DE NATURA RERUM LIBRI SEX
OF THE
NATURE of THINGS,
IN SIX BOOKS.

Illustrated with
Proper and Useful Notes.
Adorned with COPPER-PLATES,
Curiously Engraved

By GUERNIER, and others.

Carminè sublimis tunc sunt peritura Lucretī
Exitio Terras cum dabít una Dies. OVID.

IN TWO VOLUMES.

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MDCCXLIII.
THE PREFACE.

THE only Translation in English of this Poem was executed many Years ago by Mr. Creech: The World was pleased with the Performance, and received it with the Applause it deserved; they saw an Author exceedingly crabbed and abstruse, delightfully opened, set off with great Learning, and sweeten'd with the Charms of Poetry. An Author (as Quintilian allows him) elegant in his kind, curious and exact in his Images, happy in disposing his Materials, flowing even to Satiety in Instances of a brisk and ready Wit, pointed in his Satire, severe in Reflections,
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Reflections, grave in Precepts, quick and vivacious in his Discourses, and every way fitted for his bold Attempt.

These Excellencies made him extremely difficult to be followed. The learned Casaubon declares it impossible; Mr. Evelyn, who translated the first Book, found it a very discouraging Task, and left off. He says himself,

—Persuaded that there was rich Ore,
I boldly launch'd, and would new Worlds explore;
Deep Mines I saw, and hidden Wealth to lie
In Rocky Entrails, and Sierra's high.
I saw a fruitful Soil, by none yet trod,
Reserv'd for Heroes, or some Demi-God;
And urg'd my Fortune on;
Till rugged Billows, and a dangerous Coast,
My vent'rous Bark and rash Attempt had cost;
When landing, unknown Paths, and hard Access
Made me despond of pre-conceiv'd Success;

I
The P R E F A C E.

I turn'd my Prow, and the Discovery made,
But was too weak, too poor myself to trade,
Much less to make a Conquest;—

And I believe any one who will be pleased to obligre the World with another, and more correct Version, will be sufficiently convinced of the Difficulty.

The Matter of this Poem must be confessed to be rugged, subtle, and stubborn; and every Composition of this kind is like a Landscape, where craggy Mountains and broken Walls are intermixed with fair Meadows and smooth Streams. Our Language (as Sir Henry Wotton observes) runs out into Froth and Bubble, is copious in Complement, and in Love-Expressions, but very narrow and barren in Terms of Art, and Phrases suited to Philosophy; and those Technical Words we have, move coarsely and cloudily in Verse. For these Reasons, the Poetical Translation of Lucretius is often more perplexed and harsh than the Original; it is, in many Places, a wide and rambling Para-

A 3 phrase;
phrase; in others Mr. Creech contracts and curtails his Author, and is frequently guilty of Omissions for many Lines together, tho' his Numbers flow sweetly as he goes, and charm you irresistibly. This is no wonder; for the Poet he undertook is not to be confined and shackled by the Rules of Rhyme; his Verse is nearest, and runs more naturally into Prose than any other, Juvenal and Horace only excepted, among all the Classicks. I have endeavoured (because disencumber'd from the Fetters of Poetry) faithfully to disclose his Meaning in his own Terms, and to shew him whole and entire; I have followed the different Readings and Explications of the best Expositors, but whether agreeable to the Mind of the Author or no, Comparison only can discover.

And here I would have it be understood, that I translate Lucretius only as a Classick Writer of the first Rank, and one of the Venerable Fathers of Latin Poetry, without thinking myself accountable for his Principles, or justifying his System; and whoever apprehends the Design of this Work, in any other View, is a Person of narrow
narrow and flinted Conceptions; he is a precise Fanatick in the Republick of Letters, and a secret and ignorant Enemy to Human Learning. It would make strange Havock in the Learned World, if a Translator who renders a Pagan Author, or a Tutor that explains an old Classick to his Pupils, should be judged to cultivate and defend all the Folly and Impiety of the Heathen Mythology: This would soon banish those great Founders of Knowledge and polite Literature out of all Methods of Education, and introduce Barbarism and Ignorance equal to that of the Goths and Vandals, upon the Ruins of every thing that is now called Noble, Generous and Instructive, by the wisest and the most sensible Part of Mankind.

Besides, Books that treat of Subjects naturally so obscure and intricate as are many of those of which Lucretius disputes, cannot be turned into our Language in such a manner, as by a bare Translation only to make them intelligible to a Reader merely English, and that has no Knowledge of the Languages in which the Originals were com-
posed: for the Terms, tho' dark and difficult, must necessarily be retained, and by Consequence their Force cannot be apprehended by Persons of vulgar Abilities, and of low Learning.

But if I should still fall under Censure for bestowing so much Time and Labour upon an impious Poet; upon Lucretius, who believes and endeavours to prove the Mortality and Corporicity of the human Soul, who denies a future State, and laughs at Providence, who defends the Atheistical Hypothesis of Democritus and Epicurus, concerning the Indivisible Principles, and the Nature of Things: In Answer to this heavy Charge, not to mention, that for the same Reason we ought to banish from our Studies the most celebrated Authors of Antiquity, since their Writings are in many Places profane, impious, fabulous, false and ridiculous; so that all our Poets, Orators, Historians, and Philosophers must be avoided and thrown away as Debauchers of Youth, and Corrupters of Manners, if their Writings were once to be tried by the Standard of Faith, and the Doctrines of Christianity: Not
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Not to insist upon this, I will boldly venture to say, that whatever Propositions Lucretius advances contrary to our Religion are so visibly and notoriously false, and consequently so easy to be answered, that they cannot shake or stagger any one's Faith that can give a Reason for his Belief. What Danger can any Man apprehend, while he reads that ridiculous Doctrine of the Epicurean Philosophers, concerning their Atoms, or minute indivisible Corpuscles, which they held to be the first Principles of all Things? An Opinion so absurd, that only to mention it is to confute it. When the Poet thinks he has fully demonstrated the Corporeality of the Human Soul, and brings no less than six and twenty Arguments to prove its Mortality, upon full Consideration they appear of so little Force, and so obvious to be confuted, that so far from confounding a Christian's Faith, no Man, but of ordinary Capacity, can, upon so slender and unconvincing Proofs, believe, if he would, that the Soul dies with the Body; nor are his Arguments, by which he labours to overthrow the Belief of a Divine Providence, and to wrest the Power of Creation out of the Hands
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Hands of Omnipotence, more cogent or persuasive. And what Christian will not be pleased to observe, that not even the most piercing Wit of Lucretius has been able to advance any Thing solid against the Power of that infinite God whom he adores; especially considering, if any such Impieties could have been defended, he was certainly capable of defending them.

—Si Pergama dextrâ
Defendi possent certè hâc defensa fuissent. 

VIRG.

Nor that we are to suppose, that whatever Lucretius writ was impious, false or ridiculous; so far from that, many excellent Things are contained in his Poem, many that deserve to be well read and remember'd by the best of Christians. How excellently does he declaim against Ambition, Injustice and Cruelty? against Superstition, and the Fear of Death? against Avarice, Luxury, and Lust? and the disorder'd Passions of the Mind, and dishonest Pleasures of the Body? Is he not ever exhorting his Memmius to Sobriety, Temperance, Chastity,
ftity, and Magnanimity? Insomuch, that what Diogenes writes of Epicurus seems to be true, that he was falsely accused of indulging himself too much in Pleasure, and that it was a mere Calumny to wrest to a wrong Sense the Meaning of that Philosopher, and to interpret what he said of the Tranquillity of the Mind, as if it had been spoken of the sensual Delights of the Body. Galen represents this Philosopher as a Person of consummate Virtue and Continence, that exclaimed constantly against the Use of Venereal Actions, that neglected the Advantages of Life, and contemned all Daintiness and Excess, in Eating, Drinking and Apparel, and would often say, That Bread and Water in time of Want afforded the greatest Pleasure. Thus lived Epicurus, whose very Name nevertheless has, for many Ages, been used as a Proverb, to mark out an atheistical, voluptuous Wretch, addicted to all manner of Sensuality. Thus too lived his Followers, who nevertheless are called impious Libertines, and represented as a Herd of Swine, indulging themselves in Pleasure, and wallowing in all manner of Impurities.

—Epicuri de grege Porci. Hor.
I shall conclude upon this Occasion, with the Character of Lucretius, and his excellent Poem, given by Dionysius Lambinus, in his Epistle Dedicatory to Charles IX. the most Christian King.

The Poem of Lucretius, tho' he advances in it some Opinions that are repugnant to our Religion, is nevertheless a Poem, nay, and a beautiful noble Poem too, distinguished, illustrated and adorned with all the Brightness of Wit and Fancy. What tho' Epicurus and Lucretius were impious, are we who read them therefore impious too? How many Assertions are there in this Poem that are agreeable to the Opinions and Maxims of other Philosophers? How many probable? how many excellent, and almost Divine? These let us lay hold on, these let us seize, these let us approve of. — Besides, are we so credulous as to believe, that what Assertions soever all manner of Writers have left recorded in their Works, are as true, as if they had been pronounced from the Oracle of Apollo? And since we daily read many Things that are
are fabulous, incredible and false, either to
give some Respite to our Minds, or to make
us the more willingly acquiesce in, and the
more constantly to adhere to such as are in-
disputably true, what reason is there that
we should contemn Lucretius, a most ele-
gant and beautiful Poet, the most polite,
and the most ancient of all the Latin Wri-
ters, from whom Virgil and Horace have
in many Places borrowed not half, but
whole Verses? He, when he disputes of the
indivisible Corpuscles or first Principles of
Things, of their Motion, and of their va-
rious Figuration, of the Void, of the Im-
ages, ortenuous Membranes that fly off from
the Surface of all Bodies, of the Nature of
the Mind and Soul, of the Rising and Set-
ting of the Planets, of the Eclipse of the
Sun and Moon, of the Nature of Light-
ing, of the Rainbow, of the Causes of
Diseases, and of many other Things, is
learned, witty, judicious and elegant. In
the Introductions to his Books, in his Com-
parisons, in his Examples, in his Disputa-
tions against the Fear of Death, concerning
the Inconveniencies and the Harms of Love,
of Sleep, and of Dreams, he is copious,
discreet,
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discreet, eloquent, knowing and sublime; we not only read Homer, but even get him by heart, because under the Veil of Fables, partly obscene and partly absurd, he has in a manner included the Knowledge of all natural and human Things. Shall we not then hear Lucretius, who, without the Disguise of Fables, and such Trifles, not truly indeed, nor piously, but plainly and openly, and as an Epicurean, ingeniously, wittily and learnedly, and in the most correct and purest of Styles, disputes of the Principles, and Causes of Things, of the Universe, of the Parts of the World, of a happy Life, and of Things Celestial and Terrestrial? And tho' in many Places he dissents from Plato, tho' he advances many Assertions that are repugnant to our Religion, we ought not therefore to despise and set at nought those Opinions of his, in which not only the ancient Philosophers, but we, who profess Christianity, agree with him. How admirably does he dispute of the restraining of Pleasures, of the bridling of Passions, and of the attaining Tranquility of Mind? How wittily does he rebuke and confute those who affirm that nothing can
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'can be perceived, and nothing known? and
'who say that the Senses are fallacious? How
'fully he defends the Certainty of Sense?
'How beautiful are his Descriptions? How
'graceful, as the Greeks call them, are his
'Episodes? How fine are his Descriptions of
'Colours, of Mirrors, of the Loadstone,
'and of the Averni? How serious and aw-
'ful are his Exhortations to live continently,
'justly, temperately, and innocently? What
'shall we say of his Diction, than which no-
'thing can be said or imagined more pure,
'more correct, more clear, or more elegant.
'I make not the least Scruple to affirm, that
'in all the Latin Tongue, no Author speaks
'Latin better than Lucretius, and that the
'Diction, neither of Cicero, nor of Caesar,
'is more pure.'

The Notes that attend this Translation
are sufficient, I think, to explain the Text
to those, who are properly qualified to read
this Work; and to such who are not so, a
more copious and particular Comment
could be of no use.

THE
THE LIFE OF

LUcretius.

We have few Materials left from whence to collect the proper Circumstances that relate to the Life of Lucretius; we are assured by his own Testimony, that he was a Roman, and born at Rome: His very Name directs us to the noble and ancient Family of the Lucretii, which being divided into many Branches,
The Life of Lucretius,

comprehended under it, the Tricipetini, the Cinna, the Vespillonés, the Triones, the Offelli, and the Galli, and gave to Rome many Consuls, Tribunes and Prætors, who were the great Supports and Ornaments of the Commonwealth.

He was born, according to the Chronicle of Eusebius, about the second Year of the hundred and seventy first Olympiad, in the Consulship of Lucius Licinius Crassus, and Quintus Mutius Scaevola, about the six hundred and fifty eighth Year of Rome, twelve Years after Cicero. His Name was Titus Lucretius Carus; Carus was a Roman Surname, of which Ovid and many others make mention; but we nowhere find how it came to be given to Lucretius. It is not improbable it was conferred upon him either on account of his excellent and sprightly Wit, his Affability and Sweetness of Temper and Manners, or for some other like endearing Qualities, that render'd him agreeable to those with whom he conversed. He was sent young to Athens, where at that time the Epicurean Philosophy was in great Reputation. He studied under Zeno,
who had the Direction of the Gardens at that time, and was the Honour of the Epicurean Sect. Phædrus was another of his Masters, whom Cicero mentions as a Person of the greatest Humanity. These were the Preceptors of Lucretius, as they were likewise of Pomponius Atticus, Memmius, Cassius, and many others, who in that Age render'd themselves very illustrious in the Republick of Rome. How he spent his Time at Athens, how studiously he improved it, let his Poem be Witness. That he fitted himself for the best Company, is evident by what Cornelius Nepos tells us of the great Intimacy between him, Pomponius Atticus, and Memmius: And no doubt but he was intimate likewise with Tully and his Brother, who make such honourable Mention of him. If we look into his Morals, we may discover him to be a Man suitable to the Epicurean Principles, dissolved in Ease and Pleasure, flying publick Employments as a Derogation to Wisdom, and a Disturber of Peace and Quietness, and avoiding those distracting Cares which he imagined would make Heaven itself uneasy.
The Accounts that remain of this Poet stop short here, and no more is to be found concerning him till we come to his Death; yet it is difficult to find in what manner he died, nor is it much easier to determine in what Year of his Life his Death happened. Some make him die on the very Day Virgil was born, but this is an ingenious Fiction, founded only upon this, that Virgil assumed the Toga Virilis on the same Day that Lucretius died.

The Chronicle of Eusebius observes, that he died by his own Hands in the forty fourth Year of his Age, being made distracted by a Philtre, which either his Mistress or his Wife Lucilia (for some call her, tho' without Authority) in a Fit of Jealousy had given him; not with a Design to deprive him of his Senses, or to take away his Life, but only to increase the Passion of his Love. Donatus, or whoever was the Author of the Life of Virgil, that goes under his Name, writes, that he died three Years before, when Pompey the Great and M. Licinius Crassus were both of them the second time Consuls.
Others, who allow that having lost his Senses, he laid violent Hands on his own Life, yet place his Death in the twenty sixth Year of his Age, and believe that his Madness proceeded from the Cares and Melancholy that oppressed him on account of the Banishment of his beloved Memmius; to which others again add likewise another Cause, the fatal Calamities under which his Country then laboured. And indeed it is certain, that Lucretius, a few Years before his Death, was an Eye-witness of the wild Administration of Affairs in the Days of Clodius and Catiline, who gave such a Blow to the Republick of Rome, as not long after occasioned its total Subversion.

It is wonderful that this admirable Poem of Lucretius should be composed in the time of his Distraction. His six Books of his Epicurean Philosophy, says Eusebius, were written in his lucid Intervals, when the Strength of Nature had thrown off all the disturbing Particles, and his Mind, as it is observed of Madmen, was sprightly and vigorous. Then, in a Poetical Rapture, he could fly with his Epicurus beyond the flaming
ming Limits of this World, frame and dissolve Seas and Heavens in an instant, and by some unusual Sallies be the strongest Argument of his own Opinion; for it seems impossible that some Things which he delivers should proceed from Reason and Judgment, or from any other Cause but Chance and unthinking Fortune.

After his Death, Cicero, as Eusebius witnesses, revised and corrected his Writings. Lambinus contradicts this, but the Arguments he brings against the Assertion of Eusebius are but weak and of small force.
A New Translation of

T. Lucretius Carus,

Of the Nature of Things.

Vol. I.
THE
ARGUMENT
OF THE
FIRST BOOK.

UCRETIIUS has disposed his Poem in an excellent Method, and Order shines throughout the whole. He begins with an Invocation to Venus, the common natural Appetite to Procreation, and gives her all her Titles, as if really he expected some Assistance from her. He then dedicates to Memmius his Books of the Nature of Things, and endeavours to vindicate his Doctrines from the Charge of Impiety, and briefly lays down the Arguments of This and the following Books. He enters upon his Subject, and labours strenuously, That nothing can proceed from nothing, and that nothing can be reduced into nothing. He proceeds to prove that there are some little Bodies which, tho' imperceptible to the Eye, may be conceived by the Mind, of which all Beings are made: To these Corpuscles he subjoins a void or empty Space. He asserts, that there is nothing in Nature besides Body and Void; and that all Things else, such as Weight, Heat, Poverty, War, &c. are no more than certain Conjunções or Events, Properties or Accidents of Body and Space. That these first Principles are perfectly solid, and by consequence indivisible, they are Lasts (for Body cannot be infinitely divided) and
The Argument.

and Eternal. He then refutes Heraclitus, who made Fire the Principle of all Things, and others who laid down that all Things proceeded from Air, Earth, or Water. He shews against Empedocles, that Things are not composed of the four Elements. He contradicts Anaxagoras; and, in the last place, employs a long Disputation to prove the Universe, which consists of Body and Void, to be infinite. He is very copious in his Arguments against the Stoicks, who held a Centre in the infinite Universe, down to which all heavy Things are continually striving, while the light work upward of their own accord; and describes the Opinions of Epicurus with a great deal of Eloquence. He banishes the Antipodes, and soothes with his Arguments the Imagination of Man, which delights to be led away into an Infinite, and never yet fixed any Bounds to Space, nor will ever dare to do so.
T. Lucretii Cari

DE

RERUM NATURA

LIBER PRIMUS.

ÆNEADUM genetrix, hominum divumque voluptas,
Alma Venus, caeli subter labentia signa
Quae mare navigerum, quae terras frugiferenteis
Concelebras: per Te quoniam genus omne animantum
Concipitur, visitaque exortum lumina solis:
Te, Dea, te fugiunt venti, te nubila caeli,
Adventumque tuum; tibi suaveis daemona tellus
Summittit flores, tibi rident aquaqua ponti,
Placatumque nitet diffuso lumine caelum.
gives her all her Titles; yet, at the same time, shows her bitter Reflections upon the then fashionable Devotion. He styles her Mother of Rome, because the Romans deduced their Origin from Æneas, who was the Son of Venus by Anchises.

