EXTRACTS FROM
"OF THE NATURE OF THINGS"
LUcretius
ca 99-50 BC

Then be it ours with steady mind to clasp
The purport of the skies--the law behind
The wandering courses of the sun and moon;
To scan the powers that speed all life below;
But most to see with reasonable eyes
Of what the mind, of what the soul is made,
And what it is so terrible that breaks
On us asleep, or waking in disease,
Until we seem to mark and hear at hand
Dead men whose bones earth bosomed long ago.

 Substance Is Eternal
This terror, then, this darkness of the mind,
Not sunrise with its flaring spokes of light,
Nor glittering arrows of morning can disperse,
But only Nature's aspect and her law,
Which, teaching us, hath this exordium:
Nothing from nothing ever yet was born.
Fear holds dominion over mortality
Only because, seeing in land and sky
So much the cause wherof no wise they know,
Men think Divinities are working there.
Meantime, when once we know from nothing still
Nothing can be create, we shall divine
More clearly what we seek: those elements
From which alone all things created are,
And how accomplished by no tool of Gods.
Suppose all sprang from all things: any kind
Might take its origin from any thing:
No fixed seed required. Men from the sea
Might rise, and from the land the scaly breed,
And, fowl full fledged come bursting from the sky;
The horned cattle, the herds and all the wild
Would haunt with varying offspring tilth and waste;
Nor would the same fruits keep their olden trees,
But each might grow from any stock or limb
By chance and change. Indeed, and were there not
For each its procreant atoms, could things have
Each its unalterable mother old?

Thus easier 'tis to hold that many things
Have primal bodies in common (as we see
The single letters common to many words)
Than aught exists without its origins.

Hence too it comes that Nature all dissolves
Into their primal bodies again, and naught
Perishes ever to annihilation.
For, were aught mortal in its every part,
Before our eyes it might be snatched away
Unto destruction; since no force were needed
To sunder its members and undo its bands.
Whereas, of truth, because all things exist,
With seed imperishable, Nature allows
Destruction nor collapse of aught, until
Some outward force may shatter by a blow,
Or inward craft, entering its hollow cells,
Dissolve it down. ....

But now
Because the fastenings of primordial parts
Are put together diversly and stuff
Is everlasting, things abide the same
Unhurt and sure, until some power comes on
Strong to destroy the warp and woof of each:
Nothing returns to naught; but all return
At their collapse to primal forms of stuff.

Thus naught of what so seems
Perishes utterly, since Nature ever
Upbuilds one thing from other, suffering naught
To come to birth but through some other's death.

And now, since I have taught that things cannot
Be born from nothing, nor the same, when born,
To nothing be recalled, doubt not my words
Because our eyes no primal germs perceive;
For mark those bodies which, though known to be
In this world, are yet invisible:

And raiment, hung by surf-beat shore, grows moist,
The same, spread out before the sun, will dry;
Yet no one saw how sank the moisture in,
Nor how by heat off-driven. Thus we know,
That moisture is dispersed about in bits
Too small for eyes to see. Another case:
A ring upon the finger thins away
Along the under side, with years and suns;
The drippings from the eaves will scoop the stone;
The hooked ploughshare, though of iron, wastes
Amid the fields insidiously.
Nor more

Can we observe what's lost at any time,
When things wax old with eld and foul decay,
Or when salt seas eat under beetling crags,
Thus nature ever by unseen bodies works.

The Void

But yet creation's neither crammed nor blocked
About by body: there's in things a void--
Which to have known will serve thee many a turn,
Nor will not leave thee wandering about in doubt,
Forever searching in the sum of all,
And losing faith in these pronouncements mine.
There's place intangible, a void and room.
For were it not, things could in nowise move;
Since body's property to block and check
Would work on all and at all times the same.
Thus naught could evermore push forth and go,
Since naught elsewhere would yield a starting place.
But now through oceans, lands, and heights of heaven,
By divers causes and in divers modes,
Before our eyes we mark how much may move,
Which, finding not a void, would fail deprived
Of stir and motion; nay, would then have been
Nowise begot at all, since matter, then,
Had staid at rest, its parts together crammed.
Then too, however solid objects seem,
They yet are formed of matter mixed with void:
In rocks and caves the watery moisture seeps,
And beady drops stand out like plenteous tears;
And food finds way through every frame that lives;
The trees increase and yield the season's fruit
Because their food throughout the whole is poured,
Even from the deepest roots, through trunks and boughs;
And voices pass the solid walls and fly
Reverberant through shut doorways of a house,
And stiffening frost seeps inwards to our bones.
Which but for voids for bodies to go through
'Tis clear could happen in nowise at all.
Again, why see we among objects some
Of heavier weight, but of no bulkier size?
Indeed, if in a ball of wool there be
As much of body as in lump of lead,
The two should weigh alike, since body tends
To load things downward, while the void abides,
By contrary nature, the imponderable.
Therefore, an object just as large but lighter
Declares infallibly its more of void;
Even as the heavier more of matter shows,  
And how much less of vacant room inside.  
That which we're seeking with sagacious quest  
Exists, infallibly, commixed with things--  
The void, the invisible inane.

