT

Mind and spirit are bodily parts of a person, made of extremely fine particles.

3.94 First, I say that the mind, which we often call the understanding,
in which the counsel and governance of life are lodged,
is a part of a human being no less than hand and foot
and eyes are parts of the whole living creature.
...
that the sense of the mind is not lodged in any fixed part,
but is a certain vital condition of the body,
which the Greeks call harmony, because it makes us
live with sensation, though the mind is in no part;
just as good health is often said to belong
to the body, and yet it is not any part of the healthy person,
so they do not place the sense of the mind in a fixed part;
and in this they seem to me to go badly astray.[2]

3.106 So it often happens that the body, which is plain to see, is sick,
while we are glad in some other, hidden part;
and often, in turn, the reverse happens,
when someone wretched in mind is glad in his whole body;
just as when a sick man's foot is in pain,
his head meanwhile may happen to feel no pain at all.

3.112 Besides, when the limbs are given over to soft sleep
and the heavy body lies sprawled without sensation,
there is something else in us which at that time
is stirred in many ways and takes into itself
all the motions of joy and the heart's empty cares.

2 The view that the soul is an "attunement" of the body, like the tuning of a lyre, was held by some Pythagoreans and by Aristotle's pupil Aristoxenus.

3.117 Now, so that you may also recognize that the spirit too is in the limbs
and that the body does not feel by harmony,
first of all it happens that when much of the body is taken away,
life often still lingers in our limbs.

3.121 And again, that same life, when a few bodies of heat
have fled and air has been breathed out through the mouth,
at once deserts the veins and leaves the bones;
so that from this you may learn that not all bodies
play an equal part or equally uphold our well-being,
but that these rather, which are the seeds of wind and warm heat,
see to it that life lingers in the limbs.
There is, then, a vital heat and wind in the body
itself, which deserts our limbs as we die.
Therefore, since the nature of mind and spirit has been found
to be, as it were, a part of a human being, give back the name
of harmony, brought down to the musicians from lofty Helicon,
or else they themselves drew it from somewhere else and carried it over
to that thing which at the time lacked a name of its own.
Whatever it is, let them keep it: you, hear the rest of my words.

3.136 Now I say that mind and spirit are held joined
together and make up one nature between them,
but that the head, as it were, which rules in the whole body,
is the counsel that we call mind and understanding.
And this stays lodged in the middle region of the breast.
For here fear and dread leap up, around these parts
joys caress us: here, then, are understanding and mind.
The rest of the spirit, scattered through the whole body,
obeys, and moves at the nod and impulse of the mind.
The mind alone has thoughts by itself and for itself, and
rejoices for itself,
when nothing moves either spirit or body at the same time.

/ And just as, when the head or an eye is hurt in us
by an attack of pain, we are not tormented in the whole
body, so the mind is sometimes hurt by itself
or flourishes with joy, when the rest of the spirit
through the limbs and joints is stirred by nothing new;
but when the mind is shaken by some quite violent fear,
we see the whole spirit share the feeling throughout the
limbs,
and sweat and pallor break out, accordingly, over the whole
body, the tongue falters and the voice dies away,
the eyes grow dim, the ears ring, the limbs give way;
in short, we see that men often collapse from terror
of mind; so that anyone may easily learn from this
that the spirit is joined with the mind, and when it is struck
by the force of the mind, it then drives and strikes the body.

3.161 This same reasoning shows that the nature of mind and spirit
is bodily; for when it is seen to drive the limbs,
to snatch the body from sleep, to change the face,
and to steer and turn the whole human being—
none of which we see can happen without touch,
nor touch, in turn, without body—must we not admit
that mind and spirit are made of bodily nature?
Besides, you see that the mind is affected along with the body
and shares its feelings with it in our body.
If the dread force of a weapon falls short of destroying life,
though driven deep inside, splitting bones and sinews,
still there follows a faintness, and a pleasant sinking
to the ground, and, on the ground, a turmoil that arises in the mind,
and now and then a wavering wish, as it were, to rise.
Therefore the nature of the mind must be bodily,
since it suffers from bodily weapons and blows.

3.177 Now, of what kind of body this mind is made, and from what
it is composed, I shall go on to give you an account in words.
First of all, I say that it is extremely fine and made of
exceedingly minute bodies. That this is so,
you may note from what follows, and so come to know it well.

3.182 Nothing is seen to happen so swiftly
as what the mind proposes should happen and itself begins;
the mind, then, sets itself in motion faster than any of the things
whose nature we see plainly before our eyes.
But what is so exceptionally mobile must consist
of seeds exceedingly round and exceedingly minute,
so that they can be moved when struck by a small impulse.
For water moves and flows at the slightest impulse,
being made, of course, of small and rolling shapes.
But the nature of honey, by contrast, is more cohesive,
its liquid more sluggish and its movement slower:
for the whole mass of its matter clings more closely together,
no doubt because it is not made of bodies so smooth,
nor so fine and round.

/ For a light breath of air, hanging still, can make a deep heap
of poppy seed slide down from the top before your eyes,
but a pile of stones or of ears of grain, by contrast,
it cannot. So bodies enjoy mobility in proportion
as they are smallest and lightest;
while, on the other hand, the more weight and roughness
things are found to have, the more firmly settled they are.
Now then, since the nature of the mind has been found
to be exceptionally mobile, it must consist of bodies
that are exceedingly small and smooth and round.
This fact, once you know it, my good friend, will prove useful to you
in many matters and will be counted timely.

3.208 This fact, too, declares its nature,
how fine the texture it is made of, and in how small a space
it would be contained if it could be gathered into a ball:
that as soon as the carefree rest of death has taken hold
of a man, and the nature of mind and spirit has departed,
you can see nothing taken away from the whole body
in appearance, nothing in weight: death leaves everything intact
except vital sensation and warm heat.
Therefore the whole spirit must be made of very small
seeds, woven through veins, flesh, and sinews,
inasmuch as, when it has all left the whole body,
the outer contour of the limbs still keeps itself
intact, and not a scrap of weight is missing.

/ It is just as when the bouquet of Bacchus has vanished, or when
the sweet breath of a perfume has scattered into the air,
or when flavor has gone from some substance;
yet the thing itself seems no smaller to the eye
on that account, nor has anything been taken from its weight,
no doubt because many minute seeds make up
the flavors and the scent throughout the whole body of things.
Therefore, again and again, you may know that the nature of mind and spirit
is made of exceedingly tiny
seeds, since in fleeing it carries off no weight.

3.231 Yet we must not think this nature is simple.
For a thin breath, mixed with heat, deserts
the dying, and heat in turn draws air along with it;
nor is there any heat that does not have air mixed in;
for since its nature is loose in texture, many
first beginnings of air must move within it.
So the nature of the mind has now been found to be threefold;
and yet these are not enough, all together, to create sensation,
since the mind does not admit that any of them can create
the sense-bearing motions, or, in the end, what one turns over in the mind.
So a certain fourth nature must be added
to these as well; it is altogether without a name;
nothing exists more mobile or finer than it,
or made of smaller and smoother elements;
it is the first to distribute the sense-bearing motions through the limbs.

/ For it is the first to be stirred, made as it is of small shapes;
then heat takes up the motions, and the unseen power of wind,
then air; then everything is set in motion:
the blood is shaken, then all the flesh feels it
through and through; last, it is passed to the bones and the marrow,
whether it is pleasure or the opposite burning.
Nor can pain lightly penetrate this far, or a sharp
evil seep all through, without throwing everything into confusion,
so far that there is no room left for life, and the parts
of the spirit scatter through all the pores of the body.
But for the most part a limit is set, as it were, at the surface of the body
to these motions: and that is why we manage to keep our life.

3.258 Now, how these are mixed with one another, and in what ways
arranged so that they thrive, I am eager to explain, but
the poverty of my native tongue drags me back against my will;
still, as far as I can touch on it in summary, I shall touch on it.
For the first beginnings of the elements run in and out among one another
with their motions, so that no single one can be separated off
nor any power be set apart by space,
but they are, as it were, the many forces of a single body.
Just as in the flesh of any living creature, generally,
there is smell and a certain color and taste, and yet from all these
is made up one complete bulk of body,
so heat and air and the unseen power of wind,
mixed together, create one nature, along with that mobile
force which distributes to them from itself the beginning of motion,
from which the sense-bearing motion first arises through the flesh.

/ For this nature lies hidden deep down, far below,
and there is nothing in our body that lies deeper than it,
and it is itself, moreover, the very spirit of the whole spirit.
Just as in our limbs and throughout the body
the force of mind and power of spirit lie hidden, mixed in,
because they are made of bodies small and few,
so, you see, this nameless force, made of minute
bodies, lies hidden, and is, as it were, itself the spirit
of the whole spirit, and rules in the whole body.
In the same way, wind and air
and heat must thrive mingled together through the limbs,
and one lie beneath the others, another stand out more,
so that one single thing may seem to be made from them all,
lest heat and wind apart, and the power of air apart,
should destroy sensation by pulling it apart and dissolving it.

/ The mind has, too, that heat which it takes on when in anger
it boils up and fire flashes more fiercely from the eyes;
there is also much cold wind, the companion of fear,
which stirs shuddering in the limbs and sets the body shaking;
and there is also that state of calm, still air
which comes with a tranquil breast and a serene face.
But there is more heat in those whose hearts are fierce
and whose angry mind readily boils over in rage;
of this kind, above all, is the violent force of lions,
who often burst their breasts with roaring and growling
and cannot contain the waves of their anger in their breasts.
But the cold mind of deer has more wind in it,
and more quickly stirs icy breezes through the flesh,
which make a trembling motion start up in the limbs.

/ But the nature of oxen lives more by calm air;
nor does the smoky torch of anger, set beneath it, ever rouse it too much,
suffusing it with the shade of blind darkness,
nor is it numbed, pierced through by the icy shafts of fear;
it is placed between the two, deer and fierce lions.
So it is with the human race: though training may render some
equally polished, still it leaves behind
the first traces of each mind's nature.
Nor must we think that faults can be torn out by the roots,
so that one man will not run too readily into fierce anger,
another be assailed a little too quickly by fear, and a third
accept some things more meekly than is right.
And in many other ways the varied natures of human beings
and the characters that follow from them must differ;
whose hidden causes I cannot now set out,
nor find names for as many shapes
as there are among the beginnings, from which this variety of things arises.

/ This much in these matters I see I can affirm:
that the traces of our natures left behind are so very
slight, those that reason cannot drive out of us,
that nothing prevents our living a life worthy of the gods.

3.323 This nature, then, is held in by the whole body,
and is itself the body's guardian and the cause of its well-being;
for they cling together by common roots
and clearly cannot be torn apart without destruction.
Just as it is not easy to tear the scent out of lumps of incense
without its nature perishing too,
so it is not easy to draw the nature of mind and spirit
out of the whole body without everything dissolving.
With their beginnings so interwoven from their first origin,
they come into being endowed with a shared life,
and neither, it seems, without the force of the other,
can the power of body or of mind feel by itself, apart,
but by shared motions on both sides between them
sensation is kindled and fanned in us through the flesh.

3.337 Besides, the body by itself is never born,
nor grows, nor, clearly, lasts after death.
For it is not as with the liquid of water, which often gives off the heat
that has been put into it, yet is not torn apart for that reason
but remains intact—not so, I say, can the abandoned limbs
endure the separation of the spirit,
but they perish utterly, torn apart, and rot away.
So from the start of life the body and the spirit,
through mutual contact, learn the motions of life,
even while stored in the mother's limbs and womb,
so that their separation cannot happen without ruin and harm;
so that you may see, since the cause of their well-being is joined,
that their nature too is joined.

3.350 What remains: if anyone denies that the body feels
and believes that the spirit, mixed through the whole body,
takes on this motion which we call sensation,
he fights against things that are both plain and true.
For who will ever explain what it is for the body to feel,
if not what the fact itself has plainly shown and taught us?
"But when the spirit has gone, the body is wholly without
sensation."
Yes, for it loses what was never its own in life,
and much else besides it loses when it is driven out of life.

3.359 Then again, to say that the eyes can see nothing,
but that the mind looks out through them as through open
doors,
is hard, since their very sense leads us the other way;
for sense drags us and thrusts us right up to the eyes' own
sight,
especially since we often cannot see bright things,
because our eyes are blinded by the light.
That does not happen with doors; for the open doorways
through which we ourselves look suffer no strain.
Besides, if our eyes serve as doors,
then surely, with the eyes taken out, the mind ought
to see things better, now that the very doorposts are
removed.

3.370 In these matters you can by no means accept
what the venerable doctrine of Democritus lays down:
that the first beginnings of body and mind, set singly
side by side, alternate and so bind the limbs together.
For not only are the elements of the spirit much smaller
than those of which our body and flesh are made,
but they are also fewer in number, and are scattered sparsely
through the limbs, so that you can at least guarantee this:
that however small the first bodies are that, cast upon us, can stir
sense-bearing motions in the body, so great
are the intervals that the first beginnings of the spirit keep.[3]

/ For we do not at times feel dust clinging
to the body, or chalk scattered on the limbs settling there,
nor do we feel the mist at night, or the fine threads of a spider
in our way, when we are caught in them as we walk,
nor its shriveled web fallen over our head,
nor birds' feathers or flying thistledown,
which from their extreme lightness mostly fall slowly;
nor do we feel the passage of every creeping creature,
nor each separate footprint
that gnats and the like set down on our body.
So many things must first be stirred in us
before the first beginnings of the spirit, shaken, begin to feel,
those seeds mixed through the limbs with the bodies of our frame,
and before, pounding across these intervals, they can
rush together, unite, and leap apart in turn.

3 Democritus of Abdera (5th century BC), who with Leucippus founded the atomic theory that Epicurus took over and revised.

3.396 And the mind does more to keep the bolts of life shut fast,
and has more sovereignty over life, than the force of the spirit.
For without understanding and mind no part of the spirit can stay
in the limbs for even the smallest part of time,
but it follows readily in the mind's train, departs into the air,
and leaves the limbs icy in the chill of death.

/ But one in whom understanding and mind remain stays alive,
though mangled all over, his limbs cut away around him;
the trunk, with the spirit taken from around it and the limbs removed,
lives on and draws in the life-giving air of heaven;
robbed, if not wholly, at least of a great part of the spirit,
it still lingers on in life and holds fast;
just as, when the eye is lacerated all around, if the pupil has remained
unharmed, the power of sight stands firm and alive,
so long as you do not ruin the whole orb of the eye
and cut all around the pupil and leave it alone;
for that too will not happen without their ruin.
But if that tiny part in the middle of the eye is eaten away,
the light at once goes out and darkness follows,
however unharmed the bright orb may otherwise be.
By this bond spirit and mind are forever tied.

THE SOUL IS MORTAL

Many arguments show that mind and spirit are born with the body and die with it.

3.417 Now come: so that you may learn that the minds and light spirits
of living creatures are born and are mortal,
verses long sought out and found with sweet toil,
worthy of your life, I shall go on to set out.
Make sure you yoke both of them under a single name,
and when, for instance, I go on to speak of the spirit,
teaching that it is mortal, believe that I speak of the mind too,
inasmuch as they are one and form a single joined thing.

3.425 First of all, since I have shown that it is fine and consists of minute
bodies, and is made of beginnings much smaller
than the flowing liquid of water
or mist or smoke—for it far surpasses them in mobility
and is moved when struck by a slighter cause,
seeing that it is moved even by images of smoke and mist;
as when, lulled in sleep, we see altars breathe out
steam on high and send up smoke;
for without doubt these are images that come to us—
now, then, since you see that when vessels are shattered
the liquid flows away on every side and the water runs off,
and since mist and smoke scatter into the air,
believe that the spirit too is dispersed and perishes much
more quickly, and is sooner dissolved into its first bodies,
once it has been taken from a man's limbs and has departed;
for indeed, since the body, which was, as it were, its vessel,
cannot hold it in when shaken apart by some cause
and made porous by blood drawn from the veins,
how could you believe it could be held in by any air,
which is more porous than our body and less able to hold it?

3.445 Besides, we perceive that the mind is born along with the body,
grows up with it, and grows old with it.
For just as children toddle about with a weak and tender
body, so a slender judgment of mind goes with it.
Then, when their age has matured into sturdy strength,
their counsel too is greater and the strength of their mind increased.
Later, when the body has been shaken by the mighty strength
of time and the limbs have sunk down, their strength blunted,
the wit limps, the tongue raves, the mind totters,
everything fails and gives out at one and the same time.
It follows, then, that the whole nature of the spirit too is dissolved,
like smoke, into the high breezes of the air;
since we see it born together with the body and together with it
grow, and, as I have shown, weary with age, fall apart at the same time.

3.459 Add to this that we see that, just as the body itself
is subject to monstrous diseases and harsh pain,
so the mind is subject to sharp cares, grief, and fear;
so it is fitting that it should share in death as well.
What is more, in the body's diseases the mind often wanders
off the path; for it loses its reason and talks nonsense,
and at times, in a heavy lethargy, it is carried off into a deep
and endless sleep, with drooping eyes and nodding head,
from which it neither hears voices nor can recognize
the faces of those who, calling it back to life,
stand around with tears bedewing their faces and cheeks.
So you must admit that the mind too is dissolved,
since the contagions of disease penetrate into it;
for pain and disease are both craftsmen of death,
as we have been well taught before now by the destruction of many.

/ [and since the mind, like a sick body, can be healed]
[and equally that the mind is healed, the body in vain]
Then again, why is it that when the fierce strength of wine has entered
a man and its heat has spread and passed into his veins,
there follows a heaviness of the limbs, his legs
are hobbled as he staggers, the tongue grows slow, the mind is sodden,
the eyes swim, shouting, hiccups, and quarrels swell,
and all the other things of this kind that follow—
why do these things happen, unless the vehement violence of wine
is accustomed to throw the spirit into confusion within the body itself?
But whatever things can be confused and hindered
show that, if some slightly harsher cause worked its way in,
they would perish, robbed of their future life.[4]

4 These two bracketed lines are a garbled, misplaced echo of 3.510.

3.487 What is more, often someone, seized suddenly by the force of a disease,
before our very eyes, as though by a stroke of lightning,
falls down and foams at the mouth, groans and trembles in his limbs,
loses his wits, stiffens his sinews, writhes, pants
fitfully, and wears out his limbs with thrashing,
no doubt because the force of the disease, spread through the limbs,
drives and churns the spirit, as on the salt sea, foaming,
the waves seethe under the mighty strength of the winds.
A groan, moreover, is forced out, because the limbs are racked
with pain, and above all because the seeds of the voice
are driven out and carried forth from the mouth in a mass,
along what is, as it were, their usual and well-built road.
Loss of reason comes about because the force of mind and spirit
is thrown into confusion and, as I have shown, divided apart,
is torn asunder and scattered by that same poison.

/ Then, when the cause of the disease has turned back, and the sharp humor
of the corrupted body has returned to its hiding places,
then, staggering as it were, he first gets up, and little by little
returns to all his senses and takes back his spirit.
Since, then, these are tossed about by such great diseases within the body itself,
and suffer, torn apart in wretched ways,
why do you believe that the same things, without a body, in the open air,
can live out their time amid mighty winds?

3.510 Again, since we see that the mind, like a sick body, can be healed,
and we see that it can be turned by medicine,
this too foretells that the mind lives a mortal life.
For anyone must add parts, or shift them from their order,
or take away at least a whit from the whole,
who undertakes and sets out to change the mind
or seeks to alter any other nature.
But what is immortal will not let its parts be shifted,
or anything be added, or a single whit flow away;
for whatever changes and passes out of its own bounds,
that is at once the death of what it was before.
So the mind, whether it falls sick, gives off the signs
of mortality, as I have shown, or whether it is turned by medicine.
So plainly does the truth seem to confront false reasoning,
to bar its escape as it tries to flee,
and to prove it false with a two-edged refutation.

3.526 Lastly, we often see a man go little by little
and lose his vital sense limb by limb:
first the toes and nails of his feet turn livid,
then the feet and legs die, and after that
the tracks of icy death creep slowly on through the other limbs.
And since this nature of the spirit is split apart, and does not
come forth whole at a single moment, it must be counted mortal.
But if perhaps you think it can draw itself inward
through the limbs and gather its parts into one,
and so withdraw sensation from all the limbs,
still that place where so great a store of spirit
is gathered ought to show itself with heightened sense;
and since there is no such place anywhere, no doubt, as we said before,
it is torn apart and scattered abroad, and so it dies.

/ Why, even if we chose to grant what is false
and allow that the spirit can be massed together in the body of those
who, dying, leave the light piece by piece,
you must still admit that the spirit is mortal,
and it makes no difference whether it perishes scattered through the air
or, drawn in from its parts, grows dull and senseless,
since sensation fails the whole man more and more on every side,
and less and less of life remains on every side.

3.548 And since the mind is one part of a man, and stays fixed
in a set place, just as the ears and eyes are,
and the other senses that steer our life,
and since, just as a hand or eye or nostrils, set apart
and severed from us, cannot feel or even exist,
but in a short time are left to rot,
so the mind cannot exist by itself, without the body
and the man himself, which seems to be, as it were, its vessel—
or whatever else you would rather imagine
more closely joined to it, since the body clings to it by a close bond.

3.558 Lastly, the living powers of body and mind
have strength and enjoy life only when joined together;
for the nature of the mind cannot put forth the motions of life
without the body, alone and by itself, nor again
can the body, bereft of spirit, endure and use its senses.
Just as the eye by itself, torn out by its roots,
cannot see anything apart from the whole body,
so spirit and mind by themselves are plainly powerless.

/ No doubt because, mingled through veins and flesh,
through sinews and bones, they are held in by the whole body,
and the first beginnings cannot leap freely apart
across great distances, they are shut in and so move
with sense-giving motions; but cast out of the body into the breezes
of the air after death, they cannot move with these,
because they are not held in the same way;
for the air would be a body, a living thing, if the spirit
could hold itself together in it and confine itself to those motions
which it performed before in the sinews and in the body itself.
So again and again, when the whole covering of the body
is broken up and the breath of life is cast out,
you must admit that the senses of the mind are dissolved,
and the spirit too, since the two are bound in one cause.

3.580 Lastly, since the body cannot endure the spirit's
parting without rotting away in a foul stench,
why do you doubt that the power of the spirit, rising from the depths,
has streamed out, spread abroad like smoke,
and that the body, changed and rotting, has collapsed
in such great ruin because its foundations, shaken deep from their place,
are seeping out, and the spirit's too, through the limbs
and through all the winding passages that are in the body,
and through its pores? So in many ways you can learn
that the nature of the spirit left through the limbs divided up,
and was torn apart within the body itself
before it slipped out and swam away into the breezes of the air.

3.592 Why, even while it still turns within the bounds of life,
the spirit often seems, from some cause, to be shaken
and ready to go, to be loosed from the whole body entire,
and the face seems to grow faint as at the final hour,
and all the limbs to fall limp from the bloodless body.
This is what happens when we say someone's mind has failed
or their spirit has left them; then there is panic, and all
long to catch hold again of the last bond of life;
for then the mind and the power of the spirit are shaken to pieces,
all of it. And these totter together with the body itself,
so that a slightly heavier cause could dissolve them.

3.603 Why then do you doubt that, once cast forth outside the body,
weak, out in the open, its covering stripped away,
it could not only not last through all time,
but could not hold together for even the briefest moment?
For no one dying seems to feel his spirit
go out whole from his entire body,
or rise first to the throat and the gullet above;
rather he feels it fail in its set place,
just as he knows that each of his other senses, in its own part,
dissolves. But if our mind were immortal,
in dying it would not complain so much of dissolving,
but rather of going out and leaving its garment behind, like a snake.

3.615 Lastly, why are the thought and judgment of the mind never
born in the head or the feet or the hands, but cling in all men
to one seat and to set regions,
unless set places are assigned to each thing for its birth,
and where each thing, once created, can endure,
and so exists with its limbs arranged in their many ways
that the order of the members is never turned upside down?
So surely does thing follow thing: flame is not wont to be born
in rivers, nor cold to be begotten in fire.

3.624 Besides, if the nature of the spirit is immortal
and can feel when separated from our body,
we must, I think, suppose it endowed with the five senses.
In no other way can we picture to ourselves
the spirits below wandering in Acheron.
And so painters and earlier generations of writers
have brought spirits on stage endowed with the senses.
But neither eyes nor nostrils nor hand itself
can exist for the spirit apart, nor tongue apart, nor ears;
so spirits cannot feel, or even exist, by themselves.

3.634 And since we feel that vital sense is present in the whole body,
and see that the whole is alive,
if some force should suddenly cut it through the middle with a swift blow,
so as to sever each half apart,
no doubt the power of the spirit too will be divided,
cut apart, and dashed asunder along with the body.
But what is split and falls away into any parts
plainly denies that its nature is eternal.

/ They tell how scythed chariots often lop off limbs
so suddenly, hot with the confusion of slaughter,
that the part cut off and fallen from the limbs is seen
to quiver on the ground, while the man's mind and strength
cannot feel the pain, so swift is the injury;
and because his mind is given over to the eagerness of
battle,
with what is left of his body he makes for fight and
slaughter,
and often does not notice that his left arm, shield and all, is
gone,
dragged off among the horses by the wheels and the
ravening scythes;
another does not notice that his right arm has fallen, as he
climbs and presses on.
Then another tries to rise on a leg that has been taken away,
while the dying foot close by twitches its toes on the
ground.
And a head cut off from the warm and living trunk
keeps on the ground a living look and open eyes
until it has given up all the remnants of the spirit.

/ Why, if you chose, while its tongue flickers, to take a
snake's
menacing tail and long body, and cut both
into many pieces with a blade,
you will see each severed piece, apart from the rest, with
the wound still fresh,
writhing and spattering the earth with gore,
and the front part turning back with its mouth to seek itself,
so as to bite at the wound, struck by its burning pain.
Shall we say, then, that there are whole spirits in all
those little pieces? But by that reasoning it will follow
that one living creature had many spirits in its body.
So the spirit, which was one, has been divided along with
the body; and therefore both must be thought mortal,
since each alike is cut into many parts.

3.670 Besides, if the nature of the spirit is immortal
and slips into the body at our birth,
why can we not remember the life we spent before as well,
nor keep any traces of the things we did?
For if the power of the mind is so greatly changed
that all memory of past deeds has dropped away,
that, I think, is not far off from death;
therefore you must admit that the spirit that was before
has perished, and that the one that is now has now been
created.

3.679 Besides, if, when our body is already complete,
the living power of the mind is carried into us
at the moment we are born and cross the threshold of life,
it would not fit that it should be seen to grow
with the body and together with the limbs, in the very
blood;
rather it ought to live alone by itself, as in a cage,
and yet so that the whole body still overflows with sense.

/ So again and again we must not think that spirits are without
a birth, or free from the law of death;
for we cannot think they could have been so closely bound
to our bodies had they slipped in from outside,
while the plain facts show that it all happens the other way
—for the spirit is so knit through veins, flesh, sinews
and bones that even the teeth have a share in sensation,
as toothache shows, and the twinge of icy water,
and a rough stone bitten on unexpectedly in bread—
nor, being so closely woven in, do they seem able
to go out unharmed and free themselves whole
from all the sinews and bones and joints.
But if perhaps you think the spirit, slipping in from outside,
is wont to seep through our limbs,
all the more will it perish, fused with the body;
for what seeps through is dissolved, and so it dies;
since it is spread abroad through all the pores of the body.

/ Just as food, when it is spread through all the limbs and joints,
perishes and furnishes another nature out of itself,
so spirit and mind, however whole they may be when they go fresh into
a body, are still dissolved as they seep in,
while there are spread, as it were through pores, into all the limbs
the particles of which this nature of the mind is made,
which now rules in our body, born
from that which perished then, parceled out through the limbs.
So the nature of the spirit seems to be neither
without a birthday nor free of a funeral.

3.713 Besides, are seeds of the spirit left behind or not
in the lifeless body? If they are left and remain there,
it cannot rightly be held immortal,
since it has departed diminished, some of its parts lost.
But if it has fled, carried off with its members so intact
that it has left no parts of itself in the body,
from where do corpses, their flesh now going rank, breathe out
worms, and from where does so great a swarm of living things,
boneless and bloodless, surge through the swelling limbs?
But if perhaps you believe that spirits slip into the worms
from outside and can come, each one, into its own body,
and do not consider why many thousands of spirits
should gather where one has withdrawn, still this question
seems worth asking and putting to the test:
do the spirits hunt out each of the seeds
of the little worms and build themselves a dwelling,
or do they slip, as it were, into bodies already complete?