B 3 when
Lucretius Carus, OF THE NATURE of THINGS. THE FIRST BOOK

Mother of Rome, Delight of Men and Gods, Sweet Venus; who with vital Power doth fill the Sea bearing the Ships, the fruitful Earth, all Things beneath the rolling Signs of Heaven; for 'tis by Thee Creatures of every kind conceive, rise into Life, and view the Sun's bright Beams. Thee Goddess, Thee the Winds avoid; the Clouds fly Thee, and thy Approach; with various Art the Earth for Thee affords her sweetest Flowers; for Thee the Sea's rough Waves put on their Smiles, and the smooth Sky shines with diffused Light. For

Lucretius as a Poet conforms to the Rule of his Art, and begins with an Invocation to Venus, that is the common natural Appetite to Procreation; which nevertheless he treats as a Goddess, as if he really expected Assistance from her, and gives her all her Titles; yet, at the same time, throws out bitter Reflections upon the then fashionable Devotion. He styles her Mother of Rome, because the Romans deduced their Origin from Æneas, who was the Son of Venus by Anchises.
T. Lucretii L i b. I.

Nam simul ac species patefacta \*st verna diei, 
Et referata viget genitalis aura FavonIs;
Aerius primum volucre te, Diva, tuumque
Significant initum percssae corda tua vi:
Inde fera pecudes persullant pabula \*eta,
Et rapidos tranant amneis; ita capta lepore,
Illecebrisque tuis omnis natura animantum
Te sequitur cupide, quod quamque inducere pergis:
Denique per maria, \* monteis, fluviisque rapaceis,
Frundiferasque domos avium, camposque virenteis,
Omnibus incutiens blandum per pe\*toare amorem,
Efficis, ut cupide generatis ; secla propagent.
Quae quoniam rerum Naturam sola gubernas,
Nec fine Te quicquam \*ias in luminis oras
Exoritur, neque fit laetum, nec amabile quicquam;
Te sociam studeo scribundis versibus esse,
Quos ego de Rerum Natura pangere conor
Memmiae nostrro: quem tu, Dea, tempore in omni
Omnibus ornatum voluisti excellere rebus.
Quo magis aeternum da dictis, Diva, lepore:
Effice ut interea fera \*anera militiai

Per
when the buxom Spring leads on the Year, and genial Gales of Western Winds blow fresh, unlock'd from Winter's Cold, the airy Birds first feel Thee Goddes, and express thy Power; thy active Flame strikes through their very Souls. And then the savage Beasts, with wanton Play, frisk o'er the cheerful Fields, and swim the rapid Streams. So pleased with thy sweetness, so transported by thy soft Charms, all living Nature strives, with sharp Desire, to follow Thee her Guide, where Thou art pleas'd to lead. In short, thy Power inspiring every Breast with tender Love, drives every Creature on with eager Heat, in Seas, in Mountains, and in swiftest Floods, in leafy Fores, and in verdant Plains, to propagate their Kind from Age to Age.

Since Thou alone dost govern Nature's Laws, and nothing without Thee can rise to Light, without Thee nothing can look gay or lovely; I beg Thee a Companion to my Lays, which, now I sing of Nature, I devote to my dear \textsuperscript{b} Memmius, whom Thou art ever pleased, sweet Goddes, to adorn with every Grace; for him, kind Deity, inspire my Song, and give immortal Beauty to my Verse. Mean time, the bloody Tumults of the \textsuperscript{c} War by

\textsuperscript{b} This Memmius, to whom Lucretius inscribes his Poem, travelled with him to Athens, where they studied Philosophy together; he was derived from the noble Family of the Memmi, who claimed their Extraction from the Trojans. He arrived at the Dignity of Praetor, and obtained Bithynia for his Province, but was soon recalled, being accused by Caesar of Male-administration. Yet not many Years after his Return to Rome, he came to be Tribune of the People, and in a little time fould Candidate for the Consulship; of which he not only failed, but being accused of Bribery, was, tho' Cicero pleaded in his Defence, convicted of it, and banished into Greece, where he died in Exile.

\textsuperscript{c} The Poet alludes to the distracted State of Affairs under the Administration of Clodius and Catiline, which gave such a Blow to the Republick of Rome, as occasioned its total Subversion, which happened not long after.
Per maria ac terras omnes sopita quiescunt.
Nam Tu sola potes tranquilla pace juvare
Mortaleis, quoniam bella fera manera Mavors
Armipotens regit, in gremium qui sepe tuum se
Rejicit, aterno devinentus volnere amoris;
Atque ita suspiciens tereti cervice reposta
Pascit amore avidos inkians in te, Dea, visus:
Eque tuo pendei resupini spiritus ore.
Hunc tu, Diva, tuo recubantem corpore sancto
Circumfusa super, suaveis ex ore loquelas
Funde, petens placidam Romanis Incluta, pacem.
Nam neque Nos agere hoc patriai tempore iniqua
Possimus aequo animo: neque MemmiI clara propago
Talibus in rebus communi deesse saluti.
Quod superest, vacuas aureis mibi Memmiada, et te
Semotum a curis adhibe veram ad rationem,
Nec mea dona tibi studio disposita fidelis,
Intelleci prior quam sint, contempta relinquas.
Nam tibi de summa Coeli ratione, Deumque,
Differere incipiam, & rerum primordia pandam:
Unde omnes Natura creet res, auctet, aliaque:
Quae eadem rursum Natura perempta resolvat:
Quae nos Materiem, & genitalia Corpora rebus
Reddunda in ratione vocare; & Semina rerum
Appellare suemus, & haec eadem usurpare
Corpora Prima, quod ex illis sunt omnia primis.
Omnis enim per se Divum natura necesse est
Immortali ævo summa cum pace fruatur.
Book I. Of the Nature of Things.

Sea and Land compose, and lay asleep. For Thou alone Mankind with quiet Peace canst bless; because 'tis Mars Armipotent that rules the bloody Tumults of the War, and He by everlasting Pains of Love bound fast, tastes in thy Lap most sweet Repose, turns back his smooth long Neck, and views thy Charms, and greedily sucks Love at both his Eyes. Supinely as he refts his very Soul hangs on thy Lips; this God dissolv'd in Eafe, in the soft Moments when thy heavenly Limbs cling round him, with melting Eloquence cares, great Goddes, and implore a Peace for Rome.

For neither can I write with cheerful Strains, in Times so sad, nor can the noble Houfe of Memmius desert the common Good in fuch Distreß of Things. The Hours you spare apply with close Attention to my Verse, and free from Care receive true Reafon's Rules; nor these my Gifts, prepared with faithful Pains, reject with Scorn before they are understood. For I begin to write of lofty Themes, of Gods, and of the Motions of the Sky, the Rise of Things, how all Things Nature forms, and how they grow, and to Perfection rife, and into what, by the fame Nature's Laws, thofe Things resolve and die; which as I write I call by various Names; sometimes 'tis Matter, or the first Principles or Seeds of Things, or first of Bodies, whence all else proceed.

For the whole Nature of the Gods must spend an Immortality in foftest Peace, removed from our Affairs,

Here Lucretius begins his Impiety; had he contented himfelf only with deriding the superflitious Devotion of the Age he lived in, and not proposed Principles of Irreligion, drawn from the Happinefs of the Deity, which he places in fupine Idlenefs and Eafe, he might have been read with much Satisfaction, as an excellent Satirift againft the Heathen Worship; for he severely swings the mad Zeal of Men-sacrificers, tho' perhaps he has not produced a true Inftance in Iphigenia; yet Hi
Semota ab nostris rebus, sejunctaque longe
Nam privata dolore omni, privata periclis,
Ipsa suis pollens opibus, nihil indiga nostri,
Nec bene prōmeritis capitur, nec tangitur ira.

Humana ante oculos fædè cum vita jaceret
In terris oppressa gravi sub Religione,
Quæ caput à cæli regionibus ostendebat,
Horribili super aspeetu mortalibus insans;

Primus Graïus homomortalesis tollere contra
Est oculos ausus, primusque obfiterre contra:
Quem nec fama Deum, nec fulmina, nec mimitanti
Murmure compressit Cælum, sed eo magis acrem
Virtutem irritât animi, constringere ut ætea
Naturæ primus portarum claustra cupiret.
Ergo vivida vis animi pervicit, & extra
Procescit longe flammantia mænia Mundi;

Atque omne immensum peragravit mente, animoque:
Unde refert nobis victor quid possit oriri,
Quid nequeat; finita poteëtas demique quoque
Quanam sit ratione, atque alte terminus bærens.

Quare Relligio pedibus subjesta vicissim
Obteritur, nos eæquat victoria Cælo.
Book I. Of the Nature of Things.

Affairs, and separated by Distance infinite; from Sorrow free, secure from Danger; in its own Happiness sufficient, and nought of ours can want, is neither pleased with Good, nor vexed with Ill.

Indeed Mankind, in wretched Bondage held, lay groveling on the ground, galled with the Yoke of what is called Religion; from the Sky this Tyrant shewed her Head, and with grim Looks hung over us poor Mortals here below; until a "Man of Greece with steady Eyes dared look her in the Face, and first opposed her Power. Him not the Fame of Gods nor Thunder's Roar kept back, nor threatening Tumults of the Sky; but still the more they roused the active Virtue of his aspiring Soul, as he pressed forward first to break thro' Nature's scanty Bounds. His Mind's quick Force prevailed; and so he passed by far the flaming Limits of this World, and wander'd with his comprehensive Soul o'er all the mighty Space; from thence returned triumphant; told us what Things may have a Being, and what cannot; and how a finite Power is fixed to each, a Bound it cannot break; and so Religion, which we feared before, by him subdued, we tread upon in turn; his Conquest makes us equal to the Gods.

Story, both sacred and profane, gives us many sad Relations of such Cruelties: but since he declares that the Design of his writing is to free Men from the Fear of that Heavenly Tyrant Providence, &c. he must be read with some Caution, tho' his Arguments, in general, are weak, and, I think, can make but little Impression.

He attempts the Praise of Epicurus of Athens, the Son of Neocles, who, he says, first opposed himself to all these Terrors with undaunted Courage; and, by looking into the inmost Recesses of Nature, discovered, as he thought, that all Things were made without the Care and Workmanship of the Gods, and therefore overthrew the Foundation of all Religion.

But
ILLUD IN HIS REBUS VEROER, NE FOERTE REARIS

Impia te rationis inire elementa, viamque
Endogredi sceleris : Quod contra, sepius olim
Relligio peperit scelerosa atque impia faula,
Aulide quo pae so Triviae virginis aram

Iphianassa ai turparrunt sanguine fade
Duores Danaum, delecti, prima virorum.
Cui simul infula virgineos circumdata comptus
Ex utraque pari malorum parte profusa f, 
Et maestum simul ante aras adiare parentem

Sen sit, & hunc propter ferrum celare ministros ;
Aspefuque suo lacrymas effundere civeis :
Muta metu terram genibus summissa petebat :
Nec misero prodesse in tali tempore quibat,
Quod Patrio princeps donarat nomine Regem.

Nam sublata virum manibus tremabundaque ad aras
Dedueta f, non ut, solenni more sacrorum
Perfesto, posset claro comitari Hymeneo :
Sed casta incceste nubendi tempore in ipso
Hofia consideret maestatu maesta parentis,
Exitus ut classi felix, faustusque daretur
Tantum Relligio potuit suadere malorum.

Tutemet a nobis jam quovis tempore Vatum
Terriloquis viitus dietis desciscere quar es ?
Quippe etenim quam multa tibi jam fingere possim
Somnia, que vita rationes vetere pos sint,
Fortunafque tuas omnes turbare timor e.
Et merito, nam si certam finem esse viderent
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But in these Things I fear you will suspect you are learning impious Rudiments of Reason, and entering in a Road of Wickedness. So far from this, reflect what bad flagitious Deeds Religion has produced; by her inspired the Grecian Chiefs, the First of Men, at 'Aulis, Diana's Altar shamefully defiled with Iphigenia's Blood; her Virgin Hair a Fillet bound, which hung in equal Length on either side her Face; she saw her Father, cover'd with Sorrow, stand before the Altar; for pity to his Grief the butchering Priests concealed the Knife; the City at the sight overflowed with Tears; the Virgin, dumb with Fear, fell low upon her Knees on the hard Earth; in vain the wretched Princess in Distress pleaded that the first gave the honoured Name of Father to the King; but hurried off, and dragged by wicked Hands, she trembling stood before the Altar: Alas! not as a Virgin, the solemn Forms being duly done, is drawn with pleasing Force to Hymen's noble Rites, but a chaste Maid, just ripe for nuptial Joy, falls a sad Victim by a Father's Hand, only to beg a kind propitious Gale for Grecian Ships; such Scenes of Villany Religion could inspire!

But still I fear your Caution will dispute the Maxims I lay down, who all your Life have trembled at the Poets frightful Tales. Alas! I could even-now invent such Dreams as would pervert the steadiest Rules of Reason, and make your Fortunes tremble to the Bottom. No wonder! but if Men were once convinced that Death

* The Sacrifice of Iphigenia is well known; for in these Notes I shall give no Account of the common Stories and Mythology of the Heathens, to be met with in every Dictionary: She was offer'd to Diana upon her Altar at Aulis, a Port of Boeotia on the River Euphrus, her own Father assisting at the Sacrifice.
Ærumnarum homines, aliqua ratione valent.
Relligionibus, atque minis obsftere Vatum:
Nunc ratio nulla est restandi, nulla facultas,
Æternas quoniam pænas in morte timendum.
Ignoratur enim quæ sit natura animai,
Nata sunt, an contra, nascentibus insinuetur,
Et simul intereat nobiscum morte dirempta,
An tenebras Orci visat, vasaque lacunas,
An pecudes alias divinitus insinuet se,
Ennius ut nosser cecinit, qui primus amæno
Detulit ex Helicone perenni fronde coronam,
Per genteis Italas hominum quæ clara clueret,
Et si praeterea tamen esse Acherusia templo
Ennius æternis exponit versibus, edens:
Quo neque permanent animæ, neque corpora nostra;
Sed quaedam simulacra modis pallentia miris:
Unde sibi exortam semper-florentis Homeri
Commemorat speciem, lacrmas & fundere falsas
Capisse, & rerum naturam expandere dictis.
Quapropter bene, cum, Superis de rebus habenda
Nobis est ratio, Solis Lunæque meatus
Qua sian ratione; & qua vi quæque genantur.

Et
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was the sure End of all their Pains, they might with Reason then resist the Force of all Religion, and contemn the Threats of Poets. Now we have no Sense, no Power, to strive against this Prejudice, because we fear a Scene of endless Torments after Death.

And yet the Nature of the Soul we know not, whether formed with the Body, or at the Birth infused; and then, by Death cut off, she perishes as Bodies do; or whether she descends to the dark Caves and dreadful Lakes of Hell; or, after Death, inspired with heavenly Instinct, she retires into the Brutes, as our Great Ennius sung, who first a Crown of Laurel ever green, brought down from Helicon; which gained him Fame through all the Italian Coasts. And yet this Man, in never-dying Numbers, describes the stately Palaces of Acheron, where nor our Souls or Bodies ever come, but certain Spectres strange and wond'rous pale; from whence he tells how Homer's ever celebrated Shade appeared, and how his Eyes began to flow with briny Tears, as in immortal Verse he sung of Nature and her secret Laws.

Wherefore, I shall not only accurately write of Things above, as how the Sun and Moon their

5 A Latin Poet, who lived about a hundred Years before Lucretius; he was a Pythagorean, and held the Doctrine of the Transmigration of Souls; he affirmed that the Soul of Homer was in his Body; but that he might not injure Pluto, he bequeathed to the infernal Mansions, not the Souls, nor the Bodies, but the Ghosts, which the Ancients held to be a third Nature, of which, together with Body and Soul, the whole Man consists. These Spectres and Shadows of the Dead, appear, or seem to appear, when we are asleep, or awake, or sick, and terrify our Minds.

6 Ennius used to say, that Homer's Ghost appeared to him from Hell, and bitterly weeping, diuidove'd to him the Nature of Things; for which Cicero sufficiently laughs at him, in his second Book of Academick Questions.
In terris: tum, cum primis, ratione sagaci
Unde Anima atque Animi constet natura, videndum:
Et quae res nobis vigilantibus obvia menteis
Terrificet, morbo affectis, somneque sepultis,
Cernere uti videamus eos, audireque coram,
Morte obita quorum tellus amplectitur ossa:
Nec me animi fallit, Graëorum obscura reperta
Difficile inlustrare Latinis versibus esse,
(Multa novis verbis præsertim cum sit agendum,)
Propter egestatem linguæ, & rerum novitatem;
Sed tua me Virtus tamen, & speraæ voluptas
Suavis Amicitia, quemvis perferre laborem
Suadet, & inducit noeteis vigilare serenas,
Quærentem dictis quibus, & quo carmine demum
Clara tua præsim præpandere lumina menti,
Res quibus occultas penitus conviãere poscis.
Hunc igitur terrorem animi, tenebrasque necesse fuisse
Non radii Solis, neque lucida tela Diei
Discutiant, sed Naturæ species, Ratioque:
Principium binc cujus nobis exordia sumet,
Nullam rem e nihilo gigni divinitus
unquam.
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Courses run, and by what Power Beings in Earth and Heaven are formed, but chiefly search with nicest Care into the Soul and what her Nature is. What 'tis that meets our wakeful Eyes, and frights the Mind; and how, by Sickness or by Sleep oppressed, we think we see, or hear the Voice of those who died long since, whose mould'ring Bones rot in the cold Embraces of the Grave.

I know 'tis hard to explain in Latin Verse, the dark and mystic Notions of the Greeks, for I have Things to say require new Words; because the Tongue is poor, the Subject new. But your Virtue, and the Pleasures I expect from tender Friendship, makes me bear the Toil, and spend the silent Night with wakeful Eyes, studious of Words and Numbers I shall use, to open to your Minds such Scenes of Light, which shew the hidden Qualities of Things unknown.

These Terrors of the Mind, this Darkness then, not the Sun's Beams, nor the bright Rays of Day can e'er dispel, but Nature's Light and Reason; Whose first of Principles shall be my Guide: *Nothing was by the Gods Nothing made. For hence it is that Fear of Nothing made.*

---

He now enters upon his Subject, and lays down this Principle, *That Nothing is made of Nothing,* which he attempts to prove at large; he takes notice, that Men had observ'd many Effects upon Earth and in the Heavens, and not being able to discover the Causes of them, concluded that the Gods had produced them out of Nothing; the Falsity of which he undertakes to demonstrate, tho' without Success.
Quippe ita formido Mortaleis continet omneis,
Quod multa in Terris fieri, Caeloque tuentur,
Quorum operum causas nulla ratione videre
Possunt, ac fieri divino Numine rentur.

Quas ob res, ubi viderimus, nil posse creari
De nibilo, tum, quod sequimur, jam reñius inde
Perspiciemus, & unde queat res queaque creari,
Et quo queaque modo fiant opera fine Divum.