Nothing Exists per se Except Atoms and the Void--  
But, now again to weave the tale begun,  
All nature, then, as self-sustained, consists  
Of twain of things: of bodies and of void  
In which they're set, and of where they're moved around.

Besides, there's naught of which thou canst declare  
It lives disjoined from body, shut from void--  
A kind of third in nature. For whatever  
Exists must be a somewhat; and the same,  
If tangible, however light and slight,  
Will yet increase the count of body's sum,  
With its own augmentation big or small;  
But, if intangible and powerless ever  
To keep a thing from passing through itself  
On any side, 'twill be naught else but that  
Which we do call the empty, the inane.

A property is that which not at all  
Can be disjoined and severed from a thing  
Without a fatal dissolution: such,  
Weight to the rocks, heat to the fire, and flow  
To the wide waters, touch to corporal things,  
Intangibility to the viewless void.

Character of the Atoms  
Bodies, again,  
Are partly primal germs of things, and partly  
Unions deriving from the primal germs.  
And those which are the primal germs of things  
No power can quench; for in the end they conquer  
By their own solidness;

Atomic Motions

But if thou believe  
That the primordial germs of things can stop,  
And in their stopping give new motions birth,  
Afar thou wanderest from the road of truth.  
For since they wander through the void inane,  
All the primordial germs of things must needs  
Be borne along, either by weight their own,  
Or haply by another's blow without.
For, when, in their incessancy so oft
They meet and clash, it comes to pass amain
They leap asunder, face to face: not strange--
Being most hard, and solid in their weights,
And naught opposing motion, from behind.

And of this fact (as I record it here)
An image, a type goes on before our eyes
Present each moment; for behold whenever
The sun’s light and the rays, let in, pour down
Across dark halls of houses: thou wilt see
The many mites in many a manner mixed
Amid a void in the very light of the rays,
And battling on, as in eternal strife,
And in battalions contending without halt,
In meetings, partings, harried up and down.
From this thou mayest conjecture of what sort
The ceaseless tossing of primordial seeds
Amid the mightier void--at least so far
As small affair can for a vaster serve,
And by example put thee on the spoor
Of knowledge. For this reason too 'tis fit
Thou turn thy mind the more unto these bodies
Which here are witnessed tumbling in the light:
Namely, because such tumblings are a sign
That motions also of the primal stuff
Secret and viewless lurk beneath, behind.
For thou wilt mark here many a speck, impelled
By viewless blows, to change its little course,
And beaten backwards to return again,
Hither and thither in all directions round.

Atomic Forms and Their Combinations

Easy enough by thought of mind to solve
Why fires of lightning more can penetrate
Than those of ours from pitch-pine born on earth.
For thou canst say lightning’s celestial fire,
So subtle, is formed of figures finer far,
And passes thus through holes which this our fire,
Born from the wood, created from the pine,
Cannot. Again, light passes through the horn
On the lantern’s side, while rain is dashed away.
And why? --unless those bodies of light should be
Finer than those of water’s genial showers.
We see how quickly through a colander
The wines will flow; how, on the other hand,
The sluggish olive-oil delays: no doubt,
Because 'tis wrought of elements more large,
Or else more crook'd and intertangled. Thus
It comes that the primordials cannot be
So suddenly sundered one from other, and seep,
One through each several hole of anything.
And note, besides, that liquor of honey or milk
Yields in the mouth agreeable taste to tongue,
Whilst nauseous wormwood, pungent centaury,
With their foul flavours set the lips awry;
Thus simple 'tis to see that whatsoever
Can touch the senses pleasingly are made
Of smooth and rounded elements, whilst those
Which seem the bitter and the sharp, are held
Entwined by elements more crook'd, and so
Are wont to tear ways into our senses,
And rend our body as they enter in.

And, again,
What seems to us the hardened and condensed
Must be of atoms among themselves more hooked,
Be held compacted deep within, as 'twere
By branch-like atoms--of which sort the chief
Are diamond stones, despisers of all blows,
And stalwart flint and strength of solid iron,
And brazen bars, which, budging hard in locks,
Do grate and scream. But what are liquid, formed
Of fluid body, they indeed must be
Of elements more smooth and round--because
Their globules severally will not cohere:
To suck the poppy-seeds from palm of hand
Is quite as easy as drinking water down,
And they, once struck, roll like unto the same.
But that thou seest among the things that flow
Some bitter, as the brine of ocean is,
Is not the least a marvel ...
For since 'tis fluid, smooth its atoms are
and round, with painful rough ones mixed therein;
Yet need not these be held together hooked:
In fact, though rough, they 're globular besides,
Able at once to roll, and rasp the sense.
And that the more thou mayst believe me here,
That with smooth elements are mixed the rough
(Whence Neptune's salt astringent body comes),
There is a means to separate the twain,
And thereupon dividedly to see
How the sweet water, after filtering through
So often underground, flows freshened forth
Into some hollow; for it leaves above
The primal germs of nauseating brine,
Since cling the rough more readily in earth.