/ But why they themselves should make them, or why they should toil at it,
no one can say. For when they are without a body
they do not flit about, troubled by sickness and cold and hunger;
it is the body, rather, that is akin to these ills and suffers from them,
and the mind suffers many evils through contact with it.
But grant, however much you like, that it is useful for them to make a body
to enter; still there seems no way they could.
So spirits do not make bodies and limbs for themselves.
Nor again can they slip into bodies
already complete; for they could not be finely
knit together with them, nor would there be contact through shared feeling.

3.741 Lastly, why does fierce violence go with the grim breed
of lions, cunning with foxes, and flight with deer?
Why is fear passed down from their fathers, and a father's
dread spurs their limbs?
And why do all other traits of this kind grow in the limbs
and in the temper from the very start of life,
if not because, from its own fixed seed and breed,
the power of the mind grows up together with each body?
But if it were immortal and used to change
bodies, living creatures would have mixed-up characters:
a dog of Hyrcanian breed would often flee
the charge of an antlered stag, and the hawk would tremble
through the breezes
of the air, fleeing at the dove's approach;
men would lose their wits, and the wild tribes of beasts
would be wise.[5]

5 Hyrcania, by the Caspian Sea, was famous for its fierce hunting dogs.

/ For that claim is carried along by false reasoning, when they say
that an immortal spirit is altered when it changes bodies;
for what is changed is dissolved, and so it dies;
its parts are shifted and move from their order;
so they must also be capable of being dissolved through the limbs,
so that in the end they all perish together with the body.
But if they say that human spirits always pass
into human bodies, I shall still ask why from a wise one
a foolish one can come, why no child is sensible,
[if not because, from its own fixed seed and breed,]
and why a mare's foal is not as well trained as a strong horse.
No doubt they will take refuge in saying that in a tender body
the mind grows tender. But if that happens, you must admit
that the spirit is mortal, since, changed throughout the limbs,
it so utterly loses its former life and sense.

/ Or how, growing strong together with each body,
will it be able to reach the longed-for flower of life,
this power of the mind, unless it is a partner from the very first origin?
Or why does it want to go out from aged limbs?
Does it fear to stay shut up in a decaying body,
fear that its house, worn out by the long span of years,
may fall in on it? But there are no dangers for an immortal thing.

3.776 Lastly, that spirits should stand ready at the matings of Venus
and the births of beasts seems quite absurd—
immortals waiting for mortal limbs
in numbers beyond number, and competing in headlong haste
among themselves over which shall slip in first and foremost;
unless perhaps the spirits have struck a treaty
that whichever comes flying first shall slip in
first, and they shall not fight among themselves at all.

3.784 Lastly, no tree can exist in the sky, no clouds in the deep
sea, nor can fish live in the fields,
nor blood be found in wood, nor sap in stones.
It is fixed and ordained where each thing is to grow and dwell.
So the nature of the mind cannot arise alone
without the body, nor exist far from sinews and blood.
For if it could, far sooner could the power of the mind itself
be in the head or shoulders or the bottom of the heels,
and it would be wont to be born in any part at all,
so long as it stayed in the same man and the same vessel.
But since in our body too it is plainly fixed
and ordained where spirit and mind can each exist
and grow apart, all the more must we deny
that it can endure or be born wholly outside the body.

/ Therefore, when the body has perished, you must admit
that the spirit has perished too, torn apart throughout the body.
Indeed, to join the mortal to the eternal, and to think
they can feel together and act on each other,
is folly; for what can be thought more at odds,
more estranged from each other and more discordant,
than that what is mortal, joined in union with the immortal
and everlasting, should endure fierce storms together?

/ Besides, whatever things endure forever must either,
being of solid body, repel blows
and let nothing pierce them that could
unfasten their close-packed parts within, like the bodies
of matter, whose nature we have shown before;
or be able to last through all time
because they are free from blows, as the void is,
which remains untouched and is not affected a whit by any blow;
or else because there is no store of space around them
into which things might, as it were, part and be dissolved—
as the sum of all sums is eternal, and outside it
there is no place into which things may scatter, nor bodies
that could fall on it and dissolve it with a heavy blow.

3.819 But if perhaps it should rather be held immortal because
it is kept safe, fortified by things that preserve life,
or because things hostile to its well-being never come at all,
or because those that do come are somehow driven back
and retreat before we can feel any harm they do,
...
For besides the fact that it sickens along with the diseases of the body,
there comes something that often torments it about the future,
keeps it wretched in fear and wears it out with cares,
and for past wrongdoing its misdeeds bring the bite of remorse.
Add the madness that belongs to the mind alone, and forgetfulness of things;
add that it sinks into the black waters of lethargy.[6]

6 Some lines are lost here; the argument must have gone on to deny that the spirit is so protected.

DEATH IS NOTHING TO US

Since the soul dies with the body, death cannot harm us, and nature rebukes those who fear it.

3.830 Death, then, is nothing to us, and concerns us not a whit,
since the nature of the mind is held to be mortal.
And just as in time past we felt no distress
when the Carthaginians came from every side to battle,
when everything, shaken by the trembling tumult of war,
shuddered in horror beneath the high breezes of heaven,
and it was in doubt to whose rule all humankind
must fall, on land and sea,
so, when we are no more, when there has come the parting
of body and spirit, from which we are joined into one,
nothing, we may be sure, to us who will not then exist
will be able to happen at all, or stir our senses—
not even if earth is mingled with sea, and sea with sky.[7]

/ And even if it still feels after being torn from our body—
the nature of the mind and the power of the spirit—
it is still nothing to us, who are made one
by the binding and marriage of body and spirit.
Nor, if time should gather up our matter
after death and bring it back again as it is now placed,
and the light of life were given to us once more,
would even that event concern us in the least,
once the chain of our remembering has been broken.
And now nothing concerns us about ourselves who existed
before, nor does any anguish touch us over them.

7 The Carthaginians fought Rome in the Punic Wars (264–146 BC), when Hannibal invaded Italy itself.

/ For when you look back over the whole past span
of measureless time, and consider how manifold
are the motions of matter, you may easily believe this:
that the seeds have often been placed in the same order
they are in now,
these same seeds of which we are now made, in time gone
by.
Yet we cannot recapture this with the mind's memory;
for a pause in life has been cast between, and all the
motions
have wandered astray, scattered far from the senses.
For if anyone is to fare badly and suffer in the future,
he himself must also exist at that time, so that harm can
befall him.

Since death takes this away, and prevents
the existence of him on whom troubles could gather,
we may know that there is nothing to fear in death,
that one who does not exist cannot be made wretched, and
that it makes not a whit
of difference whether he had ever been born at all,
when immortal death has taken mortal life.

3.870 So when you see a man chafing at his own fate,
that after death he will either rot with his body laid in the ground,
or be destroyed by flames or by the jaws of wild beasts,
you may know that he does not ring true, and that there lurks
some hidden goad in his heart, though he himself denies
believing that he will have any feeling in death.
For he does not, I think, grant what he professes, nor its grounds;
he does not tear himself up by the roots and cast himself out of life,
but, unaware, makes something of himself survive.
For when a living man pictures to himself
that birds and beasts will tear his body in death,
he pities himself; for he does not separate himself from it,
nor remove himself enough from the cast-out body, but imagines
that it is himself, and, standing by, taints it with his own feeling.

/ Hence he resents having been born mortal,
and does not see that in real death there will be no other self
that could live on to mourn his own passing
and stand by, grieving that he himself lies there torn or burned.
For if it is an evil in death to be mauled by the jaws
and teeth of wild beasts, I cannot see why it is not bitter
to be laid on a pyre and roast in the hot flames,
or to be placed in honey and smothered, and to grow stiff
with cold, lying on the smooth top of an icy slab of stone,
or to be crushed beneath the weight of earth heaped above.
"Now no more will your happy home welcome you, nor your excellent
wife, nor will your sweet children run to snatch
the first kiss and touch your heart with silent joy.
You will not be able to prosper in your affairs, or to be a shield
to your own.

Poor wretch, how wretchedly," they say, "one hateful day has taken
from you all these many prizes of life."
But in this they do not add: "Nor does any longing for these things
remain with you any more."
If they saw this clearly in their minds and followed it in their words,
they would free themselves from great anguish and fear of mind.
"You, indeed, as you are now asleep in death, so will you be for all the time
to come, freed from all painful sorrows;
but we, close by, as you turned to ash on the dreadful pyre,
have wept for you insatiably, and our everlasting
grief no day will take from our hearts."
So this must be asked of such a man: what is so very bitter,
if it all comes back to sleep and rest,
that anyone should waste away in endless mourning?

3.912 This too men often do when they have taken their places at table,
cups in hand, their faces shaded with garlands:
they say from the heart, “Brief is this enjoyment for us poor mortals;
soon it will be over, and never after can we call it back.”
As if, in death, this were chief among their woes,
that thirst should burn the poor wretches up and parch them dry,
or that a longing for something else should weigh on them.
For no one misses himself and his life
when mind and body alike are quiet in sleep;
for all we care, that sleep might go on forever,
and no longing for ourselves touches us;
and yet at that time those first beginnings throughout our limbs
are not wandering far from their sense-giving motions,
since a man, startled from sleep, gathers himself together.

/ Death, then, must be thought to be much less to us,
if there can be less than what we see is nothing;
for a greater scattering of the thronging matter
follows on death, and no one wakes and rises
once the cold pause of life has overtaken him.

3.931 Lastly, if the nature of things should suddenly find a voice
and should herself rebuke one of us like this:
"What troubles you so much, mortal, that you give yourself up
to such sick grief? Why do you groan and weep at death?
For if your past life has been pleasing to you,
and all its blessings have not, as if poured into a leaky jar,
run through and been lost unenjoyed,
why not leave like a guest who has had his fill of life,
and take, you fool, your untroubled rest with a calm mind?
But if all you have enjoyed has been poured away and lost,
and life is hateful to you, why seek to add more,
only for it to be lost again and all perish unenjoyed?
Why not rather make an end of life and toil?
For there is nothing more I can devise or discover for you
to please you: all things are always the same.

/ If your body is not yet withered with years, nor your limbs
worn out and weary, still all things remain the same,
even if you go on to outlive all generations,
and even more so if you were never to die."
What do we answer, except that nature brings a just charge
and in her words sets out a true case?
But if an older man, well on in years, should complain
and lament his death, poor fellow, more than is fitting,
would she not be right to cry out more loudly and rebuke him in a sharp voice:
"Away with your tears, you bottomless pit, and stop your complaining.
You have enjoyed all the prizes of life, and now you wither;
but because you always long for what is absent and scorn what is present,
life has slipped away from you incomplete and unenjoyed,
and death has come to stand at your head before you expected,
before you could leave satisfied and full of things.

/ But now let go of all that does not suit your age,
and with a calm mind—come now—yield to great necessity."
She would be right, I think, to plead so, right to rebuke and
reproach;
for the old always gives way, thrust out by the new,
and one thing must be restored from others.

3.966 No one is handed over to the pit, or to black Tartarus;
matter is needed so that later generations may grow;
yet all of them, when their life is done, will follow you;
and so, no less than you, these have fallen before and will
fall.
So one thing will never cease to rise from another,
and life is given to none to own, to all to use.
Look back, too, and see how the ages of eternal time
that passed before we were born have been nothing to us.
This, then, is the mirror nature holds up to us of the time
to come, when at last we are dead.
Does anything there seem horrible? Does anything look
grim? Is it not more untroubled than any sleep?

HELL ON EARTH

The punishments of the underworld are pictures of human passions and fears in this life.

3.978 And surely all the things that tradition says exist
in deep Acheron are all here with us, in life.
There is no wretched Tantalus fearing the great rock
that hangs in the air, as the story goes, numb with empty terror;
rather, in life an idle fear of the gods oppresses
mortals, and they fear whatever fall chance may bring to each.
Nor do birds burrow into Tityos as he lies in Acheron,
nor could they find anything to probe beneath that vast chest
through all eternity, to be sure.
However huge the sprawl of his body,
though he covered not just nine acres with outstretched limbs
but the whole round of the earth,
he still could not endure eternal pain
or supply food from his own body forever.[8]

8 Tantalus and Tityos are sinners punished in the underworld: Tantalus, in one version, beneath a rock forever about to fall; Tityos with vultures tearing at his liver.

/ No, our Tityos is here: the man who lies prostrate in love,
whom the birds tear, and gnawing anguish eats away,
or cares rend with some other craving.
Sisyphus too is here in life, before our eyes:
the man bent on seeking from the people the rods and the
cruel axes,
who always withdraws defeated and gloomy.
For to seek power, which is empty and is never really given,
and always to endure hard toil in its pursuit,
this is to strain and shove up the mountain's face
a rock that even so, from the very summit, rolls back again
and rushes headlong for the level of the plain.[9]

/ Then, forever to feed the mind's ungrateful nature,
to fill it with good things and never satisfy it,
as the seasons of the year do for us when they come
round again and bring their fruits and their varied charms,
and yet we are never filled with the fruits of life—
this, I think, is what is meant by the girls in the bloom of
youth
who, the story says, pour water into a leaking jar
that can never by any means be filled.
Cerberus and the Furies, then, and the dearth of light,
Tartarus belching terrible blasts of heat from its jaws![10]

9 Sisyphus was condemned forever to roll a rock uphill. The rods and axes (fasces) were carried before Roman magistrates as emblems of office.
10 The daughters of Danaus, who murdered their husbands, were punished in the underworld by having to fill a leaking jar.

/ These exist nowhere, and surely cannot exist;
but in life there is fear of punishment for evil deeds,
notable for notable ones, and atonement for crime:
prison, and the dreadful hurling down from the rock,
scourges, executioners, the dungeon, pitch, red-hot plates,
torches;
and even if these are absent, the mind, conscious of its
deeds
and fearing in advance, applies the goads and sears itself
with lashes,
and meanwhile does not see what end there can be
to its sufferings, or what limit at last to its punishments,
and fears that these same things may grow heavier in
death.
Here, in the end, the life of fools becomes Acheron.[11]

11 The rock is the Tarpeian Rock in Rome, from which condemned criminals were thrown.

3.1024 This too you might say to yourself from time to time:
"Even good Ancus, you know, closed his eyes on the light,
and he was a better man than you, you shameless man, in many ways.
Since then many other kings and lords of the world
have fallen, who ruled over mighty nations.
Even he who once laid a road across the great sea
and gave his legions a path to march over the deep,
and taught them to walk on foot across the salt lagoons,
and scorned the roaring of the sea as his horses pranced over it,
lost the light and poured out his spirit from a dying body.
The scion of the Scipios, thunderbolt of war, terror of Carthage,
gave his bones to the earth as if he were the lowest slave.
Add the discoverers of sciences and of graces,
add the companions of the Muses of Helicon—among them Homer,
who alone held the scepter, sleeps the same sleep as the others.[12]

/ Then Democritus, when ripe old age
warned him that the remembering motions of his mind were failing,
went of his own accord to meet death and offered up his head.
Epicurus himself died when the light of his life had run its course,
he who surpassed the human race in genius and quenched
every star, as the sun does when it rises in the sky.
And you—will you hesitate, and resent it, when you must die?[13]

12 Ancus Marcius was the legendary fourth king of Rome; the line echoes Ennius. The bridge-builder is Xerxes, who bridged the Hellespont, and the Scipio is Scipio Africanus, conqueror of Hannibal.
13 Democritus was said to have ended his life by starving himself. This is the only line in the poem that names Epicurus.

/ You, whose life is as good as dead though you still live and
see,
who waste the greater part of your time in sleep,
who snore while awake and never stop seeing dreams,
and carry a mind troubled with empty terror,
and often cannot find what is wrong with you, when,
drunk and wretched, you are pressed by many cares on
every side,
and drift and wander with your mind unsteady and astray."
If people could, just as they evidently feel
there is a weight upon their minds that wears them down
with its heaviness,
also know from what causes it comes, and why
so great a mass of misery, as it were, lies upon their hearts,
they would not live their lives as now we mostly see them:
each not knowing what he wants, and always seeking
to change his place, as if he could lay his burden down.

/ Often he goes out of his great mansion,
the man sick of being at home, and suddenly comes back,
since he feels no better off out of doors.
He drives his ponies headlong to his country house,
racing as if to bring help to a burning building;
the moment he touches the threshold of the house he
yawns,
or sinks heavily into sleep and seeks oblivion,
or even hurries back to the city to see it again.

/ In this way each person flees himself—a self, of course,
that, as happens,
he cannot escape: he clings to it unwillingly and hates it,
because he is sick and does not grasp the cause of his
disease.
If he saw that clearly, each would leave everything else
and strive first of all to learn the nature of things,
since it is the condition of eternal time, not of a single hour,
that is in question—the condition in which mortals must
spend all
the time that remains to them after death, forever.

3.1076 Lastly, what evil, what great craving for life
drives us to tremble so much in doubtful dangers?
Surely a fixed end of life awaits mortals,
and death cannot be avoided: we must meet it.
Besides, we move round in the same place and stay there
always,
and no new pleasure is hammered out by living longer;
but while what we crave is absent, it seems to surpass
all else; then, once we have it, we crave something else,
and an equal thirst for life holds us, always open-mouthed.
And it is doubtful what fortune later years will bring,
what chance will bring us, or what end is at hand.
Nor by prolonging life do we take one jot
from the time of death, nor can we subtract anything
to make us, perhaps, dead for a shorter while.

/ So you may live and outlast as many generations as you
please:
death will still be waiting, eternal all the same,
and he who ended his life with today's
light will be no more for no less a time than he
who fell many months and years ago.

Book IV

The senses
Images and perception, sleep and dreams, and the madness of love.

4.1 I roam the pathless haunts of the Pierides, trodden
by no one's foot before. It is a joy to approach untouched springs
and drink from them, a joy to pluck new flowers
and seek for my head a splendid crown from places
where the Muses have never before wreathed anyone's brow:
first, because I teach of great things and press on
to free the mind from the tight knots of religion;
then, because on so dark a subject I compose such lucid
verses, touching everything with the Muses' charm.[1]

1 Book IV opens by repeating 1.926–950.

/ For this too seems not to be without good reason.
For just as doctors, when they try to give children
foul wormwood, first touch the rims all around the cups
with the sweet golden liquid of honey,
so that the unsuspecting age of childhood may be fooled
as far as the lips, and meanwhile drink down the bitter
juice of wormwood, and be tricked but not harmed,
but rather be restored by such means and grow well—
so I now, since this account of things often seems
rather grim to those who have not tried it, and the crowd
shrinks back from it, have chosen to set out our reasoning
for you in the sweet-voiced song of the Pierides
and, as it were, to touch it with the Muses' sweet honey,
in the hope that by such means I might hold your mind
on my verses, while you take in the whole
nature of things and feel its full usefulness.

IMAGES

Thin films stream constantly from the surfaces of things and cause sight.

4.26 But since I have taught what the beginnings of all things
are like, and how, differing in their varied shapes,
they fly about of their own accord, driven by eternal motion,
and in what way each thing can be created out of them,
[now I shall begin to treat for you what is closely bound up with these matters:]
[that there exist what we call images of things,]
[which should be called, as it were, films or bark;]
and since I have taught what the nature of the mind is,
and from what things it draws its strength when joined with the body,
and how, torn apart, it returns to its first beginnings,
now I shall begin to treat for you what is closely bound up with these matters:
that there exist what we call images of things,
for the image bears an appearance and form like that thing
from whose body, whatever it is, it is said to have poured off and to wander;[2]

2 These three bracketed lines repeat lines that follow shortly. The images (simulacra) are thin films shed from the surfaces of things; entering us, they cause sight and thought.

/ these, like films torn from the outermost surface of things,
flit this way and that through the air,
and these same images, meeting us when we are awake,
terrify
our minds, and in sleep too, when we often see strange
shapes and the images of those who have lost the light,
which have often roused us in horror as we lay slack in
sleep—
so that we should not by chance suppose that spirits escape
from Acheron, or that shades flit among the living,
or that something of us can be left behind after death,
when the body and the nature of the mind, destroyed
together,
have departed each into its own first beginnings.

/ I say, then, that images of things, thin shapes,
are sent off from things, from their outermost surface;
and this anyone, however dull his wits, can grasp from
what follows.

4.54 First, since among visible things many things send off
bodies, some loosely dispersed,
as logs send off smoke and fires heat,
and some more closely woven and compact, as when at
times
cicadas in summer lay aside their smooth sheaths,
and when calves at birth shed membranes from the surface
of their bodies, and likewise when the slippery snake
sloughs off its skin among the thorns—for we often see
the brambles decked with their fluttering spoils—
since these things happen, a thin image too must
be sent off from things, from their outermost surface.

/ For why those things should fall away and depart from
things
rather than those that are thin, no one can open his mouth
to say;
especially since on the surface of things there are
many tiny bodies which could be thrown off in the same
order
they held before, and keep the outline of the form,
and much faster, inasmuch as they are less easily hindered,
being few and placed in the very front rank.
For certainly we see many things thrown off and freely
given out,
not only from deep within, as we said before,
but often from the surface too—color itself.
And this is commonly done by the yellow and red awnings
and the dusky purple ones, when, stretched over great
theaters,
spread out on masts and beams, they quiver and flap;
for there they tint the seated audience in the tiers below
and the whole look of the stage, the senators and matrons
down below,
and make them ripple in their own color.

/ And the more the walls of the theater are closed in
all around, the more everything inside, steeped in charm,
laughs with color as the daylight is shut out.
Therefore, since the canvas sends off dye from its surface,
all things must also send off thin images,
since in both cases they throw them from the surface.
There are, then, sure traces of forms,
which fly about everywhere, endowed with a fine texture,
and cannot be seen one by one, apart.

4.90 Besides, every smell, smoke, heat and other such
things stream out of things in scattered form,
because, arising deep within, as they come out
they are split up along the winding path, and there are no straight
doorways for them to struggle out through once they have arisen.
But on the other hand, when the thin film of surface color
is thrown off, there is nothing that can tear it apart,
since it lies ready, placed in the front rank.

4.98 Lastly, whatever images appear to us in mirrors,
in water, and in every shining surface must,
since they are endowed with an appearance like that of things,
consist of images sent off from those things.
[For why those things should fall away and depart from things]
[rather than those that are thin, no one can open his mouth to say.]
There are, then, thin images, like those things in form,
which, though no one can make them out singly,
yet, thrown back by constant, repeated rebound,
give back a sight from the mirror's level surface;
and by no other means, it seems, could they be preserved
so well that shapes so like each thing are given back.

4.110 Now come: how fine the stuff of which an image is made—
grasp that. And first, since the first beginnings lie so far
below our senses, and are so much smaller
than the things our eyes first begin to be unable to see,
still, to confirm this too, learn in a few words
how fine are the beginnings of all things.
First, there are creatures so tiny that a third
of them could by no means be seen.
What must we think any one of their guts is like!
What of the ball of the heart, or the eyes? The limbs? The joints?
How tiny they are! And what, further, of the first beginnings,
whatever they are, of which their spirit and the nature of their mind must consist?
Do you not see how fine they are, and how minute?

/ Besides, all things that breathe out a pungent smell
from their bodies—all-heal, foul wormwood,
strong-smelling southernwood and bitter centaury—
any one of which, if you should chance lightly between two
...
Why not rather recognize that many images of things wander
in many ways, powerless and beyond the reach of sense?

4.129 But lest you think that only those images of things
wander that depart from things,
there are also some that are born of their own accord and form
by themselves in this part of the sky that is called air;
these, shaped in many ways, are carried aloft,
as we sometimes see clouds easily gather on high
and mar the clear face of the heavens,
caressing the air with their motion; for often the faces of Giants
seem to fly by and trail a broad shadow,
sometimes great mountains and rocks torn from
the mountains seem to go before and pass across the sun,
then some monster seems to drag and draw on other clouds.
And, melting, they never stop changing their appearance
and turning into the outlines of every kind of form.

4.143 Now how easily and swiftly they are produced,
and flow constantly from things, and slip away and withdraw—
...
for there is always something on the surface of things in abundance
for them to shoot off. And when this reaches other things,
it passes through—clothing, for example; but when it reaches rough rocks
or the matter of wood, there straightaway
it is torn apart, so that it can give back no image.
But when bright and dense objects have been placed
in its way—a mirror above all—none of this happens;
for they cannot pass through, as through clothing, nor yet
be torn apart; the smoothness takes care to keep them safe.
That is why images stream back to us from there.

/ And however suddenly, at whatever moment, you place
any thing before a mirror, an image appears;
so you may know that from the surface there flow
unceasingly
thin textures of things and thin shapes.
Therefore many images are produced in a short time,
so that their origin may rightly be called swift.
And just as the sun must send up much light in a short time,
so that all things may constantly be full of it,
so likewise, by similar reasoning, from things
many images of things must be carried in an instant
in many ways, in all directions everywhere;
since wherever we turn a mirror to face,
there things answer it with like form and color.

4.168 Besides, when the weather of the sky has just been
perfectly clear,
all of a sudden it becomes foully overcast,
so that you would think all the darkness had deserted
Acheron
on every side and filled the great caverns of the sky.
So thoroughly, when the foul night of storm clouds has
risen,
do the faces of black Terror hang over us from above;
yet how tiny a part of these an image is, no one
can say, nor render an account of it in words.

4.176 Now come: how swift the motion with which images travel,
and what speed has been given them as they swim through
the air,
so that a brief hour is spent on a long journey,
to whatever place each heads with its varying impulse,
I shall tell in verses sweet rather than many;
as the swan's brief song is better than the cry of cranes
scattered among the lofty clouds of the south wind.

4.183 First, you can very often see that things that are light
and made of tiny bodies are swift.
Of this kind are the sun's light and its heat,
because they are made of tiny first bodies,
which are, so to speak, hammered on, and do not hesitate
to cross the space of air, driven by the blow behind;
for light is instantly supplied by light,
and flash spurred on by flash, as in an unbroken line.
Therefore by like reasoning images must be able
to run across an unspeakable distance
in an instant of time: first, because a tiny cause
far behind them carries them on and propels them,
and for the rest, they are borne along with such winged
lightness;
next, because they are sent out endowed with so loose
a texture that they can easily pass into anything
and, as it were, seep through the space of air.

4.199 Besides, if some particles of things sent out from deep
within to the outside, like the sun's light
and heat, are seen in an instant of the day to glide down
and spread themselves through the whole expanse of the
sky,
and to fly over sea and lands and flood the sky,
what then of those that stand ready in the front rank,
when they are thrown off and nothing holds back their
release?
Do you not see how much faster and farther they must go,
and run through many times the space
in the same time that the sun's rays spread across the sky?

4.209 This too seems an especially true proof
of how swift the motion is with which images of things travel:
that as soon as a shining pool of water is set out
under the open sky, at once, if the sky is starry, the clear
stars of the heavens answer, gleaming in the water.
Do you see now, then, in what an instant an image
falls from the borders of the sky to the borders of the earth?
So again and again you must admit that bodies are sent off
that strike the eyes and provoke sight.
And smells flow constantly from certain things,
as cold from rivers, heat from the sun, spray from the waves
of the sea, which eats away walls along the shores,
and various sounds never cease to fly through the air.
Then, a moist salty taste often comes into the mouth
when we walk beside the sea; and when we watch, close by,
wormwood being diluted and mixed, its bitterness touches us.

/ So true is it that from all things each thing is carried off
in a flow and sent out in all directions everywhere,
and no delay or rest from flowing is granted,
since we feel constantly, and can always
see and smell all things, and hear them sound.

4.230 Besides, since a shape handled in the dark
is recognized as the same one that
is seen in the light and bright radiance,
touch and sight must be moved by a like cause.
Now then, if we feel a square thing, and it affects us
in the dark, what square thing will be able in the light
to strike our sight, unless its image?
So the cause of seeing seems to lie in images,
and without them nothing can be seen.

4.239 Now these images of things I speak of are carried
everywhere and are thrown off, scattered, in all directions;
but because we can see only with our eyes,
it happens that wherever we turn our gaze, all
things there strike against it with form and color.
And how far each thing is from us, the image
makes us see, and takes care that we distinguish it;
for when it is sent off, it at once pushes and drives
whatever air lies between itself and the eyes,
and all that air thus glides through our eyes
and, as it were, brushes the pupils, and so passes through.
That is why we see how far away
each thing is. And the more air is driven on ahead,
and the longer the breeze that brushes our eyes,
the farther away each thing is seen to be.

/ Of course, these things happen with the utmost swiftness, /
so that we see what a thing is like, and at once how far away it is.
4.256 In these matters we must not think it at all surprising
that, though the images that strike the eyes cannot
be seen one by one, the things themselves are perceived.
For when the wind too lashes us bit by bit, and when
sharp cold flows, we do not usually feel each single
particle of that wind and of that cold,
but rather the whole at once, and we perceive blows
being dealt to our body then, just as if some thing
were lashing it and giving us a sense of its own body
outside us.
Besides, when we strike a stone with a finger, we touch
the very outermost part of the rock and its surface color,
yet we do not feel that by touch; rather we feel
the hardness itself of the rock, deep within.