Nam si de Nibilo fieren, ex omnibus rebus
Omne genus nasci posset; nil Semine egeret:
E mare primum homines, è terra posset oriri
Squamminerum genus, & volucres; erumpere caelo
Armenta, atque aliae pecudes: genus omne fera
Incerto partu culta, ac deserta teneret:

Nec fructus iidem arboribus constare solet,
Sed mutarentur: ferre omnes omnia possernt.
Quippe, ubi non essent genitalia Corpora quique,
Qui posset mater rebus constare certa?
At nunc Seminibus quia certis quidque creator
Inde enascitur, atque oras in luminis exit,
Materies ubi inest cujusque & Corpora prima:
Atque hac re nequeunt ex omnibus omnia gigni,
Quod certis in rebus inest secreta facultas.

Præterea, cur Vere rosam, frumenta Calore,
Viteis Autumno fundi sudante widemus:
Si non, certa suo quia tempore Semina rerum
Cum confluxerunt, patet, quodcunque creator,
Dum tempestatibus advent, & vivida tellus
Tuto res teneras effert in luminis oras?

Quod si de Nibilo fieren, subito exorarentur
Incerto spatio, atque alienis partibus anni:
disturbs the Mind, that strange Events in Earth and Heaven are seen, whose Causes cannot appear by Reason's Eye, and then we say they were from Powers Divine. But when we rest convinced that Nothing can arise from Nothing, then the Way is clear to our Pursuit; we distinctly see whence every Thing comes into Being, and how Things are formed without the Help and Trouble of the Gods.

If Things proceed from Nothing, every Thing might spring from any Thing, and want no Seed; Men from the Sea might first arise, and Fith and Birds break from the Earth, and Herds and tender Flocks drop from the Sky, and every kind of Beast fix'd to no certain Place, might find a Being in Deserts or in cultivated Fields: Nor the same Fruit on the same Trees would grow, but would be chang'd, and all Things all Things bear. For had not every Thing its genial Seed, how is it that every Thing derives its Birth from Causes still the same? But now, since Things are form'd from certain Seeds, and first rise into Light, where every Being has its Principles and Matter fitly framed, from hence we see that all Things cannot spring from every Thing, since each has certain secret Properties peculiar to itself. Besides,

Why do we see the Rose adorn the Spring, the Fruits in Summer, and the sweaty Autumn, press the Vine, unless the fixed Seeds of Things, uniting in their proper Times, give Life to Beings, each in its stated Season, while Mother Earth can trust her tender Offspring with Safety to the Air. But if Things proceed from Nothing, in a moment they might spring at Times uncertain, at Quarters of the Year unfit, and there would
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Quippe ubi nulla forent primordia, quae genitali Concilio possent arceri tempore iniquo.

Nec porro Augendis rebus Spatio foret usus

Seminis ad coïtum, è Nibilo sì crescere possent. Nam sì erent juvenes subito ex infantibus parvis:

E terraque exorta repente arbusa salirent.

Quorum nil fieri manifestum sì, omnia quando Paullatim crescent (ut par est) Semine certo:

Crescendoque genus servat; ut noscerre possis

Luque sua de Materia grandescere, alique.

Huc accedit uti sìne certis imbrisbus annis

Lætisicos nequeat sætus summittere tellus:

Nec porro secreta cibo natura animantum

Propagare genus posset, vitamque tueri:

Ut potius multis communia corpora rebus

Multa putes esse, ut verbis Elementa videmus,

Quam sìne Principiis ullam rem existere posse.

Denique cur Homines tantos natura parare

Non potuit, pedibus qui pontum per vada possent

Tranfire, & magnos manibus divellere montes,

Multaque vivendo vitalia vincere saxa:

Si non Materies quia rebus reddita certa sì

Gignundis è qua constat quid posset oriri?

Nil igitur fieri de Niło posse fatendum sì:

Semine quando opus est rebus, quo quæque create

Aëris in teneras possint profierri auras.

Postremo quoniam Incultis præsiare videmus

Culta loca, & manibus meliores reddere fætus:

Esse videlicet in terris Primordia rerum,

Quæ nos, fæcundas vertentes vomere glebas,

Terraque solum subigentes, cimus ad ortus.

Quod
would be no proper Seeds, whose kindly Influence might check their Growth at Seasons that would kill them in the Bud.

Again, if Things could spring from Nought, what need of Time for Bodies to fulfil their Growth by Accession of new Matter? An Infant then might instantly become a Youth, and Trees start up in full Perfection from the Earth. But 'tis not so, 'tis plain; for Things, we know, grow by degrees from certain Seeds, and still as they grow keep their Kind; and thus you find each Being rises into Bulk, and thrives from Seed and Matter proper to itself.

Nor likewise can the Earth produce her Fruits to cheer the Heart, unless with timely Showers impregnated; nor can Creatures, blessed with Life, deprived of Food, e'er propagate their Kind, or save their own Lives; and so you safer say that certain fixed Principles belong to certain Things, as Letters form our Words, than that from Nothing any Thing can rise.

Further; whence is it that Nature cannot gavew Men so gigantick as on foot to wade through Seas, or with their Hands to tear up mighty Hills, or to surpass the common Bounds of Life, by many Ages, but that certain Seeds are fixed to all Things, whence they must arise? And so we must confess that Nothing springs from Nothing, since each Kind must first proceed from Seed, the Principle whence every Creature derives its Life, and feels the gentle Air.

Besides, because we find the Earth, improved by Care, exceeds the uncultivated Soil, and by our Labour offers richer Fruits, we say that in the Earth the Seeds of Things lie still, which, by turning up the fruitful Clods, by Ploughing, and, by breaking of the Ground, we force to spring;
Quod si nulla forent, nostro fine quaeque labor
Sponte sua multo fieri meliora videres.

Huc accedit, uti quicque in sua Corporarursum
Dissolvat Natura, neque ad Nibilum interimat res.

Nam, si quid mortale eunxhis partibus esset,
Ex oculis res quaeque repente erepta periret,
Nulla vi foret usus enim, quae partibus ejus
Discidium parere, & nexus exsolevere posset.

At nunc, aterno quia constant Semine quaeque,
Donec vis obiit, quae res diverberet itiu,
Aut intus penetret per inania, dissolvatque,
Nullius exitium patitur Natura videri.

Praterea, quaecunque vetustate amovet aetas,
Si penitus perimit consumens Materiem omnem,
Unde animale genus generatim in lumina vite
Redducit Venus? aut redducitum dædala tellus
Unde alit, atque auget, generatim pabula præbens?
Unde mare ingenui fontes, externaque longè
Flumina suppediant? unde æther sidera pasceit?
but then, if no such Seeds lay there, the Fruits, without our Labour, would of their own accord improve, and of themselves prevent our Care.

And here, that Nature does dissolve all Bodies into their Principles again; nor can reduce Things into Nothing.

For if every Being was liable to Death through all its Substance, snatch'd from our Eyes, it would directly perish; no need of Violence to make a Breach in all its Parts, and loose the vital Bands. But now since Things are formed from eternal Seeds, Nature wills that nothing be destroyed, unless some Force prevails, which beats with Blows its outward Form; or pierces through the Pores with subtile Art, and so dissolves the Frame.

Besides, such Things as are removed by Age, if Time destroys them quite in all their Parts, whence does the Power of Love restore to Light the several Race of Beings? Whence the Earth, with nicest Art, does nourish them when born, and makes them grow, and feeds with proper Food each in its Kind? Whence do the bounteous Springs, and Rivers, with their wandring Streams from far, supply the Sea? The Air

That is, what can hinder Plants that are produced from Nothing, from improving and growing every Year more fair and fruitful of their own accord?

If Things were mortal in all their Parts, there would be no need of Violence to dissolve them; but as every Thing would be produced and appear on a sudden without the Endeavour or Force of any other Thing, so without the Force or Violence of any other Thing like-wise every Thing would perish, not by a Dissolution of its Parts, but withdrawing from our Eyes, would vanish away in a moment, and thus return into Nothing; for the Reason why Force is requisite to dissolve every Thing is because it consists of Seeds that remain after its Dissolution.

It was the Doctrine of the Epicureans, that the Sun and Stars were Fires, that were nourished and kept alive by Vapours and Exhalations that rise from the Earth and Sea.
Omnia enim debet, mortali Corpore quae sunt,
Infinita ætas consumse, anteæta diesque.
Quod si in eo spatio, atque anteæta ætate fuere,
E quibus haec Rerum consistit Summa reseulta:
Immortalis sunt naturæ præedita certe.
Haud igitur posseunt ad Nilum quæque reverti.

Denique res omnes eadem vis causaque volgo
Conficeret, nisi Materies ætern a teneret
Inter se nexus minus aut magis endopedite.
Tacitus enim letbi satis esset causa profectione:
Quippe, ubi nulla forent æterno Corpore, eorum
Contextum vis deberet dissolvvere quæque.

At nunc, inter se quia nexus principiorum
Diffusus constat, æternaque materies est,
Incolunt remanent res corpore, dum satis acris
Vis obeat pro textura cujusque reperta.
Haud igitur redit ad Nibilum res sula, sed omnes
Discidio redeunt in corpora materiaë.

Postremo percunt imbres, ubi eos pater Æther
In gremium matris Terræ praecipitavit.
At nitidæ surgunt fruges, ramique virescunt
Arboribus, crescent ipsæ, fætuque gravantur:
Hinc alitur porro nostrum genus, atque ferarum:
Hinc letas urbeis pueris floresque videmus,
Frundiferasque novis avibus canere undique sylvas,
Hinc fessæ peçudes pingues per pabula letæ
Corpora deponunt, & candens laetæ us humor
Uberibus manat dißentis; hinc nova proles
Artibus insirmis teneras lascivaper herbæs
Ludit, laete vero menteis percussa novellas.
whence feed the Stars? For that vast Tract of Time already past had long ago consumed Things that were form'd from mortal Seed; but if those Bodies which compose this Universe of Things were still supplied through all that Space and Periods of Time that pass'd long since, they surely must consist of an immortal Nature, and from Death secure, can never into Nothing fall.

Again, the same Violence would everywhere destroy all Beings, if the eternal Power of Matter did not hold fast their close compacted Frame in Bonds more strong or weak; a single Touch would surely be the Cause of Death; for Things form'd out of mortal Seed by any Force must perish, and their Frame be quite dissolv'd; but now, because the Union of the Seeds of Bodies differs, which consist of Matter eternal in its Nature, every Being is safe from Danger till some proper Force, proportioned to its Texture, makes the Assault. So Nothing can return to Nothing; every Thing resolves by Separation of its Parts into its Principles from whence it sprung.

Lastly, the Rains that Father Ether pours into the Womb of Mother Earth do seem to perish there, but straight fair Fruits spring up; the Boughs grow green upon the Trees, their Limbs increase, and bend beneath a Load of Fruit; hence all the living Race of Men and Beasts are fed, our gallant Cities filled with Youth, our leafy Woods resound with Songs of Birds new fledg'd; the weary Flocks grown fat repose their Bodies on the fertile Plains, while the white milky Humour from their Dugs distended flows; and hence their sprightly Young, in wanton Play, frisk with their tender Limbs o'er the soft Grass, cheering their little Hearts with the pure Milk;
Haud igitur penitus pereunt quaeunque videntur:
Quando alii ex alio rescit Natura, nec ullam
Rem gigni patitur, nisi morte adjutam alienam. 265
Nunc age, res quoniam docui non posse creari
De Nibilo, neque item genitas ad Nil revocari;
Ne qua forte tamen cæptes diffidere dicitis,
Quod nequeunt oculis rerum Primordia cerui;
Accipe praeterea, quæ Corpora Tute necesse sunt
Confiteare esse in rebus, nec posse videre.

Principio, VENTI vis verberat incita pontum,
Ingenteisque ruit naveis, & nubila differt;
Interdum rapido percurrens turbine campos
Arboribus magnis ster nit, monteisque supremos
Silvifragis vexat flabris: ita perfurit acri
Cum fremitu, sæavitque minaci murmure pontus.
Sunt igitur VENTI nimirum corpora cæca,
Quæ mare, quæ terras, quæ denique nubila sæli
Verrunt, ac subito vexantia turbine raptant. 270
Nec ratione fluunt alia, stragemque propagant,
Ac cum mollis aquæ fertur natura repente
Flumine abundanti, quod largis imbribus auget
Montibus ex altis magnus decursus aquaí:
Fragmina conjiciens sylvarum, arbus tisque tota

Nec
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and therefore Things we see do not entirely die; Nature still renews one Being by another, nor does she suffer one Thing to be, unless supplied with Matter from something else that was dissolved before.

And now, since I have taught that Nothing can proceed from Nothing, nor can Things once formed to Nothing be reduced, left you by chance should doubt my Reasons, since the Seeds of Things cannot be seen with naked Eyes; hear further, that there are Seeds of Bodies (and you must confess there are) impervious to the Sight.

And first, the raging Force of Winds does lash the Sea, o'erthrow vast Ships, and chase the Clouds; sometimes they scour the Plains with furious Storms, and spread them o'er with tallest Trees, and vex the lofty Hills with Blasts that rend the Woods. And so they bluster with a dreadful Sound, and roar with threatening Noises through the Air. These Winds are therefore Bodies to the Eye unseen, which scour the Sea, the Lands, the Clouds, and toss them, thus torment, with their Blasts. They act the same, and spread Destruction round as a still Stream, increased by sudden Rain, and swell'd by Torrents pouring from the Hills, the Effect of driving Showers, is born along, rending the Limbs of Trees, and then whole Woods: Nor can the

He concludes that Nothing returns to Nothing, since Nature produces one Thing out of another, and never any Thing new, but makes use of the Matter of another Thing that had been dissolved before.

Left Memmius should distrust the Validity of the Arguments he has produced to establish his Atoms, because the first Principles of Things are, by reason of their Exilience, imperceptible to the Sense, he brings several Instances of corporeal Substances, to which no Man denies an Existence, tho' they are invisible to the Eye.
Nec validi possunt pontes venientes aqua

Vim subitam tolerare: ita magno turbidus imbri
Molibus incurrens validis cum viribus amnis,
Dat sonitu magno stragem; volvitque sub undis
Grandia saxa, ruit quae quidquid fluctibus obflat.

Sic igitur debent VENTI quoque flamina ferri:
Quae, veluti validum flumen, cum procubuere
Quamlibet in partem, trudunt res ante, ruuntque
Impetibus crebris; interdum vertice torto
Corripiunt, rapidoque rotantia turbine portant.

Quare etiam atque etiam sunt VENTI Corpora cæca:
Quandoquidem faetis ac moribus, amula magnis
Amnibus inueniuntur, aperto Corpore qui sunt.

Tum porro varios rerum sentimus ODORES,
Nec tamen ad nareis venienteis cernimus unquam:
Nec calidosÆSTUS tuimur, nec FRIGORA quimus

Usurpare oculis, nec VONES cernere suemus;
Quae tamen omnia Corporaæ consolare necesse est
Natura: quoniam sensus impellere possunt.

TANGERE enim et TANGI, nisi CORPUS,
NULLA POTEST RES.

Denique fluctifrago suspendi in littore Vestes
Usescunt, eadem dispansæ in Sole serescunt;
At neque quo pæto persederit humor aqua
Visu est nec rursum quo pæto fugerit æstu;
In parvas igitur parteis dispersitur Humor,
Quas oculi nulla possunt ratione videre.

Quin etiam multis Solis redeuntibus annis
Annulus in digito subtertaunatur habendo:
StillicidI casus lapidem cavat: uncus aratri
Ferreus occulte decrescit Vomer in arvis:
Strataque jam volgi pedibus detrita viarum
Saxea conspicimus; tum portas propter abena.
Book I. Of the Nature of Things.

Strongest Bridges bear the Force, so sudden, of the rushing Flood; the Stream, made mad by hafty Rains, beats on the Damms with Force impetuous, swells through the Breach with horrid Noise, and rolls the maffy Stones under its Waves, and breaks what stops its Tide. Just fo the Hurricanes of Wind drive on which way they point their Blasts, like mighty Floods, force all before them, beat with frequent Strokes; sometimes they snatch with rapid Turns, and whirl Things as they roll in Eddies through the Air. These Winds, 'tis plain, are Bodies still unseen, since by their furious Blasts they rival in their Force the largest Streams, which Bodies are we own.

Besides, we feel the various Smells of Things, but can't discern how they affect the Nose; nor can we see the raging Heat, nor with our Eyes perceive the Cold, nor can we see a Voice; all which by Nature are of Bodies form'd, because they make Impression on the Sense, for nothing but Body can be touch'd, or touch.

Again, a Garment hung up nigh the Shore, That breaks the Waves, grows wet, and, to the Sun expanded, dries; yet no one ever saw how the moist Vapour fix'd, or how again it fled before the Heat; the watery Drops must be dissolv'd into small Parts too subtle to be at all discover'd by the Eye.

But further, after many circling Years, a Ring upon the Finger wears away, the Fall of dropping Water hollows Stones, the crooked Plough-share, tho' of Iron, waftes in the Fields insensibly by Ufe; we see the Streets, paved with hard Stones, worn out by frequent Tread of Passengers; p the

He means the Images of the Tutelar or Guardian Gods, whose Right Hand, whoever came into the City or went out of it, was used to kiss, boni omenis causa, for good Luck's sake.

brazen
T. Lucretii Lib. I.

Signa manus dextrae ostendunt attentuari
Sæpe saluantum tabul, præterque meautum:
Hæc igitur minui, cum sint detrita videmus; 320
Sed quæ Corpora decedant in tempore quoque,
Invïda præclusit speciem Natura videndi.

Postremo, quæcunque Dies, Naturaque rebus
Paullatim tribuit, moderatim crescre cogens,
Nulla potest oculorum acies contenta tueri; 325
Nec porro quæcunque ævo, macieque senescunt:
Nec mare quæe impendunt vesco sale Saxa pereat,
Quid quoque admittant in tempore, cernere possis.
Corporibus caecis igitur Natura gerit res.

Nec tamen undique Corporea stipata tenentur 330
Omnia natura, námque sî in rebus Inane.
Quod tibi cognosse in multis erit utile rebus:
Nec finet errantium dubitare, & quærere semper
De Summa rerum, & nostris diffidere dictis;
Quapropter locus est intactus, Inane, vacansque.
Quod si non esset, nulla ratione moveri 335
Res possent; namque officium, quod Corporis extat,
Officere, atque obtare, id in omni tempore adeisset
Omnibus: Haud igitur quidquam procedere possit,
Principium quoniam cedendi nulla darest res. 340
At nunc per maria, ac terras, sublimaque cali,
Multa modis multis varia ratione moveri
Cernimus ante oculos; quæ, si non esset Inane,
Non tam sollicito motu privata carerent;
Quam genita omnino nulla ratione fuissent: 345
Undique Materies quoniam stipata quiesse.
brazen Statues nigh the Gates shew their Right Hands made lefts by many a Kiss of those who worship, or who pass along. These Things we see shew lefts and lefts, and wear; but what a Share of Matter every time is brushed off, Nature in Envy to us, has not indulg'd the Faculty to see.

Lastly, what every Day and Nature do bestow on Beings, to make them grow by just Degrees, not the most piercing Eye could ever find, nor yet the Particles that fly and waste by Age or by Decay; nor can you see by what degrees the Rocks are eaten through by the corroding Salt of dashing Waves: Thus Nature works by Bodies not discern'd.

And yet all Beings are not form'd of close and solid Parts; in Things there is a Void, which in your Searches into Nature will be of use to know. This will preserve your wand'ring Mind from Doubt, prevent your constant Toil by judging right of Nature's Laws, and make my Words belief'd.

Wherefore there is a Place we call a Void, an empty Space intangible, or else no Bodies could be moved, or stir; the Quality all Bodies have to stop and to oppose does never fail, so that to move would be in vain to try, no Body first by yielding would give way. But now we see before our Eyes, that Things move various ways in Seas, in Earth, and in the Heaven above; but were no Void, they would not be depriv'd of that Activity of Motion only, but would not be at all; for Matter wedg'd and crouded close on every side had ever been at rest.

If there were no Void interperfed in Things, all Things would be crouded to such a degree, that not only nothing in the whole Universe could be moved from its Place, but it would be even impossibl'e to give a Reason, and explain how any thing can be generated, because a local Motion is absolutely necessary for the Generation of all Things, and without a Void there can be no Motion whatever.
Præterea quamvis Solidæ res esse putentur,
Hinc tamen esse licet Raro cum corpore cernas:
In faxis, ac speluncis permanat Aquarum
Liquidus humor, & iberibus fient omnia guttis:
Dispersat in corpus fese Cibus omne animantium:
Crescunt Arbusa, & factus in tempore fundunt:
Quod Cibus in totas usque ab radicibus imis
Per trunca, ac per ramos diffunditur omnis:
Inter septa ment Vociæ, & clausa domorum
Transvolitant : rigidum permanat Frigus ad ossa.
Quod, nisi Inania sint, qua possent Corpora quæque
Transire, baud ullafieri ratione videres.

Denique cur alias aliis praestare videmus
Pondere res rebus, nibilo majore figura?
Nam, si tantundem fì in Lanes glomere, quantum
Corporis in Plumo fi, tantundem pendere par est;
Corporis officium est quoniam premere omnia deorum:
Contra autem natura manet sine pondere Inanis.

Ergo quod Magnum fi æque, Leviusque videtur,
Nimirum plus esse sibi declarat Inanis:

At contra Gravius plus in fse Corporis esse
Dedicat, & multo Vacui minus intus habere.
Est igitur nimirum id, quod ratione sagaci
Quærimus, admissum rebus quod Inane vocamus.
BESIDES though Things appear of solid Parts composed, yet you will find them, in some measure, form'd of Bodies that are rare; the liquid Moiture of the Water sweats through Rocks and Stones, and all Things weep with Drops abundant; the Food that every Creature eats, disperses through the Body; the Trees increafe and grow, and in due Season shew their Fruit; because the Juice is from the lower Roots spread through the Trunk, and over all the Boughs. Sounds pass through strong Partitions, and fly quick through Walls of Houses, and the piercing Cold strikes through the very Bones; but were no Void, no empty Space, that Bodies e'er should pass, you'd find a Thing impossible to prove.

Again, why do we see some Things exceed others in Weight, tho' of an equal Size? For if as much of Body went to form a Ball of Wooll, as made a Ball of Lead, their Weight would be the fame; for the Quality of Body is to precipitate downward: but a perfect Void by Nature has no Weight; so that a Body of equal Size, but lighter in its Weight, proves it has more of empty Space. So again, the heavier Body has more of solid Parts; 'tis plain, and has within it less of Void. And this is doubtless what with Reason's searching Eye we look for, mixed with Things, we call it Space.

Some Bodies, he observes, pierce and distil through Things that seem to be most solid, as Water through Stones, which could never be, were there not between the Particles of these Things some void Spaces, through which these Bodies might pass.

It is hard to conceive why two Bodies of the same Shape and Size should weigh one more than the other, except the one had more of Body, to which Weight is natural, and the other more of Void, which has no Weight at all.
Illud in his rebus, ne te deducere vero
Possit, quod quidam fingunt, praecurrere cogor;
Cedere Squamigeris latices nitentibus aiunt,
Et liquidas aperire vias; quia post loca Pisces
Linquant, quo possint cedentes confluere undue; 375
Sic alias quoque res inter se posse moveri,
Et mutare locum; quamvis sint omnia plena:
Scilicet id falsa totum ratione receptum 'st.
Nam quod Squamigeri poterunt procedere tandem,
Ni spatium dederint latices? concedere porro 380
Quod poterunt undue, cum pisces ire nequibunt?
Aut igitur motu privandum 'st corpora quaeque;
Aut esse admixture dicendum 'st rebus Inane;
Unde initium primum capiat res quaeque movendi.
Postremo duo de concursu Corpora lati,
Si cita disibiliant, nempe aer omne necesse 'st,
Inter corpora quod scilicet, possidat Inane.
Is porro, quamvis circum celerantibus auris
Confluat, baud poterit tamen uno tempore totum
Completere spatium: Nam primum quemque necesse 'st
Occupet ille locum, deinde omnia possideantur. 391
Quod si forte aliquis, cum Corpora disiluere,
Tum putat id fieri, quia se condensat aer;
Errat; nam Vacuum tum fit, quod non fuit ante;
Et repletur item, Vacuurn quod constilat ante: 395

Nec
But I am forc'd to step before, and answer what some pretend, lest you should be seduced from Truth: They say the Waters yield to Fish making their way, and open their liquid Paths; for when the Fish have left a Space, that instant thither the yielding Waters circling flow. By the same Rule, all Beings may be moved among themselves, and change their former Place, though all Things should be full: but this, 'tis plain, is false throughout; for how could Fish advance at all, unless the Waters gave them way? And whither should the Waves retire, if the Fish did not move, and leave a Space behind? So that all Bodies must be deprived of Motion, or you must say a Void is mixed with every Thing from whence each Being first derives a Power to move.

Lastly, if two broad Bodies meet, and instantly are separated again, the Air must needs fill up the Void that is between; but this Air, though it should hurry with its swiftest Powers, it cannot all at once fill up the Space, these Bodies will disclose at parting; first the nearest Part will be filled up, and then the more remote, until the whole be full.

If one should say, when these flat Bodies meet the Air is condensed, but when they part the Air is rarified, 'tis a Mistake; for then there must be Void where there was none before, and that Void that was before must now be full; in such a

The Water could not give way unless there was an empty Place for it to retire to; and therefore there must be a Void mix'd with Bodies, or there could be no Motion at all.

If two smooth broad Bodies meet, and are parted of a sudden, a Void will be caused by their Dissolution; for all Matter must have been driven away by those two Bodies, and therefore the Space that opens between them, as they part, will be void of all Body.

D 2
T. Lucretii Lib. I.

Nec tali ratione potest denseri aër,
Nec, si jam posset, sene Inani posset, opinor,
Se ipse in se trahere, & parteis conducere in unum:
Qua propter, quamvis causando multa moreris,
Eße in rebus Inane tamen fateare necesse 'st. 400
Multaque præterea tibi possunt commemorando
Argumenta, fidem dicas, convarere nostraris;
Verum animo satis haec vestigia parva sagaci
Sunt, per quæ possis cognoscere caetera Tute:
Namque Canes ut montivage perspexerit feraï
Naribus inventum interfas frunde quietes,
Cum semel insiterunt vestigia certa viai:
Sic alid ex alio per te Tute ipse videre
Talibus in rebus poteris, caesque latebras
Insinuare omnis, & Verum protrabere inde:

Quod si pigrâris, paullum me abesseferis ab re,
Hoc tibi de plano possunt promittere, Memmi:
Usque adeo largos haustus de fontibus magnis
Lingua meo suavis diti de peetore fundet,
Ut verear, ne tarda prius per membra Sexedus
Serpat, & in Nobis Vitaï claustra resolvat,
Quam tibi de qua vis una re versibus omnis
Argumentorum fit copia missa per aureis.
Sed nunc jam repetam cæptum pertexere diritis:

Omnis, ut est, igitur, per se, Natura, duabus
Consistit rebus; nam Corpora sunt, Inane,
Hæc in quo sita sunt, & quâ diversâ moventur:
Corpus enim per se communis deliquat esse
Sensus; quo nîs prima fides fundata valebit,
Haud erit occultiis de rebus quo referentes
Confirmare animi quicquam ratione quemus.
Tum porro Locus, ac Spatium, quod Inane vocamus,
Si nullum foret, haud usquam sita Corpora possent
Esse, neque omnino quâquam diversa meare;
Id quod jam superatibi paullo ostendimus ante: 430

Præterea
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Cafe, the Air can't be condens'd; and if it could, it can't without a Void contract itself, and to reduce its Parts into a closer Space: Wherefore, perplex the Matter as you please, you must confess in Things there is a Void.

I could by many Arguments confirm this System of a Void, and fix your Faith to what I say; but these small Tracks I have drawn, to such a searching Mind, will be enough; the rest you may find out without a Guide. For as staunch Hounds, once put upon the Foot, will by the Nose soon roufe the Mountain Game from their thick Covers; so you, in Things like these, will one Thing by another trace, will hunt for Truth in every dark Recess, and draw her thence.

But if you doubt, or in the least object to what I say, I freely promise this, my Memmius, my tuneful Tongue shall, from the mighty Store that fills my Heart, pour out such plenteous Draughts from the deep Springs, that tardy Age I fear will first creep through my Limbs, and quite break down the Gates of Life, before I can explain in Verfe the many Arguments that give a Light to one Particular. But now I shall go on to finish regularly what I begun.

All Nature therefore, in itself considered, is one of these, is Body or is Space; in which all Things are placed, and from whence the various Motions of all Beings spring. That there is Body common Sense will shew, this as a fundamental Truth must be allowed, or there is nothing we can fix as certain in our Pursuit of hidden Things, by which to find the Truth, or prove it when 'tis found. Then if there were no Place or Space, we call it Void, Bodies could have no where to be, nor could they move at all, as we have fully proved to you before.

Besides,
Præterea nihil est, quod posseis dicere ab omni
Corpori sejunctum, secretumque esse ab Inani:
Quod quasi tertia sit rerum natura reperta.
Nam quodcumque erit, esse aliquid debeat id ipsum
Augmine vel grandi, vel parvo dueneque dum sit; 435
Cui si Taetus erit quamvis levis, exiguusque,
Corporum augebit numerum, summamque sequetur;
Sin Intaetile erit, nulla de parte quod ullam
Rem prohibere queat per se transire meantem;
Scilicet hoc id erit Vacuum, quod Inane vocamus.

Præterea per se quodcumque erit, aut faciet quid,
Aut alis fungi debeat agentibus ipsum;
Aut erit ut posse in eo res esse, gerique:
At facere & fungi sine Corpori nulla potest res:
Nec praebere locum porro, nisi Inane, Vacansque 445
Ergo præter Inane, & Corpora, tertia per se
Nulla potest rerum in numero natura relinquat;
Nec, quæ sub sensus cadat ullo tempore nostris,
Nec, ratione animi quam quisquam posset apisci.
Nam quæcunque cluent, aut bis Conjuncta dua-
450
Rebus ea invenies; aut horum Eventa videbis.
Conjuncta est id, quod nunquam sine perniciati
Discidio potis est sejungi, seque gregari:
Pondus uti saxis, Calor ignibus, Liquor aqua,i,
Taetus Corporibus cumquis, Intaetus Inani. 455
Servitium contra, Libertas, Divitiaeque,
Paupertas, Bellum, Concordia, cætera, quorum
Adventu manet incolumis natura, abituque,
Hæc solutis sumus, ut par est, Eventa vocare.

Tempus
Besides, there is Nothing you can strictly say, It neither Body is nor Void, which you may call a third Degree of Things distinct from these. For every Being must in Quantity be more or less; and if it can be touch’d, tho’ ne’er so small or light, it must be Body, and so esteemed; but if it can’t be touch’d, and has not in itself a Power to stop the Course of other Bodies as they pass, this is the Void we call an empty Space.

Again, *whatever is must either act itself, or be by other Agents acted on; or must be something in which other Bodies must have a Place and move; but Nothing without Body can act, or be acted on; and where can this be done, but in a Vacuum or empty Space? Therefore, beside what Body is or Space, no third Degree in Nature can be found, Nothing that ever can affect our Sense, or by the Power of Thought can be conceiv’d. All other Things you’ll find essential Conjuncts, or else the Events or Accidents of these. I call essential Conjunct, what’s so joined to a Thing that it cannot, without fatal Violence, be forced or parted from it; such is Weight to Stones, to Fire Heat, Moisture to the Sea, Touch to all Bodies, and not to be touch’d essential is to Void; but, on the contrary, Bondage, Liberty, Riches, Poverty, War, Concord, or the like, which not affect the Nature of the Thing, but when they come or when they go, the Thing remains entire; these, as ‘tis fit we should, we call Events.

* Nothing exists but Body and Void; for whatever is, either has a Power of acting on another, or may suffer from another: that is, it must be subject either to Action or Passion, and that must be a Body; or it must be that in which Things are contained, and in which they are made and moved, and that is the Void.
Lucretii Lib. I.

Tempus item per se non est, sed Rebus ab ipsis
Consequitur sensus, transactum quid sit in aequo,
Tum quae Res insit; quid porro deinde sequatur:
Nec per se quemquam Tempus sentire fatendu sit
Semotum ab rerum motu, placidaque quiete.

Denique Tyndaridem raptam, belloque subactas
Trojagenas gentes cum dicunt esse, videndu sit,
Ne forte hac per se, cogant nos, esse sateri:
Quando ea secla hominum, quorum hac eventa fuere
Irrevocabiles abstulerit jam præterita ætas.
Namque aliud Rebus, aliud regionibus ipsis
Eventum dici poterit, quodcunque erit actu.

Denique Materies si rerum nulla fuisset,
Nec Locus, ac Spatium, res in quo quaeque geruntur;
Nunquam Tyndaridis forma conflatus amore
Ignis Alexandri Phrygio sub pestore gliscens
Clara accendisset sevi certamina belli:
Nec clam duratus Trojanis Pergamæ partu
Inflammasset equus nocturno Grajugeneram;
Perspicere ut possis Res Geæs funditus omnis,
Non ita, uti Corpus, per se confiare nec esse:
Nec ratione cluere eadem, qua constat Inane;

Sed
TIME likewise of itself is Nothing; our Sense collects from Things themselves what has been done long since, the Thing that present is, and what's to come. For no one, we must own, e'er thought of Time distinct from Things in Motion or at Rest.

For when the Poets sing of Helen's Rape, or of the Trojan State subdued by War, we must not say that these Things do exist now in themselves, since Time, irrevocably past, has long-since swept away that Race of Men that were the Cause of those Events; for every Act is either properly the Event of Things, or of the Places where those Things are done.

Further, if Things were not of Matter form'd, were there no Place or Space where Things might act, the Fire that burn'd in Paris' Heart, blown up by Love of Helen's Beauty, had never rais'd the famous Contests of a cruel War, nor had the Wooden Horse set Troy on fire, discharging from his Belly in the Night the armed Greeks: from whence you plainly see that Actions do not of themselves subsist, as Bodies do, nor are in Nature such as is a Void, but rather are

Pythagoras, Heraclitus and others believed, that Time was a Body; but Lucretius calls it an Event, attributed to Things by the Mind or Thought only, according as they are conceived to persevere in the State in which they are, or to cease from it, and to preserve a longer or shorter Existence, and to have it, or to have had it, or to be to have it. Epicurus, because he saw that Time is nothing besides Body and Void, asserted, that it does not exist of itself, nor as a Conjoint or Event, but as the chief Event of Events; he taught, that it exists not in Reality, but only in the Mind, and therefore may properly be called a Being of the Understanding.

The Rape of Helen, and the Destruction of Troy, are not at this time, nor do exist in themselves as Body and Void do; but are, as it were, the Events of Things, of Persons, or of Places, for the Time past has carried off those Men of whom those Actions are Events.
Sed magis ut meriò possis Eventa vocare
Corporis, atque Loci, res in quo quæque gerantur.
Corpora sunt porro partim Primordia rerum,
Partim Concilio quæ constant principiorum. 485
Sed quæ sunt rerum Primordia, nulla potest vis
Stringere; nam Solido vincunt ea corpora demum:
Et si difficile esse videtur credere quicquam
In rebus Solido reperi corporum possè;
Transit enim Fulmen caeli per septa domorum, 490
Clamor ut, ac Voces: Ferrum candescit in igne:
Diffiliuntque fero ferventia Saxa vapore:
Conlabefcat Status rigor Auri solvitur æstu:
Tum glacies æris flamma devièta liquescit:
Permanat calor Argentum, penetrálque frigus 495
Quando utrumque, manu retinentes pocula rîtè,
Sensimus infuso lympharum rorè supernè:
Ufque adeo in rebus Solidi nihil esse videtur.
Sed quia vera tamen ratio, naturaque rerum
Cogit, ades, paucis dum versibus expediamus, 500
Esse ea, quæ Solido atque æterno corpore constent,
Semina quæ rerum, Primordiaque esse docemus:
Unde omnis Rerum nunc constet Summa creata.
Principio quoniam duplex natura duarum
Diffimilis rerum longe constare reperta est
Corporis atque Loci, res in quo quæque geruntur;
Esse utramque sibi per se, puramque necesse est:
Nam quâcunque vacat Spatium, quod Inane vocamus
Corpus ea non est: quà porro cuncte tenet se
Corpus, ea vacuum nequaquam constat Inane. 510
Sunt igitur Solida, ac sine Inani Corpora prima.

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more justly called the Events of Body, and of Space, where Things are carried on.

Lastly, Bodies are either the first Seeds of Things, or formed by the uniting of those Seeds. The simple Seeds of Things no Force can strain, their solid Parts will never be subdued. Tho' it is difficult, I own, to think that any Thing in Nature can be found perfectly solid; for Heaven's Thunder passes through the Walls of Houses, just as Sound or Words; Iron in the Fire grows hot, and burning Stones fly into pieces by the raging Heat; the Stiffness of the Gold is loosed by Fire, and made to run; the hard and solid Brass, subdued by Flames, dissolves; the Heat and piercing Cold passes through Silver; both of these we find, as in our Hand we hold a Cup, and at the Top pour Water hot or cold: so nothing wholly solid seems to be found in Nature. But because Reason and the fixed State of Things oblige me, hear, I beg, while in few Verses we evince, that there are Beings that consist of solid and everlasting Matter which we call the Seeds, and the first Principles of Things, from whence the whole of Things begin to be.

And, first, because we find two Sorts of Things unlike in Nature, in themselves distinct, Body and Space, 'tis necessary each should be entire, and separate in itself; for where there is a Space which we call Void, there Nothing is of Body; so where Body is, there Nothing is of empty Space: and therefore such Things there are as Solids and first Seeds, which Nothing in them can admit of Void.

* He comes now to dispute more at large concerning Bodies, which he divides into Simple and Compound, and asserts, that Simple Bodies, or the Principles of the Compounds, are most solid, perfectly full, and contain no Void; tho' he allows this is very hard to conceive.

Besides,
Praeterea quoniam genitis in rebus Inane est,
Materiem circum Solidam constare necesse est:
Nec res ullæ poteš vera ratione probari
Corpore Inane suo celare atque intus habere;
Si non, quod cohibet, Solidum constare relinquas.
Id porro nihil esse potest, nisi Materiæ
Concilium, quod Inane queat rerum cohibere.
Materies igitur Solido quæ corpore constat,
Essæ æterna poteš, cum æterna dissolvantur.