MIRRORS

How images make things seem to stand behind a mirror and reverse left and right.

4.269 Now come, learn why the image is seen beyond
the mirror: for certainly it seems set far back within.
It is like those things outside that are truly seen through
a door, when the doorway offers an open view through it
and lets many things outside be seen from the house;
for that sight too is produced by a double, twofold air.
First the air on this side of the doorposts is perceived,
then the doors themselves follow, right and left,
then the light from outside brushes the eyes, and
the second air, and the things outside that are truly seen
through.

/ So, when the mirror's image first sends itself forth,
as it comes to our eyes, it pushes and drives
whatever air lies between itself and the eyes,
and makes us able to perceive all that air before
the mirror; but when we have perceived the mirror itself
too,
at once the image that travels from us to it
arrives, and, thrown back, returns to our eyes,
and rolls another air before it, pushing it on,
and makes us see this air before itself, and so
it seems to stand back that far from the mirror.
So again and again it is not at all fitting to wonder
...
at those things that give back a sight from the mirror's level
surface,
since in both cases the effect comes about through two airs.

4.292 Now, the part of our body that is on the right
appears in mirrors on the left, because,
when the image, coming to the mirror's flat surface, strikes it,
it is not turned around intact, but is pushed straight
back, as if someone, before a plaster mask
were dry, should dash it against a pillar or beam,
and it at once kept its shape straight on the front
and pressed itself out, thrust backward.
It will happen that the eye which was before the right
is now the left, and the left in exchange the right.

4.302 It happens too that an image is passed from mirror to mirror,
so that even five or six images are commonly produced.
For whatever things lie hidden behind, in the inner part,
from there, however tortuously and deeply removed,
all can be drawn out through winding passages,
and by means of several mirrors be seen to be in the house.
So thoroughly does the image shine across from mirror to mirror;
and when it is given as left, it becomes right again,
then turns back once more and reverts to the same position.

4.311 What is more, all mirrors with little sides
that have a curve like the curve of our own flank
send images back to us the right way round,
either because the image is passed from mirror to mirror
and flies to us after being struck back twice, or else because
the image is turned around as it comes, since
the mirror's curved shape teaches it to turn toward us.

4.318 Then again, you would think the images step along with us, set
their feet down as we do and copy our gestures,
because from whatever part of the mirror you move away,
from there the images at once cannot return;
since nature compels all things to be carried back
and to rebound from things, returned at equal angles.

4.324 Again, the eyes shun bright things and avoid looking at them.
The sun even blinds them if you keep straining toward it,
because its own power is great, and from on high
its images are carried through the clear air
and strike the eyes, throwing their structure into disorder.

4.329 Besides, any sharp brightness often scorches
the eyes, because it holds many seeds
of fire, which breed pain in the eyes by working their way in.
Besides, whatever the jaundiced look at
turns sallow, because from their body many seeds
of sallowness flow out to meet the images of things,
and many, too, are mixed within their eyes,
which by their contagion paint everything with pallor.

4.337 We see out of darkness the things that are in the light
because, when the black air of the gloom, being nearer,
enters the open eyes first and takes possession of them,
the shining, bright air follows at once,
which, as it were, cleanses them and scatters the black shadows
of that other air; for this air is many times
more mobile, many times finer and more potent.
As soon as it has filled the passages of the eyes with light
and opened those that the air had blocked before—
the black air—at once the images of things follow
that are situated in the light, and stir the eyes so that we see.
We cannot do the reverse, from light into darkness,
because the air of the gloom that comes after
is thicker, and fills all the openings
and blocks the passages of the eyes, so that the images
of no things can be thrown in and move them.

4.353 And when we see a city's square towers from far off,
it often happens that they look round,
because every angle is seen blunted from afar,
or rather is not seen at all: its blow
is lost, and its impact does not glide through to our sight,
since, while the images are carried through much air,
the air forces the angle to grow dull by frequent collisions.
When in this way every angle has escaped our sense at once,
the stone structures look as though turned on a lathe—
yet not like things that are close at hand and truly round,
but they appear to resemble them a little, as in a sketch.

4.364 Our shadow, too, seems to us to move in the sun
and to follow our footsteps and copy our gestures—
if you believe that air deprived of light can
walk along, following the movements and gestures of men;
for what we are accustomed to call a shadow
can be nothing else but air empty of light.
Of course: because the earth, in fixed places one after another,
is robbed of the sun's light wherever, as we walk,
we get in its way, and likewise the part we have left is filled again,
that is why what was our body's shadow
seems to have followed us constantly, directly in line with us.
For new rays of light are always pouring out,
and the first ones perish, as if wool were being drawn into a fire.
So the earth is easily robbed of light
and likewise filled again, and washes the black shadows off itself.

ILLUSIONS OF SIGHT

Moving ships, still stars and bent oars seem to deceive the eyes, but the error lies in the mind.

4.379 Yet we do not grant that the eyes are deceived one bit in this.
For to see in what place there is light and shadow
is their business; but whether the lights are the same or not,
and whether the shadow that was here is the same one now passing there,
or rather what I said a little earlier happens—
this, in the end, the reasoning of the mind must decide;
the eyes cannot know the nature of things.
So do not pin this fault of the mind on the eyes.

4.387 The ship we sail in moves while it seems to stand still;
the one that stays at anchor is believed to be going past.
And hills and plains seem to run away astern
as we drive our ship past them and fly on under sail.

4.391 The stars all seem to be at rest, fixed to the vaults of heaven,
and yet they are all in constant motion,
since they rise and then return to their distant settings
when they have measured out the sky with their bright bodies.
And by the same reasoning the sun and moon seem
to stay at rest—things that the facts themselves show to be moving.

4.397 And mountains rising far off from the middle of the sea,
between which a vast passage lies open, free for fleets,
nevertheless look like a single island joined from them.
Halls seem to spin and columns to run around
to children, so much so, when they themselves
have stopped whirling, that they can scarcely believe
the whole roof is not threatening to crash down on them.

4.404 And when nature begins to raise the red radiance on high
with its trembling fires and lift it above the mountains,
those mountains above which the sun then seems to you to be,
touching them close at hand with its own blazing fire,
are scarcely two thousand arrow-shots away from us,
often scarcely five hundred casts of a javelin;
yet between them and the sun lie the enormous
plains of the sea, spread out beneath the vast shores of the sky,
and many thousands of lands lie in between,
held by various peoples and generations of beasts.

But a pool of water no deeper than a single finger,
collected between the stones of paved streets,
offers a view down beneath the earth of as vast a depth
as the high chasm of the sky gapes open above the earth,
so that you seem to look down on clouds and see the sky,
and bodies marvelously hidden in a sky beneath the earth.

Lastly, when our spirited horse has come to a halt in the middle
of a river, and we look down into the stream's rushing waves,
the force of the current seems to carry the standing horse's body
sideways and to thrust it swiftly upstream,
and wherever we cast our eyes, everything seems to be carried
and to flow along in the same way as we are.

Lastly, though a colonnade runs evenly throughout
and stands forever propped on equal columns,
yet when its whole length is seen from the top end,
it gradually draws in to the point of a narrow cone,
joining roof to floor and all the right side to the left,
until it has drawn them together into the cone's faint tip.

4.432 At sea, to sailors, the sun seems to rise from the waves
and in the waves to set and hide its light—
naturally, since they see nothing else but water and sky;
so do not lightly believe that the senses are shaken on every side.
But to those who do not know the sea, ships in harbor
seem to be straining lamely against the waves with broken sterns.
For whatever part of the oars is raised above the salt spray
is straight, and the rudders are straight above;
but the parts that go down beneath the water all seem refracted,
bent round, turning back and sloping upward,
and bent back so as almost to float on the water's surface.

4.443 And when the winds carry scattered clouds across the sky
at night, then the bright constellations seem
to glide against the clouds and travel above them
in quite another direction from their true course.
But if by chance a hand placed beneath one eye
presses it, by a certain sensation it comes about that
everything we look at seems to become double as we look:
double the lamplights, blooming with their flames,
double the furniture throughout the whole house,
and men's faces twofold, and their bodies two.

4.453 Lastly, when sleep has bound our limbs in sweet slumber
and the whole body lies in deepest rest,
even then we seem to ourselves to be awake and to move
our limbs, and in the blind darkness of night
we think we see the sun and the light of day,
and, shut in a closed room, we seem to pass to sky and sea, to rivers and mountains,
and to cross the plains on foot,
and to hear sounds, when the stern silence of night
reigns on every side, and to reply, though we say nothing.

4.462 We see many other marvels of this kind,
which all seek, as it were, to break down our trust in the senses—
in vain, since most of them deceive us
because of the mind's opinions, which we add ourselves,
so that things not seen by the senses are taken as seen;
for nothing is harder than to separate plain things
from doubtful ones, which the mind adds straight away of its own accord.

AGAINST THE SKEPTIC

Whoever says nothing can be known refutes himself; the senses are the foundation of all knowledge.

4.469 Lastly, if anyone thinks that nothing can be known, he also does not know
whether it can be known, since he admits he knows nothing.
Against this man, then, I will not trouble to argue my case,
a man who has stood himself on his own head.
And yet, granting that he knows even this, still I would
ask him this: since he has never before seen anything true in things,
how does he know what knowing and not knowing are,
what produced the concept of the true and the false,
and what proved that the doubtful differs from the certain?
You will find that the concept of the true was created first
by the senses, and that the senses cannot be refuted.
For something must be found of greater credit,
which can of its own accord overcome the false with the true.
Then what ought to be held of greater credit
than the senses?

Or will reasoning, sprung from a false sense, be able
to speak against them, when it has sprung wholly from the senses?
If they are not true, all reasoning too becomes false.

4.486 Can the ears find fault with the eyes, or touch
with the ears? Or will the mouth's taste convict this touch,
or will the nostrils refute it, or the eyes disprove it?
Not so, I think. For to each a separate power
is assigned, each has its own force; and so it must be that
what is soft, or cold, or hot is perceived
by one sense, and by another the various colors of things
are sensed, and whatever is joined to the colors.
Separately, too, the mouth's taste has its power; separately smells
arise, separately sounds. And so it must be
that one sense cannot convict another.
Nor again can they find fault with themselves,
since equal trust must always be placed in them.
Therefore, whatever has appeared to them at any time is true.

4.500 And even if reasoning cannot unravel the cause
why things that were square close up are seen
as round from far off, still it is better, lacking a reason,
to give a faulty account of the causes of each shape
than to let things plainly grasped slip from our hands
and to violate our first trust and tear up all
the foundations on which life and well-being rest.
For not only would all reasoning collapse; life itself too
would fall at once, unless you dared to trust the senses
and to avoid steep places and all the other things
of this kind that are to be shunned, and to pursue their opposites.
So all that store of words is empty for you,
which has been drawn up and prepared against the senses.

4.513 Lastly, as in a building, if the first rule is crooked,
and if the square is false and departs from straight lines,
and if the level is the least bit off at any point,
everything must be done faulty and askew,
the building warped, leaning, tilting forward, tilting back,
all out of true,
so that some parts seem about to collapse already, and do
collapse,
all betrayed by those first false judgments—
so, then, your reasoning about things must be crooked
and false, whatever reasoning has arisen from false senses.

HEARING, TASTE AND SMELL

Voice is bodily, echoes are voices thrown back, and flavors and smells please or harm by their shapes.

4.522 Now how each of the other senses perceives its own / object
—the account that remains is by no means a stony path.
4.524 First, every sound and voice is heard when it has worked its
way
into the ears and struck the sense with its body.
For we must admit that voice too, and sound,
are bodily, since they can strike the senses.

4.528 Besides, the voice often scrapes the throat, and a shout
makes the windpipe rougher as it goes out,
since the first beginnings of voices, rising in a greater crowd
through a narrow passage, have begun to go outside.
Clearly, the doorway of the mouth, too, is scraped when they fill it.
There is no doubt, then, that voices and words consist
of bodily first beginnings, so that they can do harm.
Nor do you fail to see, likewise, how much body is taken away,
how much is drained from men's very sinews and strength
by unbroken talk carried on to the shadow of black night
from the first bright gleam of dawn,
especially if it is poured out at the top of one's voice.
So the voice must be bodily,
since one who talks a lot loses part of his body.

4.542 Roughness of voice, moreover, comes from roughness
of the first beginnings, and smoothness likewise is created from smoothness;
nor do first beginnings of the same shape pierce the ears
when the trumpet bellows with a low, deep rumble
and the lyre, swept into motion, booms back its hoarse drone,
and when now the Daulian birds from Helicon's gardens
raise their liquid lament in a mournful voice.[3]

3 The Daulian birds are nightingales, after Procne and Philomela of Daulis, who in myth were turned into birds.

4.549 So when we press out these voices from deep within our body
and send them out straight through the mouth,
the nimble tongue, deft worker of the sinews, articulates them,
and the shaping of the lips in its turn gives them form.
When the distance is not long from which each voice sets out
to arrive, the words themselves too must
be heard clearly and distinguished syllable by syllable;
for the voice keeps its shaping, keeps its form.
But if the space between is longer than it should be,
the words must be jumbled through so much air
and the voice thrown into confusion as it flies through the breezes.
So it happens that you can hear the sound but cannot
make out what the meaning of the words is;
so confused and obstructed does the voice arrive.

4.563 Besides, a single word, sent out from a herald's mouth,
often rouses the ears of everyone in a crowd.
So one voice suddenly scatters
into many voices, since it divides itself among individual ears,
stamping its form and clear sound on the words.
But the part of the voices that does not fall on ears
is carried past and perishes, scattered in vain through the air.
Part, dashed against solid places, is thrown back and returns
a sound, and sometimes mocks us with the image of a word.

4.572 When you see this well, you could give an account
to yourself and others of how, in lonely places,
rocks give back like shapes of words in their order,
when among the shadowy mountains we look for straying
companions
and call aloud to them, scattered as they are.
I have even seen places give back six or seven voices
when you uttered only one: so did the hills themselves,
beating words back to hills, repeat what was said.

/ These places, the neighbors imagine, are haunted by goat-
footed Satyrs
and Nymphs, and they say there are Fauns,
by whose night-roaming din and playful revels,
they commonly declare, the hushed silences are broken,
and sounds of strings arise, and sweet laments
which the pipe pours out when played by the musicians'
fingers,
and that the farming folk hear it far and wide when Pan,
shaking the pine that covers his half-beast head,
often runs his curved lip over the open reeds,
so that the pipe never ceases to pour out woodland music.
They tell of other marvels and prodigies of this kind,
so that no one may think they live in lonely places
deserted even by the gods. That is why they boast of
wonders in their tales,
or they are led on by some other reason, since the whole
human race is all too eager for listening ears.

4.595 For the rest, there is no reason to wonder how it is
that through places where the eyes cannot see things plainly,
through these places voices come and strike the ears.
We often observe a conversation carried on through closed doors, too—
of course, because a voice can pass unharmed through the winding passages
of things, while images refuse;
for they are torn apart unless they swim through straight passages,
like those of glass, through which every sight flies.
Besides, a voice divides itself in all directions,
since voices are born one from another, once a single voice
has burst out and split into many, as a spark of fire
often scatters itself into fires of its own.
So places hidden far back are filled with voices,
all seething around and astir with sound.

/ But all images travel on straight paths
once they are sent out; which is why no one can see
over a fence, but can catch voices from outside.
And yet even this voice, while it passes through the closed rooms of houses,
is blunted and enters the ears confused,
and we seem to hear sound rather than words.

4.615 The tongue and palate, by which we perceive flavor,
involve a little more reasoning, more work.
First, we perceive flavor in the mouth when we press out
food by chewing, as if someone happened to begin
to squeeze a sponge full of water in his hand and dry it.
Then all that we press out is spread through the pores of the palate
and through the winding passages of the porous tongue.
When the bodies of the oozing flavor are smooth,
they touch pleasantly and pleasantly handle
all the moist, sweating regions around the tongue;
but on the other hand they prick the sense and tear it as they rise,
the more so, the more each is filled with roughness.

/ Next, the pleasure from flavor lies within the bounds of the palate;
but when it has plunged down through the throat,
there is no pleasure while it is all being spread into the limbs;
and it makes no difference what food the body is nourished on,
so long as what you take you can digest and spread
to the limbs, and keep the stomach's moisture evenly balanced.

4.633 Now, so that we may see how different creatures have
different foods,
I will explain, and why what is harsh and bitter to some
can nevertheless seem very sweet to others,
and why the distance and difference in these things is so
great
that what is food to some is sharp poison to others;
there is even a snake which, touched by human spittle,
perishes and destroys itself by biting itself.
Besides, hellebore is a sharp poison to us,
but it fattens goats and quails.
To understand by what means this comes about,
you must first remember what we said before,
that seeds are held mixed in things in many ways.
Moreover, all living creatures that take food,
just as they are unlike outwardly and, kind by kind,
the outer contour of their limbs confines them,
so too they consist of seeds that vary in shape.

/ Since, further, the seeds differ, the spaces between must
differ,
and the passages, which we call pores,
in all the limbs, and in the mouth and the palate itself.
Some must therefore be smaller, some larger;
some must be triangular, others square,
many round, some many-angled in many ways.
For as the arrangement of the shapes and their motions
demand,
so the pores must differ in their shapes
and the passages vary, according as the texture confines
them.
So when what is sweet to some becomes bitter to others,
for the one to whom it is sweet, the smoothest bodies must
enter the pores of the palate caressingly;
but for those to whom the same thing is sour within,
rough, hooked bodies, of course, pierce the throat.
Now it is easy to understand each case from these facts.

/ For when fever has arisen in someone from an excess of bile,
or the force of some disease has been stirred up in another way,
then the whole body is thrown into disorder, and all
the arrangements of its first beginnings are changed;
it comes about that the bodies that formerly suited the sense
now do not suit it, and others are more fitting,
which can penetrate and produce a bitter sensation;
for both kinds are mixed in the flavor of honey—
as I have often shown you before, above.

4.673 Now come, I will explain how the impact of smell
touches the nostrils. First, there must be many things
from which a varied stream of smells rolls out,
and we must suppose they flow and are sent and scattered everywhere;
but different smells suit different creatures better,
because of their unlike shapes. And so through the air
bees are drawn by the scent of honey, however far away,
and vultures by corpses; then, where the cloven hoof of wild beasts
has carried their steps, the power of hounds, let loose,
leads on, and the scent of man is sensed far off
by the savior of the citadel of Romulus's sons, the white goose.
So different scents, given to different creatures, lead each
to its own food and force it to recoil from foul poison,
and in this way the generations of beasts are preserved.[4]

4 The sacred geese on the Capitol were said to have woken the Romans when the Gauls attacked by night in 390 BC.

4.687 This smell, then, whatever it is that strikes the nostrils,
one kind can be sent farther than another;
but none of them travels as far
as sound, as voice—not to mention the things
that strike the eyes' sight and stir our vision.
For it comes slowly, wandering, and perishes first,
gradually and easily dispersed into the breezes of the air;
first, because it is scarcely released from deep within the thing;
for that smells flow out and depart from deep within things
is shown by the fact that everything seems to smell stronger
when broken, when crushed, when broken down by fire.
Next, you can see that it is made of larger
first beginnings than voice, since through stone walls
it does not pass, where voice and sound commonly travel.

/ Therefore you will see that it is also not so easy
to track down in what region a smelly thing is located;
for the blow grows cold as it lingers in the air,
and the messengers of things do not run hot to the sense.
That is why dogs often go astray and search for the trail.

4.706 Yet this is not so only with smells and with the class
of flavors; likewise the appearances and colors of things
do not suit all the senses of all creatures equally,
but some are harsher to the sight of some.
Indeed, the rooster, who is used to clapping night away
with his wings
and summoning dawn with his clear voice—
ravening lions cannot stand and face him
or look at him: so quickly do they think of flight.
Of course, this is because there are certain seeds in the
bodies
of roosters which, when they are shot into the eyes of lions,
pierce the pupils and cause sharp pain,
so that, fierce as they are, they cannot hold out against it,
though these seeds cannot hurt our sight at all,
either because they do not penetrate, or because, when
they do,
a free exit from the eyes is given them, so that by lingering
they cannot hurt the eyes in any part.

IMAGES IN THE MIND

Thin images, some combined like Centaurs, strike the mind directly in thought and in dreams.

4.722 Now come, learn what things move the mind, and hear in a
few words
where the things that come into the mind come from.
First, I say this: many images of things wander
in many ways, in all directions everywhere,
thin images, which easily join with one another in the air
when they meet, like spider's web or gold leaf.
For these are indeed much thinner in texture
than those that take hold of the eyes and stir our sight,
since they penetrate through the body's pores and stir
the thin nature of the mind within and arouse its sense.

/ So we see Centaurs and the limbs of Scyllas
and dog-faces like Cerberus's, and images of those
whose bones the earth embraces after they have met their death;
since images of every kind are carried everywhere,
some that form of their own accord in the air itself,
some that depart from various things,
and some that are made up by combining the shapes of these.
For certainly no image of a Centaur comes from a living one,
since there never was a living creature of that nature;
but when images of a horse and a man happen to meet,
they easily stick together at once, as I said before,
because of their fine nature and thin texture.
Other things of this kind are created in the same way.

/ Since these move nimbly with the utmost lightness,
as I showed before, any single fine image
easily moves our mind with a single blow;
for the mind itself is thin and wonderfully mobile.
That this happens as I say you can easily learn from this:
since what we see with the mind is like what we see
with the eyes, it must come about in a similar way.

4.752 Now, since I have shown that I see lions, let us say,
by means of images, whatever ones strike the eyes,
you may know that the mind is moved in a similar way
by images of lions and of the other things it sees, equally
and no less than the eyes, except that it perceives thinner ones.
And for no other reason, when sleep has sprawled the limbs,
is the mind awake, except that the same images stir
our minds as when we are awake,
so much so that we seem surely to see one
whom, life left behind, death and earth have already taken.
Nature compels this to happen because all
the senses of the body are blocked and at rest throughout the limbs
and cannot refute the false with the true.

/ Besides, memory lies idle and faint with sleep
and does not object that the man is in the grip of death and doom
long since, whom the mind believes it sees alive.
For the rest, it is no wonder that images move
and throw their arms and other limbs in rhythm;
for in sleep an image seems to do this.
Naturally: when the first perishes and a second is born
in another posture, the first seems to have changed its gesture.
This, of course, we must suppose happens swiftly:
so great is the mobility, and so great the supply of things,
and so great, in any single perceptible moment,
the supply of particles, that it can keep up the flow.

4.777 Many questions are asked about these things, and much
must be made clear by us, if we want to explain the matter
plainly.
First of all it is asked why, whatever each person
has had a sudden fancy for, the mind thinks of that very
thing at once.
Do the images watch for our will,
and does an image come to us as soon as we wish,
if our heart is set on sea, on land, or on the sky?
Gatherings of people, a procession, banquets, battles—
does nature create and provide them all at a word?
Especially when, in the same region and place,
other minds are thinking of things all utterly different.
And what of this: when we see images in sleep
move in rhythm and sway their supple limbs,
when they nimbly thrust out their supple arms in turn
and repeat the gesture for our eyes with matching feet?

/ Naturally the images are steeped in art and wander about
well trained,
so that they can put on shows in the nighttime!
Or will this rather be the truth? Because in one moment
that we perceive, that is, while a single sound is uttered,
many moments lie hidden, which reason finds to exist,
it comes about that at any moment any
images are ready at hand, in every place.
So great is the mobility, and so great the supply of things.
When the first perishes and a second is born
in another posture, the first seems to have changed its
gesture.
And because they are thin, the mind cannot see sharply
any but those it strains toward; and so all that exist
besides are lost, except those it has readied itself for.

/ It readies itself, moreover, and hopes that it will come to pass
that it sees what follows on each thing: so it happens.
Do you not see that the eyes, too, when things that are thin
[besides are lost, except those it has readied itself for]
they begin to look at, strain themselves and get ready,
and that without this we cannot see sharply?
And yet even with things in plain view you can recognize that,
if you do not turn your mind to them, it is just as if they had been
at all times set apart and far away.
So why is it surprising if the mind loses everything else
except the things to which it is itself devoted?
Then too, we form huge opinions from small signs
and lead ourselves into the trap of self-deception.

4.818 It also happens at times that the image supplied is not
of the same kind, but what was a woman before
seems to be there in our arms, turned into a man,
or one face and age follows after another.
Sleep and forgetfulness see to it that we do not wonder at this.

ORGANS WERE NOT MADE FOR A PURPOSE

Eyes, tongue and limbs existed before their uses; use came from them, not they from use.

4.823 In these matters there is one fault that you should strongly
shun, one error to avoid with foresight:
do not think that the bright lights of the eyes were created
so that we could see ahead, or that, so that we could take
long strides, the tapering ends of shins
and thighs, set on the feet, are able to bend for that
purpose,
or again that the forearms, fitted to strong upper arms,
and the hands, servants on either side, were given us
so that we could do what was needed for life.
All the other explanations of this kind that people give
are backward and preposterous in their reasoning,
since nothing has been born in the body so that we might
use it, but what has been born creates the use.

/ There was no seeing before the lights of the eyes were
born,
no pleading in words before the tongue was created;
rather, the tongue's origin came long before
speech, and the ears were created long before
any sound was heard, and in short all the limbs
existed, I think, before there was any use for them;
so they cannot have grown for the sake of use.
But on the other hand, fighting it out hand to hand in battle,
tearing limbs and fouling bodies with blood
existed long before gleaming spears flew,
and nature compelled men to avoid wounds
before art set a shield on the left arm to block them.
Of course, to entrust the tired body to rest
is far older than the soft coverings of a bed,
and quenching thirst came before cups were born.

/ These things, then, can be believed to have been devised
for the sake of use, since they were discovered from use
and life.
Quite separate are all those things which were first born
themselves and afterward gave the idea of their usefulness.
In this class we see above all the senses and the limbs;
so again and again, it is far from possible for you to believe
that they could have been created for the purpose of
usefulness.

4.858 Nor is it any wonder, likewise, that the very nature
of every living creature's body seeks food.
For I have shown that many bodies flow and depart from
things
in many ways, but the most must depart
from living creatures; these, because they are exercised by
motion,
many are breathed out through the mouth when they pant
with weariness,
and many are forced up from deep within and carried off
through sweat.
Through these things, then, the body grows porous and its
whole
nature is undermined, and pain follows on this.
That is why food is taken: to prop up the limbs
and restore strength when given within, and to stop up
the gaping desire for eating throughout the limbs and veins.

/ Liquid likewise departs into all the places
that call for liquid; and the many massed bodies of heat
that kindle fires in our stomach
the arriving liquid scatters and puts out like a fire,
so that the dry heat can no longer burn the limbs.
So, then, panting thirst is washed out
of our body; so hungry desire is filled.

4.877 Now how it happens that we can step forward
when we wish, and why we are able to move our limbs,
and what has been accustomed to push forward this great weight
of our body, I will tell: take in my words.
I say that first, images of walking
strike our mind and beat upon it, as I said before.
Then comes the will; for no one begins to do any
thing until the mind has first foreseen what it wishes.
And what it foresees consists of an image of that thing.
So when the mind stirs itself so that it wishes to go
and step forward, at once it strikes the force of the spirit
that is scattered through the whole body, through limbs and frame;
and that is easy to do, since the two are held joined together.
Then the spirit in turn strikes the body, and so the whole
mass is gradually pushed forward and moved.

/ Besides, the body then also grows porous, and air—
as it must, being always mobile—
comes in abundance through the opened pores and penetrates,
and so is spread to all the tiny parts
of the body. Here, then, by two things working from both sides,
the body is carried like a ship by sails and wind.
Nor is it any wonder in these matters
that such tiny particles can turn
so large a body and wheel round our whole weight;
for indeed the wind, thin with its fine body,
drives a great ship with great force,
and one hand steers it however fast it goes,
and a single rudder turns it wherever it pleases,
and a machine, by pulleys and drums, moves many things
of great weight and lifts them with slight effort.

SLEEP AND DREAMS

Sleep comes when the spirit is scattered, and dreams replay the pursuits of waking life.

4.907 Now by what means sleep floods the limbs with rest
and frees the heart from the cares of the mind,
I shall tell in verses sweet rather than many,
as the swan's brief song is better than the cry of cranes
scattered among the lofty clouds of the south wind.
Give me fine ears and a shrewd mind,
so that you do not deny that what I say can happen
and go away with a heart that thrusts back
true words, when you are yourself at fault and cannot see it.