Tum porro si nil esset, qued Inane vacaret,
Omne foret Solidum; nisi contra corpora cæca
Essent, quæ loca complerent, quæcunque tenerent:
Omne, quod est, Spatium vacuum constaret Inane.
Alternis igitur nimirum Corpus Inani
Disstitutum, quoniam nec Plenum naviter extat:
Nec porro Vacuum; sunt ergo corpora cæca,
Quæ Spatium Pleno possint distinguere Inane.

Hæc neque dissolvi plagis extrinsecus icta
Possunt: nec porro penetras penetrata retexi;
Nec ratione queunt alia tentata labare:
Id quod jam supera tibi paullo ostendimus ante.
Nam neque conlidi sine Inani posse videtur
Quicquam, nec frangis, nec findi in bina secando:
Nec capere humorem, neque item manabile frigus,
Nec penetrale ignem, quibus omnia conficiuntur.
Et quæm quæque magis cohibet res intus Inane,
Tam magis hic rebus penitus tentata labascat.
Ergo, si Solida, ac sine Inani Corpora prima
Sunt, ita uti docui, sint bæc Æterna necesse est.

Praeterea, nisi Materies Æterna fuisset,
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Besides; because in all created Things there is a Void, 'tis necessary some solid Matter should still include this Void; nor can you prove, by any Rule of Reason, that any Thing contains within it self an empty Space, unless you will allow what holds it in is perfect solid; and this is Nothing else but the close Union of first Seeds, which bind and do confine within themselves this Void. Matter therefore composed of solid Parts eternal is, when all Things else must die.

Further, if there was no such Thing as we call Void, every Thing would be solid; then again, unless there were some Things solid to fill up the Space they hold, all would be empty Space. Body from Space therefore is in itself distinct; for all is neither full, nor is all Void; and therefore there are solid Seeds which make a Difference between Full and Space.

These solid Seeds by no Force from without can be dissolvd, nor can they be destroyed by being pierced within, nor made to yield by any other Means, as proved before. For Nothing can be bruised without a Void, or broken or by Force be cleft in two, or receive Moisture, or the piercing Cold, or searching Fire which all Things else destroys. And the more of Void the solid Seeds confine, the sooner when they are struck will they dissolve, and fall to pieces; therefore, if these first Seeds are solid, free from Void, they, as I said, must be eternal, and from Death secure.

Again, if Matter had not been eternal, before

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b Having asserted the Solidity of his Atoms, he proves they are eternal; for Solids are perfectly full, contain no Void, and therefore are not subject to Dissolution, or to a Separation and Divisibility of Parts.

c If the first Seeds of Things were dissolvd, they would fall into Nothing; for there are no Principles, prior to the first, into
Antebac ad Nibilum penitus res quaque redivent;
De Nibiloque renata forent quaecunque videmus.
At quoniam supera docui Nil posse creari
De Nibilo, neque quodgenitu'f3 ad Nil revocari: 545
Esse immortalis primordia corpore debent,
Dissolvit quo quaeque supremo tempore possint;
Materies ut suppeditet rebus reparandis.
Sunt igitur solida primordia simplicitate,
Nec ratione queunt alia servata per ævum
Ex infinito jam tempore res reparare.
Denique, si nullam finem natura pararet
Frangendis rebus, jam corpora materia
Usque redacta forent, ævo frangente prioré,
Ut nihil ex illis ætate tempore posset
Conceptum, summum ætatis pervadere fiorem:
Nam quidvis citius dissolvit posse videmus,
Quam rursus refici. Quapropter longa diei
Infiniti ætas ante ætis temporis omnis
Quod fregisset adhuc, disturbans, dissolverisque, 560
Id nunquam reliquo reparari tempore posset:
At nunc nimium frangendi reddita finis
Certa manet: quoniam refici rem quamque videmus,
Et finita simul generatim tempora rebus
Stare, quibus possint ævi contingere florem. 565
before now all Beings had return’d to Nothing, and each Being we behold again had been restored from Nothing; but, as before I proved, Nothing from Nothing can be made, and what was once in Being can ne’er to Nothing be reduced; it follows, those first Seeds must be composed of Principles immortal, into which at last each Being must dissolve, and thence supply an everlasting Stock of Matter to repair the Things decay’d. These first Seeds therefore are solid and simple, else they could not last entire through Ages past and infinite, to repair Beings perished and dissolv’d.

But still, *d* if Nature had prefix’d no Bounds in breaking Things to pieces, the Parts of Matter, broken by every passing Age, had been reduced so small, that Nothing could of them be form’d that would in any time become mature; for Things we see much sooner are dissolv’d than are again restored; and therefore what an infinite Tract of Ages past has broken, and separated and dissolv’d, in future Time can never be repaired; so that certain Bounds of breaking and dividing must be set, because we see each Being is repaired, and stated Times are fixed to every Thing in which it feels the Flower of its Age.

into which they can be resolved; and thus the Things that are daily born would arise from Nothing; it must therefore be allowed either that the Seeds are eternal, or that Things proceed from Nothing, which the Philosophers held as the greatest Absurdity.

d The Seeds of Things are of a fixed Magnitude, and indissoluble; for had they been broken and wasted for so vast a Tract of Time as is already past, they would have been reduced into Parts so extremely small, that they could never in any Length of Years, and therefore not in a few, be re-united and made up again into one Mafs.

And
Huc accedit, uti Solidissima materiae
Corpora cum constant, possint tamen omnia reddi
Mollia, que sint, Aër, Aqua, Terra, Vapores,
Quo patto sint, & qua vi cunque genantur;
Admissum quoniam simul est in rebus Inane.

At contra, si Mollia sint Primordia rerum,
Unde quaeant validi silices, ferrumque creari,
Non poterit ratio reddi. Nam funditus omnis
Principio fundamenti Natura carebit.
Sunt igitur Solida pollentia simplicitate,
Quorum condensum magis omnia conciliatut
Aréstari possunt, validasque ostendere vireis.

Denique jam quoniam generatim reddita finis
Crescendi rebus constat, vitamque tuendi,
Et quid queque queant per fædera Naturæ,
Quid porro nequeant sanctum quandoquidem exstat:
Nec commutatur quicquam, quin omnia constant,
Usque adeo, varia volucres ut in ordine cunétæ
Ostendant maculas generaleis corpori inesse:
Immutabile materiæ quoque corpus habere

Debent nimirum. Nam si Primordia rerum
Commutari aliquo possent ratione revivâta,
Incertum quoque jam constet, quid possit oriri,
Quid nequeat ; finita potebant denique quoque
Quanam sit ratione, atque altè terminus hæreat;
And yet, though the first Seeds of Things are solid, all Beings that are compounded, such as Air and Water, Earth and Fire, may be soft, (however made, or by what Power form'd) and from them be produced, because there is a Void still mix'd with Things; and, on the contrary, if these first Seeds were soft, what Reason can there be assign'd whence hardned Flints and Iron could be form'd, for Nature would want the proper Principles to work upon; and therefore these first Seeds must simple Solids be, by whose Union close and compact all Things are bound up firm, and so display their Strength and hardy Force.

Again, because each Being in its Kind has certain Bounds prefix'd to its Increase, and to the Preservation of its Life, and since by Nature's Laws it is ordained to each how far their Powers to act or not extend; since Nothing changes, and every Thing goes on as it began, each Kind of Birds, most steady in their Course, shew the same Colours painted on their Wings, the Principles of Matter whence they spring must be fix'd and unchangeable; if the Seeds of Things could change by any Means, 'twould be unknown what could be form'd, what not; by what Means every Being is limited, and stops short within the Bounds it cannot break; nor could

Soft Bodies may be compounded of solid Seeds by the Intermixture of Void; but if the Seeds were soft, how hard Bodies should be made from them is impossible to conceive.

How could Animals carry always upon them the distinguishing Marks of their several Kinds, if they were not formed of Principles not liable to Change or Dissolution? If the Seeds could be changed or dissolved, neither Men nor any other Animals would retain their usual Shapes; some would enjoy a prodigious Strength and Length of Days, while others of the same Kind would be puny and short-lived. We should see frequently white Crows, and sometimes black Swans.

The
Nec toties possent generatim sæcla referre
Naturam, motus, viōtum, moresque parentum.

Tum porro, quoniam extremum cujusque cacumen;
Corporis est aliquod, nostri quod cernere sensus
jam nequeunt, id nimirum sine partibus existat,
Et Minima constat natura, nec fuit unquam
Per se secretum, neque posthac esse valebit;
Alterius quoniam est ipsum pars, primaque, & imas:
Inde alie, atque alie similes ex ordine partes

Agmine condenso naturam Corporis explent.

Quae quoniam per se nequeunt constare necesse est
Haerere, ut nequeant uta ratione revelli.
Sunt igitur Solida Primordia simplicitate;
Quae minimis stipata cohaerent partibus arcæ.
Non ex ulla conventu conciliata,
Sed magis æterna pollentia Simplicitate:
Unde neque avelli quicquam, neque diminui jam
Concedit Natura reservans semina rebus.

Præterea, nisi erit Minimum, Parvissima quæque
Corpora constabunt ex partibus Infinitis;
Quippe ubi dimidiae partis pars semper babebit
Dimidiam partem, nec res persiniet uta:
Ergò rerum inter summam, minimamque qui esset?
Book I. Of the Nature of Things.

the Course of Time in every Age, the Nature, Motion, Diet, and the Manners of the old Sire impress upon the Young.

Besides, because the utmost Point or the Extreme of every Body something is the Eye cannot discern; it is not made of Parts, but is in Nature what we call the Least; which ne'er exists of itself, divided from Body, nor ever can, because it is the very First and Last of something else. For 'tis by heaping up such Parts as these, one by another, that complete the Being of every Body. Since then they can't subsist apart, and separate, they must needs stick close, nor be divided by the utmost Force. These Seeds therefore are in their Nature solid, and simple, form'd of smallest Parts bound close; not tied together by united Seeds of various Kinds, but in themselves entire, eternally unmix'd and pure, from which Nature will suffer Nothing to be forced or lessened, reserving them as first Seeds, to form and to repair those Things that die.

Again, suppose there was no Least, the smallest Bodies must be composed of Parts boundless and infinite; the Half of every Being must then contain another Half, so there would be no End of still dividing; and where would be the Difference between the smallest and the largest Bo-

Every Seed is of necessity simple and indissoluble, because it consists of Parts even the least that can be conceived, and which no Art or Strength can disjoint, because no Art or Strength can reduce into Nothing; for Nothing goes into Nothing.

The first Seeds are eternal and not to be dissolved, not because they are destitute of Parts, but because they are solid, and therefore cannot be broken in pieces, nor divided by the greatest Force. These Parts have no Parts, and are purely Mathematical; for unless such Least are allowed, there would be no Inequality between the greatest and the smallest Things, because either of them would contain infinite Parts alike; and thus both of them would be infinite, which is absurd.

E 2 dies?
Non erit ut dißent: nam quamvis funditus omnis
Summa sit Infinita, tamen Parvissima quæ sunt, 615
Ex Infinitis confiabunt partibus æquæ,
Quo quoniam ratio reclamat vera, negatque
Credere posse animum, victus fateare necesse 'st,
Essè ea quæ nullis jam prædita partibus exsent,
Et Minima constant naturæ. Quæ quoniam sunt, 620
Illa quoque esse tibi Solida, atque Æterna fatendum.

Denique ni Minimas in parteis cuncta resolvit
Cogere consuefset rerum Natura creatrix,
Jam nihil ex illis cadem reparare valeret:
Propter ea quia, quæ multis sunt partibus aucta, 625
Non possunt ea, quæ debet Genitalis habere
Materies, varios Connexus, Pondera, Plagas,
Concursus, Motus, per quæ res quæque geruntur.

Porro, si nulla 'st frangendis redditâ finis
Corporibus, tamen ex æterno tempore quædam 630
Nunc etiam superare necesse 'st Corpora rebus,
Quæ nondum clœant ullo tentata periculo:
At quoniam fragili naturæ prædita constant,
Discrepat æternum tempus potuisse manere
Innumerabilibus plagis vexata per ærum. 635

Quapropter, qui Materiem rerum esse putârunt
Ignem, atque ex igni Summam consisère solo

Magnopere
dies? None in the least; for though the whole be entirely infinite, yet Bodies that are smallest would contain infinite Parts alike, which, since true Reason exclaims against, nor will allow the Mind to give assent, you must, convinced, profess that there are Bodies which are void of Parts, and are by Nature Least; since such there are, you must admit them Solid and Eternal.

Lastly, if Nature, Parent of Things, had not compelled all Things that perish then to be resolv'd into Least Parts, she could from them repair Nothing that dies; for Bodies that are form'd of various Parts can never be endued with Properties, which the first Seeds of Things ought to possess, as Union, Weight, and Force, Agreement, Motion, by which all Things act.

And yet, suppose that Nature had allowed no End to Bodies being divided, yet some Bodies from Eternity must have been, which by no Force could ever be subdued. But Bodies that are form'd of brittle Seeds, and to be broken, could not have remained for Ages infinite, vexed as they have been with endless Blows, but must have been dissolv'd.

Wherefore, those Sages who have thought that Fire is the first Principle of Things, and from that alone the whole is form'd, do greatly

1 If Nature did not lessen even to the minutest Mites, the Matter of which Things are formed would be unfit to undergo those Changes, and receive those Figures, to which it must be exposed; for if those minute Bodies were formed of several Parts, and contained within them any Void, they would not be endued with an equal Weight, or uniform Motion; and therefore could never be united together.

k If there were no Solids which could not be dissolv'd, where can we find those Bodies that from Eternity have remained unbroken? for frail Atoms, that for so long a Tract of Time have been expos'd to infinite Strokes and Blows, mult of necessity have been dissolv'd.
Magnopere à vera lapsi ratione videntur.

Heractitus init quorum dux prælia primus,
Clarus ob obscumam linguam magis inter inaneis, 640
Quamde graveis inter Graios, qui vera requirunt.
Omnia enim Stolidi magis admirantur, amantque
Inversis quae sub verbis latitantia cernunt:
Veraque constituunt, quæ bellè tangere possunt
Aureis, & lepido quæ sunt fucata sonore. 645

Nam cur tam variae res possent esse, requiro,
Ex vero si sunt Ignis, puroque creatæ?
Nil prodeisset enim calidum denserier Ignem,
Nec rarefier, si partes Ignis candem
Naturam, quam totus habet super Ignis, haberent.

Acior Ardor enim conduësis partibus esset:
Languidior porro disjœès, disque supatis.
Amplius hoc fieri nihil est, quod possit rearis
Talibus in causis, nequum variantia rerum
Tanta queat densis rarisque ex Ignibus esse. 655

Atque Hi si faciant, admìstum rebus Inane;
Denserì poterunt Ignes, rarique relinquis:
Sed, quia multa sibi cernunt contraria, müssant,
Et fugitant in rebus Inane relinquere purum, &
Ardua dum metuunt, amittunt vera viai:
Nec rursus cernunt exempto rebus Inani,
Omnia denserì, fierique ex omnibus unum

Corpus,
err from the true Rule of Reason. The Champion of these, 1 Heraclitus, enters first the Lifts, more famed for dark Expression among empty Greeks, than with the Wise, who search for Truth; for none but Fools admire, and love what they see couch’d in Words abstruse; and that they take for Truth which quaintly moves the Ear, and painted o’re affects by witty Jingling of the Sound.

For how such various Beings could arise, I ask, if form’d from pure and real Fire? To say, m that the hot Fire is now condens’d, and sometimes rarified, would nought avail; the several Parts must still retain the Nature of Fire, the same which the Fire had when whole; the Heat would be more fierce, the Parts condens’d, more languid when divided and made rare. There’s nothing more than this you can derive from Causes such as these, much less so great Variety of Things can be produced from Fire or Flame, condens’d or made rare.

Indeed, would they admit in Things a Void, Fire then might be condens’d or rarified; but This, because it contradicts their Schemes, they murmur at, and will allow in Things no empty Space: So, while they fear to grant this difficult Truth, they lose the Way that’s right, nor do they see, by not allowing there is in Things a Void, all Bodies would be dense, and out of all one only would be

1 He taught, that all Things are made of Fire, and resolv’d again into Fire; and tho’ the Poet fingles out this Philosopher, he takes it for granted, that his Arguments conclude as strongly against others; since whatever opposes this Doctrine of Fire, will equally hold good against the Air, or any other of the Elements.

m Heraclitus affirmed, that Fire, by being condenf’d, grows moist, and so becomes Air; and the Air, by Compressiion, becomes Water; which Water, by Condensation, is turned into Earth: But this is not proved; for the more the Fire is condenf’d, the more it is Fire, and the Rarification is nothing to the purpose; for rarify Fire as much as you will, it will still be Fire.
Corpus, nil ab se quod possit mittere raptim, 
Æstifer Ignis uti lumen jacit, atque vaporum: 
Ut videas non e stipatis partibus esse. 665

Quod si fortè ulla credunt ratione potesse Ignis in caetu singui, mutareque corpus; 
Scilicet ex ulla facere id si parte repercant, 
Occidet ad Nibilum nimium funditus Ardor Omnis, & ex Nibilo fient quæcunque creantur. 670
Nam quodcunque suis mutatum finibus exit, 
Continuò hoc mort quod fuit ante; 
Proinde aliquid superare necesse est incolume olli, 
Ne tibi res redeant ad Nilum funditus omnes, 
De Nibiloque venata virescat copia rerum. 675

Nunc igitur, quoniam certissima corpora quædam Sunt, quæ conservant naturam semper eandem, 
Quorum abitu, aut aditu, mutatoque ordine, mutant 
Naturam res, & convertunt corpora se à 
Scire licet non esse bæc Ignea corpora rerum. 680
Nil referret enim quædam decedere, abire, 
Atque alia attribui, mutariique ordine quædam, 
Si tamen Ardoris naturam cuncta tenerent. 
Ignis enim foret omnimodis, quodcunque crearent. 
Verum, ut opinor, ita est: Sunt quædam Corpora, 
quorum 685

Concursum.
made, which could by force emit Nothing without it self, as the hot Fire emits both Light and Heat, which shews it is not composed of crouded Parts, without a Void.

But if they think, that *Fire in all its Parts may be extinquish'd, and so its Body change; if they insist that This may once be done, then the whole Fire must be resolv'd to Nothing, and Things new-form'd from Nothing must arise; for whatsoever is chang'd, and breaks the Bounds of its first Nature, dies, and is no more what first it was: some Seeds of Beings therefore must still remain whole and unhurt, left Things to Nothing should perfectly return; and then revive, and found again from Nothing be restored.

But now, since there remain some certain Seeds that keep their Nature still the same, whose Absence or their Presence, and their Change of Order change the Nature of compound Bodies, you must not think that these first Seeds are fiery; if they were, what would it signify what Seeds are absent, or what retire, what others take their place, how others may their Rank and Order change, since All would still be in their Nature Fire, and Beings form'd from Them must wholly be of Fire? But, as I think, the Case is thus: Some certain Seeds there are by

If Fire be a simple and uncompounded Thing, of which all Things are made, it cannot change without totally perishing; a compound Body may change, and assume another State, but a Body uncompounded, if it loses its first Nature, entirely dies.