4.916 First, sleep comes when the force of the spirit is scattered
through the limbs, and part of it has been driven out and
gone away,
and part, crowded together, has withdrawn deeper inside;
for then at last the limbs are loosened and grow slack.
For there is no doubt that it is through the spirit's work
that this sense exists in us; and when slumber prevents it
from existing,
then we must suppose that our spirit is thrown into
disorder
and driven out—not all of it; for then the body would lie
steeped in the everlasting chill of death.
For if no part of the spirit remained hidden
in the limbs, as fire lies buried beneath much ash,
from what could sense be suddenly rekindled through the
limbs,
as flame springs up from hidden fire?

4.929 But by what means this new state comes about, and how
the spirit can be thrown into disorder and the body grow
slack,
I will explain: see that I do not pour out my words to the
winds.

4.932 First, the body must on its outer side,
since it is touched by the neighboring breezes of the air,
be pounded and beaten by their frequent blows,
and that is why nearly all things are covered
with hide, or else with shells, or with callus, or with bark.
And in those that breathe, this same air also
lashes the inner part as it is drawn in and breathed out.
So since the body is beaten on both sides, and since
the blows make their way through the tiny pores
to the primary parts and first elements of our body,
there comes about, as it were, a gradual collapse
throughout our limbs.
For the arrangements of the first beginnings of body
and mind are thrown into disorder.

The result is that part of the spirit
is drawn out, and part, hidden away, withdraws inward,
and part too, scattered through the limbs, cannot stay
joined together or interact in motion;
for nature blocks off its meetings and passages.
So sense departs deep within, as the motions change.
And since there is nothing, as it were, to prop up the limbs,
the body grows weak and all the limbs go slack,
the arms and eyelids droop, and the knees, as one lies
down,
often buckle even so and let their strength dissolve.

4.954 Then too, sleep follows food, because the same effects the
air produces,
food, while it is being spread through all the veins,
produces too. And that slumber is by far the heaviest
which you fall into when full or tired, because then the
greatest number
of bodies are thrown into disorder, bruised by much labor.
By the same reasoning, the spirit is in part packed
deeper, and more of it is driven out,
and it is more divided and scattered within.

4.962 And whatever pursuit each of us is bound to and clings to,
or whatever things we have spent much time on before,
so that the mind has been more strained in that task,
in sleep we generally seem to go about those same things:
lawyers plead cases and draft laws,
generals fight and go into battle,
sailors wage their grappling war with the winds,
and I pursue this task: to seek out the nature of things
always, and set it forth, once found, in my country's
language.
So other pursuits and arts are generally seen
to hold men's minds in sleep with their illusions.

/ And those who for many days in a row have given
unbroken attention to the games, we generally see,
when they have stopped taking them in with their senses,
still have passages left open in their minds
by which the same images of things can come;
so for many days those same things hover
before their eyes, so that even awake they seem
to see dancers moving their supple limbs,
and to take in with their ears the liquid song of the lyre
and its speaking strings, and to see the same audience
and the varied splendors of the stage all shining at once.
So much do zeal and will matter,
and the things in which one is used to be engaged—
not for humans only, but for all living creatures.

/ For you will see strong horses, when their limbs are lying at rest,
still sweating in their sleep and panting constantly
and straining their utmost strength as if for the prize,
or as if the starting gates were thrown open, whinnying.
And hunters' dogs, often in soft repose,
still suddenly toss their legs and all at once
give tongue and keep sniffing the air with their nostrils,
as if they held the trail of beasts they had found,
and even when awakened they often chase empty
images of stags, as if they saw them in flight,
until they shake off their delusions and come back to themselves.

/ But the fawning breed of puppies used to living in the house
hurry to shake off sleep and snatch their bodies up from the ground,
[still suddenly toss their legs and all at once]
[give tongue and keep sniffing the air with their nostrils]
[as if they held the trail of beasts they had found]
[and even when awakened they often chase empty]
as if they were seeing unfamiliar faces and features.
And the rougher the seeds that make each creature,
the more fiercely it must rage in its sleep.
But birds of various kinds flee and suddenly with their wings
disturb the groves of the gods at night,
if in gentle sleep they have seemed to see hawks
giving fight and battle, pursuing them and flying at them.
Moreover, men's minds, which with great motions bring forth
great deeds, often do and carry out the same in sleep:
they conquer kings, are captured, join battle,
raise a shout as if they were having their throats cut on the spot.

/ Many fight to the finish and let out groans of pain,
and, as if mauled by the bite of a panther or a savage lion,
are devoured, and fill the whole place with loud cries.
Many talk in their sleep about great affairs
and have very often given evidence of their own deeds.
Many meet death. Many, as if they were falling
from high mountains to the ground with their whole body,
are terrified, and as if out of their minds from sleep,
scarcely come to themselves, shaken by the body's turmoil.
Likewise a thirsty man sits down beside a river or a lovely spring
and almost swallows the whole stream in his throat.
Often little children, if beside a pool or a cut-down jar
they believe, deep in sleep, that they are lifting their clothes,
pour out the filtered liquid of their whole body,
and the Babylonian coverlets of splendid magnificence are soaked.

/ Then those into whom, in the stormy straits of youth, seed
is first making its way, when the day itself has made it ripe in their limbs,
are met by images from outside, from some body or other,
messengers of a lovely face and fine complexion,
which stirs and excites the places swollen with much seed,
so that, as if the whole act were done, they often pour out
great floods of a stream and stain their clothes.

LOVE AND DESIRE

Desire is aroused by images of a body; love is a wound and a madness best avoided.

4.1037 That seed in us is stirred, as I said before,
when ripening age first strengthens the limbs.
For different things move and stir different things;
only the influence of a human being calls forth human seed from a human.
As soon as it has been driven out of its seats and goes forth,
it withdraws from the whole body through limbs and frame,
gathering in certain regions of the sinews, and at once
rouses the very genital parts of the body.
Those parts, stimulated, swell with seed, and there arises the will
to discharge it toward that which fierce desire strains toward,
[it rouses, exciting the places swollen with much seed]
and it seeks the body from which the mind is wounded by love;
for all, as a rule, fall toward their wound, and the blood
spurts out in the direction from which we are struck by the blow,
and if the enemy is close at hand, the red stream covers him.

/ So, then, whoever receives a wound from the weapons of Venus—
whether it is a boy with womanly limbs who shoots at him
or a woman darting love from her whole body—
he strains toward the source of his wound and longs to unite
and cast the fluid drawn from his body into that body;
for mute desire foretells the pleasure.

4.1058 This is Venus for us; this is where the name of Love comes from;
this is where that drop of Venus's sweetness first
trickled into the heart, and chilling care followed.
For if what you love is absent, still its images
are at hand, and its sweet name hovers about your ears.
But it is right to flee those images and frighten away
what feeds love, and to turn the mind elsewhere,
and to cast the gathered fluid into any bodies,
and not to hold it back, once turned by love of one alone,
and so store up care and certain pain for oneself;
for the sore quickens and becomes chronic by feeding,
and day by day the frenzy grows and the misery gets heavier,
unless you disrupt the first wounds with new blows
and heal them while still fresh, roaming with roaming Venus,
or can divert the motions of the mind elsewhere.

4.1073 Nor does the man who avoids love go without the fruits of
Venus;
rather, he takes the benefits that come without the penalty;
for surely the pleasure from it is purer for the healthy-
minded
than for the lovesick; for at the very moment of possession
the lovers' passion wavers, drifting uncertainly,
and they cannot settle what to enjoy first with eyes and
hands.
What they have sought they squeeze tight and hurt
the body, and often dash their teeth against the lips
and fasten their kisses hard, because the pleasure is not
pure
and there are goads beneath that spur them to hurt the very
thing,
whatever it is, from which those seeds of madness spring.
But Venus lightly breaks the penalties in the midst of love,
and the coaxing pleasure mixed in reins in the bites.
For in this lies the hope that from the same body that is the
source
of their burning, the flame can also be quenched.

/ But nature resists this happening, entirely to the contrary;
this is the one thing where, the more of it we have,
the more the heart burns with fierce desire.
For food and drink are taken into the limbs within;
and since these can occupy fixed places,
the desire for drink and grain is easily satisfied.
But from a person's face and lovely complexion
nothing is given to the body to enjoy except images,
thin ones—and that wretched hope is often snatched away
by the wind.

/ As when in dreams a thirsty man seeks to drink, and no liquid
is given that could quench the burning in his limbs,
but he seeks the images of water and labors in vain,
and thirsts even while drinking in the midst of a rushing river,
so in love Venus mocks lovers with images,
and they cannot sate themselves by gazing at bodies face to face,
nor can they rub anything off from the tender limbs with their hands
as they wander uncertainly all over the body.
Then, when with limbs entwined they enjoy the flower
of youth, when the body already foretells its joys
and Venus is at the point of sowing the woman's fields,
they clasp each other greedily, and mingle the saliva
of their mouths, and breathe in, pressing teeth on lips—
in vain, since they can rub nothing off from there,
nor penetrate and pass into the other body with their whole body;
for at times they seem to want to do this, and to strive for it.

/ So eagerly do they cling in the couplings of Venus,
while their limbs melt, loosened by the force of pleasure.
At last, when the desire gathered in the sinews has burst out,
there comes a small pause in the violent burning for a little while.
Then the same madness returns and that frenzy comes back,
when they seek to attain what they themselves desire,
and cannot find a device to conquer that malady.
So uncertainly do they waste away from a hidden wound.

THE COSTS OF LOVE

Lovers waste wealth and reputation, and bitterness wells up amid their pleasures.

4.1121 Add that they use up their strength and are ruined by the toil;
add that life is lived at another's beck and call.
Duties are neglected, and reputation totters and sickens.
Meanwhile wealth slips away and turns into Babylonian
perfumes, and lovely Sicyonian shoes smile on her feet,
and of course huge emeralds with green light
are set in gold, and the sea-colored gown is worn out
constantly and, hard used, drinks in the sweat of Venus.
And the fathers' well-earned wealth becomes headbands and turbans,
and at times is turned into a robe, or gowns from Alinda and Ceos.[5]

/ Banquets with exquisite coverings and fare, games,
cup after cup, perfumes, crowns, garlands are laid on—
in vain, since from the very fountain of delights
some bitterness wells up to torment them amid the flowers themselves,
either when the guilty mind perhaps bites itself
for spending life in idleness and perishing in debauchery,
or because she has let fly an ambiguous word and left it,
which, fixed in the passionate heart, comes alive like fire,
or because he thinks she is casting her eyes about too much, or looking at another,
and sees in her face traces of a smile.

5 Babylonian perfumes, shoes from Sicyon near Corinth, and fabrics from Alinda in Caria and the island of Ceos were famous luxuries.

4.1141 These evils are found in love that is secure and at its most
prosperous;
but in love that is thwarted and hopeless there are evils
you could grasp with your eyes shut—
countless ones; so it is better to be on guard beforehand,
in the way I have taught, and take care not to be lured in.
For to avoid being thrown into the nets of love
is not as difficult as, once caught, to get out
of the very meshes and break the strong knots of Venus.
And yet even entangled and hampered, you could
escape the danger, unless you stand in your own way
and overlook, first, all the faults of mind
or of body in her whom you seek and want.
For men mostly do this, blinded by desire,
and grant them merits they do not truly have.
So we see women faulty and ill-favored in many ways
being treated as darlings and flourishing in the highest
esteem.

/ And some laugh at others and urge them to appease
Venus, since they are afflicted by a shameful love,
and the poor wretches often fail to see their own far greater
woes.
A dark girl is melichrus ("honey-toned"); an unwashed,
smelly one acosmos ("unadorned");
a gray-eyed girl a Palladium ("little Athena"); a wiry,
wooden one a dorcas ("gazelle");
a tiny, petite one is chariton mia ("one of the Graces"), pure
wit through and through;
a big, towering one is cataplexis ("a marvel"), full of dignity.
The stammerer who cannot talk is said to traulizi ("lisp
sweetly"); the mute one is modest;
but the fiery, tiresome chatterbox becomes a Lampadium
("little torch").
She becomes ischnon eromenion ("a slender darling") when
she can scarcely live
for thinness; and she is rhadine ("delicate") when she is
half-dead with coughing.
But the ample, full-breasted one is Ceres herself, nursing
Iacchus;
the snub-nosed one is a Silena or a Satyress; the full-lipped
one a philema ("kiss").
It would be tedious if I tried to tell the rest of this kind.[6]

6 Lucretius mocks lovers' Greek pet names, kept here in Greek with English renderings. Iacchus is the infant Bacchus, nursed by Ceres, goddess of grain; Silenus and the Satyrs were snub-nosed companions of Bacchus.

/ But suppose she has all the beauty of face you could wish,
and from all her limbs the power of Venus rises;
surely there are others too; surely we lived without her before;
surely she does, and we know she does, all the same things as a plain woman,
and, poor thing, fumigates herself with foul smells,
while her maids keep well away from her and giggle behind her back.
But the lover, shut out and weeping, often covers the threshold
with flowers and garlands, and anoints the proud doorposts
with marjoram oil, and, poor wretch, plants kisses on the door;
yet if he were let in, and a single whiff met him
as he came, he would look for decent excuses to leave,
and the long-rehearsed lament, fetched from deep, would fall flat,
and he would condemn himself for folly there, seeing that he had
granted her more than is right to grant to a mortal.

/ Nor are our Venuses unaware of this; all the more do they
take the greatest pains to hide all this backstage side of life
from those they want to hold fast and keep bound in love—
in vain, since you can still in your mind drag
it all into the light and find out all that is laughable,
and if she has a good heart and is not spiteful, in turn
overlook it and make allowance for human nature.

4.1192 Nor does a woman always sigh with feigned love
when she embraces a man's body and joins body to body
and holds him, moistening kisses with lips pressed to his;
for she often does it from the heart, and seeking shared
joys, she urges him to run the course of love.
Nor in any other way could birds, cattle, and wild beasts,
sheep, and mares submit to males,
if their own nature were not in heat, burning abundantly,
and did not gladly respond to the Venus of those who mount them.
Do you not see, too, how those whom mutual pleasure has often
bound are tormented in their shared bonds,
when dogs at the crossroads, longing to part,
often pull eagerly in opposite directions with all their strength,
while they are held fast in the strong couplings of Venus?
They would never do this unless they knew mutual joys,
which could lure them into the trap and hold them bound.

/ So again and again, as I say, the pleasure is shared.

HEREDITY AND FERTILITY

Children resemble either parent through the mixing of seed; fertility depends on nature, not the gods.

4.1209 And when, in the mingling of seed, the woman happens to overcome
the man's force with a sudden force of her own and seize it,
then children are born like their mothers from the mother's seed,
as they are like their fathers from the father's. But those you see
with the features of both, blending side by side the faces of their parents,
grow from the father's body and the mother's blood,
when the seeds, stirred through the limbs by the goads of Venus,
have been dashed together by a mutual passion breathing as one,
and neither of them has conquered nor been conquered.
It also happens at times that children can turn out like
their grandparents and often recall the features of great-grandparents,
because parents often conceal in their bodies many
first beginnings mixed in many ways,
which fathers hand down to fathers, passed down from the stock.

/ From these Venus brings forth features by varied lot,
and reproduces the faces, voices, and hair of ancestors;
since these things come from definite seed no less
than our faces and bodies and limbs.
And the female sex arises from the father's seed,
and males come forth made from the mother's body;
for a birth always consists of twofold seed,
and whatever is created, whichever parent it resembles more,
has more than an equal share of that one; as you can see,
whether the offspring is male or its origin female.

4.1233 Nor is it the divine powers that bar anyone from procreative sowing,
so that he is never called father by sweet children
and must live out his life in barren love,
as people mostly believe; and in their sorrow they sprinkle
the altars with much blood and make them smoke with offerings,
to make their wives pregnant with abundant seed.
In vain they weary the power of the gods and the oracles;
for some are sterile because their seed is too thick,
and others, in turn, because it is more fluid and thin than is right.
The thin, since it cannot cling fast in those places,
flows away at once and, drawn back, fails in miscarriage.
The thicker, next, since it is discharged more clotted than it should be,
either does not fly forward with so far-reaching a thrust,
or cannot penetrate the places equally, or, having penetrated,
mixes only with difficulty, seed with the woman's seed.
For the harmonies of love seem to vary widely.

/ And some men fill some women better, and from some men
other women more readily take up the burden and grow heavy with child.
And many women have been barren before in several marriages,
and yet afterward have found a partner from whom they could
bear little children and be enriched with sweet offspring.
And men whose wives at home, though fertile, had often failed
to bear them children, found for themselves too a matching
nature, so that they could fortify their old age with children.
So much does it matter that seeds be able
to mix with seeds in a way fit for procreation,
and that thick should meet with fluid and fluid with thick.
It matters too on what diet life is maintained;
for by some foods seeds grow thick in the body,
and by others, in turn, they are thinned and waste away.
And the ways in which the caressing pleasure itself is conducted—

/ that too matters a great deal. For in the manner of wild beasts
and after the fashion of four-footed creatures, wives are generally thought
to conceive more readily, since in that position the places can take in
the seeds, with the chest down and the loins raised.
Nor do wives have the least need of voluptuous movements.
For a woman prevents herself from conceiving and fights against it
if in her delight she answers the man's lovemaking with her buttocks
and, her whole body gone supple, rouses its waves;
for she throws the furrow off the straight line and path
of the plowshare and turns the stroke of the seed away from the places.
Prostitutes are in the habit of moving like this for their own reasons,
so as not to be made pregnant often and lie with child,
and also so that sex itself might be more pleasing to men;
which our wives plainly have no need of.

4.1278 Nor is it by divine will or the arrows of Venus
that sometimes a woman of plainer looks is loved;
for sometimes the woman herself, by her own actions,
her obliging ways, and the neat care of her person,
makes it easy for you to grow used to living your life with her.
Besides, habit is what builds love;
for whatever is struck by blows, however light, but often repeated,
is still overcome in the long run and gives way.
Do you not see that even drops of water falling on rocks
in the long run bore through the rocks?

Book V

The world and civilization
Our world is mortal; the origin of life; the rise of human society.

5.1 Who has a mind strong enough to compose a song
worthy of the majesty of things and of these discoveries?
Or who has such power with words that he could shape praises
to match the merits of the man who left us such rewards,
won and sought out by his own mind?
No one, I think, who is made of a mortal body.
For if we must speak as the majesty of things, now known, itself demands,
he was a god, a god, illustrious Memmius,
who first discovered that reasoned way of life which
is now called wisdom, and who by his skill
brought life out of such great waves and such great darkness
and set it in so calm a place and so clear a light.
For compare the divine discoveries of others long ago.

/ For Ceres, it is said, gave mortals grain, and Liber
the drink of the vine-born juice;
and yet life could go on without these things,
as there are said to be peoples who live so even now.
But no one could live well without a pure heart;
so this man seems to us all the more rightly a god,
from whom even now, spread through great nations,
the sweet consolations of life soothe our minds.
But if you think the deeds of Hercules surpass his,
you will be carried much further from true reasoning.
For what harm could they do us now, those great gaping
jaws
of the Nemean lion, and the bristling boar of Arcadia?
And how could the birds that haunt Stymphalus hurt us so?
Or, lastly, the bull of Crete, and the plague of Lerna,
the hydra, fenced about with venomous snakes?[1]

1 Liber is the Italian god of wine, identified with Bacchus. The monsters listed here and below are those slain in the labors of Hercules.

/ Or the three-breasted might of triple Geryon,
and the horses of Diomedes breathing fire from their nostrils
near Thrace and the Bistonian lands and Ismarus,
and, guarding the gleaming golden apples of the Hesperides,
the fierce, grim-eyed serpent of monstrous body,
coiled round the tree's trunk? What harm, in the end, could it do
out by the Atlantic shore and the stern wastes of the sea,
where no one of ours goes and no barbarian dares?
And all the other monsters of this kind that were slain—
had they not been conquered, what harm could they do alive?
None, I think: the earth teems with wild beasts to surfeit
even now, and is filled with trembling terror
throughout the groves and great mountains and deep forests;
but those places, for the most part, we have the power to avoid.
Yet unless the heart is cleansed, what battles
and dangers must then work their way into us against our will!

/ How sharp are the cares of desire that then tear a troubled man apart,
and how great, likewise, the fears!
And what of pride, filth, and wantonness? What disasters
they bring about! What of luxury and idleness?
He, then, who has subdued all these and driven them from the mind
with words, not weapons—will it not be fitting
to count this man worthy of a place among the gods?
Above all since he used to utter many sayings, finely and as if inspired,
about the immortal gods themselves,
and to lay open the whole nature of things in his words.

THE PLAN OF BOOK V

Lucretius announces that the world was born and will die, and lists the topics to come.

5.55 While I, following in his footsteps, pursue his reasonings
and teach in my verses by what law all things were created,
and how they must abide by it
and cannot break the mighty laws of time—
and here, first of all, the nature of the mind was shown
to be made up of a body that had a birth,
and unable to last unharmed through long ages,
and that it is images that in sleep deceive the mind
when we seem to see someone whom life has left—
now, to go on, the order of my reasoning has brought me to this point,
where I must show by reasoning that the world consists
of a mortal body and was also born;
and in what ways that coming together of matter
established earth, sky, sea, stars, sun,
and the moon's globe; then what living creatures
arose from the earth, and which were never born at any time;
and in what way the human race, with varied speech,
began to converse with one another through the names of things;
and in what ways that fear of the gods crept into
human hearts which, throughout the world, keeps sacred
shrines, lakes, groves, altars, and images of the gods.

/ Besides, the courses of the sun and the wanderings of the moon—
I will explain by what force steering nature guides them,
so that we may not suppose that these, between heaven and earth,
freely and of their own accord travel their everlasting rounds,
obligingly helping crops and living creatures grow,
or think that they are turned by some plan of the gods.
For even those who have learned well that the gods lead a carefree life,
if all the same they wonder by what means
each thing can be carried on, above all those things
that are seen overhead in the regions of the upper air,
are carried back again into the old religions
and take on harsh masters, able to do all things,
so the wretches believe, not knowing what can be
and what cannot—in short, by what principle each thing
has its limited power and its deep-set boundary stone.

5.91 For the rest, not to keep you longer with promises,
first of all, look at the seas, the lands, and the sky;
their threefold nature, their three bodies, Memmius,
three forms so unlike, three such fabrics—
a single day will give them over to destruction, and, held up through many years,
the great mass and machinery of the world will crash down.
Nor am I unaware how new and strange it falls upon the mind,
this destruction of heaven and earth to come,
and how hard it is for me to prove it with words;
as happens when you bring to the ears a thing unheard of before,
yet cannot place it under the sight of the eyes
or lay it in the hands, the paved road of belief
that leads most directly into the human heart and the precincts of the mind.
But still I will speak out.

Perhaps the event itself will lend my words belief,
and when violent earthquakes arise
you will see everything shaken to pieces in a short time.
May steering fortune turn that far from us,
and may reason rather than the event itself convince us
that all things can be overcome and collapse with a terrible, roaring crash.

5.110 But before I set about declaring the decrees of fate on this
matter,
more holy and far more certain in reasoning than
the Pythia pronounces from Phoebus' tripod and laurel,
I will set out for you many consolations in learned words;
so that you may not, held back by religion, perhaps think
that the lands and the sun and the sky, the sea, stars, and
moon,
being of divine body, must remain forever,
and so suppose it right that, like the Giants,
all should pay the penalty for a monstrous crime
who by their reasoning shake the walls of the world
and would put out the brilliant sun in the sky,
branding immortal things with mortal speech;
whereas these are so far removed from divine power
and so unworthy to be counted among the gods
that they may rather be thought to give us a notion
of what is without vital motion and sensation.[2]

/ For indeed it cannot be that in any body whatever
the nature of the mind and judgment could be thought to
exist.
Just as no tree can exist in the sky, no clouds in the salt
sea, nor can fish live in the fields,
nor blood be found in wood, nor sap in stones—
it is fixed and ordained where each thing is to grow and
dwell—
so the nature of the mind cannot arise alone
without the body, nor exist far from sinews and blood.
For if it could, far sooner could the power of the mind itself
be in the head or shoulders or the bottom of the heels,
and it would be wont to be born in any part at all,
so long as it stayed in the same man and the same vessel.

2 The Giants rose against the gods and were punished.

/ But since in our body too it is plainly fixed
and ordained where spirit and mind can each exist
and grow apart, all the more must we deny
that they could, wholly outside the body and the living
form,
endure in crumbling clods of earth, or in the fire of the sun,
or in water, or in the high regions of the upper air.
These things, then, are not endowed with divine sensation,
since they cannot be alive and animate.

THE GODS DID NOT MAKE THE WORLD

The gods live apart and made nothing for us; the world is too flawed to be divine work.

5.146 Nor, likewise, can you believe that the holy dwellings
of the gods are in any parts of the world.
For the nature of the gods is fine and far removed
from our senses, and is scarcely seen even by the mind's
understanding;
and since it escapes the touch and impact of hands,
it must touch nothing that is tangible for us;
for what cannot itself be touched cannot touch.
Therefore their dwellings too must be
unlike our dwellings, fine, like their bodies;
which I will prove to you later at length.

5.156 Further, to say that for the sake of mankind they chose to prepare
the glorious nature of the world, and that therefore
it is fitting to praise this praiseworthy work of the gods
and to think it eternal and destined to be immortal,
and that it is wrong for what was founded by the gods' ancient plan
to last for the races of men for all time
ever to be disturbed from its foundations by any force,
or assailed with words and overturned from top to bottom,
and to invent and add other notions of this kind, Memmius,
is folly. For on immortal and blessed beings
what profit could our gratitude bestow,
that they should undertake to do anything for our sake?
Or what new thing could, so long after, tempt beings at peace before
to wish to change their former life?

/ For the one who, it seems, must delight in new things
is he whom the old ones harm; but one who has met with nothing painful
in the time gone by, while he lived his life happily—
what could have kindled a love of novelty in such a one?
Or what harm would it have been for us never to have been created?
Was life, I suppose, lying in darkness and grief
until the creative origin of things dawned?
For whoever has been born must want to stay
in life, as long as caressing pleasure holds him;
but for one who has never tasted the love of life
and was never counted among the living, what harm is it not to have been created?
Then again, where did a model for creating things, and the very
notion of human beings, first come to be implanted in the gods,
so that they knew and saw in their minds what they wished to make?
Or how was the power of the first beginnings ever discovered,
and what they could do when their order was changed among themselves,

/ if nature herself had not given a model of creation?
For so many first beginnings of things, in many ways,
driven on by blows from infinite time past
and set moving by their own weights, have been accustomed to travel
and to come together in every way and try out everything
that they could create by meeting with one another,
that it is no wonder if they also fell into such arrangements
and came into such courses
as those by which this sum of things now goes on, renewing itself.

Even if I did not know what the first beginnings of things are,
I would dare to affirm this from the very workings of the sky,
and to show it from many other things:
that the nature of things was by no means made ready
for us by divine power, so great are the flaws with which it stands endowed.
First, of all that the vast sweep of the sky covers,
a greedy share is held by mountains and by forests full of wild beasts;
crags and vast marshes take up part,
and the sea, which holds the shores of the lands far apart.
Next, nearly two parts are taken from mortals by scorching heat
and the constant fall of frost.
What is left of the land, nature by her own force would still
cover over with thorns, unless human effort resisted,
used, for the sake of life, to groan over the stout mattock
and to cut through the earth by pressing down on the plow.
If we did not, turning the fertile clods with the plowshare
and working the soil of the earth, call forth to birth,

/ they could not of their own accord come out into the clear
air.
And even so, at times, when things won with great labor
are already in leaf across the land and all in flower,
either the sun in the sky scorches them with too much heat,
or sudden rains and icy frosts destroy them,
and blasts of wind harry them with violent whirlwinds.
Besides, the fearsome breed of wild beasts, hostile
to the human race by land and sea—why does nature
feed and increase it? Why do the seasons of the year
bring diseases? Why does untimely death roam abroad?
Then again, the child, like a sailor cast ashore by the savage
waves,
lies naked on the ground, unable to speak, in need of every
aid for life, when first into the shores of light
nature has thrust him with birth pangs from his mother's
womb,
and he fills the place with mournful wailing, as is only right
for one who has so much evil left to pass through in life.

/ But the various flocks and herds and wild beasts grow up;
they need no rattles, nor does any of them need
the coaxing, broken baby talk of a kindly nurse,
nor do they seek different clothes for each season of the
sky;
lastly, they need no weapons, no high walls,
to protect what is theirs, since for all of them all things are
produced in plenty
by the earth herself and by nature, the skillful maker of
things.

PROOFS THAT THE WORLD IS MORTAL

Earth, water, air and fire are consumed and renewed, stones decay, and human history is recent.

5.235 First, since the body of earth and water,
the light breaths of the breezes and hot vapors,
of which this sum of things seems to be composed,
all consist of a body that is born and mortal,
the whole nature of the world must be thought to be of the same kind.
For indeed, things whose parts and members we see
to be of a body that is born and of mortal shapes—
these same things we generally see to be mortal
and born as well. So, since I see the greatest members
and parts of the world consumed and born again,
we may know that for heaven and earth too there was
some time of beginning, and there will be destruction.