The first Seeds are not fiery in their own Nature; if they were, neither adding, detracting, nor transposing them, would signify nothing to produce any Effect: for if the Nature of Fire still continued safe, nothing but Fire can be made of it. He says further, that certain Corpuscles, whose Form cannot be perceived by Sense, are the first Principles of Things, from whose meeting and uniting in various Manners, Fire and all Things else are produced.
Concursus, Motus, Ordo, Postura, Figure,
Efficiunt Ignes, mutatoque ordine mutant
Naturam; neque sunt Igni simulata, neque ullæ
Præterea rei, quæ corpora mittere possit
Sensibus, & nostrós adjectū tāngere tātus. 690

Dicere porro Ignem res omnis esse, neque ullam
Rem veram in numero rerum constare, nisi Ignem,
Quod facit Hic Idem, perdelirum esse videtur.
Nam contra Sensus ab Sensibus ipse repugnat:
Et labesaret eos, unde omnia credita pendent: 695
Unde hic cognitus est ipsi, quem nominat Ignem.
Credit enim Sensus Ignem cognoscere verè,
Cætera non credit, nihil quæ clara minus sunt:
Quod mibi cum vanum, tum delirum esse videtur.
Quo referemus enim? Quid nobis certius ipsis 700
Sensibus esse potest, quo vera ac falsa notemus?

Præterea, quare quisquam magis Omnia tollat,
Et velit Ardoris naturam linquere solam,
Quam neget esse Ignis, Summam tamen esse relin-
quat?
Æqua videtur enim dementia dicere utrumque. 705

Quapropter qui Materiem rerum esse putárrunt
Ignem, atque ex Igni Summam confertere posse:
Et qui principium gignundis Äëra rebus
Constituère: aut Humorem quincunque putárrunt
Fingere res ipsum per se: Terramve creare 710

Omnia
whose Concussion, Motion, Order, Site, and Figure, Fire is form'd; and when their Order is chang'd, they change the Nature of this Fire; but the first Seeds have nothing fiery in themselves, nor of such a Nature are they, as to send forth Bodies to be perceiv'd by Sense, or be the Object of our Touch,

And now to say that every Thing is Fire, that no true Thing in Nature does exist but Fire, as this Man does, is Madnesse all; he contradicts his Senses by his Sense, and overthrows those Tests of Truth by which all Things are known: For 'tis by Them we know that Thing which he calls Fire, and this Sense concludes, it truly knows the Nature of this Fire; but then all other Things it will deny, which equally are true. This is to me a vain and foolish Way to judge; for to what shall we apply? And what can be more sure than are our Senses to us, by which we fully know Falshood and Truth?

Besides, why any one should all Things else disclaim, and only Fire allow, or say there's no such Thing as Fire, and all Things else allow, either of these is vain, and equal Madnesse to believe.

Wherefore, those Sages who contend that Fire is the first Principle, and that of Fire all Things consist, and those who make the Air the first Seeds of Bodies, and such who say the Water is the sole Cause of Beings, or that the Earth

Heraclitus confesses, he knows Fire by the Help of his Senses; Lucretius urges, that by his Senses he discovers other Things besides Fire. The Philosopher never denied, but that other Things besides Fire appeared, but he would not allow them to be; the Poet insists, that other Things besides Fire truly are, and that the Senses evidently discover them to be.

Heraclitus held, that Fire, Anaximenes Mileius, that Air, Thales Mileius, that Water, and Pherecydes, that Earth was the first Principle of all Things.
Omnia, & in rerum naturas vertier omnes:
Magnopere à vero longèque erráste videntur.
Adde etiam qui conduplicant primordia rerum,
Aëra jungentes Igni, Terramque Liquori:
Et qui Quatuor ex rebus posse omnia rentur,
Ex Igni, Terra, atque Anima procrefcre, & Im-
bri:
Quorum Acragantinus cum primis Empedocles
est:
Insula quem Triquetris terrarum gesfit in oris:
Quam fluitans circum magnis amfætitibus æquor
Ionium glaucis aspergit virus ab undis:
Angustoque fretu rapidum mare dividit undis
Italie terrai oras à finibus ejus:
Hic est vasa Charybdis, & hic Ætnæa minantur
Murmura flammarrum rursum se conligere iras,
Faucibus eruptos iterum ut vis evomat ignes:
Ad cælumque ferat flammaef fulgura rursum:
Quæ cùm magna modis multis miranda videtur
Gentibus humanis regio, visendaque fertur,
Rebus opima bonis, multa munita virüm vi:
Nil tamen hoc babuisse Viro præclarius in se,
Nec sanctum magis, & mirum, carumque videtur.
Carmina quin etiam divini peitoris ejus
Vociferantur, & exponunt præclara reperta:
Ut vix humana videatur tirpe creatus.
Hic tamen, & supera, quos diximus, inferiores
Partibus egregiè multis, multoque minores,
Quanquam multa bene, ac divinitus invententes

Ex
all Things creates, and can infuse itself into the Nature of all Things, do strangely err, and wander wide from Truth.

And so do those who double the first Elements of Things, and to produce all Beings, join the Air to Fire, the Earth to Water, or believe that from all Four all Beings are produced, and spring from Air, and Water, Earth and Fire.

The Chief of these we rank Empedocles of Empedocles, born in Sicily, the Island famed for its three Promontories, whose Sides the Ionian Sea flows all around, with mighty Windings, from whose Coasts the Sea, by a narrow Frith, divides the Bounds of Italy. Here is the fierce Charybdis, here Etna roars, and threatens loud to suck in Flames of Vengeance, with greater Force to belch them out again, burst from his Jaws, and throw the flashing Fire high as the Sky. This Island, tho’ renown’d by Men for many Things, and worth their Sight, rich in the best Advantages of Life, by mighty Men defended, yet produced Nothing more glorious than this One great Man, Nothing more venerable, admired, and dear. Besides his Verfe, that from his Soul Divine flows sweetly, so clearly proves, and so explains the noble Secrets he has found, he seems scarce born of Human Race, but from the Gods.

Yet He, with others of inferior Note we named before, remarkably, by great Degrees, and much below him, tho’ these have succeeded well in their Search, and many Things have found as if

The Son of Meton, born at Agrigentum in Sicily, who taught that all Things were formed of the four Elements, Fire, Water, Air, and Earth. Whatever Lucretius objects against his Doctrine, will conclude likewise against those who hold, that Things are produced from two or three Elements only; for if four cannot be thought sufficient, much less will a fewer Number suffice.
Ex adyto tanquam cordis responfa dedere
Sanctius, & multò certa ratione magis, quam
Pythia, quæ tripode ex Phæbi, lauroque profatur;
Principiis tamen in rerum fecere ruinas,
Et graviter Magni magnó ecidere ibi casu:
Primum, quod motus, exempto rebus Inani,
Constituunt, & res molleis, raråque relinquunt,
Æra, Solem, Ignem, Terras, Animalia, Fruges;
Nec tamen admìscnt in eorum corpus Inane.
Deinde quod omnino fìnem non esse secandis
Corporibus faciunt, neque paufam stare fragori;
Nec prorsum in rebus Minimum consìdere quicquam:
Cum videamus id extremum cujusque cacumen
Esse quod ad sensus nostros Minimum esse videtur.
Book I. Of the Nature of Things.

inspired, and have pronounced their Oracles (from the most close Receivers of their Souls) much more Divine, and founded more on Reason than Pythia, sacred Prophetess, from Tripod, or from Apollo's Laurel ever spoke. Yet they have made sad Havock, when they search into the Principles of Things, and fell with this Great Man's Mistakes together with Him.

And first, because, denying there is Void in Bodies, they admit of Motion, and allow that Things are soft or rare; as the Air, the Sun, the Fire, the Earth, the Creatures, Fruits, and yet will mix no empty Space in the Contexture of Bodies that are form'd.

And then they set no Bounds to Bodies being divided, nor will admit an End to Blows that break their Frame; nor will they grant that such a Thing as Leaf is found in Bodies, when we plainly see that every Being has a Part, a Point that utmost lies, and obvious to our Sense, which is the Leaf of all; and thence conclude, that ut-

3 He objects against the Philosophers, first, that they admit of Motion, of Rareness and Softness, and yet deny a Void. Secondly, that they assert all Bodies to be infinitely divisible, which he opposes. Thirdly, that their first Seeds are soft, and consequently subject to change; and if they could change, they must be annihilated: but he has proved before, that Nothing proceeds or returns to Nothing. Fourthly, that the Elements they set up are contrary to one another, and therefore will mutually destroy one another, at least they can never unite in the Composition of Bodies. He observes, fifthly, that if they say the Elements lose their Nature, when they are changed into Things, and that Things are again changed into them, in this Case he says, the Elements are not more properly the Principles of Things, than Things are the Principles of the Elements. If they say the Elements still retain their Nature, he insists, that Nothing of one Species, and of one Name, could then be produced, but only a certain rude and undigested Mass of Fire, Air, Earth, and Water; as of the Things of Gold, Silver, Tin, and Brass, Nothing can ever be made but a Heap of Gold, Silver, Tin, and Brass.
Conjicere ut possis ex hoc, quod cernere non quis,  
Extremum quod habent, Minimum consister rebus.  
Huc accedit item, quod jam primordia rerum  
Mollia constituunt, que nos nativa videmus  
Esse, & mortali cum corpore funditus; atqui  
Debeat ad Nibilum jam rerum Summa reverti,  
De Nibiloque renata virescere copia rerum:  
Quorum utrumque quid à vero jam distet, habebas.

Deinde inimica modis multis sunt, atque venena  
Ipse ibi inter se: Quare aut congressa peribunt,  
Aut ita diffugient, ut temperatæ coorta,  
Fulmina diffugere, atque Imbreis Ventosque videmus.

Denique Quatuor ex rebus si cuncta creantur,  
Atque in eas rursum res omnia dissipavuntur,  
Quò magis illa queunt rerum Primordia dici,  
Quam contra res illorum, retroque putari?  
Alternis gignundur enim, mutantque colorem,  
Et tam inter se naturam tempore ab omni:  
Sin ita fortè putas, Ignis, Terræque coire  
Corpus, & Aërias auras, Roremque liquorum,  
Nil in concilio naturam ut mutet eorum:  
Nulla tibi ex illis poterit res esse creata,  
Non Animans, non Exanimo quid corpore, ut Arbos:  
Quippe suam quidque in cætu variantis acervi  
Naturam ostendet, missusque videbitur Aër  
Cum Terra simul, atque Ardor cum Rore manere:  
At Primordia gignundis in rebus oportet  
Naturam Clandestinam, cæcumque adhibere,  
Eminet necquid, quod contra pugnet & obstet,  
Quò minus esse quæcat propriè, quodcunque creatur.

Quin.
most Point is that fame Leaft in Things too small to be discover'd by the Sight.

Besides, these Men make their Principles of Things confift of soft Seeds, which we see are born, and altogether mortal in their Frame; if so, the whole of Things muft have return'd to Nothing, and be again from thence restored; how distant both from Truth you have heard before.

And then fuch Seeds are many times at war among themselves, and Poison to each other, and fo will perifh in the Attack, or fly scatter'd, as in a Tempeft we observe the Thunder, and the Showers and Wind difperfe.

Lastly, if all Things from four Elements are form'd, and into them are finally difsolv'd, why should they rather the first Principles of Things be called, than Things the Principles of them? For they are produced alternately, are ever changing their Form and their whole Nature mutually into each other; but if by chance you think the Body of the Fire and Earth is join'd, that Air is joined to Water, and thus united, each Element preserves its Nature still entire; Nothing from Seeds like these could have been form'd, not Men, nor Things inanimate, as Trees: For every Element in this various Heap of Matter, ever changing, would difplay its proper Nature still; you'd fee the Air mix'd with the Earth, and Fire with Water joined. But the first Principles whence Things are form'd should be in Nature close and undiscern'd, that Nothing might appear, which should oppose or jar, and thus prevent the compound Body from being uniform, and make it confift of Parts diffimilar, confused and void.

Vol. I. F Besides,
Quin etiam repetunt à caelo, atque ignibus ejus
Et primum faciunt Ignem se vertere in Auras
Aëris: binc Imbrem gigni, Terramque creari
Ex Imbri, retroque à Terra cuncta reverti,
Humorem primum, post Aëra, deinde Calorem:
Nec cessare haec inter se mutare, meare
De Cælo ad Terram, de Terra ad Sidera Mundi:
Quod facere baud ullo debent primordia patto.
Immutabile enim quiddam superare necesse est:
Ne res ad Nibilum redigantur funditus omnes.
Nam quocunque suis mutatam finibus exit,
Continuò hoc mors est illius, quod fuit antè,
Quapropter, quoniam quæ paullo diximus antè,
In commutatum veniunt, constare necesse est.
Ex aliis ea, quæ nequeant convertier unquam:
Ne tibi res redeant ad Nibilum funditus omnes.
Quin potius tali natura preedita quædam
Corpora constituas, Ignem si forte creadint,
Posse eadem demptis paucis, paucisque tributis,
Ordine mutato, & motu, facere Aëris auras:
Sic alias aliis rebus mutarier omnes.
At manifesta palam res indicat, inquis, in auras
Aëris è Terra res omnes crescere, aliique;

Et
BESIDES, Philosophers like These derive their Transmutation from Celestial Fire; and first, they make this Fire to change to Air, from Air is Water form'd, the Earth from Water; and then again, from Earth these Elements return, first Water, then the Air, and last the Fire. Nor do these constant Changes ever cease among themselves, but still proceed from Heaven to Earth, from Earth to Stars, that light the World. But the first Seeds of Things must by no means be thus disposed; something immutable must needs remain, left Things should utterly to Nothing be reduced: For whatsoever suffers a Change, by passing o'er the Bounds of its first Nature, dies, and is no more what it first was. Those Elements therefore, which, as we said above, admit of Change, must needs consist of other Seeds which never can change at all, left Things should utterly to Nothing be reduced: Then rather say, there are some certain Principles in Nature which are the Seeds of Fire, suppose, and some of these being taken away, or else by adding more, by changing of their Order or their Motion, they compose the Air, and so all other Beings may be produced by Changes such as These.

But you say, that common Fact does clearly shew, that all Things grow, and rise into the Air,

*Empedocles* and his Followers taught, that the Elements are continually preying upon and robbing one another; but the Poet urges, that if the Principles change, they will fall into Nothing; and therefore, since they allow the Elements are chang'd, they cannot be the first Principles of Things: For Nothing comes from Nothing, and therefore, there must be an immutable Matter, which being variously moved, produced now Fire, now Air, now Earth, now Water.

He raises an Objection, that Plants and all Animals grow, and are nourished by the four Elements; and therefore are said to be the Principles of all Things: but he replies, that they

Nunc
Air, and are supported by the Earth; and unless the Season, in happy Time, indulges Rain, and shakes the Trees with driving Showers, unless the Sun, on his Part, cherishes and gives his Heat, nor Fruits, nor Trees, nor Creatures could increase. 'Tis true, but these are not first Seeds; and we likewise, unless dry Food and kindly Juice preserve our Bodies, they must perish, and every Spark of Life, out of our Nerves and Bones, must be extinct. We are upheld, no doubt, and nourished by certain Means; and other Things are stay'd by certain others; for many common Principles of many Things are mix'd in each. And therefore, the various kind of Things we find supported in a different manner; but yet it much concerns with what, and in what Order, these first Seeds unite, and what Motion they give and take among themselves; for the same Seeds compose Heaven, Earth, the Sea, the Rivers, and the Sun, the same compose the Creatures, Fruits, and Trees, they differ only as they are moved by others, and as their Mixture differs in themselves.

So, in these Lines of mine, the many Letters you see are common to the Make and Form of many Words; and yet, you must confess, the Verses and the Words are much unlike in Sense and Sound: Such is the Force of Letters, by Change of Order only. But the first Seeds of Things being more, must needs admit of Changes more different; from whence proceeds that great Variety of Things we see produced.

are no more the Principles than Wine, Wheat, and other Things, by which we support Life; for Things that nourish are not therefore Principles, but Those from which they receive a Contexture, which makes them fit Nourishment for Things.

Now,
Nunc & Anaxagorae scrutemur Homaeometiam,
Quam Graeci memorant, nec nostra dicere lingua
Concedit nobis patrii sermonis egestas:
Sed tamen ipsam rem facile est exponere verbis,
Principium rerum quam dicit Homaeomeriam:
Ossa videlicet e pauxillis atque minutis
Ossibus: sic et de pauxillis atque minutis
Visceribus Viscus gigni: Sanguenque creari,
Sanguinis inter se multis coeuntibus guttis:
Ex Aurique putat micis consistere posse
Aurum: & de Terris Terram concrescere parvis:
Ignibus ex Ignem: Humorem ex Humoribus esse:
Cetera consimili singit ratione, putatque.

Nec tamen esse ulla parte Idem in rebus Inane
Concedit, neque corporibus finem esse secundis:
Quare in utraque mibi pariter ratione videtur,
Errare, atque Illi, supera quos diximus ante.

Adde quod imbecilla nimis Primordia singit,
Si Primordia sunt, simili qua præedita constant
Natura, atque ipsae sunt; æquèque laborant,
Et pereunt, neque ab exitiores ulla refrænat:
Nam quid in oppressis valido durabit eorum,
Now, let us inquire into the *Homœomery of Against Anaxagoras*, the Greeks so call it, but the Poverty of the Latin Tongue will not allow us to express it; but yet, by a short Periphrasis, we can explain that Thing which he calls *Homœomery*, and makes the Principle of Bodies. For instance, Bones proceed from small and little Bones, and Flesh is made of small and little Bits of Flesh; and Blood is form'd of many Drops of Blood flowing together; and Gold, he thinks, consists of little Grains of Gold; and Earth grows firm by Particles of Earth; Fire is made of Fire; Water from Water springs; and all Things else, he thinks, from Caules such as THESE arise.

And yet this Man in no Case will allow in Things a Void, nor that there is an End to Bodies being divided: He equally mistakes in both; and so do those Sages spoken of before.

Besides *, the Seeds he chose are much too weak, if of the same frail Nature they consist, as do the Things themselves, they equally fall to decay, and perish, nothing hinders them from Death: For which of these can long hold out against the fierce Jaws of Death, and so escape

* Homœomery signifies a Likeness of Parts; we call Homœomeries those Things whose minutest Parts have the Name of the Whole, as Stones, Gold, Blood, &c.

This Philosopher held the Matter of which all Things are produced to be infinite, and made it consist of very minute Particles, exactly like one another, confused at first, but reduced afterwards into Order by the Divine Mind. Things he asserted were formed of similar Parts, as Bones of little Bones, Blood of Drops of Blood, &c.

* If like Things consist of like, and the Principles are exactly of the same Nature with the Compounds, it follows that they are both equally liable to perish; for certainly no Reason can be given, why a small Part of Flesh should not be equally obnoxious to Corruption as a greater.