5.247 In this matter, do not think that I have taken it for granted
on my own authority when I assumed that earth and fire are mortal,
and did not doubt that water and air perish,
and said that these same things are born and grow again.
First, no small part of the earth, scorched through
by unceasing suns and pounded by the force of many feet,
breathes out a mist of dust and flying clouds,
which strong winds scatter through the whole air.
Part of the soil, too, is summoned back into flood
by rains, and rivers scrape and gnaw away their banks.
Besides, whatever feeds and increases other things is, for its share,
paid back; and since, beyond doubt, it is clear
that the mother of all is likewise the common tomb of things,
the earth, you see, is worn away and, increased, grows back.

5.261 Next, that sea, rivers, and springs always overflow
with new water, and that streams well up unceasingly,
there is no need of words: the great downrush of waters
on every side declares it. But the first of the water, whatever it be,
is taken off, and so it happens that on the whole there is no excess of water,
partly because strong winds sweeping the seas
diminish it, and so does the sun in the sky, unraveling it with its rays,
partly because it is spread about beneath, through all the lands;
for the brine is strained out, and the matter of the moisture
seeps back and all gathers at the rivers' source,
and from there flows over the lands in a fresh column
wherever a channel, once cut, has carried down the waves on liquid foot.

5.273 Now, then, I will speak of air, which in its whole body
is changed in countless ways every hour.
For always, whatever flows off from things, all of it
is carried into the great sea of air; and unless air in turn
gave back bodies to things and restored them as they flowed away,
all things would by now have been dissolved and turned into air.
So air never ceases to be born from things and to fall back
into things, since it is certain that all things are constantly flowing.

5.281 Likewise that generous fountain of clear light, the sun in the sky,
constantly floods the heavens with fresh brightness
and at once supplies light with new light.
For the first of its brightness, whatever it be, is lost to it,
wherever it falls. You can learn this from the fact
that as soon as clouds begin to pass beneath the sun
and, as it were, to break the rays of light between,
at once the lower part of them is all lost
and the earth is shadowed wherever the storm clouds are borne;
so you may know that things always need new brilliance,
that each first cast of brightness perishes,
and that things could not be seen in the sunlight in any other way
unless the very source of light kept up a constant supply.

/ Indeed, even our lights at night, those of the earth—
hanging lamps, and torches bright with flashing
gleams, rich with much smoky darkness—
hurry in the same way, their heat serving them,
to supply new light; they press on to flicker with their fires,
they press on, and the light leaves no places broken, as it were, between:
so hastily, from all its fires,
is its end sped on by the speedy birth of flame.
So, then, we must think that sun, moon, and stars
throw out their light from ever new sources rising up
and always lose the first of their flames, whatever it be,
lest you should perhaps believe that these things flourish inviolable.

5.306 Again, do you not see that even stones are conquered by time,
that tall towers fall and rocks crumble,
that shrines and images of the gods grow weary and crack,
and that holy divinity cannot extend the bounds of fate
or struggle against the laws of nature?
Again, do we not see the monuments of men fallen to ruin,
[to ask further, whether you believe they grow old for themselves,]
and flints torn from high mountains come crashing down,
unable to bear and endure the mighty forces of a time
that is finite? For they would not suddenly fall, torn away,
if from infinite time they had endured
all the tortures of age without breaking.

5.318 Again, now look at this, which all around and above
holds the whole earth in its embrace: if it begets from itself
all things, as some say, and takes them back when destroyed,
the whole of it is made of a body that is born and mortal.
For whatever increases and feeds other things from itself
must be diminished, and restored when it takes things back.

5.324 Besides, if there was no creative origin
of earth and sky, and they have always been eternal,
why, before the Theban war and the fall of Troy,
did other poets not also sing of other things?
Where have so many deeds of men so often vanished, and why do they nowhere
flourish, grafted onto eternal monuments of fame?
But, I think, the whole is new, and the nature of the world
is recent, and it took its beginning not long ago.
That is why even now some arts are being refined,
even now are growing; now much has been added to ships,
only lately have musicians given birth to melodious sounds;
lastly, this nature of things, this account of it, was discovered
lately, and I myself am found first among the first
who can now render it into the words of our fathers.

5.338 But if perhaps you believe that all these things existed before,
but that the generations of men perished in scorching heat,
or that cities fell in some great upheaval of the world,
or that after incessant rains ravening rivers came forth
across the lands and buried the towns,
all the more must you be defeated and admit
that there will be a destruction of earth and sky too;
for when things were assailed by such great diseases and such great dangers,
if a grimmer cause had then pressed upon them,
they would have spread destruction far and wide, and great ruin.
And by no other reasoning do we see that we are mortal
than that we fall sick among ourselves with the same diseases
as those whom nature has removed from life.

5.351 Besides, whatever things endure forever must either,
being of solid body, repel blows
and let nothing pierce them that could
unfasten their close-packed parts within, like the bodies
of matter, whose nature we have shown before;
or be able to last through all time
because they are free from blows, as the void is,
which remains untouched and is not affected a whit by any
blow;
or else because there is no store of space around them
into which things might, as it were, part and be dissolved—
as the sum of all sums is eternal, and outside it
there is no place into which things may scatter, nor bodies
that could fall on it and dissolve it with a heavy blow.

/ But, as I have shown, the nature of the world is not
of solid body, since void is mixed into things;
nor yet is it like the void; nor, again, are bodies lacking
that might by chance rise up out of the infinite
and overwhelm this sum of things in a violent whirlwind,
or bring on it some other kind of dangerous disaster;
nor, further, is there any lack of room, of space in the deep,
into which the walls of the world could be scattered;
or else they can perish, struck by any other force.
So the door of death is not shut against the sky,
nor against sun and earth, nor the deep waters of the sea,
but stands open and gazes at them with a vast and
monstrous gaping mouth.
And so you must admit that these same things
were born as well; for things that are of mortal body
could not, from infinite time until now,
have defied the mighty forces of immeasurable age.

Again, since the greatest members of the world
fight so fiercely among themselves, stirred up in a war that is anything but righteous,
do you not see that some end to their long contest
may be granted them—when, for instance, the sun and every heat
have drunk up all the waters and prevailed?
This they are striving to do, but so far their attempts are unfulfilled;
so much do the rivers supply, and they threaten besides
to flood everything from the deep gulf of the sea:
in vain, since the winds sweeping the seas
diminish it, and so does the sun in the sky, unraveling it with its rays,
and they are confident they can dry everything up
before the water can reach the end of its undertaking.
So fiercely do they breathe war in an evenly matched contest,
striving among themselves to decide the issue over mighty things;
though in the meantime fire has once had the upper hand,
and once, as the story goes, water reigned over the fields.

/ For fire prevailed and, ranging about, burned up much,
when the headlong force of the Sun's horses swept
Phaethon
off the path through the whole sky and over all the lands.
But the almighty father, roused then to fierce anger,
with a sudden stroke of the thunderbolt dashed great-
hearted Phaethon
from the horses to the earth; and the Sun, meeting him as
he fell,
caught the everlasting lamp of the world,
brought back the scattered horses and yoked them,
trembling,
then, guiding them along his own path, restored all things—
so, of course, the old poets of the Greeks have sung.
But this is driven far indeed from true reasoning.
For fire can prevail when more bodies of matter
have risen up out of the infinite;
then their forces fall, somehow overcome,
or else things perish, burnt up by scorching blasts.[3]

/ Water likewise once began to prevail, rising up,
as the story goes, when it overwhelmed the lives of men
with its waves;
then, when that force was somehow turned aside and
withdrew,
all that had risen up out of the infinite,
the rains stopped and the rivers lessened their force.

3 Phaethon, son of the Sun, lost control of his father's chariot; Jupiter struck him down with a thunderbolt.

HOW THE WORLD WAS FORMED

Colliding first beginnings sort themselves into earth, sea, air, ether and the heavenly fires.

5.416 But in what ways that throwing-together of matter
established earth and sky and the depths of the sea,
and the courses of sun and moon, I will set out in order.
For certainly the first beginnings of things did not by design
place themselves each in its order with a shrewd mind,
nor, surely, did they bargain over what motions each should make;
but because many first beginnings of things, in many ways,
driven on by blows from infinite time past
and set moving by their own weights, have been accustomed to travel
and to come together in every way and try out everything
that they could create by meeting with one another,
so it comes about that, spread abroad through a vast age,
by trying unions and motions of every kind,
at last those come together which, suddenly thrown together,
often become the beginnings of great things,
of earth and sea and sky and the race of living creatures.

5.432 At that point the sun's wheel could not be seen, soaring on high
with its abundant light, nor the stars of the great world,
nor sea nor sky, nor, lastly, earth or air,
nor anything at all like the things we know,
but only a strange kind of storm, a mass that had risen up.
Then parts began to fly apart, and like things
to join with like, and to mark out the world,
to divide its members and arrange its great parts
out of first beginnings of every kind, whose discord
threw into confusion their intervals, paths, connections, weights, blows,
collisions, motions, stirring up battles among them
because of their unlike forms and varied shapes,
since not all of them could stay joined in that way
nor produce motions fitting to one another—
that is, to separate the lofty sky from the lands,
and the sea apart, so that it might spread out with its water set apart,
and likewise apart the fires of the pure and separate upper air.

5.449 For first of all the bodies of earth, each one,
because they were heavy and entangled, came together
in the middle and all took up the lowest seats;
and the more tightly they came together, entangled with each other,
the more they squeezed out the stuff that would make sea, stars, sun,
and moon, and the walls of the great world;
for all of these consist of smoother and rounder
seeds, and of elements much smaller,
than earth does.

So, through the loose-knit pores of the earth,
bursting from its parts, the fire-bearing ether rose first
and, being light, carried many fires off with it,
in much the same way as we often see
when, across the grass jeweled with dew, the golden
morning light of the radiant sun first glows red,
and lakes and ever-flowing rivers breathe out mist,
and even the earth itself at times seems to smoke;
and when all these gather upward, high above,
their bodies condensing, they weave clouds beneath the sky.
So in this way the light, expansive ether then
condensed its body, poured round, and fenced itself in on every side,
and, spreading widely in all directions everywhere,
thus fenced in everything else in its greedy embrace.

/ After it came the beginnings of sun and moon,
whose globes revolve in the airs between the two;
neither earth nor the vast ether claimed these for itself,
since they were neither so heavy as to sink and settle,
nor so light that they could glide along the topmost shores;
and yet they lie between the two in such a way that they turn
as living bodies and stand out as parts of the whole world;
just as in us certain limbs may stay
at rest, while there are others that move.
So, when these things had been withdrawn, the earth suddenly,
where now the sea's vast blue expanse stretches out,
sank down and flooded its hollows with salt water.

/ And day by day, the more the ether's heat all round
and the sun's rays pressed the earth on every side
with frequent blows, packing it tight to its outermost edges,
so that, driven inward, it grew dense and drew together at
its center,
the more the salt sweat squeezed from its body
swelled the sea as it oozed, and the swimming plains,
and the more those many bodies of heat and air
slipped out and flew off, and far from the earth
thickened the high and shining regions of the sky.
The plains sank down; the slopes of the lofty mountains
grew; for the rocks could not subside,
nor could all parts sink equally to the same degree.

So, then, the weight of earth settled, its body
condensed, and all the world's sludge, as it were, flowed
heavily to the bottom and sank to the depths like dregs;
then sea, then air, then the fire-bearing ether itself
were all left pure, with liquid bodies,
some lighter than others; and ether, most liquid
and lightest of all, flows above the breezes of air
and does not mix its liquid body with the air's
turbulent breezes; it lets all these be whirled by violent
tornadoes, lets them churn in fitful storms,
while it glides on, carrying its fires in a steady sweep.
For that the ether can flow evenly and with a single thrust
is shown by the Pontus, a sea that flows with a steady
current,
keeping always to a single course as it glides.[4]

4 The Pontus is the Black Sea, whose surface current runs steadily outward through the Bosporus.

THE HEAVENS

Possible causes are given for the stars' motions, the sun's size, day and night, the moon and eclipses.

5.509 Now let us sing what causes the motions of the stars.
First, if the great sphere of the sky revolves,
we must say that air presses on the pole at either end
and holds it from outside and closes it in on both sides;
and then that another air flows above and strains in the same direction
in which the stars of the eternal world roll glittering;
or else another below, to drive the sphere up the other way,
as we see rivers turn wheels and their scoops.

/ It is also possible that the whole sky stays
at rest, while the shining constellations are carried along,
either because swift tides of ether are shut inside
and, seeking a way out, whirl round and round and roll the fires
everywhere through the sky's night-thundering regions,
or because air, flowing from some other place outside,
drives the fires and turns them, or because they can creep on their own,
going wherever each one's food calls and invites them,
grazing their fiery bodies all across the sky.

/ For which of these is true in our world it is hard
to say for certain; but what can happen and does happen throughout the universe,
in the various worlds created in various ways,
that I teach, and I go on to set out several causes
that can account for the motions of the stars throughout the universe;
yet one of these must also be the cause here
that gives the constellations their motion; but to lay down which of them it is
is not at all for one who advances step by step.

5.534 For the earth to rest in the middle region of the world,
its weight must gradually fade and lessen,
and it must have another nature underneath,
joined to it from the beginning of time and fitted into one
with the airy parts of the world in which it lives, embedded.
That is why it is no burden and does not press down on the air,
just as a person's own limbs have no weight for him,
nor is the head a burden to the neck, nor, in short, do we feel
the whole weight of the body resting on the feet;
but whatever weights come from outside and are laid on us
hurt us, though often much smaller.
So much does it matter what each thing can do.
So the earth is not some alien thing suddenly
brought in and thrust from elsewhere into alien air,
but was conceived together with it at the world's first origin,
a fixed part of it, as our limbs are seen to be of us.

5.550 Besides, when shaken suddenly by a great thunderclap,
the earth shakes everything above it with its motion;
which it could in no way do unless it were
bound fast to the airy parts of the world and to the sky;
for they cling together by common roots,
joined from the beginning of time and grown into one.

5.556 Don't you see, too, how great a weight of body
the spirit's most slender power sustains for us,
because it is so closely joined and fitted into one with it?

5.559 Then again, what can lift the body in a nimble leap
but the power of the spirit, which steers the limbs?
Now do you see how much a slender nature
can do when it is joined to a heavy body,
as air is joined to the earth, and the power of the mind to us?

5.564 Nor can the sun's wheel be much larger, nor its blaze much smaller,
than it appears to our senses.
For from whatever distances fires can cast
their light and breathe warm heat upon our limbs,
the great intervals subtract nothing from the body
of the flames, and the fire looks not a bit shrunken.
So, since the sun's heat and the light it pours out
reach our senses and make places shine,
the sun's shape and size too must be seen from here as they are,
so that you can truly make it neither bigger nor smaller.
[reach our senses and make places shine]
And the moon, whether she moves lighting places with borrowed light
or throws out her own light from her own body,
whatever the case, moves with a shape no larger
than the one she appears to have as we see her with our eyes.

/ For everything we see far off, through a great deal
of air, looks blurred in appearance
before its size seems to shrink. So the moon,
since it presents a clear appearance and a definite shape,
its outline sharply marked by its outer edges,
as large as it really is, so large it must look to us from here on high.
Lastly, whatever fires of the ether you see from here,
you may know they can be smaller by only a very little,
or larger by some slight, small fraction.
For whatever fires we see on earth,
as long as their flicker and their bright blaze are visible,
seem at times to change their size by a very small amount
one way or the other, the farther off they are.

5.592 Nor is this to be wondered at: how
so small a sun can send out so much light
as to fill seas and all lands and sky, watering them,
and drench all things with warm heat.
[as large as it really is, so large it must look to us from here on high]
For it may be that here a single, wide-open fountain
of the whole world's light, pouring freely, gushes and bursts forth,
because the elements of heat from all the world
gather from every side in such a way, and their mass so
flows together, that this blaze streams out from a single source.
Don't you see, too, how widely a small spring of water
sometimes waters the meadows and floods the fields?

/ It is also possible that from the sun's fire, though not great,
a blaze may seize the air with scorching heat,
if the air happens to be suitable and ready enough
to be set alight when struck by small flames;
just as we sometimes see crops and stubble
catch fire everywhere from a single spark.
Perhaps, too, the sun, shining on high with its rosy lamp,
has around it a great deal of fire with unseen heat,
fire marked by no brightness,
so that, heat-bearing, it greatly increases the force of its rays.

5.614 Nor is there a simple and straightforward account of the
sun:
how, from its summer regions, it approaches Capricorn's
wintry turning, and then, coming back from there,
turns at the solstice goalposts of Cancer;
and how the moon is seen to cover in a month the stretch
on which the sun spends a year's time in its course.
No single cause, I say, is given for these things.
For first and foremost it seems it can happen
as the venerable doctrine of Democritus lays down:
the nearer each star is to the earth,
the less it can be carried along with the sky's whirl;
for its swift and fierce force fades
and weakens below, and so the sun is left
gradually behind with the rear constellations,
because it is far lower than the blazing constellations.

/ And the moon more so: the lower her course
runs, far from the sky and close to the earth,
the less she can keep pace with the constellations.
And the slacker the whirl that carries her,
being lower than the sun, the more all the constellations
overtake her and are carried round and past her.
So it happens that she seems to return to each constellation
more quickly, because the constellations come back round
to her.
It may also be that from the world's opposite quarters
an air can flow, each in turn, at a fixed time,
one able to thrust the sun from the summer constellations
all the way to its wintry turning and the icy cold,
and one to fling it back from the chill shadows of cold
to the heat-bearing regions and the blazing constellations.

/ And in the same way we must suppose that the moon and the stars,
which roll through great years in great orbits,
can move by airs from alternate quarters.
Don't you see, too, how clouds, driven by opposing winds,
move in opposite directions, the lower ones against the upper?
Why should those stars be less able, through the ether's great orbits,
to be carried by currents running against each other?

5.650 But night covers the earth in vast darkness
either when, after its long course, the sun has struck the farthest parts
of the sky and, weary, breathed out its fires,
shaken by the journey and weakened by much air,
or because it is compelled to turn its course beneath the earth
by the same force that carried its sphere above the earth.

5.656 Likewise at a fixed time Matuta spreads rosy dawn
along the shores of the ether and opens out the light,
either because the same sun, returning beneath the earth,
seizes the sky ahead of time, trying to kindle it with its rays,
or because fires gather, and many seeds
of heat are accustomed to flow together at a fixed time,
which cause the sun's light to be born ever new;
just as, they say, from the high mountains of Ida
scattered fires are seen at the rising of the light,
which then come together as if into a single globe and form
a sphere.
Nor in these matters should it seem
a wonder that these seeds of fire can flow together
at so fixed a time and restore the sun's brightness.
For we see many things that happen at a fixed time
in all things. At a fixed time the trees
flower, and at a fixed time they shed their flowers.[5]

/ No less does age command the teeth to fall out at a fixed
time, and the beardless youth to reach manhood in a soft
covering
and let a soft beard grow down both cheeks alike.
Lastly, thunderbolts, snow, rains, clouds, winds
come at seasons of the year that are not very uncertain.
For since the very first origins of the causes were such,
and things fell out so from the world's first origin,
they now come round in sequence in a fixed order.

5 Mater Matuta was an old Roman goddess of the dawn. Ida is the mountain range near Troy, from whose summit the rising sun was said to be seen gathering from scattered fires.

5.680 Likewise, days can lengthen and nights waste away,
and daylight shrink when nights take on increase,
either because the same sun, running beneath the earth and above
in unequal arcs, parts the regions of the ether
and divides its orbit into unequal parts,
and what it has taken from one part, it restores,
carried round, by just so much more in the opposite part,
until it reaches that sign of the sky where the year's
node makes the shadows of night equal to the daylight;
for, midway in its course between the blasts of the north wind and the south,
the sky holds its turning points apart at an equal distance
because of the position of the whole zodiac's circle,
in which the sun, winding along, completes the year's span,
lighting earth and sky with slanting light,
as the reasoning of those makes plain who have mapped all
the regions of the sky, adorned with their constellations set in order.

/ Or because the air is thicker in certain parts,
and so the fire's quivering radiance lingers beneath the earth
and cannot easily pass through and emerge at its rising;
that is why in wintertime the long nights
linger, until the rayed emblem of day arrives.
Or else, because at alternating seasons of the year
the fires are accustomed to flow together more slowly and more quickly,
the fires that make the sun rise at a fixed spot,
it follows that they seem to speak the truth.

5.705 The moon may shine because it is struck by the sun's rays,
and day by day turn more of that light toward us,
into view, the farther it moves away from the sun's sphere,
until, opposite the sun, it has shone with a full light
and, rising high, has watched it set;
then little by little it must likewise hide its light
backward, as it were, the nearer it now glides to the sun's fire
from the other side through the circle of the constellations;
as those suppose who picture the moon as like
a ball, and hold that its course runs below the sun.
There is also reason why it might roll along with a light of its own
and still show varying shapes of brightness;
for there may be another body, carried and gliding along
with it, getting in its way and blocking it in every manner,
which cannot be seen because it moves bereft of light.

/ Or it may turn, like a ball's sphere, perhaps,
tinged on one half with gleaming light,
and by turning the sphere show changing shapes,
until it turns whatever part is endowed with fire
into view, toward us and our open eyes;
then little by little it twists back and takes away
the light-bearing part of its globe, its ball;
as the Babylonian teaching of the Chaldaeans, refuting
the astronomers' art, strives to prove the opposite—
as if what each side fights for could not be so,
or there were less reason for you to dare embrace this than
that.
Lastly, why a new moon could not be created each time
with a fixed order of shapes and fixed figures,
and each one created perish every single day,
and another be restored in its part and place,
is hard to show by reasoning or to establish in argument,
since you see so many things created in so fixed an order.[6]

6 The Chaldaeans were the astronomer-priests of Babylon; their half-lit, rotating moon is set against the Greek astronomers' view that it borrows its light from the sun.

/ Spring comes, and Venus, and before them strides Venus's
winged herald; and close on the footprints of Zephyr
mother Flora strews the whole way before them
and fills it all with glorious colors and scents.
Next in place follows parching Heat, and with it as
companion
dusty Ceres and the Etesian blasts of the north winds.
Next comes Autumn, and with him steps Euhius Euan.
Then other seasons follow, and other winds,
high-thundering Volturnus and the South Wind, mighty
with lightning.
At last Midwinter brings the snows and brings back
numbing
cold. Winter follows her, teeth chattering with chill.
So it is less surprising if at a fixed time the moon
is born and at a fixed time is blotted out again,
since so many things can happen at so fixed a time.[7]

7 Venus's winged herald is Cupid; Zephyr is the west wind of spring and Flora the goddess of flowers. The Etesian ("yearly") winds blow steadily from the north over the eastern Mediterranean in summer. Euhius Euan is a ritual name of Bacchus, god of the vintage, and Volturnus a southeast wind.

5.751 Likewise you must suppose that eclipses of the sun and the moon's hidings
can happen from several causes.
For why should the moon be able to shut the earth off from the sun's
light and block its high head from the earth,
setting its dark sphere in the way of the burning rays,
and yet at the same time another body not be thought able to do this,
one that glides along always bereft of light?
And why could the sun not also, growing faint, let its fires fail
at a fixed time and renew its light,
once it has passed through places in the air hostile to its flames,
which make its fires be quenched and perish?

/ And why should the earth be able in turn to rob the moon
of light and, itself above, hold the sun suppressed,
while the moon glides each month through the cone's rigid shadows,
and yet at the same time another body not be able to pass under the moon,
or glide above the sun's sphere,
breaking off its rays and the light it pours out?
And yet, if the moon shines with a brilliance of its own,
why could it not grow faint in a certain part of the world,
while it passes through places hostile to its own light?
[while the moon glides each month through the cone's rigid shadows].

THE ORIGIN OF LIFE

The young earth brings forth plants, animals and humans; monsters fail and defenseless kinds die out.

5.772 For the rest, since I have explained by what means
everything could happen
throughout the blue expanses of the great world,
so that we could know what force and cause drive
the sun's varied courses and the moon's journeys,
and how, their light blocked, they could vanish
and cover the unsuspecting earth in darkness,
when they, as it were, shut their eyes and then, with light
reopened,
look out again on all places bright with shining radiance—
now I return to the world's infancy and the soft
fields of earth, to what, with new offspring, they first
resolved
to raise into the shores of light and entrust to the uncertain
winds.

5.783 First, the earth brought forth the kinds of grasses and their
green
sheen around the hills and over all the plains;
flowering meadows gleamed with verdant color;
and then to the various trees was given a great contest
of growing up into the air, with reins let loose.
Just as feathers and hair and bristles are first created
on the limbs of four-footed beasts and the bodies of the
strong-winged,
so the new earth then first put forth grasses and shrubs,
and next created the mortal generations,
many, arising in many ways by varied means.
For living creatures cannot have fallen from the sky,
nor can land creatures have come out of salt pools.
It remains that the earth has rightly won the name
of mother, since from the earth all things were created.

/ And even now many creatures come forth from the earth,
formed by rains and the sun's warm heat;
so it is less surprising if more arose then,
and larger ones, grown up when earth and ether were new.
First, the race of birds and the various winged creatures
hatched and left their eggs in springtime,
as now in summer cicadas leave their smooth husks
of their own accord, seeking food and life.
Then, you must know, the earth first gave forth the mortal
generations.
For there was an abundance of heat and moisture in the
fields.

/ So wherever a suitable spot was found,
wombs grew, attached to the earth by roots;
and when in due time the infants' age had opened
them, fleeing the moisture and seeking the air,
nature turned the earth's pores toward them there
and made it pour from its opened veins a juice
like milk, just as now every woman,
when she has given birth, is filled with sweet milk, because
all
that surge of nourishment is turned toward the breasts.
The earth gave the children food, the warmth gave clothing,
the grass a bed
abounding in plenty of soft down.
But the world's newness brought on neither harsh cold
nor excessive heat nor winds of great force.
For all things grow and gain strength together.

5.821 So again and again the earth has won and rightly holds
the name of mother, since she herself created the human
race, and at about a fixed time poured forth every animal
that runs wild everywhere on the great mountains,
and with them the birds of the air in their varied forms.
But since she must have some limit to bearing,
she stopped, like a woman worn out by long age.
For time changes the nature of the whole world,
and one state must follow another in all things,
and nothing stays like itself: all things move on,
nature transforms all things and compels them to change.
For one thing rots and languishes, feeble with age,
and then another grows up and comes forth from
contempt.
So, then, time changes the nature of the whole
world, and one state of the earth gives way to another,
so that it cannot bear what it could, and can bear what it did
not before.

5.837 At that time the earth also tried to create many monsters,
arising with strange faces and limbs:
the androgyne, between the two sexes, neither one, apart
from both;
some deprived of feet, others in turn bereft of hands,
some found mute without a mouth, or blind without a face,
or bound fast by their limbs clinging together all over the
body,
so that they could do nothing and go nowhere,
neither avoid harm nor take what need required.
Other monsters and prodigies of this kind she created,
in vain, since nature barred their growth,
and they could not reach the longed-for flower of youth,
nor find food, nor be joined in the acts of Venus.

/ For we see that many things must come together
for creatures to be able to forge on their generations by breeding:
first, there must be fodder; then a way by which the creative
seeds can flow through the frame from the relaxed limbs;
and, for the female to be joined with the male, both must have
the means to exchange mutual joys with each other.

5.855 Many races of living things must then have perished
and been unable to forge on their offspring by breeding.
For whatever creatures you see feeding on the breath of life,
it is either cunning or courage or, lastly, speed
that has kept that kind safe from the beginning of time.
And there are many that, commended to us by their usefulness,
survive, entrusted to our protection.
First, the fierce race of lions and savage breeds
courage has protected, cunning the foxes, and flight the deer.
But the light-sleeping minds of dogs, with their loyal hearts,
and every kind born of the seed of beasts of burden,
and with them the wool-bearing flocks and the horned herds,
have all been entrusted to human protection, Memmius;
for they eagerly fled wild beasts and sought peace
and plentiful fodder won without their own labor,
which we give as a reward for their usefulness.

/ But those to whom nature gave none of these gifts, so that they could neither
live on their own by themselves nor render us
any service, for which we might allow their kind
to feed and be safe under our protection—
these, of course, lay open as prey and profit to others,
all hampered by their own fateful chains,
until nature brought that kind to extinction.

5.878 But there never were Centaurs, nor at any time
can there be creatures of twofold nature and double body
put together from limbs of alien kinds, such that the powers
of the parts on this side and that could be fairly matched.
And this anyone, however dull his wits, can grasp from what follows.
First, when some three years have run their course, a horse
is in the vigor of its prime, a boy by no means; for often even then
he will still seek in his sleep the milk-giving breasts.

/ Later, when the horse's stout strength in old age
and its limbs are failing, drooping as life ebbs away,
then at last, as boyhood ends, the flower of youth
arrives for the boy and clothes his cheeks with soft down;
so you must not believe that from man and the draught-
    beast seed of horses
Centaurs can be formed, or can exist,
or Scyllas, girdled with ravening dogs, their bodies half
of the sea, and all the rest of that kind,
whose limbs we see are at odds with one another;
for these neither flower together nor gain their strength
of body at once, nor lose it in old age,
nor burn with a like Venus, nor agree
in one set of habits, nor do the same things please their
    frames.
Indeed you can see bearded goats often grow fat
on hemlock, which for a man is a bitter poison.[8]

8 Scylla, in Homer's *Odyssey*, is a sea-monster with dogs about her waist who snatches sailors from passing ships.

/ Again, since flame indeed scorches and burns the tawny bodies
of lions just as it does every kind
of flesh and blood that exists on earth,
how could it happen that one creature with three bodies—
lion in front, serpent behind, in the middle the goat herself, the Chimaera—
should breathe fierce flame out of her body through her mouth?
So anyone who imagines that, when the earth was new and the sky fresh,
such animals could have been born,
leaning on this one empty word, "newness,"
may babble many things by the same reasoning:
he may say that rivers of gold then flowed everywhere
across the land, and trees used to blossom with gems,
or that a man was born with such a mighty reach of limb
that he could plant his footsteps across the deep seas
and with his hands whirl the whole sky round about him.[9]

/ For though there were many seeds of things in the earth
at the time when the earth first poured out living creatures,
still that is no sign that beasts could have been created
mixed together, or the limbs of creatures joined in one,
because the kinds of grasses and grain and flourishing trees
that even now spring up abundantly from the earth
still cannot be created intertwined with one another;
each thing goes forward in its own way, and all
keep their distinctions by a fixed law of nature.

9 The Chimaera's name means "she-goat" in Greek, hence the goat that is "herself" in the middle.

THE FIRST HUMANS

The earliest people live like wild beasts, without fire, clothing, customs or laws.

5.925 And the human race that lived then in the fields was far
hardier, as was fitting, since the hard earth had made it;
it was built within on larger and more solid bones,
knit together through its flesh with strong sinews,
not easily overcome by heat or cold,
by strange food, or by any flaw of the body.
Through many cycles of the sun rolling across the sky
they led their lives in the roaming way of wild beasts.
No one was a sturdy guide of the curved plow,
no one knew how to work the fields with iron,
or bury young shoots in the ground, or from tall
trees cut the old branches with pruning hooks.
What the sun and rains had given, what the earth had
produced
of her own accord—that gift was enough to content their
hearts.

/ Among the acorn-bearing oaks they looked after their bodies
for the most part; and the arbutus berries you now see
ripening in winter time, turning scarlet,
the earth then bore in great numbers, and larger too.
Besides, the flowering newness of the world then
brought forth much rough fodder, ample for wretched mortals.
But rivers and springs called them to quench their thirst,
as now the rush of water down from great mountains
calls loud and far to the thirsty tribes of wild beasts.
Lastly, as they wandered, they took to the woodland shrines
of the nymphs, now known to them, from which they knew that gliding streams
of water washed with lavish flood the wet rocks,
the wet rocks, dripping over the green moss,
and in places gushed and burst out over the level plain.

/ Not yet did they know how to work things with fire, or to use
skins, clothing their bodies in the spoils of wild beasts;
they dwelt in groves and mountain caves and forests,
and hid their rough limbs among the brushwood,
driven to escape the lashing of winds and rains.
They could not look to the common good, nor did they know
how to use any customs or laws among themselves.
Whatever booty chance had offered each, he carried off
on his own, schooled to thrive and live for himself.
And Venus joined the bodies of lovers in the woods;
for each woman was won over either by mutual desire,
or by the man's violent force and headstrong lust,
or by a price—acorns and arbutus berries, or choice pears.
And relying on the wondrous strength of their hands and feet
they hunted the woodland tribes of wild beasts
with hurled stones and the great weight of the club.

/ Many they overcame; a few they avoided by hiding;
and like bristly boars they laid their woodland limbs
naked on the ground, when night overtook them,
wrapping themselves around with leaves and foliage.
Nor did they, with loud wailing, seek the day and the sun
across the fields, wandering in terror through the shadows
of night,
but waited, silent and buried in sleep,
until the sun with rosy torch brought light into the sky.
For since from childhood they had always been used to
seeing
darkness and light born by turns,
it could never happen that they wondered at it,
or feared that everlasting night might hold the earth
forever, the light of the sun withdrawn.
What troubled them more was that the tribes of wild beasts
often made rest perilous for the poor wretches.

/ Driven from home, they would flee their rocky shelters
at the coming of a foaming boar or a mighty lion,
and in the dead of night, in terror, they would yield
to savage guests their beds strewn with leaves.

5.988 Nor then did mortal tribes, much more than now,
leave the sweet light of life with lamentation.
For then it was more often that one of them, caught alone,
would offer living food to the beasts, gulped down by their teeth,
and fill the groves and mountains and forests with groans,
seeing his living flesh buried in a living tomb.
And those whom flight had saved with their bodies half-eaten
would afterwards, holding trembling hands over their foul sores,
call on Orcus with hideous cries,
until cruel gripings robbed them of life,
helpless, not knowing what their wounds required.
But no single day then sent many thousands of men
led beneath the standards to their death, nor did the stormy
waters of the sea dash ships and men upon the rocks.

/ For the sea, often rising up at random, raged
idly, to no purpose, and lightly laid aside its empty threats;
nor could the treacherous allure of the calm sea
lure anyone into ruin with its smiling waves.
The reckless art of sailing lay then unknown.
Then, too, lack of food gave fainting limbs
to death; now, by contrast, it is abundance that drowns them.
They, unwitting, often poured out poison
for themselves; now, more skillfully, men give it to others.

THE BEGINNINGS OF SOCIETY

Huts, families, fire, friendship and language soften human life.

5.1011 Then, after they got themselves huts and skins and fire,
and woman, joined to man, withdrew with him into one place,
...
were known, and they saw offspring born from themselves,
then first the human race began to soften.
For fire saw to it that their shivering bodies
could no longer bear the cold so well under the canopy of sky,
and Venus sapped their strength, and children, with their coaxing,
easily broke the proud spirit of their parents.
Then too neighbors began to join in friendship, eager
neither to harm nor to be harmed,
and commended to one another their children and womenfolk,
signifying, stammeringly, with cries and gestures,
that it was right for everyone to pity the weak.

/ Yet harmony could not arise in every way,
but a good, large part kept their pacts faithfully;
or else the human race would have been wiped out entirely even then,
and breeding could not have carried its generations down to now.

5.1028 But nature drove them to utter the various sounds of the tongue,
and need squeezed out the names of things,
in much the same way as the very speechlessness of the tongue
seems to lead children on to gesture,
when it makes them point with a finger at things that are present.
For every creature senses what it can use its own powers for.
A calf, before its horns have sprouted and stand out from its brow,
already butts with them in anger and presses hard on the attack.
And panther cubs and lion whelps
fight back with claws and feet and bites already,
when their teeth and claws have barely even formed.
Again, we see the whole race of birds
trust in their wings and seek a fluttering aid from their feathers.
So to think that someone back then handed out names
to things, and that from him people learned their first words,
is folly.

For why should he have been able to mark all things
with words and utter the various sounds of the tongue,
while others at the same time should be thought unable to
do it?
Besides, if others too had not used words
among themselves, where did he get the implanted notion
of their use, and where was he first given the power
to know what he wanted to do and see it in his mind?
Again, one man could not compel many and, having
conquered them, tame them
into being willing to learn the names of things.
Nor is it easy by any means to teach the deaf and persuade
them
of what needs to be done; for they would not put up with it,
nor would they in any way endure any longer
the unheard-of sounds of a voice battering their ears in
vain.
Lastly, what is so very wonderful in this matter,
if the human race, strong in voice and tongue,
marked things with different sounds for different feelings?

/ when mute cattle, and even the tribes of wild beasts,
are wont to utter unlike and varied cries
when there is fear or pain and when joys are swelling?
And indeed, you can learn this from plain facts.
When the great soft jowls of Molossian hounds, provoked,
first begin to snarl, baring their hard teeth,
their rage, drawn back, threatens with a sound far different
from when they bark outright and fill the whole place with their cries;
but when they try to lick their pups fondly with their tongues,
or when they dandle them, and, strong as they are in paw and bite,
mimic tender gulps with teeth held back,
they fawn with a whimpering voice in a far different way
from when they howl, left alone in the house, or when,
whining, they cower and shrink away from blows.[10]

/ Again, does not neighing seem to differ likewise,
when a young stallion in the flower of his age rages among the mares,
pricked by the spurs of winged Love,
and snorts from wide nostrils as if for battle,
and when at other times he neighs with trembling limbs?
Lastly, the race of birds and the various winged creatures,
hawks and ospreys and gulls that in the sea's
salt waves seek their food and livelihood,
utter cries far different at other times
from when they fight for food and struggle over their prey.
And some change their harsh-sounding songs
along with the weather, as the long-lived tribes of crows
and flocks of ravens, when they are said to call
for water and rains, and at times to summon winds and breezes.

10 Molossian hounds, from Epirus in north-western Greece, were large, powerful dogs prized for hunting and guarding.

/ So if different feelings drive animals,
mute though they are, to utter different cries,
how much more reasonable that mortals then could
mark different things with one sound and another!

5.1091 In case you silently ask yourself about this matter,
it was lightning that first brought fire down to earth for mortals,
and from it all the heat of flames is spread abroad;
for we see many things, kindled by heavenly flames,
blaze up, when a stroke from the sky has endowed them with its heat.
And yet, when a branching tree, beaten by the winds and swaying,
tosses and leans its boughs against the boughs of another tree,
fire is squeezed out, struck forth by the powerful force,
and sometimes the fiery heat of flame flashes out,
while branches and trunks rub against each other.
Either of these may have given fire to mortals.
Next, to cook food and soften it in the heat of flame
the sun taught them, since they saw many things ripen,
subdued by the lashing of its rays and its heat across the fields.

KINGS, WEALTH AND LAW

Kings found cities, gold breeds ambition, kings fall, and laws arise from weariness with violence.

5.1105 And day by day, more and more, men showed others how to change
their former diet and life for new ways and for fire—
men who excelled in talent and were strong in mind.
Kings began to found cities and to set up a citadel
as a stronghold and refuge for themselves,
and they divided flocks and fields and gave them out
according to each man's looks and strength and talent;
for looks counted for much, and strength was in force.
Later, property was invented and gold discovered,
which easily robbed both the strong and the handsome of their honor;
for, as a rule, men follow the party of the richer,
however strong or handsome in body they are born.
But if one were to steer life by true reasoning,
great riches for a man are to live sparingly
with a calm mind; for there is never any lack of a little.

/ But men wanted to be famous and powerful,
so that their fortune might rest on a stable foundation
and they, being rich, might lead a peaceful life—
in vain, since in striving to climb to the highest honor
they made the road a perilous one to travel,
and even so, from the summit, like a thunderbolt, envy
at times strikes them and hurls them scornfully down into foul Tartarus;
since by envy, as by lightning, the highest places are scorched,
as a rule, and whatever stands raised above the rest;
so that it is far better to obey in peace
than to want to rule the world by command and hold kingdoms.

/ So let them sweat blood, worn out for nothing,
struggling along the narrow road of ambition;
since their wisdom comes from another's mouth, and they seek
things on hearsay rather than from their own senses,
and this is no more so now, nor will it be later, than it was before.

5.1136 So the kings were slain, and overthrown lay
the ancient majesty of thrones and the proud scepters,
and the glorious emblem of the highest head, bloodied,
beneath the feet of the mob, mourned its great honor;
for what was once too much feared is eagerly trampled.
So things sank back to the lowest dregs and to turmoil,
as each man sought power and supremacy for himself.
Then some of them taught the people to create magistrates
and to set up rules of justice, so that they would be willing to use laws.
For the human race, worn out with living by violence,
was languishing from its feuds; so all the more readily
it fell of its own accord under laws and strict justice.
For since each man in anger was ready to avenge himself
more harshly than is now allowed under fair laws,
for this reason men grew weary of living by violence.
From then on, fear of punishment taints the prizes of life.

/ For violence and wrong ensnare each man who commits them
and, as a rule, recoil on the one from whom they sprang,
nor is it easy to lead a calm and peaceful life
for one who by his deeds breaks the common pacts of peace.
For though he escapes the notice of the race of gods and men,
still he must doubt that it will stay hidden forever;
since many, talking in their sleep, as often happens,
or raving in fever, are said to have betrayed themselves
and brought long-hidden wrongs and sins into the open.

THE ORIGIN OF RELIGION

Dreams and ignorance of the heavens lead people to believe in powerful, angry gods.

5.1161 Now, what cause spread the divine power of the gods among great nations,
and filled cities with altars,
and saw to the undertaking of solemn rites,
rites which now flourish in great states and places,
from which even now there is implanted in mortals the dread
that raises new shrines of the gods over the whole world
and drives them to throng them on festal days—
it is not so hard to give an account of this in words.
For even then the tribes of mortals would see
splendid forms of the gods with waking mind,
and still more in sleep, of wondrous bodily size.
To these, then, they attributed sensation, because
they seemed to move their limbs and utter proud words
befitting their splendid looks and ample strength.

/ And they gave them everlasting life, because their appearance
was constantly supplied afresh and their form remained,
and above all because they thought that beings endowed with such strength
could not easily be overcome by any force.
And so they thought them far superior in happiness,
because the fear of death troubled none of them,
and at the same time because in sleep they saw them
accomplish many wonders and yet feel no effort from it themselves.
Besides, they saw the workings of the sky in fixed order
and the various seasons of the year come round,
and could not find out by what causes this came about.
So they took refuge in handing everything over to the gods
and making everything turn at their nod.

/ And they placed the dwellings and precincts of the gods in the sky,
because through the sky night and the moon are seen to wheel,
moon, day and night, and night's austere constellations,
and the night-wandering torches of the sky and flying flames,
clouds, sun, rains, snow, winds, lightning, hail,
and sudden roarings and great threatening rumbles.

5.1194 O unhappy race of men, to ascribe such deeds to the gods
and add bitter anger to them!
What groans they bred then for themselves, what wounds
for us, what tears for our descendants!
It is no piety to be seen often, with covered head,
turning toward a stone and approaching every altar,
nor to fall prostrate on the ground and spread out your palms
before the shrines of the gods, nor to drench the altars with much blood
of four-footed beasts, nor to string vow upon vow,
but rather to be able to look on all things with a mind at peace.

/ For when we look up at the heavenly precincts of the great world
above, and the ether studded with twinkling stars,
and the paths of the sun and moon come to mind,
then into hearts already weighed down by other ills
that anxiety too begins to rear its reawakened head:
that perhaps some boundless power of the gods may hold sway
over us, turning the bright stars in their varied motion;
for lack of reasoning assails the doubting mind
with questions: was there ever a birth, a beginning of the world,
and is there likewise an end, how long the walls of the world
and their silent motions can bear this strain,
or whether, endowed by the gods with everlasting safety,
gliding on through the endless stretch of time,
they can defy the mighty forces of immeasurable age.

/ Besides, whose mind does not shrink in fear of the gods,
whose limbs do not creep with dread,
when the scorched earth quakes beneath the terrible stroke
of lightning, and rumblings run across the great sky?
Do not peoples and nations tremble, and proud kings
shrink in every limb, struck with fear of the gods,
in case for some foul deed or arrogant word
the heavy time for paying the penalty has come to ripeness?
When, too, the utmost force of a violent wind at sea
sweeps a fleet's commander over the waters,
together with his mighty legions and elephants,
does he not court the gods' peace with vows, and in terror
beg in prayer for peace from the winds and favoring
breezes?
In vain, since often he is caught in a violent whirlwind
and carried none the less to the shoals of death.

/ So utterly does some hidden force grind down
human affairs, and the splendid rods and cruel axes
it seems to trample underfoot and make its sport.
Lastly, when the whole earth rocks beneath our feet,
and cities fall shaken or totter and threaten to fall,
what wonder if mortal races despise themselves
and leave room in the world for great and wondrous powers
of the gods, to govern all things?

METALS AND WAR

Metals are discovered, bronze gives way to iron, and even wild beasts are tried in battle.

5.1241 To continue: copper and gold and iron were discovered,
and with them heavy silver and potent lead,
when fire with its heat had burned up huge forests
on great mountains, whether from lightning hurled from the sky,
or because men, waging a woodland war with one another,
had carried fire against their enemies to terrify them,
or because, lured by the richness of the soil, they wanted
to clear fat fields and turn the countryside into pasture,
or to kill wild beasts and grow rich on the spoils;
for hunting with pit and fire arose earlier
than fencing a glade with nets and rousing it with dogs.
Whatever it was, from whatever cause the flaming heat
had devoured the forests with a terrible roar from their deep
roots and baked the earth through with fire,
there would trickle from the boiling veins into hollow places
in the earth, and gather there, a stream of silver and gold,
of copper too, and lead.

When they saw these, hardened,
shining afterwards on the ground with bright color,
they picked them up, captivated by their gleaming, smooth charm,
and saw that each had been molded in a shape like
the imprint of the hollow it had lain in.
Then it dawned on them that these, melted by heat,
could run into any form and shape of things,
and could even be hammered out and drawn
into points and edges as sharp and fine as you like,
so that they might make weapons for themselves, fell forests,
hew timber, plane beams smooth,
and bore and punch and drill holes too.
And at first they set about doing these things with silver and gold
no less than with the violent strength of sturdy bronze—
in vain, since their power gave way, defeated,
and could not equally endure the hard work.

/ For bronze was more highly prized, and gold lay neglected,
useless, its blunted edge turned back;
now bronze lies neglected, and gold has risen to the highest honor.
So rolling time changes the seasons of things.
What was prized becomes in the end of no esteem;
then something else takes its place and emerges from contempt,
and is sought more each day, and once discovered it flowers
with praise, and is held in wondrous honor among mortals.

5.1281 Now, how the nature of iron was discovered
you can easily learn for yourself, Memmius.
The earliest weapons were hands, nails and teeth,
and stones, and branches broken from the forests,
and flame and fires, once they first became known.
Later the power of iron and bronze was discovered.
And the use of bronze was known before that of iron,
since its nature is easier to work and its supply more plentiful.
With bronze they tilled the soil, with bronze they stirred
the waves of war and sowed gaping wounds
and seized flocks and fields; for easily to them,
armed as they were, all things gave way, naked and defenseless.
Then little by little the iron sword came forward,
and the form of the bronze sickle came to be scorned,
and they began to break the soil of the earth with iron,
and the struggles of uncertain war were made equal.

/ And to mount armed on a horse's back,
guiding it with the reins while the right hand fights,
came before trying the perils of war in a two-horse chariot.
And the pair came before yoking two pairs,
and before mounting armed on scythed chariots.
Then the Carthaginians taught Lucanian oxen, grim beasts with towered bodies
and snake-like hands, to endure the wounds of war
and throw into confusion the great ranks of Mars.
So grim discord bred one thing after another
to be a terror in arms to the races of men,
and day by day added increase to the horrors of war.[11]

11 Romans called elephants "Lucanian oxen," having first met them in Lucania, in southern Italy, during the war with Pyrrhus (280 BC).

5.1308 They tried bulls too in the service of war,
and made trial of sending savage boars against the enemy.
And some sent mighty lions before them
with armed trainers and harsh masters
who could control them and hold them in chains—
in vain, since, hot with the indiscriminate slaughter,
the savage beasts threw the squadrons into disorder,
making no distinction,
shaking their terrifying manes all around,
nor could the riders soothe the hearts of their horses,
terrified by the roaring, and turn them with the reins
against the enemy.
The lionesses, enraged, flung their bodies in leaps
on every side, and went for the faces of those coming at
them,
and dragged others down from behind, unawares,
and clasping them, brought them to the ground, overcome
by wounds,
clinging with powerful bites and hooked claws.
And the bulls tossed their own side and trampled them
underfoot,
and gored the flanks and bellies of the horses from beneath
with their horns, and tore up the ground with menacing
intent.

/ And the boars slashed their allies with their powerful tusks,
savagely staining with their own blood the weapons broken in them,
[staining with their own blood the weapons broken in their bodies,]
and wrought havoc among horse and foot alike.
For the horses would shy aside to escape the savage thrust of the tusks,
or rear up and paw the winds with their hooves—
in vain, since you would see them, hamstrung, collapse
and strew the ground with their heavy fall.
Any they had thought before were tame enough at home
they saw boil over in the heat of action
from wounds, shouting, flight, terror, uproar,
and they could not bring back any part of them;
for every kind of wild beast scattered in all directions,
as now Lucanian oxen, cruelly wounded by the steel,
often scatter, after dealing many savage blows to their own side.

5.1341 But they wanted to do this not so much in hope of victory
as to give the enemy cause to groan, even if they themselves perished—
those who distrusted their numbers and lacked weapons—
if indeed they did it at all. But I can hardly be brought to believe
that they could not foresee in their minds and see
before it happened that this would become a shared and hideous evil.
And you could more readily maintain that this happened in the universe at large,
in the various worlds created in various ways,
than on any one particular earth.

THE ARTS OF PEACE

Weaving, farming, music and the other arts develop step by step through experience.

5.1350 Plaited clothing came before woven garments.
Weaving came after iron, since a loom is made with iron,
and in no other way can such smooth things be made
as treadles and spindles, shuttles and clattering loom-rods.
And nature compelled men to work wool before
womankind; for the whole male sex is far superior in skill
and much more ingenious;
until the stern farmers made it a reproach,
so that men were willing to leave it to women's hands
and themselves share in enduring hard labor,
and in hard work hardened their limbs and hands.

5.1361 But the model for sowing and the origin of grafting
was first nature herself, creator of things,
since berries and acorns falling from the trees
put forth in due season swarms of shoots beneath them;
from which men also took the fancy to graft slips onto branches
and to plant new saplings in the ground across the fields.
Then they tried one way after another of tilling their sweet little plot,
and saw wild fruits grow tame in the soil
through their indulgence and gentle tending.
And day by day they made the forests climb higher up the mountains
and yield the ground below to cultivation,
so that they might have meadows, pools, streams, crops and flourishing vineyards
on hills and plains, and a gray-green belt of olives
might run between, marking the boundaries,
spread over hillocks and valleys and plains;
as now you see it all, marked out with varied charm—
all that they adorn, setting sweet fruit trees among it,
and keep hedged round with fruitful trees and shrubs.

5.1379 But imitating the liquid notes of birds with the mouth
came long before men could join in singing smooth songs
and give pleasure to the ear.
And the whistling of the west wind through hollow reeds first
taught country folk to blow into hollow hemlock stalks.
Then little by little they learned the sweet laments
which the pipe pours out when played by the musicians' fingers,
the pipe discovered in pathless groves and woods and glades,
in the lonely haunts of shepherds and their divine leisure.
[So time, little by little, brings each single thing]
[into view, and reason raises it into the shores of light.]
These things soothed and delighted their minds
when they had had their fill of food; for then all things are welcome.
So often, lying together on the soft grass
by a stream of water under the branches of a tall tree,

/ they would refresh their bodies pleasantly at little cost,
especially when the weather smiled and the seasons
of the year painted the green grass with flowers.
Then jokes, then talk, then sweet peals of mirth
were their custom; for then the rustic Muse was in her prime.
Then playful merriment would prompt them to wreathe
head and shoulders with garlands woven of flowers and leaves,
and to step out of time, moving their limbs
clumsily, and with clumsy foot to stamp on mother earth;
from which arose laughter and sweet peals of mirth,
because all these things were then newer and more wonderful, and in their prime.
And for those who lay awake, here was solace for lost sleep:
to lead the voice in many ways and bend the melody,
and run over the reeds with curling lip;
from which even now the watchmen keep up these customs they received.

/ and have learned to keep time in each kind of tune; yet not a whit
more sweetness do they reap from it in the meantime
than the woodland race of earth-born people once reaped.
For what is at hand, unless we have known something sweeter
before, pleases us above all and seems supreme;
then, as a rule, the better thing found later
spoils it and turns our feelings against everything of old.
So acorns came to be loathed; so those beds
strewn with grass and heaped with leaves were abandoned.
Clothing of wild beasts' skin likewise fell into contempt—
yet I suppose that, when first found, it roused such envy
that whoever first wore it met his death by ambush,
and that, torn to pieces among them with much bloodshed,
it was ruined and could not be put to any use.

/ Then it was skins, now it is gold and purple that harry
human life with cares and wear it down with war;
and here, I think, the greater blame lies with us.
For cold tormented them, naked, without skins,
the earth-born; but it does us no harm to go without a robe
of purple, set off with gold and great embroidered figures,
so long as we have a plain one that can shield us.

5.1430 So the human race toils in vain, to no purpose,
forever, and wastes its life in empty cares,
no doubt because it has not learned where possession
ends, and how far true pleasure can grow at all;
and this, little by little, has carried life out into deep water
and stirred up from the depths the great tides of war.
But the world's watchmen, circling the great revolving vault
of heaven,
the sun and moon, sweeping round it with their light,
taught people thoroughly that the seasons of the year come
round
and that all is carried on by a fixed plan and in fixed order.

5.1440 By now people lived their lives fenced in by strong towers,
and the land was parceled out and marked off for tilling;
the sea now bloomed with ships flying under sail;
they had allies and helpers, bound by treaty,
when poets began to hand down in song
the deeds of the past; and letters were found not long
before.
So what was done before that, our age
cannot look back upon, except where reasoning points out
the traces.

5.1448 Ships and the tilling of fields, city walls, laws,
arms, roads, clothing, and all the rest of this kind,
rewards, and every one of life's luxuries as well,
poems, paintings, and cunningly wrought, polished statues
—
these were taught by practice and the trials of the tireless
mind,
little by little, to people advancing step by step.
So time, little by little, brings each single thing
into view, and reason raises it into the shores of light;
for they saw one thing after another grow clear in their
minds,
until by their arts they reached the highest peak.

Book VI

Nature's wonders
Thunder, earthquakes, volcanoes, magnets, disease, and the plague of Athens.

6.1 First, long ago, to suffering mortals, the grain-bearing crops
were given out by Athens of glorious name;
she renewed their life and passed laws,
and she first gave sweet comforts for life
when she bore a man found to have such a mind
that he poured out all things from truth-telling lips;
and now that he is dead, for his godlike discoveries
his glory, spread abroad from of old, is carried up to the sky.

/ For when he saw that almost everything need demands
for living was already provided for mortals,
and that, as far as could be, their life was secure;
that the powerful abounded in wealth and honor and
praise,
and stood out through the good name of their children;
and yet that at home no one had a heart any less anxious,
but that hearts vexed their lives in spite of themselves,
without any
pause, and were driven to rage in bitter complaint—
then he understood that the fault lay in the vessel itself,
and that by its fault everything was spoiled within,
whatever came into it from outside, however good;
partly because he saw it was leaky and full of holes,
so that it could never by any means be filled,
partly because he saw that it fouled, as it were, with a vile
taste
everything it had taken in.

/ So with truth-telling words he cleansed our hearts
and set a limit to desire and fear,
and set forth the highest good, toward which we all strive—
what it was—and showed the way by which, along a narrow
track,
we might press on toward it on a straight course;
and what evil there is everywhere in human affairs,
which happens and flies about in various ways, by natural
chance or force, since nature had so arranged it;
and from what gates each should be met;
and he proved that the human race for the most part vainly
tosses the gloomy waves of care within its breast.
For just as children tremble and fear everything
in blind darkness, so we in the light are afraid
at times of things no more to be feared than
what children shudder at in the dark and imagine will
come.

/ This terror of the mind, then, and this darkness must be dispelled
not by the rays of the sun or the bright shafts of day,
but by the face of nature and her reasoning.
So all the more shall I go on weaving with words the work I have begun.

6.43 And since I have taught that the realms of the world are mortal
and that the sky is made of a body that was born,
and that most of what happens in it, and must happen,
is dissolved, now learn what remains,
since once I am to mount the splendid chariot
...
You, as I race toward the chalk line at the end of the course,
show me the track ahead, O skillful Muse,
Calliope, rest of men and delight of gods,
so that with you as guide I may win the crown with signal praise.
...
of the winds arise, so that all is calmed again,
...
what had been, is turned about once the fury is calmed.[1]

/ and the other things mortals see happen on earth and in the sky,
when they often hang in suspense with fearful minds—
things that humble their minds with fear of the gods
and press them down, bowed, to the earth, because
ignorance of causes forces them to assign things
to the command of the gods and to grant them kingship.