* F 4 Destruction,
Ut mortem effugiat lethi sub dentibus ipsis?
Nil, ut opinor, ubi ex quo res funditus omnis
Tam mortalis erit, quam que manifesta videmus 855
Ex oculis nostris aliqua vi vieta perire.
At neque recidere ad Nibilum res poss, neque autem
Crescere de Nibilo, testor res ante probatas.
Præterea quoniam Cibus auget corpus alitque:
Scire licet, nobis Venas, & Sanguen, & Osfa, 860
Et Nervos alienigenis ex partibus esse:
Sive Cibos omnes commisto corpore dicent
Esse, & habere in se Nervorum corpora parva,
Osque, & omnino Venas, parteisque Cruris;
Fiet, uti Cibus omnis & aridus, & Liquor ipsa, 865
Ex alienigenis rebus confaire putetur,
Offibus, & Nervis, Venisque, & Sanguine misto,
Præterea quacunque Terra corpora crescent;
Si sunt in Terris, Terras constare necesse est
Ex alienigenis, que Terris exoriuntur. 870
Transfer item, totidem verbis utare licebit:
In Lignis si flamma latet, fumusque, cinisque:
Ex alienigenis consistant Ligna necesse est.
Linquitur hic tenuis latitandi copia quedam:
Id quod ANAXAGORAS sibi sumit, ut omnibus omnes
Res putet immista rebus latitare: sed illud 876
Apparere unum, cujus sint pluria mista.
Book I. Of the Nature of Things.

Deftuction, crushed between his very Teeth? Can Fire? Can Air? Can Water? Which of these? Can Blood? Can Bones? In my Opinion none. All Things in Nature then would equally be liable to Death, as are such Things we see before our Eyes by any Force destroy'd. But this, I think, is fully proved before, that Nothing can fall to Nothing, or from Nothing rise.

Besides, since Food increases and supports the Body, then we know the Veins, the Blood, the Bones, consist of heterogeneous and Parts dissimilar, as does our Food. But if they say all Food consists of Parts various and mixed, and in itself contains the little Strings of Nerves and Bones, and all the Veins and Parts of Blood, then all dry Meat and Drink must needs consist of Parts dissimilar, of Bones, of Nerves, of Veins, and mingled Blood.

Further, if all Things which grow from the Earth are in the Earth contain'd, the Earth must then consist of Parts dissimilar, as do those Things which from the Earth arise. Now change the Theme, but keep the Terms the same; in Wood if Flame and Smoke, and Ashes lay conceal'd, then Wood must needs consist of Parts of different Frame.

But here a thin Evasion seems to shake this Argument a little; and Anaxagoras himself makes use of it: he thinks all Things are mixed with all Things and lie hid, but that one Thing only

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* The Body is supported by several Sorts of Food, which plainly consists of dissimilar Parts; and therefore the Parts of our Body consist of dissimilar likewise: for the several Parts of it, the Bones, the Veins, the Nerves, are nourished with different and dissimilar Aliments. If it be pretended, that those Aliments contain some Particles of Bones, Nerves, &c. it follows that there is not in those Bodies that Homœomy imagined by Anaxagoras.
Et magis in promptu, primaque in fronte locata:
Quod tamen à vera longe ratione repulsum est.
Conveniebat enim Fruges quoque sēpe minutas, 880
Robore cum saxi franguntur, mittere signum
Sanguinis, aut aliūm nostrō quae corpore aluntur:
Cum lapidi lapidem terimus, manare cruorem,
Consimili ratione Herbas quoque sēpe decebat,
Et laticis dulcis guttas, similique sapore
Mittere, lanigeræ quali sunt ubera laebris:
Scilicet & Glebis terrarum sēpe friatis
Herbarum genera, & fruges, frondeisque videri,
Dispersēta, atque in Terris latitare minutē:
Postremo, in Lignis cinerem fumumque videri, 890
Cum præfrētā forent, igneisque latere minutos.
Quorum nil fieri quoniam manifesta docet res,
Scire licet non esse in rebus res ita misas:
Verum semina multimodis immista latere
Multarum rerum in rebus communia debent. 895
At sēpe in magnīs fit montibus, inquis, ut altis
Arboribus vicina cacumina summā terantur
Inter sē, validis facere id cogentibus Aūtris,
Donec fulserunt flammæ fulgore coorto:
Scilicet: & non est lignis tamen insitus Ignis, 900
Verum Semina sunt Ardoris multa, terendo
Quæ cum confluxere, creant incendia sylvis.
Quod sī tanta forēt sylvis abscondita flamma,
Non possent ullum tempus celarier Ignes:
Conficerent volgō sylvas, Arbusa cremarent. 905

Jamn
Book I. Of the Nature of Things.

appears, of which it most abounds, and on the Surface lies; but this Reply is vain, and wide from Truth; for then the little Grains of Corn, when ground, would shew some Signs of Blood, or of some other Parts which form our Bodies; and when we wear the Stones, the Blood would flow. By the like Reason Herbs would sweat sweet Drops of Liquor, so delightful to the Taste, as flow from Dugs of woolly Sheep, and Clods of crumbled Earth would shew the various Kinds of Fruits and Herbs, and Leaves distinct and hid in smallest Particles within the Earth; And then, in Wood divided, might be seen conceal’d Ashes and Smoke, and smallest Parts of Fire. But since Experience shews Nothing of this appears, we must conclude there’s no such Mixture as This in Things; but say, that common Seeds of many Things in various Order join’d, are mix’d in every Thing, and lie conceal’d.

But oft, b you say, upon the Mountain Tops, the Heads of lofty Trees that grow together are by the violent Blasts of forcing Winds, so rubb’d by close Collision, that they soon are all on fire, and Flames shine out. ’Tis true, and yet there’s no actual Fire within the Wood, but many Seeds of Fire, which by hard Rubbing unite, and so the Wood is all in flames. For if so much of Fire had lain concealed within the Wood, this Fire would have appeared immediately, and so consumed the Wood entirely, and burnt its Root Branches to the ground.

b He says, there is not any Fire in the Tree itself, but that the Seeds of Fire, or the Molecule of the Atoms, being dispos’d in a certain and new Order, and dashing with Violence against one another, exhibit and produce the Species of Fire. If there were actually Fire in Woods and Forests of Trees, it would certainly shew its Strength, and make a wide Destruction.
Jamne vides igitur, paullo quod diximus ante, Per magni referre eadem Primordia sæpe Cum quibus, & quali postura continentur, Et quos inter se dent motus, accipientque; Atque eadem paullo inter se mutata creare

Ignes è Lignis, quo paœo Verba quoque ipsa Inter se paullo mutatis sunt elementis, Cum Ligna, atque Ignes distincta voce notemus.

Denique jam quæcunque in rebus cernis apertis, Si fieri non posse putas, quin Materiai

Corpora consimili natura præedita fingas, Hac ratione tibi percunt Primordia rerum:

Fiet uti risu tremulo concussa cachinent, Et lacrymis falsis humeâtent ora, genasque

Nunc age, quod superest, cognosce, & clarius audi. Nec me animi fallit quam sint obscura, sed acri

Percussit thyrsō Laudis spes magna Meum cor, Et simul incussit suavem mi in pectus amorem Musarum: quo nunc insinētus, mente vigenti

Avia Pieridum peragro loca, nullius ante

Trita solo: juvat integros accedere fonteis, Atque haurire: juvatque novos decerpere flores:

Insignemque meo capiti petere inde coronam, Unde prius nulli velârint tempora Musæ:

Primum quod magnis doceo de rebus, & arēlis

Religionum animos nodis exsolvere pergo:

Deinde quod obscura de re tam lucida pango

Carmina, Museo contingens cunctâ lepore,
You see therefore of what Concern it is, as we observ'd before, with what first Principles those Seeds are joined, and in what Order placed, and what the Motions are they give and take among themselves, and how, the Seeds remaining ever the same, but yet their Order changed, produce a Fire from Wood; just as we write Ignis and Lignum, tho' quite different Words, they are yet composed of Letters much the same.

Lastly, if Things most obvious to the Sense, you think, cannot be form'd, unless you make their Seeds consist of Principles the same in Nature, those Principles would be destroy'd; you'd see some Seeds would shake their little Sides with Laughing, some bedew their Face with Tears.

Now, what remains observe, attend me close; I know my Theme is dark, but the great Love of Praise pricks on my Heart with sharpest Spurs, and strikes my Soul at once with sweet Desire of the most tuneful Nine; by this urged on, my Mind in Rapture, I haunt the Muse's Seats, of difficult Access, and yet untrod; I love to approach the purest Springs, and thence to draw large Draughts. I love to crop fresh Flowers, and make a noble Garland for my Head; from thence, where yet the Muse's never bound another's Temples with a Crown like mine. And first, I write of lofty Things, and strive to free the Mind from the severest Bonds of what Men call Religion; then my Verse I frame so clear, altho' my Theme be dark; seasoning my Lines with the Poetic Sweets of Fancy, and Reason

Some late Philosophers seem at least to favour this opinion of Anaxagoras, when they affert, that these Affections do indeed, in some sort, praetexit in the Elements, tho' not in the same manner as in Man.
Id quoque enim non ab ulla ratione videtur: Sed veluti Pueris absinthia tetra medentes 925
Cum dare conantur, prius oras pocola circum Contingunt mellis dulci flavoque liquore;
Ut Puerorum ætas improvida ludificetur Labororum tenus, interea perpetet amarum Absintibi laticem, deceptaque non capiatur, 940
Sed potius tali facto recreata valescat:
Sic ego nunc, quoniam haec Ratio plerumque videtur Tristiōr esse, quibus non est tractata, retroque Volgus abhorret ab hac, volui tibi suaviloquenti Carmine Pierio Rationem exponere nostram, 945
Et quasi Musco dulci contingere melle,
Si tibi fortè animum tali ratione tenere Versibus in nostris possém, dum perspicis omnem Naturam rerum, qua constet compta figura.
Sed quoniam docui, Solidissima Materiai 950
Corpora perpetuò volitare invicta per ævum
Nunc age Summaī ecquaenam fit finis eorum,
Nec ne fit, evolvamus: item, quod Inane repertum est
Seu locus, ac spatium, res in quo quaeque genantur,
Pervideamus utrum finitum funditus Omne 955
Constet, an Immensum pateat vel ad usque profundum?
Omne quod est, igitur, nulla regione viarum
Finitum est: namque Extremum debebat habere.
Extremum porro nullius posse videtur
Esse, nisi ultra fit quod finiat, ut videatur, 960
Quò non longius haec sensus natura sequatur.

Nunc
I. Of the Nature of Things.

justifies the Method. For as the Physicians, when they would prevail on Children to take down a bitter Draught of Wormwood, first tinge the Edges of the Cup, that so the Childrens unsuspecting Age may be deceiv'd, at least their Lips, and take the bitter Juice, thus harmlesly betrayed, but not abused, they have their Health restored: So I, because this System seems severe and harsh, to such who have not yet discern'd its Truth, and the common Herd are utterly averse to this Philosophy, I thought it fit to shew these rigid Principles in Verse smooth and alluring, and tinge them, as it were, with sweet Poetic Honey, thus to charm thy Mind with my soft Numbers, till you view the Nature of All Things clearly, and perceive the Figure and the Order they display.

But since I taught the Principles of Matter are solid, are eternal, ever-moving, nor are destroy'd; now, come, let us enquire, whether they have an End, or are by Nature infinite: and since we have found a Void or Place, or Space in which all Things are mov'd, let us now see whether the Universe, made up of Void and Body, be circumscrib'd, or does to a profound Immensity extend.

This All, therefore, does not admit of Bounds; for if it did, then it must have something Extreme: Now, no Extreme can be, unless it lies beyond those Things whose Bounds, or whose Extreme it is, from whence they may be seen, and beyond which our Faculty of Sight can reach no further. Now since we must own,

Whatever is finite has an Extreme, but whatever has an Extreme may be seen by what is without or beyond it. Now the Universe, or the All, is not seen by any Thing that is beyond it; therefore the Universe has no Extreme.

that
Nunc extra Summam quoniam nihil esse fatendum est,
Non habet Extremum: caret ergo fine, modoque:
Nec refert quibus assistas regionibus ejus,
Usque adeo quem quisque locum possidit, in omnibus
Tantundem partis infinitum Omne relinquat.

Præterea, si jam finitum constituatur
Omne quod est spatium, si quis procurrat ad oras
Ultimus extremitas, jactatque volatile telum,
Id validis utrum contortum viribus ire
Quod fuerit missum mavis, longique volare,
An prohibere aliquid censeas, obstareque posses?
Alterutrum fatearis enim, summasque necessis est,
Quorum utrumque tibi effugium præcludit, & Omne
Cogit ut exempta concedas fine patere.

Nam siue est aliquid, quod prohibeat, officiatque
Quod minue quo missum est veniat, finique locet se,
Siue foras fertur, non est ea fini profecto.
Hoc paétō sequar, atque oras ubicunque locaris
Extremas, quaeram quid Telō denique fiat.

Fiet uti nusquam possit consìstere finis:
Effugiumque fugæ prolatae copia semper.
Præterea spatium Summae totius omne
Undique si inclusum certis consìstet oris,
that nought can be beyond the All, this All has therefore no Extreme, it has no End, no Bounds; nor does it signify what Spot of this great All you stand upon; for on what Part soever you are fix’d, you have a wide and infinite Space around you every way.

But if this wide Extent of Space be finite and circumscrib’d, let a Man stand upon the utmost Verge, and from thence throw a Dart, whether you choose this Dart, with mighty Force thus cast, should reach the Mark design’d, and fly swift on, or whether you think that something should hinder or oppose its Flight, and one of these you must confess; now either way you are caught, and can’t escape: You are forc’d to own this All lies wide extended without Bounds. For whether there be something that does hinder and stop its Flight, so that it cannot reach the Mark design’d, and there rest still and fix’d; or whether it flies forward, there this End you cannot fix: for if it stops, then something must lie beyond the utmost Verge; and if it flies, there is a Space beyond the extremest Brink. And thus I follow close; and whereas’er you place the extremest Bounds, I still demand what comes of your Dart? So that no Bounds can any where be fixed, but Space immense will always give a Passege to its Flight.

Besides, were this All’s extended Space shut up by certain Bounds on every Side, and was by

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* Suppose the Universe be finite, and let a Man be placed on the extremest Verge of it, and strive to throw a Dart, either the Dart will fly forward, or something will stop it; if it flies forward, there is a Space beyond the extremest Brink; if it be stopped by any Thing, there must be Something without the utmost Part.

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Vol. I. G Nature
Finitumque foret, jam copia Materiae
Undique ponderibus solidis conflixet ad Imum;
Nec res ulla geni sub aeli tegmine posset:
Nec foret omnino Caelum, neque lumina Solis:
Quippe ubi materies omnis cumulata jaceret
Ex infinito jam tempore subsidendo
At nunc nimirum requies data Principiorum
Corporibus nulla est: quia nil est funditus Imum,
Quo quasi confluere, & sedes ubi ponere possint;
Semper & assiduo motu res quaeeque genuntur
Partibus in cunelis, aternavque suppeditantur
Ex Infinito cita corpora Materiae.
Postremo ante oculos rem res finire videtur,
Aer dissepit Colleis, atque Aera Montes;
Terra Mare, & contra Mare Terras terminat omneis.
Omne quidem verò nihil est quod finiat extra:
Est igitur natura loci, spatiumque profundi,
Quod neque clara suo percurre re flumina cursu
Perpetuo possint ævi labentia traebu:
Nec prorsum facere, ut resbet minus ire, meando:
Usque adeo passim patet ingens copia rebus,
Finibus exemptis in cunelas undique parteis.

T. Lucretii Lib. I.
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Nature finite, then this mass of Matter, press'd by its solid Weight, had long ere now sunk to the lowest place, and therefore Nothing under the Vault of Heaven could have a Being, nor could there be Heavens at all, or the Sun's Light. For then the Seeds of Things that had been sinking from all Eternity, would in Confusion lie on Heaps; but now the Principles of Bodies having no Rest at all, are ever moving, because there's no such Thing as lowest Place, to which they may descend, no fix'd Abode where they should rest; but Things are ever carried by Motion never-ending, through every Part of this vast All, from whence the active Seeds of Things arise, and are eternally supplied.

Further, we see one Thing bounds in another; the Air bounds in the Hills, the Hills the Air, the Earth fluts up the Sea, and then again the Sea surrounds the Earth; but this Great All Nothing exterior to it self can bind. For the Nature of this Place, this empty Space, is such, that Rivers of the swiftest Stream, were they to run for Ages infinite, with a perpetual Current, could not run through it, or ever by their running prove they had left of their Course to run; so vastly wide this mighty Space of Things extended lies on all Sides, every way, without all Bounds.

If the Universe were finite, in that finite Space there would be some lowest Place, to which Matter that by its natural Gravity had been sinking from all Eternity, would have sunk down and rested. And thus it would have happened long ago, that the univerfal Matter having reached the lowest Place, would from that Time have generated Nothing; for Nothing can proceed from Seeds that are at Rest.

There can be Nothing exterior to the Universe that can be its Bound, since that very Thing that is exterior to it is a Part of it; for the Universe contains All that is.
Ipsa modum porro sibi rerum Summa parare
Ne possit, Natura tenet: quia Corpus Inani,
Et quod Inane autem sit, finiri Corpore cogit:
Ut sic alternis Infinita omnia reddat. 1010

Aut etiam, alterutrum nisi terminet alterum eorum,
Simplice natura & pateat tantum Immoderatum:
Nec Mare, nec Tellus, nec Cæli lucida templae,
Nec Mortale genus, nec Divum corpora sancta
Exiguum possent horai fistere tempus. 1015

Nam dispuifa suo de cætu Material
Copia ferretur magnum per Inane foluta.
Sive adeo potius nunquam concreta creasset
Ullam rem, quoniam cogi disjeta nequisset.
Nam certè neque consilio primordia rerum 1020
Ordine se quæque, atque sagaci mente locûrunt;
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Besides, the Laws of Nature do provide, that this Universe of Things will not admit of Limits to itself, because Body is Bound to Void, and Void a Bound to Body; and by this mutual Termination it is, that this great All becomes Immense; for were not each a Bound unto the other, were Body not a Limit set to Void, the Void would be infinite, and all finite Bodies would be dissolv'd, and so nor Sea, nor Earth, nor the bright Heavens, nor mortal Race of Men, nor sacred Bodies of the Gods could be one Moment of an Hour; for the Seeds of Bodies being dissoluted in themselves, would fly, and quite dissolv'd, be carried through the Void; or rather, being never joined, had form'd no Being; for once scatter'd through this Space, they could not be compelled to join again.