1 Calliope is the Muse of epic poetry; Lucretius plays on her name with callis ("track") and callida ("skillful").

/ [Whose causes they can in no way see,]
[and they suppose these things happen by divine will.]
For even those who have learned well that the gods lead a carefree life,
if all the same they wonder by what means
each thing can be carried on, above all those things
that are seen overhead in the regions of the upper air,
are carried back again into the old religions
and take on harsh masters, able to do all things,
so the wretches believe, not knowing what can be
and what cannot—in short, by what principle each thing
has its limited power and its deep-set boundary stone;
so they stray all the more, carried along by blind reasoning.

/ Unless you spit these out of your mind and cast far from you
thoughts unworthy of the gods and foreign to their peace,
the holy powers of the gods, belittled by you,
will often harm you—not that the supreme power of the gods can be
outraged, so as to thirst in anger for harsh revenge,
but because you will picture them, at rest in quiet peace,
as tossing great billows of wrath;
you will not approach the shrines of the gods with a quiet heart,
nor the images that travel from their holy bodies
into the minds of men, heralds of divine form—
you will not have the calm peace of mind to take these in.
From this you can see what sort of life must follow.

/ And so that the truest reasoning may drive such a life
far from us, though much has already gone forth from me,
much still remains, and must be adorned with polished
verse: I must grasp the account of sky and fire,
I must sing of storms and the bright thunderbolt,
what they do and from what cause they are borne on,
so that you do not divide the sky into sections and tremble,
out of your wits, at
where the flying fire has come from, or to which side
it has turned from there, how through enclosed places
it has wormed its way, and how, having lorded it there, it
has got out again.
[Whose causes they can in no way see,]
[and they suppose these things happen by divine will.][2]

THUNDER AND LIGHTNING

Colliding clouds and winds produce thunder, lightning and the thunderbolt.

6.96 First, the blue of the sky is shaken with thunder
because, flying aloft high in the ether,
clouds collide as the winds battle against each other.
For no sound comes from a clear part of the sky;
but the more densely the clouds are massed anywhere,
the more there often comes from there a roar with a great
rumble.
Besides, clouds cannot be of a body as dense
as stones and timber are, nor again
as thin as mists and drifting smoke;
for either they would have to fall, pressed down by their
dead weight,
like stones, or, like smoke, they could not hold together
or hold in the icy snow and the showers of hail.

2 Etruscan diviners divided the sky into sectors and read omens from where lightning came and went.

6.108 They also make a sound above the plains of the wide heavens,
as at times an awning stretched over great theaters
cracks as it tosses among the poles and beams,
and at times, torn through, rages in the wanton breezes
and imitates the crackling sound of paper;
for you can recognize that kind of sound too in thunder,
or when hanging clothes and flying sheets of paper
are whirled and slapped through the air by the lashes of the wind.
It also happens at times that clouds cannot so much meet
head-on as pass along each other's flanks,
moving in opposite directions, slowly grazing their bodies,
and from this comes that dry sound that grates on the ears and is long
drawn out, until they have come out of their narrow straits.

6.121 In this way too, shaken by thunder, all things
often seem to tremble heavily, and, torn apart suddenly,
the mightiest walls of the capacious world seem to have burst asunder,
when a gathered storm of mighty wind has suddenly
twisted itself into the clouds and, shut up there,
with its whirling eddy, more and more on every side, forces the cloud
to become hollow, with a dense body all around;
then, when its force and fierce onset have weakened the cloud,
it is torn open and bursts with a terrifying crash.
No wonder, since a little bladder full of air
often makes no little noise when suddenly burst.

There is also a way, when winds blow through the clouds,
for them to make sounds; for we see that clouds, branching
and rough, are often borne along in many ways;
just as, when the blasts of the northwest wind
blow through a thick forest, the leaves rustle and the branches crash.

It also happens at times that the roused force of a strong wind
tears through a cloud, breaking it with a straight charge;
for what a blast can do up there, plain fact shows us
here on earth, where it is gentler, when all the same it tumbles
tall trees and wrenches them out from their deepest roots.
There are waves, too, among the clouds, which give a kind of
heavy roar as they break; the same happens in deep
rivers and on the great sea, when the surf breaks.

There is thunder, too, when the burning force of a thunderbolt
falls from cloud to cloud; if the second cloud happens to take in the fire
with much moisture, at once it kills it with a great outcry;
as white-hot iron from a hot furnace at times
hisses when we plunge it quickly into icy water.

Again, if a drier cloud takes in the fire,
it is suddenly set alight and burns with a huge noise,
as if a flame were to roam over laurel-crowned mountains
in a whirlwind, burning them up with a great rush;
and nothing burns like the Delphic laurel of Phoebus,
with such a terrible noise, in the crackling of the flame.

6.156 Lastly, a great crash of ice and a downfall
of hail often make a sound high in great clouds;
for when the wind crams them together, there break,
squeezed tight,
mountains of storm cloud, frozen and mixed with hail.

6.160 There is lightning, too, when clouds by their collision have
struck out
many seeds of fire, as if a stone
were struck by stone or iron; for then too light
leaps out and fire scatters bright sparks.
But it happens that we take in the thunder with our ears
after
the eyes see the flash, because what reaches the ears
always arrives more slowly than the things that move the
sight.
You can learn this from the following too: if you see
someone
far off chopping a tall tree with a double-edged axe,
you see the stroke before the blow
sounds in your ears; so too we see the lightning before
we hear the thunder, which is sent out along with the fire
from a like cause, born of the same collision.

6.173 In this way too clouds tinge places with flying light,
and the storm flashes with a flickering rush.
When wind has invaded a cloud and, whirling there,
has made the cloud grow thick and hollow, as I showed before,
it grows hot by its own speed; just as you see all things
heated through by motion catch fire, and even a leaden
sling bullet, spinning in a long flight, melts.
So when this hot wind has torn through the black cloud,
it scatters, suddenly squeezed out as if by force, the seeds
of heat, which make the flickering flashes of flame;
then follows the sound, which reaches our ears more slowly
than what arrives at the light of our eyes.
This, of course, happens when clouds are dense and at the same time
piled high, one upon another, with wondrous force.
Do not be deceived because we, from below, see
how broad they are rather than how high they are piled.

/ For just observe, when winds carry clouds shaped like mountains
slanting across the sky through the air,
or when you see them heaped over great mountains,
one upon another, pressing down from above,
set fast at their posts, with the winds buried on every side:
then you will be able to recognize their great masses
and make out caverns built, as it were, of overhanging rock;
when winds have filled these as a storm gets up,
they chafe with a great roar at being shut in
the clouds, and threaten like wild beasts in cages;
now here, now there, they send their growls through the clouds,
and seeking a way out they whirl round, and roll together
seeds of fire from the clouds, and so drive
many together and spin the flame inside the hollow furnaces,
until the cloud is torn apart and they flash out gleaming.

6.204 For this reason too it happens that that swift
golden color of liquid fire flies down to earth:
because the clouds themselves must hold very many
seeds of fire; for when they are without any moisture,
their color is mostly flame-red and bright.
Indeed they must take in many from the light
of the sun, so that naturally they glow red and pour out fire.
So when the wind, driving, has crammed these into one
place and squeezed them hard, they pour out, pressed
forth,
the seeds that make the colors of flame flash out.

6.214 There is lightning, too, when the clouds of the sky thin out;
for when the wind gently pulls them apart as they move
and dissolves them, there must fall out, against their will,
the seeds that make the flash. Then it flashes without
hideous
terror and sound, and with no uproar.

6.219 As for the rest, the kind of nature with which
thunderbolts are endowed is shown by their strokes and
the branded marks
of heat, and the scars exhaling heavy fumes of sulfur;
for these are signs of fire, not of wind or rain.
Besides, they often set fire to the roofs of houses too
and hold sway with swift flame within the buildings
themselves.
This fire, you see, subtlest of all fires,
nature has made out of tiny and swift-moving
bodies, such that nothing at all can stand against it.
For the mighty thunderbolt passes through the walls of
houses
like shouts and voices, passes through stones, through
bronze,
and in an instant makes bronze and gold run liquid.

/ It likewise makes wine suddenly flee from jars
that stay whole, because, no doubt, its heat, arriving, easily
loosens all the sides of the jar around and makes them
porous,
and, slipping into the wine itself,
swiftly dissolves and scatters the first beginnings of the
wine.
This the sun's heat, it seems, could not achieve in an age,
for all its mighty strength in flashing glow.
So much swifter and more masterful is this force.

6.239 Now how these are born, and how they come to have such
force
that with a stroke they can split towers apart,
overturn houses, wrench away timbers and beams,
shake and dislodge the monuments of men,
strike people dead, lay cattle low on every side—
by what force they can do all the rest of this kind—
I will explain, and not keep you any longer with promises.

6.246 We must suppose that thunderbolts are born from thick clouds
piled up high; for none are ever sent from a clear sky
or from clouds of slight density.
Plain fact shows beyond doubt that this is so;
for then the clouds thicken throughout the whole air,
so that we might think all the darkness had deserted Acheron
on every side and filled the great caverns of the sky
—so thoroughly, when the foul night of storm clouds has risen,
do the faces of black Terror hang over us from above—
when the storm begins to set its thunderbolts in motion.
Besides, very often a black storm cloud over the sea too,
like a river of pitch let down from the sky, falls
upon the waves, crammed with darkness, far off, and drags a black
storm heavy with thunderbolts and gales,
itself filled above all with fires and winds,
so that even on land people shudder and seek shelter.

/ So, then, we must suppose that above our heads
the storm towers high; for they would not bury
the lands in such gloom unless many clouds were built up
above, on many, blotting out the sun;
nor could they overwhelm us, when they come, with such rain
as to make rivers overflow and fields swim,
if the ether were not piled high with clouds.
Here, then, all things are full of winds and fires;
that is why roars and flashes come on every side.
For I showed above that hollow clouds contain very many seeds
of heat, and must take in many more
from the rays of the sun and their blaze.

/ So when the same wind that drives them together into one
place, whatever it may be, has squeezed out many seeds
of heat, and has at the same time mixed itself with that fire,
the eddy, slipping in there, whirls round in the narrow space
and sharpens the thunderbolt in the hot furnaces within;
for it is kindled in two ways: it grows hot by its own
swiftness, and from contact with the fire.
Then, when the force of the wind is thoroughly heated and the heavy onset
of fire has come upon it, the thunderbolt, ripe, as it were,
suddenly tears through the cloud, and the roused blaze rushes on,
lighting up every place with flashing light.
Close behind comes a heavy crash, so that, bursting all at once,
the realms of the sky seem to crush us from above.
Then a trembling runs heavily through the lands, and rumbles
race across the high sky; for then almost the whole
storm is shaken and shudders, and roarings stir.

/ From this shaking follows heavy and abundant rain,
so that the whole ether seems to be turning into rain
and, plunging headlong, to be calling the world back to a flood;
so much is sent down by the rending of the cloud and the wind's
squall, when the crash flies out with the burning stroke.

6.295 Sometimes, too, the roused force of wind from outside
falls on a strong cloud whose summit is ripe;
when it has torn through it, at once there falls that fiery
whirlwind which in our fathers' tongue we call the thunderbolt.
The same happens in other directions, wherever the force has carried it.

6.300 It also happens at times that the force of wind, sent out without fire,
catches fire nonetheless over the distance of its long journey,
while it comes, shedding on its way certain bodies
that are large and cannot pierce the air as easily,
and scraping together others from the air itself, it carries
tiny ones, which make fire when mixed together in flight;
much in the same way as a leaden sling bullet often
grows hot in flight, when, shedding many bodies
of cold, it catches fire in the air.

6.309 It also happens that the force of the blow itself strikes up fire,
when the cold force of the wind, sent without fire, has struck,
no doubt because, when it has struck with a violent stroke,
elements of heat can flow together out of the wind itself
and also from the thing that then takes the stroke;
as when we strike a stone with iron, fire flies out,
and though the force of iron is cold, none the less
the seeds of hot flashing rush together at the stroke.
So, too, a thing must be set on fire by a thunderbolt
if it happens to be ready and suited to flame.
Nor can the force of the wind really be wholly
cold, when it is sent from above with such power,
but that, if it is not kindled with fire earlier in its course,
it still arrives warmed and mixed with heat.

6.323 The thunderbolt's speed and heavy stroke come about,
and thunderbolts generally race along in a swift glide,
because the force itself, roused, first gathers itself entirely
in the clouds and builds up a great effort to go;
then, when the cloud can no longer hold the growth of its onset,
the force is squeezed out and so flies with wondrous speed,
like missiles hurled from powerful catapults.

Add that it is made of small and light elements,
and it is not easy for anything to stand in the way of such a nature;
for it slips between and pierces through the open passages,
so it is not held back by many collisions
and delayed; for this reason it glides and flies with a swift rush.

Then, since by nature all weights press
downward, when a blow is added as well,
the speed is doubled and the onset grows heavier,
so that it more violently and swiftly scatters with its blows
whatever stands in its path to delay it, and follows its route.

Lastly, since it comes with a long rush, it must gain
speed again and again, which grows as it goes
and increases its mighty strength and toughens its stroke;
for it makes all its seeds, whatever they are,
move straight ahead, all as it were toward a single place,
throwing them all, as they roll, into that one course.

Perhaps, too, as it comes, it draws from the air itself certain
bodies which kindle its speed with their blows.
And it passes through things unharmed, and goes through many, leaving them
whole, because the flowing fire slips through their pores.
And it shatters many, when the very bodies of the thunderbolt
have struck the bodies of things where their fabric holds together.
Again, it easily melts bronze and in a moment makes gold
boil, because its force is finely made of small
bodies and of light elements,
which easily slip in, and, once slipped in, suddenly
untie all the knots and loosen the bonds.

6.357 In autumn above all the lofty house of heaven, bright with stars,
is shaken on every side, and the whole earth too,
and when the flowering season of spring unfolds.
For in the cold there is a lack of fires, and in the heat the winds
fail, and the clouds are not of so dense a body.
So when the seasons of the sky stand between the two,
then all the various causes of the thunderbolt converge.
For the year's very strait mingles cold with heat,
and a cloud needs both to forge thunderbolts,
so that there may be discord in things, and with great uproar
the air may surge in fury with fires and winds.
For the first part of heat is the last of the cold:
that is the time of spring; and so it must be that
unlike things fight among themselves and, mixed, make turmoil.

/ And when the last of the heat, mixed with the first of the cold,
comes round—the season known by the name of autumn—
here too fierce winters clash with summers.
That is why these should be called the straits of the year,
and it is no wonder if at that season thunderbolts
are most frequent and a turbulent storm is stirred up in the sky,
since the sky is thrown into turmoil on both sides by a war of doubtful outcome,
on one side by flames, on the other by winds and water mixed.

THUNDERBOLTS ARE NOT JUPITER'S

If Jupiter hurled thunderbolts, they would not strike the innocent, empty places and his own temples.

6.379 This is how to see into the very nature of the fiery thunderbolt
and perceive by what force it does each thing—
not by unrolling Etruscan scrolls of verse, searching
in vain for signs of the gods' hidden will:
where the flying fire has come from, or to which side
it has turned from there, how through enclosed places
it has wormed its way, and how, having lorded it there, it has got out again,
or what harm the stroke of a thunderbolt from heaven can do.

/ But if Jupiter and the other gods shake the shining
regions of heaven with a terrifying din
and hurl fire wherever each of them pleases,
why do they not make those who have committed some reckless, abhorrent crime
are struck and breathe out the flames of lightning
from a pierced breast—a sharp lesson to mortals—
and why instead is one conscious of nothing shameful
rolled, innocent, in the flames, and entangled,
suddenly caught up in a heavenly whirlwind and fire?
Why, too, do they aim at deserted places and labor in vain?
Or are they then exercising their arms and building up their muscles?
And why do they let their father's weapon be blunted
on the ground? Why does he himself allow it, and not save it for his enemies?
Lastly, why does Jupiter never hurl a thunderbolt on the earth
and pour out his thunder from a sky that is clear on every side?

/ Or, as soon as clouds have come up, does he climb down into them himself,
so as to aim the stroke of his weapon from close at hand?
And then, for what reason does he hurl it into the sea? What charge has he against the waves,
the liquid mass, the floating plains?
Besides, if he wants us to beware the thunderbolt's stroke,
why is he reluctant to let us see it when it is hurled?
But if he wants to overwhelm us with fire when we are off guard,
why does he thunder from that quarter, so that we can avoid it?
Why does he stir up darkness beforehand, and roarings and rumblings?
And how could you believe that he hurls at once
in many directions? Or would you dare to maintain it has never happened
that several strokes fell at one and the same time?
But it has often happened, and must happen,
that just as rain falls and showers come down in many regions,
so many thunderbolts occur at one time.

/ Lastly, why does he shatter the holy shrines of the gods, and his own
splendid dwellings, with a hostile thunderbolt,
and smash the finely wrought statues of the gods, and rob
his own likenesses of their dignity with a violent wound?
And why does he mostly aim at high places, and why do we see
most traces of his fire on mountain tops?

WATERSPOUTS, CLOUDS AND RAIN

Whirlwinds, clouds, rain and the rainbow all have natural causes.

6.423 For the rest, it is easy to understand from these facts
how what the Greeks, from their nature, named presteres
(“fiery blasts”)
come down into the sea, sent from above.
For it happens that at times something like a column let
down
from the sky descends into the sea, and around it the
waters
seethe, stirred up by violently blowing gusts,
and whatever ships are caught in that turmoil at the time
are tossed about and come into the gravest danger.[3]

3 Greek prēstēr, from a verb meaning both “to burn” and “to blow”: a fiery whirlwind or waterspout.

/ This happens when at times the roused force of the wind cannot
burst the cloud it has attacked, but presses it down, so that there is
something like a column let down from the sky into the sea,
little by little, as if something were being thrust from above by a fist and the drive
of an arm and stretched out into the waves;
and when it has split the cloud, the force of the wind bursts out from it
into the sea and whips up an astonishing seething in the waves;
for the whirling eddy comes down and draws
that cloud down with it, pliant as its body is;
and as soon as it has thrust the cloud, heavy-laden, down to the level of the sea,
the eddy suddenly plunges wholly into the water and rouses
the whole sea with a huge roar, forcing it to boil.

6.443 It also happens that the wind's very whirl wraps itself in clouds,
scraping together seeds of cloud from the air,
and imitates, as it were, a prester let down from the sky;
when this has let itself down onto the land and broken up,
it spews out a monstrous force of whirlwind and storm.
But because this happens rarely at all, and mountains are bound
to get in its way on land, the same thing is seen more often
over the wide prospect of the sea and under the open sky.

6.451 Clouds form when many bodies, flying
in this space of sky above us, have suddenly come together —
rougher ones, which, though entangled
only slightly, can still be held pressed together.
These first make small clouds take shape;
then these grip one another and flock together
and grow by joining, and are carried by the winds
until at last a savage storm has risen.

6.459 It happens too that mountain peaks, the nearer they neighbor the sky,
the more they smoke, towering,
continually with the thick murk of tawny cloud,
because, when clouds first form,
before the eyes can see them, thin as they are, the winds
carry them and drive them together to the mountain's highest peaks;
only there does it happen that, once a greater throng has gathered,
they can be seen condensed, and seem at the same time to rise
from the very summit of the mountain into the upper air.
For that high places lie open to the winds is made plain
by the fact itself and by our senses, when we climb high mountains.

6.470 Besides, that nature lifts very many bodies from the whole sea too
is shown by clothes hung up on the shore,
when they take in a clinging moisture.
So it seems all the more that many bodies, to swell the clouds,
can also rise from the salt surge of the sea;
for all moistures are akin in their nature.

6.476 Besides, from all the rivers, and at the same time from the earth
itself, we see mists and steam rise up,
which, like breath, are pressed out from there and carried upward
and overspread the sky with their murk and, little by little,
by coming together, furnish the high clouds;
for the heat of the star-signed ether above bears down on them too
and, as if by thickening them, weaves a veil of rain-clouds under the blue.

6.483 It happens too that into this sky of ours, from outside, come those
bodies that make clouds and flying storm-clouds;
for I have taught that their number is countless, and the sum of the deep
infinite, and I have shown with what great speed
bodies fly, and how in an instant
they commonly travel through untold space.
So it is no wonder if often in a short time
storm and darkness, with winds so great,
cover seas and lands, looming overhead,
since on all sides, through all the pores of the ether
and, as it were, through the breathing-holes of the great world around,
a way out and a way in stands open to the elements.

6.495 Now come, how the rain-water condenses in the high
clouds, and how, let down on the earth as a shower,
it falls, I will explain. First, then, I will prove that many seeds
of water rise together with the clouds themselves
from all things, and that both grow alike in this way—
the clouds and the water, whatever there is in the clouds—
just as our body grows together with the blood,
and so does sweat, and in short whatever moisture there is in the limbs.
They also often take in a great deal of sea
moisture, like hanging fleeces of wool,
when the winds carry clouds over the great sea.
In the same way moisture is raised from all the rivers
into the clouds.

And when seeds of water have duly gathered there,
many of them, in many ways, swollen from every side,
the crowded clouds strive to discharge their moisture
in two ways; for the force of the wind thrusts them together, and the very
mass of the rain-clouds, driven together in a greater throng,
presses and bears down from above and makes the showers stream out.
Besides, when the clouds are thinned by the winds too,
or broken up, struck from above by the sun's heat,
they let fall their rain and drip, as wax over a hot
fire melts and flows away in plenty.
But a violent rain comes when, violently, by both forces
the clouds are pressed—by their own heaped-up mass and by the thrust of the wind.
But rains are wont to hold on long and to linger
long, when many seeds of water are stirred up,
and clouds upon clouds and drenching rain-clouds
are borne along above them and from every side,
and the whole earth, steaming, breathes its moisture back.

/ Here, when the sun with its rays amid the dark storm
shines straight into the spray of the rain-clouds facing it,
then the color of the rainbow appears in the black clouds.

6.527 All the other things that grow up above and are created
above,
and that form in the clouds—all of them, absolutely
all: snow, winds, hail and chill hoarfrost,
and the great force of ice, the great hardening of waters,
the check that everywhere reins in eager rivers—
it is still very easy to find these out and to see with the mind
how they all come about and why they are created,
once you have well understood what properties belong to
the elements.

EARTHQUAKES

Collapsing caverns, underground waters and trapped winds shake the earth and topple cities.

6.535 Now come, learn the explanation for the movements
of the earth. And first of all be sure to think of the earth
as being, below as above, full on every side of windy
caverns, and as carrying many lakes and many pools
in its bosom, and crags and sheer rocks;
and we must suppose that many rivers, covered beneath
the earth's back,
roll, blind, their sunken waves with force;
for the thing itself demands that it be like itself throughout.
With these things, then, joined beneath it and set under it,
the earth trembles above, shaken by great collapses,
when age has undermined huge caverns below;
for whole mountains fall, and from the great, sudden
shock tremors creep out far and wide.
And no wonder, since, shaken by wagons, whole houses
beside the road tremble, from no great weight,
and they jump no less if any bump in the road
jolts the iron-rimmed circles of the wheels on either side.

6.552 It happens too, when into great, vast pools of water
a huge clod, loosened by age, rolls down from the land,
that the earth too is tossed and sways with the water's wave,
just as a vessel cannot stand steady in water unless the liquid
within has stopped being tossed in an unsteady swell.

6.557 Besides, when wind through hollow places of the earth
has gathered and leans forward from one side and presses,
straining with great force, against the deep caverns,
the earth leans over where the wind's force bears down headlong.
Then the buildings raised up on the earth,
and the more so the higher each one towers toward the sky,
lean over and threaten, pitched forward to the same side,
and the beams, thrust out, hang ready to go.
And yet people are afraid to believe that for the nature of the great world
some deadly time of ruin and disaster lies in wait,
even when they see so vast a mass of earth leaning over!

/ But if the winds did not pause for breath, no force could rein in
things or pull them back from ruin as they went;
as it is, because they pause for breath by turns and grow heavier,
and, as it were, gather and return and then fall back repulsed,
for this reason the earth more often threatens collapse
than causes it; for it leans over and springs back again,
and, having slipped forward, recovers its seat under its weight.
This, then, is why all buildings sway,
the top more than the middle, the middle more than the lowest, the lowest very little.

6.577 This is also the cause of that same great trembling:
when wind and some sudden, very great force of air,
arising either from outside or from the earth itself,
has hurled itself into the hollow places of the earth, and there
first roars in uproar among the huge caverns
and is carried whirling along, then, when its force, roused
and driven wild, bursts outward and at the same time, splitting
the deep earth, forms a great chasm.
This is what happened at Sidon in Syria, and it happened at Aegium
in the Peloponnese—cities that such an outbreak of air
and the earthquake that arose overthrew.
And many other walls have fallen in great
quakes on land, and many cities have sunk down through the sea
to the bottom together with their citizens.[4]

/ But if it does not burst out, still the very onrush of air
and the fierce force of wind is spread through the earth's many
openings like a shudder, and so sets up a tremor,
as when cold comes deep into our limbs
and shakes them against their will, forcing them to shiver and move.
So people in the cities quake with a double terror:
they fear the roofs above, they dread the caverns below,
lest the earth's nature suddenly break them open,
or, torn apart, spread its chasm wide
and, in confusion, seek to fill it with its own ruins.

4 Sidon was the Phoenician port city; Aegium, on the Gulf of Corinth, was struck by the earthquake of 373 BC that also sank nearby Helice into the sea.

/ So however much they may believe that heaven and earth
will be imperishable, entrusted to everlasting safety,
yet at times the very presence of danger
applies, from some quarter, this goad of fear as well:
lest the earth be snatched suddenly from under their feet
and carried into the abyss, and the sum of things,
abandoned, follow
utterly, and the world become a confused wreck.
...
First of all, people wonder that nature does not render the
sea
larger, when there is such a downrush of waters,
when all rivers come to it from every side.
Add the wandering showers and the flying storms
that sprinkle and drench all seas and lands;
add its own springs; yet all these, compared with the whole
sea,
will scarcely equal the increase of a single drop;
so it is less of a wonder that the great sea does not grow.

6.616 Besides, the sun draws off a great part with its heat.
For we see clothes dripping with moisture
dried out by the sun with its burning rays;
and we see many seas spread out far and wide beneath.
So though from each single place the sun
may sip only a small part of moisture from the sea's
surface,
over so vast a space it will still take away much from the
waves.

6.623 Then again, winds too can lift off a great part
of the moisture as they sweep the seas, since very often
we see roads dried by the winds in a single night
and crusts of soft mud harden.

6.627 Besides, I have taught that clouds too lift up much
moisture, taken up from the great surface of the sea,
and scatter it everywhere over the whole round of the earth,
when it rains on land and the winds carry the clouds.

6.631 Lastly, since the earth is loose in body
and is joined to the sea, girding its shores on every side,
then, just as the water's moisture comes from the land into the sea,
it must likewise seep into the land from the salt sea;
for the brine is strained out, and the matter of the moisture
seeps back and all flows together at the rivers' source,
and from there returns over the lands in a fresh column
wherever a channel, once cut, has carried down the waves on liquid foot.

ETNA AND OTHER WONDERS

Volcanoes, the Nile's summer flood, deadly Avernian places and strange springs are explained.

6.639 Now what the reason is that, through the jaws of Mount Etna,
fires sometimes breathe out in so great a whirlwind,
I will explain; for it was with no ordinary destruction that the storm
of flame arose and held sway over the fields of the Sicilians
and turned the eyes of neighboring peoples toward itself,
when, seeing all the regions of the sky smoking and sparkling,
they filled their hearts with anxious fear
of what new upheaval nature was contriving.

6.647 In these matters you must look widely and deeply
and gaze far out in every direction,
so as to recall that the sum of things is bottomless,
and to see how tiny a part of the whole sum one heaven
is, and how minute a fraction it makes up—
not even so much as one man is of the whole earth.
If you set this well before you and gaze on it plainly
and see it plainly, you would give up wondering at many
things.
For does any of us wonder if someone has caught in his
limbs
a fever that has sprung up with burning heat,
or any other pain of disease throughout his body?

/ A foot suddenly swells up; sharp pain often
seizes the teeth, invades the very eyes;
the sacred fire breaks out and, creeping over the body,
burns
whatever part it has seized, and crawls through the limbs—
no wonder, since there are seeds of many things,
and this earth and sky bring forth enough disease and harm
for the force of measureless disease to grow up from them.
In just this way, then, we must suppose that to the whole of
heaven and earth
enough of everything is supplied out of the infinite
for the earth suddenly to be shaken and moved,
for a rushing whirlwind to sweep over sea and land,
for Etna's fire to overflow, and the sky to burst into flame;
for that happens too, and the regions of heaven catch fire,
and rainstorms arise with a heavier onset
when the seeds of water have chanced to come together so.[5]

5 The "sacred fire" is an inflammatory skin disease, perhaps erysipelas or shingles.

/ "But the turbulent blaze of the fire is far too huge."
Of course—and a river seems the greatest to someone
who has never seen a greater before; and huge
a tree and a man appear, and in every kind of thing
whatever is the greatest each has seen, he pictures as huge,
though all things together, with sky and land and sea,
are nothing compared with the whole sum of the entire
sum.

6.680 Now, though, the ways in which that flame, suddenly
roused,
blasts out from the vast furnaces of Etna
I will explain. First, the whole mountain is hollow beneath
in its nature, propped up for the most part on caverns of
flint.
Moreover, in all its caves there is wind and air.
For wind arises when air is stirred and set in motion.
When this has grown thoroughly hot and in its fury has
heated all the surrounding
rocks where it touches them, and the earth, and has struck
from them
a fire hot with swift flames,
it rises and so hurls itself high out through the straight
jaws.
So it carries its heat far, and far and wide scatters
the ash, and rolls up smoke in thick murk,
and at the same time thrusts out rocks of astonishing
weight;
so you need not doubt that this is the turbulent force of air.
Besides, along a great part of the mountain the sea breaks
its waves
at its roots and draws back its surge.

/ From this sea caves run underground right up to the mountain's high
jaws. By this path, we must admit, there goes
...
and the facts compel us to see that it penetrates deep from the open sea
and blows out, and so lifts up flame,
and hurls up rocks and raises clouds of sand.
For on the very summit there are crateres ("bowls"), as the people there
call them—what we call jaws and mouths.

6.703 There are also some things for which to state one cause
is not enough—rather several, one of which, however, is the true one;
just as, if you yourself should see the lifeless body
of a man lying some way off, it would be fitting to name all the causes
of death, so that the one cause of his death may be named;
for you could not prove that he died either by the sword
or by cold, or from disease, or perhaps by poison,
but we know that what befell him is something
of this kind. In the same way we have to say this in many cases.

6.712 The Nile rises toward summer and overflows the plains,
unique on earth, the river of all Egypt.
It waters Egypt, often in the midst of the heat,
either because in summer the north winds blow against its mouths
at that time of year when they are said to be the Etesians,
and, blowing against the stream, hold it back, and, forcing
the waters upstream, fill it and make it stand still.
For beyond doubt these blasts are borne against the current
of the river, driven as they are from the chill stars of the pole;
that river comes from the heat-bearing quarter, from the south,
among races of men whose skin the sun has baked dark,
rising deep within the region of midday.

/ It may also be that a great heap of sand
blocks up the mouths, set against the opposing waves,
when the sea, churned by the winds, drives the sand inland;
by which means the river's outlet becomes less free
and the downhill rush of its waters likewise less.
It may be, too, that more rain falls at its source
at that season, when the Etesian blasts of the north winds
drive all the clouds into those regions.
That is, when, driven out to the region of midday,
they have gathered, there at last against high mountains
the clouds are thrust, packed together and pressed by force.
Perhaps it swells from deep within, from the high mountains of the Ethiopians,
where the white snows are made to come down into the plains
by the melting rays of the sun that surveys all things.

6.738 Now come, as for any places and lakes that are Avernian,
I will explain to you with what nature they are endowed.
First, the name by which they are called, Avernian, was given
from the thing itself, because they are hostile to all birds,
since, when they have come flying over those regions,
they forget the oarage of their wings, let their sails go slack,
and fall headlong, their necks limp and drooping,
to the ground, if the nature of the place so happens to have it,
or into the water, if a lake of Avernus lies spread beneath.
Such a place is near Cumae, where mountains, filled with acrid sulfur,
smoke, enriched with hot springs.[6]

/ There is one too within the walls of Athens, on the very summit
of the citadel, by the temple of kindly Pallas Tritonis,
where hoarse crows never steer their bodies on their wings,
not even when the altars smoke with offerings;
so constantly do they avoid it—shunning not the fierce anger of Pallas
for their watchfulness, as the poets of the Greeks have sung,
but the nature of the place itself does the work by its own power.
In Syria too, it is said, there is a place to be seen
where, as soon as even four-footed beasts have first set
foot in it, its very force makes them fall down heavily,
as if they had suddenly been sacrificed to the gods of the dead.[7]

6 The name was taken as Greek aornos, "birdless"; Lake Avernus, near Cumae on the Bay of Naples, was held to be an entrance to the underworld.
7 Pallas Tritonis is Athena; in myth she banished the crow from the Acropolis after it brought her unwelcome news it had seen while keeping watch.

/ All these things take place by a natural process,
and it is plain from what causes they have their origin;
so let no one believe that the gate of Orcus can be in these
regions, nor let us think that from here, perhaps, spirits are led
by the gods of the dead below to the shores of Acheron,
as wing-footed stags are often believed to draw
with their nostrils the creeping races of wild creatures from their lairs.
How far this is removed from true reasoning,
learn; for now I am trying to speak of the thing itself.

6.769 First I say this, as I have often said before:
there are in the earth shapes of things of every kind;
many, which serve as food, are life-giving, and many can
bring on diseases and hasten death.
And that different things are better suited to different creatures
for the business of life we have shown before,
because of their unlike nature and unlike
textures and first shapes, differing from one another.
Many hostile things travel through the ears, many
make their way in through the nostrils themselves, harmful and harsh to the touch,
and not a few must be shunned by touch, or else
fled from by sight, or are bitter in taste.

6.781 Next, you can see how many things there are that to humans
are sharply hostile to the senses, foul and oppressive.
First, certain trees have been given a shade so oppressive
that they often bring on headaches
if someone has lain stretched out on the grass beneath them.
There is even a tree on the great mountains of Helicon
that is known to kill a man with the foul smell of its flower.
Clearly, all these things rise from the ground for this reason:
the earth holds many seeds of many things, in many ways
mixed together, and hands them out separately.
And a night-lamp just put out, when with its sharp
reek it strikes the nostrils, puts to sleep there and then
anyone prone to fall down and foam at the mouth from illness.
And a woman sinks back, put to sleep by heavy castoreum,
and the fine work slips from her delicate hands,
if she has smelled it at the time of her monthly period.

/ Many other things besides loosen the drooping limbs
through the joints
and make the spirit totter in its seat within.
Then again, if you linger in hot baths
when overfull, and bathe, how easily it happens
that you often collapse in the middle of a tub of scalding
water!
And the heavy force and smell of charcoal—how easily
it seeps into the brain, unless we have taken water first!
But when a burning fever has seized the limbs and is
mastering them,
then the smell of wine is like a killing blow.
Do you not see, too, that in the earth itself sulfur
is produced, and bitumen hardens with its foul smell;
and lastly, where men follow veins of silver and gold,
probing with iron deep into earth's hidden places,
what smells Scaptensula breathes out from below?
And what harm the gold mines exhale!
What faces, what complexions they give to men![8]

/ Do you not see or hear how soon they usually die,
and how their stock of life runs short—
those whom the great force of necessity confines to such
work?
All these exhalations, then, the earth seethes out
and breathes forth into the open, into the unguarded spaces
of the sky.

8 Scaptensula (Scapte Hyle) was a mining district in Thrace, rich in gold and silver.

6.818 So too the places of Avernus must send up for birds
a deadly force that rises from the earth into the air,
so as to poison the space of the sky in some quarter;
and as soon as a bird has been carried there on its wings,
it is hampered there, seized by the unseen poison,
so that it falls straight down at the spot where the exhalation directs it.
When it has crashed down there, the same force of that exhalation
takes the remnants of life from all its limbs.
For at first it stirs up a kind of giddy seething;
afterward it happens that, once they have fallen into the very
sources of the poison, there they must also spew out their life,
because there is a great store of evil all around.

6.830 It also happens at times that this force and exhalation of Avernus
scatters the air that lies between the birds and the earth,
so that the place there is left almost empty.
When they come flying straight over this spot,
at once the effort of their feathers limps, useless,
and all the striving of their wings on either side is betrayed.
Here, when they cannot lean their weight or rest upon their wings,
nature, of course, forces them by their weight to sink down to earth,
and lying now in what is nearly empty void,
they scatter their spirits through all the pores of the body.
...
Then again, water in wells grows colder in summer,
because the earth is parched by heat, and any seeds
of heat it happens to have of its own, it lets go into the air.
So the more the ground is exhausted by heat,
the colder too becomes the water hidden in the earth.

/ Then again, when all the earth is pressed by cold and contracts
and, as it were, congeals, it happens, of course, that in contracting
it squeezes out into the wells whatever heat it holds.

6.848 There is said to be a spring at the shrine of Ammon that is cold
in the light of day and warm in the nighttime.
People marvel greatly at this spring, and some think
it boils from the fierce sun beneath the earth
when night has covered the lands in fearful darkness.
But this is very far removed from true reasoning.
For if the sun, touching the bare body of the water,
could not make it warm on its upper surface,
though its light above enjoys such great heat,
how could it, here beneath earth so dense in body,
cook the water through and nurse it with warm heat?
Especially since it can scarcely, through the walls of houses,
work its heat inside with its burning rays.
What is the reason, then? No doubt it is that the earth
around the spring is looser than the rest of the ground,
and there are many seeds of fire near the body of the water.[9]

9 The oracle of Zeus Ammon in the Libyan desert, at the Siwa oasis in Egypt.

/ So when night has buried the earth in its dew-bearing
waves,
at once the earth grows cold deep down and contracts.
In this way it happens that, as if squeezed by a hand,
it presses out into the spring whatever seeds of fire it holds,
and these make the water warm to the touch and steaming.
Then, when the sun has risen and parted the earth with its
rays
and loosened it, as its warm heat mingles in,
the first beginnings of fire return again to their old seats,
and all the water's heat withdraws into the earth.
That is why the spring turns cold in the light of day.
Besides, the water's moisture is tossed about by the sun's
rays
and thins out in the daylight from the quivering heat;
and so it happens that whatever seeds of fire it holds
it lets go, just as it often gives up the frost it holds
within, and melts its ice and loosens its knots.

6.879 There is also a cold spring such that tow placed above it
often throws out flame, catching fire at once,
and a torch in the same way is kindled and shines
across the waves, wherever it floats, driven by the breezes.
No doubt this is because there are very many seeds of heat
in the water,
and from the earth itself, from its very depths,
bodies of fire must rise up through the whole spring
and at the same time breathe out and go forth into the air—
not so many, however, that the spring could become warm.
Besides, a force compels them, scattered, to burst out
suddenly through the water and to combine above.
Of this kind is the spring in the sea at Aradus, which gushes
up
with fresh water and pushes back the salt waves around it;
and in many other regions the sea offers
timely help to thirsty sailors,
because it spews up fresh water amid the salt waves.[10]

/ In the same way, then, those seeds can burst out through
that spring
and bubble forth; and when they meet in the tow
or cling to the body of the torch,
they easily catch fire at once, because they too contain
many
seeds of fire, the tow and the torches alike.
Do you not see, too, that when you bring a wick just put out
near a night-lamp, it catches fire before
it has touched the flame, and a torch in the same way?
And many other things besides, touched only by the heat,
catch fire from a distance before the fire soaks them close at
hand.
This, then, we must suppose happens in that spring as well.

10 Aradus, an island city off the Phoenician coast (modern Arwad, Syria).

THE MAGNET

Particles streaming from the stone empty the air, so iron rings are pushed toward it.

6.906 As for what remains, I will begin to explain by what law
of nature it comes about that this stone can draw iron—
the stone the Greeks call magnet, from its native name,
because it has its origin within the native borders of the
Magnesians.
People marvel at this stone; for it often forms
a chain of rings hanging from it.
Indeed you can sometimes see five or more
in a hanging line, swaying in the light breezes,
where one hangs from another, clinging underneath,
and each learns from the next the stone's power and bonds;
so pervasively does its power prevail.[11]

6.917 In matters of this kind, many points must be established
before
you can give an account of the thing itself,
and it must be approached by very long, winding paths;
so all the more I ask for attentive ears and mind.

11 The Magnesians of Thessaly or of Magnesia in Asia Minor; the Greek word magnēs gives our "magnet."

6.921 First, from all the things we see
there must constantly flow, be sent out and scattered
bodies that strike the eyes and provoke sight.
And smells flow constantly from certain things,
as cold from rivers, heat from the sun, spray from the waves
of the sea, which eats away walls along the shores,
and various sounds never cease to flow through the air.
Then, a moist salty taste often comes into the mouth
when we walk beside the sea; and when we watch, close by,
wormwood being diluted and mixed, its bitterness touches us.
So true is it that from all things each thing is carried off
in a flow and sent out in all directions everywhere,
and no delay or rest from flowing is granted,
since we feel constantly, and can always
see and smell all things, and hear them sound.

6.936 Now I will go back to recall how porous in body
all things are—a point made clear in my first book as well.
For although knowing this bears on many matters,
first of all, for this very subject
that I am setting out to discuss, it must be established
that nothing we can see is anything but body mixed with void.
First, it happens that in caves the rocks overhead
sweat with moisture and drip with trickling drops.
Likewise sweat flows out from our whole body,
the beard grows, and hair over all our limbs and joints.
Food is spread into all the veins, and it increases and nourishes
even the farthest parts of the body, down to the nails.
Likewise we feel cold and warm heat pass through bronze;
we feel them likewise pass through gold
and through silver, when we hold full cups.

/ Then again, voices fly through the stone walls
of houses; smell seeps through, and cold, and the heat
of fire, which regularly pierces even the strength of iron;
and lastly, where the breastplate of the sky hems the world
around,
the force of disease too, when it creeps in from outside;
and storms that have arisen on earth and in the sky,
withdrawn afar, rightly make their way off into sky and
earth;
since nothing is put together except with porous body.

6.959 Add to this that not all the bodies
thrown off from things are endowed with the same effect on
the senses
or suited in the same way to all things.
First, the sun bakes the earth and makes it dry,
but it melts ice, and on high mountains it forces the snows,
high
and heaped up, to waste away under its rays;
lastly, wax set in its heat turns liquid.
Fire likewise makes bronze liquid and melts gold,
but hides and flesh it shrivels and draws together.
Then again, water hardens iron fresh from the fire,
but softens hides and flesh hardened by heat.
The wild olive delights the bearded goats so much
that it might truly be dripping with ambrosia and steeped
in nectar;
yet nothing exists that is more bitter to man than its sour
leaves.

/ Then again, a pig shuns marjoram oil and fears every
perfume; for to bristly pigs it is a sharp poison,
though to us it sometimes seems almost to revive us.
But on the other hand, though mud is to us the foulest
filth, to pigs this same stuff seems delightful,
so that they wallow in it all over, insatiably.

6.979 This too remains, before I set out to speak of the matter itself—
a point that it seems must be made first.
Since many pores have been given to various things,
they must be endowed with natures unlike one another,
and each must have its own nature and passages.
For indeed living creatures have various senses,
each of which takes in its own proper object;
for we see that sound penetrates by one way, and by another the taste
from juices, by another the smell of scents.
[The nature of the passages, of course, makes this happen,]
[varying in many ways, as I showed a little before.]
Besides, one thing seems to seep through rocks,
another through wood, another to pass through gold,
and another to make its way out through silver and glass;
for images seem to flow by one path, heat to go by another,
and some things to pass through the same openings faster than others.

/ The nature of the passages, of course, makes this happen,
varying in many ways, as I showed a little before,
because of the unlike nature and texture of things.

6.998 Therefore, once all these things have been well established and set in place
and stand firm, laid out and ready for us beforehand,
from here on the account of what remains will be easily given, and the whole
cause will be laid open that entices the force of iron.

6.1002 First, there must flow from this stone a great many
seeds, or a current, that scatters with blows the air
that lies between the stone and the iron.
When this space is emptied and much room becomes vacant
in between, at once the first beginnings of the iron
slip forward and fall, joined together, into the void, and it happens
that the ring itself follows and so moves with its whole body.
For no thing, entangled by its own first
elements, coheres more tightly bound together
than the nature of strong iron, that cold, bristling stuff.
So it is less surprising—a thing said to be strange—
if many bodies rising from the iron cannot
move into the void without the ring itself following;
and this it does, following until it reaches
the stone itself and clings to it with unseen fastenings.

/ The same thing happens in every direction: wherever
a place becomes empty, whether from the side or from above,
the neighboring bodies are carried at once into the void;
for they are set moving by blows from elsewhere, and cannot
of their own accord rise up into the air.
Add to this also—a reason why this can happen all the more —
that this process is helped by a supporting motion:
as soon as the air in front of the ring has been made
thinner, and the place more emptied and vacant,
at once it happens that whatever air lies behind
pushes it forward from the rear, as it were, and drives it on.
For the air placed around things always beats on them;
but at such a time it happens that it drives the iron forward,
because on one side the space is empty and takes it in.

/ This air I tell you of, through the iron's many pores
subtly working its way in to its tiny parts,
thrusts and drives it, as the wind drives a ship and its sails.
Then again, all things must have air
in their bodies, since they are porous in body, and air
is placed around and against all things.
This air, then, that lies hidden deep in the iron
is always tossed about in restless motion, and so
beyond doubt it beats on the ring and stirs it from within;
the ring, of course, is carried the same way it has already plunged
once before, having made its effort toward the empty part.

6.1042 It also happens that the nature of iron sometimes draws back
from this stone, being accustomed to flee and follow by turns.
I have even seen Samothracian iron rings leap up,
and at the same time iron filings rage inside bronze
bowls, when this Magnesian stone was placed beneath;
so eagerly does the iron seem to want to flee the stone.
When bronze is placed between, such great discord arises
because, no doubt, when the current from the bronze has come
first and taken possession of the iron's open passages,
the stone's current comes after and finds everything full
in the iron, and has no way to swim through as before;
so it is forced to strike and beat with its flood
against the iron's texture; in this way it spits it away
and drives it through the bronze—the very thing it often sucks back without it.[12]

12 Samothracian rings: iron rings associated with the mystery cult on the Aegean island of Samothrace.

6.1056 In these matters, stop wondering at this: that the current
from this stone cannot drive other things in the same way.
For some stand firm, relying on their weight, like gold;
others, because they are so porous in body that the current
flies through untouched, cannot be driven anywhere—
and wood seems to be of this kind.
The nature of iron, then, placed between the two,
when it has taken in certain small bodies of bronze, then it happens
that the Magnesian stones drive it with their stream.
Yet these things are not so foreign to other things
that I lack a good supply of many of this kind
that I could mention, uniquely suited to each other.
You see, first, that stones bond together with lime alone.
Timber is joined into one by bull's glue,
so that the grain of the planks will more often split from a flaw
than the joints can slacken their bonds of bull's glue.

/ The vine-born liquor readily mixes with water from springs,
though heavy pitch and light olive oil cannot.
The purple dye of the shellfish unites into one
body with wool, so that it cannot be separated at all,
not even if you set to work again and again with Neptune's waves,
not if the whole sea should wish to wash it out with all its waters.
Lastly, is it not one thing alone that bonds gold to gold,
and does it not happen that bronze is joined to bronze by white lead?
How many other cases one can find! What then?
You have no need at all of such long, winding paths,
nor is it right for me to spend so much effort here;
it is better to cover much briefly, in few words.
Where the textures of things have so fallen out to match each other
that the hollows of this fit the solids of that, and those of that
the solids of this, this joining is the best.

/ It is also possible that some things, linked as if by rings and hooks
to one another, can be held coupled together;
and this seems to happen above all with this stone and iron.

THE CAUSES OF DISEASE

Harmful seeds in the air and water make foreign climates and epidemics dangerous.

6.1090 Now what the cause of diseases is, and from where, suddenly
arising, the force of disease can blow up a deadly disaster
for the race of men and the herds of cattle,
I will explain. First, I have taught above that there are seeds
of many things that are life-giving for us,
and, on the other hand, many that bring disease and death
must fly about; when these by chance have happened to arise
and have disordered the sky, the air becomes diseased.
And all that force of diseases, that pestilence,
either comes from outside, like clouds and mists, from above
through the sky, or often gathers
and rises from the earth itself, when the damp ground has taken on rot,
struck by unseasonable rains and suns.
Do you not see, too, that by strange climate and water
all are afflicted who, far from their homeland and home,
arrive, because conditions differ widely?

/ For how different, do we think, is the climate of the Britons
from that of Egypt, where the axis of the world slants,
or how different that of Pontus from that of Gades, and on
to the peoples of men whose skin the sun has baked dark?
Since we see these four regions differ from one another,
lying under the four winds and quarters of the sky,
so the color and features of people are seen to vary
widely, and diseases hold their own peoples, kind by kind.
There is the elephant disease, produced by the streams of the Nile
in the middle of Egypt, and nowhere else.
In Attica the feet are afflicted, and the eyes in Achaean
lands. So different places are hostile to different
parts and limbs; the varied air brings this about.[13]

/ So when a sky that happens to be alien to us
stirs itself and a hostile air begins to creep,
it crawls slowly like mist and cloud, and everything
in its path it throws into disorder and forces to change;
and so it happens that when at last it reaches our sky,
it corrupts it and makes it like itself, and alien to us.
This new disaster and pestilence, then, suddenly
either falls into the waters or settles on the crops themselves
or on other food of men and fodder of beasts,
or else the force stays suspended in the air itself,
and when we breathe and draw in the air mixed with it,
we must suck that into our body along with it.
In the same way, pestilence often comes upon cattle too,
and sickness upon the sluggish bleating flocks.

13 Gades is Cádiz in Spain; the "elephant disease" (elephantiasis) is probably a form of leprosy.

/ Nor does it matter whether we come to places
hostile to us and change the sky that cloaks us,
or whether nature of its own accord brings us a corrupted sky
or something we are not used to meeting,
which can assail us by its fresh arrival.

THE PLAGUE OF ATHENS

A plague from Egypt ravages Athens, destroying bodies, minds, burial customs and religion.

6.1138 Such a cause of diseases, and a deadly blast, once
filled the fields with death in the land of Cecrops,
laid waste the streets, and drained the city of its citizens.
For it arose in the lands of Egypt and came from far within,
crossing much air and the floating plains of the sea,
and fell at last upon the whole people of Pandion.
Then they were handed over in droves to disease and death.
First, they had their heads on fire with heat,
and both eyes red with a suffused glow.
The throat, too, black inside, sweated
with blood, and the passage of the voice, blocked with sores, closed up,
and the tongue, the mind's interpreter, oozed with gore,
weakened by the pain, heavy to move, rough to the touch.
Then, when the force of disease had filled the chest through the throat
and flowed together into the sick people's very heart, heavy with grief,
then truly all the barriers of life began to totter.
The breath rolled out a foul smell from the mouth,
like the reek of rotting corpses cast aside.[14]

14 The plague that struck Athens in 430 BC, which Lucretius describes closely following Thucydides (2.47–54); Cecrops and Pandion were legendary kings of Athens.

/ And then the strength of the whole mind entirely, and the whole
body, languished, already on the very threshold of death.
And to these unbearable evils anxious anguish was
a constant companion, and complaint mixed with groans,
and frequent retching, often through the night and day,
forcing the sinews and limbs to contract continually,
broke them down, wearing out men already exhausted.
Nor could you see, in anyone, with excessive heat
the outermost part on the body's surface burning,
but rather present a lukewarm touch to the hands,
and at the same time the whole body red with sores, as if burned in,
as when the sacred fire spreads through the limbs.
But the inmost part of people burned to the bones;
a flame burned in the stomach as in a furnace.
You could turn nothing at all, however light and thin, to use
for anyone's limbs—only wind and cold, always.

/ Some gave their limbs, burning with the disease,
to icy rivers, throwing their naked bodies into the waves.
Many plunged headlong, deep into the nymphs of the wells,
meeting the water with their mouths gaping wide:
a thirst that nothing could quench, drenching their parched bodies,
made a great flood of water equal to a few drops.
Nor was there any respite from the evil: bodies lay
exhausted. Medicine muttered in silent fear,
since so often, wide open and burning with disease,
they rolled the lights of their eyes, which knew no sleep.
And many other signs of death were given then:
the mind's reason disturbed in sorrow and fear,
the gloomy brow, the frenzied, fierce face,
the ears, moreover, troubled and full of ringing,
the breathing rapid, or deep and coming at long intervals,
the gleaming moisture of sweat soaking the neck,
the spittle thin and in small bits, tinged with the color of saffron,
and salty, barely brought up through the throat with a hoarse cough.

/ In the hands, moreover, the sinews would twitch, the limbs tremble,
and the cold creep up bit by bit from the feet—
without fail. Likewise, at last, toward the final hour,
the nostrils were pinched, the tip of the nose
sharp and thin, the eyes hollow, the temples sunken, the skin cold
and hard on the face, the mouth gaping; the brow remained taut.
And not long after, they lay with limbs stiff in death.
Around the eighth shining light of the sun,
or even at the ninth lamp, they gave up their life.
If any of them, as happens, had escaped the doom of death,
yet later, from foul sores and a black flux of the bowels,
wasting and death awaited him,
or else a great deal of corrupt blood, often with pain in the head,
poured out through the clogged nostrils.
Into this flowed all the man's strength and body.

/ Then again, whoever had escaped the fierce flux of foul
blood, still the disease went into his sinews and joints
and into the very genitals of the body.
And some, gravely fearing the threshold of death,
lived on, deprived of their male parts by the knife,
and some, without hands and feet, remained
alive nonetheless, and some lost their eyes.
So sharply had the fear of death come upon them.
And some were even seized by forgetfulness of all
things, so that they could not recognize themselves.
And though many bodies lay unburied on the ground, heaped upon
bodies, yet the race of birds and beasts
either leapt far away to escape the pungent smell
or, when they had tasted, grew faint with death close at hand.
Yet in those days hardly any bird at all
appeared, nor did the grim tribes of wild beasts
come out of the woods.

Most of them languished with the disease
and died. Above all, the faithful strength of dogs,
stretched out in every street, gave up its life in pain;
for the force of the disease wrung the life from their limbs.
Vast funerals, unattended, raced one another to be hurried off,
nor was any sure, common method of cure available;
for what had given some the power to roll the life-giving breezes of air
in their mouths and to gaze upon the vast spaces of the sky,
that was ruin to others and brought on death.

6.1230 In these matters one thing above all was pitiful
and distressing: whenever anyone saw himself
caught in the disease, as though condemned to death,
his courage failing, he lay there with a grieving heart,
and, looking only to his funeral, gave up his life on the spot.
For at no time did they cease to catch,
one from another, the contagion of the greedy disease,
like woolly flocks and horned herds,
and this above all heaped death upon death.
For all those who shunned visiting their own sick,
too greedy for life and afraid of death—
these, soon after, neglect punished with a shameful, evil death,
slaughtering them, abandoned and bereft of help.
But those who had stood by went to their death by contagion
and by the toil that shame then compelled them to undertake,
and the coaxing voice of the weary, mixed with the voice of complaint.
So all the best people met this kind of death.

6.1247 Besides, every shepherd and herdsman,
and likewise the sturdy guider of the curved plow,
languished, and bodies lay crammed deep inside huts,
given over to death by poverty and disease.
Over lifeless children you might sometimes see the lifeless
bodies of parents, and, the other way round, see
children breathing out their life upon mothers and fathers.
And not the least part of this grief flowed from the fields
into the city, brought there by the languishing crowd
of farmers, gathering sick from every quarter.
They filled all places and buildings; so all the more, in the heat,
death piled them up in heaps, crowded together.

/ Many bodies, laid low by thirst and rolled along the street,
lay stretched out by the fountain spouts,
their breath cut off by the too-great sweetness of the water;
and all through the public places and streets
you might see drooping limbs, with half-dead bodies,
bristling with filth and covered in rags, perish
in the body's dirt, with nothing but skin upon their bones,
already almost buried in foul sores and grime.
Lastly, death had filled all the holy shrines of the gods
with lifeless bodies, and everywhere all the temples
of the heavenly ones stood burdened with corpses,
places the temple-keepers had filled with guests.
For no longer was the religion of the gods or their divine
power
much regarded: the present grief overwhelmed all.

/ Nor did that custom of burial remain in the city
with which this people had always before been used to bury
their dead;
for the whole people was in turmoil and panic, and each
man in sorrow buried his own kin as circumstances
allowed.
And the sudden event and grim poverty prompted many
things;
for they would place their own blood relations, with a huge
outcry,
on pyres heaped up for others,
and set torches beneath them, often brawling
with much bloodshed rather than abandon the bodies,
and on pyres of others a whole host of their own
they fought to bury; worn out with tears and grief, they
went home;
then for the most part they took to their beds from grief;
nor could anyone be found whom neither disease
nor death nor mourning assailed at such a time.