For certainly the Principles of Things could never range themselves in Form or Order, by Counsel, or by Wisdom of the Mind, nor any

\[a\] This Argument is allowed to be very intricate, and hard to be explained; he seems to mean that Body and Void mutually bind each other, and that an Immensity must proceed from the mutual Termination; because neither of them, that is, neither Body nor Void, can be the last, but whatever has no Part that can be the Least or extremest, that indeed is infinite.

\[b\] The Stoicks held the World to be a rational Creature, and to conist of Heaven and Earth, as of Soul and Body. The Heavens, they said, were the same to the whole, as Reason is to Man, and the Stars were the Eyes of the World. He de-rides this Opinion, and teaches, that after a Length of Time all Things were produced by a fortuitous Concourse of these indivisible Bodies, which after striking, jostling and crowding one another in the infinite Void, perhaps for many Myriads of Ages, after all possible Configurations, Changes, Postures, Successions and Agitations, happened at last to fall into this goodly Fabrick of the Univerle. This is the System of Epicurus concerning the first Beginning of Things, which common Sense sufficiently overthrows.

G 3  Com-
Nec quos quæque darent motus pepigere profecto:
Sed quia multimodis, multis, mutata, per Omne
Ex infinito vexantur percita plagis,
Omne genus motus, & cæ tus experiundo,
Tandem deveniunt in taleis disposituras,
Qualibus hæc rebus constítit Summa creata:
Et multos etiam magnos servata per annos,
Ut semel in motus conjeta est convenienteis,
Efficit, ut largis avidum Mare fluminis undis
Integrent Amnes, & Solis Terra vapore
Fota novet fatus, summissaque gens animantum
Floreat, & vivant labentes Ætheris ignes.
Quod nullo facerent pætio, nisi Materiali
Ex Infinito suboriri copia posset,
Unde amissa solent reparari in tempore quoque.
Nam veluti privata cibo Natura animantum
Diffuit amittens corpus, sic omnia debent
Dissolvit, simul ac defectit suppeditare
Materies recta regione aversa viaë.
Nec Plague possent extrinsecus undique Summam
Conservare omnem, quæcunque est conciliata.
Cudere enim cerebro possunt, partemque morari,
Dum veniant aliae, ac suppleri Summa queatur.

Interdum
Compact make how each should move; but being chang'd in various Forms, and struck with many Blows, they are driven through this Void for many Ages, and having try'd all Kinds of Motion, and of Union, they at length by chance are to disposed, to frame those Bodies of which this Universe of Things consists. And these Seeds once thrown into convenient Motions, and keeping in the same for many Ages, is the true Cause that Rivers, with a large Supply of Waters from their Streams, fill up the greedy Sea, and the Earth, supported by the Sun's Heat, renews the Fruits, and the Race of living Creatures flourish, and the rolling Stars of Heaven are kept alive; all which could never be, if from this infinite Mafs a Supply of Seeds flow'd not, from whence decaying Things might rise, and live, and be from Age to Age repaired.

For as the Animal Creation, deprived of Food, must perish, and their Bodies be quite destroy'd, so Things must be dissolved as soon as Matter, turning from its Course, fails to afford Supply, and save the whole.

Nor, as some may object, can 'outward Blows on all Sides given, preserve this All of Things we see compounded, from falling into pieces: They may indeed beat thick, and stay some Part, till other Atoms come, and so supply the Universe.

*k After this accidental Coition of the Seeds, they never varied from their original and stated Motions; and the Frame of the Universe is preserved.

1 He means that finite Atoms cannot always, and at every Moment of Time, mutually strike one another; and when they do, they must sometimes rebound, and thus give Time and Room for the Principles of the Compounds which affect to be in continual Motion, to break the Chain of their Contexture, and to fly away from one another.
Interdum resiliere tamen coguntur, & unà Principiis rerum spatium, tempusque fugae Largiri, ut possint à caelo libera ferri. Quare etiam atque etiam suboriri multa necesse est. Et tamen ut Plaga quoque possint suppetere ipsae, Infinita opus est vis undique Materiae.  

Illud in his rebus longe fugae credere, Memmi, In medium Summae (quod dicunt) omnia niti, Atque ideo Mundi naturam stare sine ullis Iribus externis, neque quodquam possit resolvi Summa atque Ima, quod in Medium sint omnia nixa, (Ipsum si quicquam possit in se sistere credis: 1055 Et quae pondera sunt sub Terris omnia surfum Nitier, in Terraque retrò requiescere posta: Ut per aquas quae nunc rerum simulacra videmus: ) Et simili ratione Animalia subtu vagari Contendunt, neque posse Æ Terris in loca Cæli Recidere inferiora magis, quam corpora nostra Sponte sua possint in Cæli templa volare: Illi cum videant Solem, nos Sidera noctis Cernere, & alternis nobiscum tempora Cæli Divide, & noxibus parileis agitare, diesque.
Book I. Of the Nature of Things.

But oft they are compelled to bound, and leap back, and so afford the Seeds both Time and Place to fly away, and thus to get their former Liberty again. Therefore, 'tis fit that many Seeds should still arise, from Time to Time, for a Supply; and that these Blows might never cease to beat, the Force of Matter must be on all Sides infinite.

In these Enquiries see that you avoid, my Mem- minus, to believe with some that say, all Bodies strive to reach the middle Place of this great All; and so the Nature of the World stands fix'd, not struck at all by outward Blows; nor can the upper or the lower Parts be scatter'd any way abroad, since all Things by Nature to the Centre tend (as if you could believe that any Thing could stay and rest upon itself, that heavy Bodies tend upwards, and fix their Rest upon the Surface of the Earth opposite to us, just as we see the Images of Bodies shew themselves in Water.) By the same Reason they contend, that Creatures walk underneath, as we above; nor can they fall into the Regions of the Air below, than can our Bodies naturally fly upwards towards Heaven; and when they see the Sun, we view the Stars of Night, and so by turns they share with us the Seasons of the Heavens, and with us still divide the Nights and Days.

m He refutes the Opinion, that the Universe has a Centre, to which all Things tend by their natural Gravity. He says, there can be no Middle, because the Void is infinite; but what is infinite has neither Beginning nor End, and therefore no Middle. And grant there was a Centre, yet no Reason can be given why heavy Bodies should stop in the middle Part of the Void, when a Void gives way to heavy Bodies equally in every Part of it.
T. Lucretii Lib. I.

Sed vanus Stolidis bæc omnia finxerit error,
Amplexi quod habent perversè prima viai.
Nam Medium nihil esse poteš, ubi Inane, locusque
Infinita: neque omnino, fi jam Medium sit, 1070
Possit ibi quicquam bæc potius consistere causa,
Quàm quavis alia longè regione manere.
Omnis enim locus, ac spatium, quod Inane vocamus,
Per Medium, per non Medium concedat oportet
Æquis ponderibus, motus quæcunque seruntur. 1075
Nec quisquam locus est, quo Corpora cum venere,
Ponderis amissa vi possint stare in Inani:
Nec quod Inane autem est, illis subsistere debet,
Quin, sua quod natura petit, concedere pergat.
Haudigitur possunt tali ratione teneri 1080
Res in concilio, Medii cuppedine viciæ:
Præterea quoque jam non omnia corpora singunt
In Medium niti, sed Terrarum, atque Liquorum,
Humorem ponti, magnisque è montibus Undas,
Et quasi Terreno quæ corpore continantur: 1085
At contrà tenues exponunt Aéris auras,
Et calidos simul à Medio differreter Ignis,
But vain Mistake hath form'd this Scheme for Fools, who judge perversely of the Seeds of Things. For there can be no Middle, where there is a Void or Space that's infinite; or if there was, can Bodies, for this Reason, rather stop their Course in this Medium, than take up their Abode in any Part of Space that's further off. For Place, or empty Space, which we call Void, must equally give way to heavy Movements through a Medium, or through none, which way soever their Motions tend; nor is there any Place where Bodies, when they come, throw off their Weight, and stand fix'd in a Void, and take their Rest. Nor can a Void support the Weight of Bodies, but must by its own Nature still give way. It follows then, that Things are not preserv'd, or held together by this means, as if they fondly strove to reach a middle Space.

Besides, all Bodies, they pretend, do not incline towards the Centre, but those of Earth and Water, the Sea, and Rivers rolling from the Hills, and those that are composed of earthly Parts. But the thin Air, they say, and the hot Fire are carried upwards from the Middle; and hence it is the Sky is spangled every way with Stars, and

Those who suppose a Centre, assert, that the Particles of the Earth and Water only tend thither; but he answers, if some earthly Particles did not rise upwards likewise, how could Animals be nourish'd? How could Trees and all manner of Plants grow? He says, they pretend that certain solid Heavens inclose those light Particles that rise from the Centre, are roll'd round all Things, and hold them in; for if these Particles were not stop'd, they would immediately fly through the immense Void, and the Heavens and the Earth would be dissolved, and fall to pieces; for where any Part of the World begins to fail, the Whole will soon be dissolved. He recites these Opinions as Absurdities, and thinks by so doing he confutes them.
Atque ideo totum circumtremere Æthera signis,
Et Solis flammam per cæli cærula pasce,
Quod calor à Medio sugiens ibi colligat igneis. 1090
(Quippe etiam veści è Terra mortalia sacra:
Nec prorsum arboribus summos frundescere ramos
Posse, nisi à terris paullatim quique cibatum
Terra det) at suprà circum tegere omnia Calum
Ne volucrum ritu flammarum, mænia Mundi 1095
Diffugiant subito magnum per Inane soluta,
Et ne cætera consimili ratione sequantur:
Neve ruant cæli tontralia tempia supervi,
Terraque se pedibus raptim subducat, & omnes
Inter permixtas terræ, cælique ruinas
Corpora solventes, abeant per Inane profundum,
Temporis ut puncto nihil exspect relliquiarum,
Desertum præter Spatium, & Primordia cæca.
Nam quacunque prius de parti corpora cæsse
Constituæs, hæc rebus erit pars janua letiæ: 1105
Hæc se turba foras dabí omnis Materiæ.
Hæc si pernoctes, parva perfunctus opella,
(Namque alid ex alio clarescit) non tibi cæca
Nox iter eripiet, quin ultima Naturali
Pervideas, ita Res accendent lumina Rebus. 1110
the Sun's Flame in his celestial Course is fed, because the Fire flying from the Centre, there binds up all its Heat; (so from the Earth all mortal Things are fed, nor can the Trees adorn their lofty Heads with Leaves, unless the Earth to every Kind affords its due Support.) They say, a sort of Heavenly Canopy above covers the whole, and holds it in; left the World's Walls, their Parts being all dissolv'd, should instantly be scatter'd through the Void, like swifteft Flames, and all Things be o'erwhelm'd in this great Ruin; left the thundering Vaults of Heaven should tumble from above, and Earth should fail our trembling Feet, and the whole Race of Men, their Bodies broken and dissolv'd, should wander through the boundless Void, amidst these mingled Ruins of the Earth and Heavens; and in a Moment nothing would be left but desart empty Space, and senseless Seeds. For in whatever Part you will suppose the Seeds to separate, here will be the Gate of Death to Bodies; for Matter through the Breach will rush abroad, and prefs with mighty Force.

If This you throughly know, and little Pains will serve (for one Thing by another you'll explain) no more shall Darkness interrupt your Way, but you shall view the utmost Depths of Nature; for Things will shew themselves by mutual Light.

He means the whole Circumference of the Heavens, which, like Walls, inclose and surrouns the World.

The END of the FIRST BOOK.
OUR Poet made choice of a Subject naturally crabbed, and therefore he adorned it with Poetical Descriptions and Precepts of Morality in the Beginning and Ending of his Books. In this Book he treats of the Motions and Figures of his Atoms, and introduces his Subject with the Praise of that Philosophy which Epicurus taught, and which he calls, The Doctrine of the Wife. This he recommends to his Memmius, as what will alleviate all his Care, and deliver the Mind from Anxiety and Fear. Then he disputes about the Properties and Qualities of his Seeds or Atoms, the first of which is Motion. That Seeds do move, is demonstrated from the Generation of Things, but their Motion is downwards; for all Seeds are heavy: But when solid Seeds meet, they must of necessity rebound every way from one another. Thus some Seeds happen to unite and join together, and those whose Union is most compact, compose Things that are hard and dense; but the Seeds whose Connexion is more loose, make those that are soft and rare. But some Seeds never unite, but like the Particles of Dust we see in the Beams of the Sun, are with perpetual Motion carried through the Void, and incessantly strike, and drive up and down other
other Atoms and Themselves. He then explains the
Swiftness of the Seeds that tend downwards; and,
after his usual Manner, severely falls upon those
who confess a divine and ruling Providence. He
observes that the Seeds, as they tend downwards,
decline a little from a strait Line; for unless they
did so, Nothing at all, at least no free Agent, could
ever be produced. He shews that the Seeds still keep
the same Motion in which they have moved from all
Eternity; and that no Man should distrust this
Opinion, because he cannot discover this Motion by
his Sight, since the very Seeds themselves cannot be
perceived. Figure is the second Quality or Property
of Seeds, and he proves that all Seeds are not of the
same Figure, but that some are round, some square,
some smooth, some rough, some hooked, &c. And
he shews at large, what Figures compose bitter Bo-
dies, what sweet, what hard, what soft; that
this Variety of Figures is not infinite, but that Seeds
of the same Figure are infinite, that is, the Round
are infinite, the Square infinite, &c. He observes,
that Things are not composed of Seeds of the same
Figure, and proves by many Arguments, that com-
 pound Bodies contain Seeds of different Figures;
Seeds, he says, have none of those Qualities which
we call sensible, as Colour, Taste, Heat, Cold, &c.
and that they are not endowed with Sense, tho' co-
 loured, savoury, hot, cold, and sensible Things are
composed of them. Lastly, that these infinite Seeds
flying up and down through the infinite Void, com-
 pose infinite Worlds, and that these Worlds are some-
times increased in Bulk by the Seeds that drop down
out of the infinite Space, and sometimes diminished
and dissolved, because the Seeds get loose and fly a-
way from them into the infinite Space likewise; in the
same Manner as Plants and Animals are born, in-
crease in Growth, wax old, and at length die.

T. Lucretii
T. Lucretii Cari

DE

RERUM NATURA

LIBER SECUNDUS.

SUAVE, mari magno turbantibus aquora ventis
E terra magnum alterius spectare laborem;
Non quia vexari quemquam, sed jucunda voluptas,
Sed, quibus ipse malis careas, quia cernere suave est.
Suave etiam belli certamina magna tueri
Per campos instructa, Tua sine parte pericli
Sed nil dulcius est, bene quam munita tenere
Edita doctrina Sapientum templo serena;

Despicere
T. Lucretius Carus,
OF THE
NATURE of THINGS.
THE
SECOND BOOK.

TIS pleasant, when a Tempest drives the Waves, in the wide Sea, to view the sad Distresses of others from the Land; not that the Pleasure is so sweet that others suffer, but the Joy is this, to look upon the Ills from which yourself are free. It likewise gives delight to view the bloody Conflicts of a War, in Battle ranged over all the Plains, without a Share of Danger to yourself: But nothing is more sweet, than to attain the serene tho' lofty Heights of true a Philosophy, well fortified with Learning of the Wife, and thence look down on others,

a The Poet introduces his Subject with the Praise of that Philosophy taught by Epicurus; and intending in this Book to treat of the Motions and Figures, and other Qualities of his Atoms, he relaxes the wearied Mind of his Memmius, by forewarning him of the Dangers and Calamities of others, and to allure him to the Study of that Philosophy which he calls The Doctrine of the Wife.
T. Lucretii Lib. II.

Despicere unde queas Alios, passimque videre
Errare, atque viam palanteis querere vitæ,
Certare ingenio, contendere nobilitate,
Nošteis atque dies niti praestante labore
Ad summas emergere opes, rerumque potiri:
O miseræs hominum menteis! ó poëtora cæca!
Qualibus in tenebris vitæ, quantisque periclis
Degitur hocœvi, quodcumque jêt! nonne videre
Nil aliud sibi Naturam latrare, nisi ut, cium
Corpore séjunctius dolor abst, mente fruatur
Jucundo sensu, cura semota, metuque!

Ergo corpoream ad naturam pauca videmus
Essè opus omnino, que demant quemque dolorem,
Delicias quoque uti multæ subßternere possint,
Gratius interdum neque Naturam ipsa requirit.
Si non aurea sunt juvenum simulacra per ædeis
Lampadas igniferas manibus retinentia dextris,
Lumina nocturnis epulis ut suppedientur,
Nec domus argento fulget, auroque renidet;
Nec citbaris reboant laqueata aurataque templa:
Attamen inter se prostrati in gramine molli
Propter aque rivum, sub ramis arboris altae,
Non magnis opibus jucundè Corpora curant:
Praesertim cum tempæstas arridet, & anni
Tempora conspargunt viridantes floribus herbas,
Nec calide citiæ decedunt corpore fæbres,
Textilibus si in pìturus, ostroque rubenti
Jactaris, quam si plebeia in vestæ cubandu jêt:
Quapropter quoniam nil nostro in corpore Gæae

Profi-
Book II. Of the Nature of Things.

and behold Mankind wandering and roving every way, to find a Path to Happiness; they strive for Wit, contend for Nobility, labour Nights and Days, with anxious Care, for Heaps of Wealth, and to be Ministers of State.

O wretched are the Thoughts of Men! How blind their Souls! In what dark Roads they grope their way, in what Distress is this Life spent, short as it is! Don't you see Nature requires no more, than the Body free from Pain, she may enjoy the Mind easy and cheerful, remov'd from Care and Fear?

And then we find a little will suffice the Nature of our Bodies, and take off every Pain; nay, will afford much Pleasure, and Nature wishes for nothing more desirable than this. What tho' no Golden Images of Boys, holding forth blazing Torches in their Hands, to light the Midnight Revels of the Great, adorn thy House? What tho' thy Rooms shine not with Silver, nor are overlaid with Gold, nor do thy arched gilded Roofs rebound with the strong Notes of Mufick? Yet we find Men sweetly indulge their Bodies, as they lie together on the soft and tender Grafs, hard by a River's Side, under the Boughs of some high Tree, without a Heap of Wealth; chiefly when the Spring smiles, and the Season of the Year sprinkles the verdant Herbs with flowery Pride. Nor will a burning Fever sooner leave the Body, when you are tossed in Cloaths embroidered on Beds of blushing Purple, than when you lie in coarsest Blankets. Since Riches then afford no Comfort to our Bo-

b The Golden Statues used in the Houses of Persons of Quality, instead of Sconces and Candlesticks in their Entertainments by Night.

H 2 dies,
Projiciunt, neque Nobilitas, neque Gloria regni:
Quod superest, animo quoque nil prodeffe putandum:
Si non forte tuas Legiones per loca campi
Fercecum videbas bellis simulacra cienteis:
Fercecum videbas Classem, latéque vagari,
His tibi tum rebus timefatæ Religiones
Effugiunt animo pavide, mortisque timores:
Tum Vacuum pestis linquant, curaque solutum.

Quod si ridicula hæc, ludibriaque esse videmus,
Re veraque Metus hominum, Curæque sequaces,
Nec metuunt sonitus armorum, nec fera tela:
Audacesque inter Reges, rerumque Potenteis
Versantur, neque fulgorem reverentur ab auro,
Nec clarum vestis splendorem purpureaë:
Quid dubitas, quin omnes hæc rationis ęges tas,
Omnis cùm in tenebris praestertim vita laboret?

Nam veluti Pueri trepidant, atque omnia cæcis
In Tenebris metuunt: sic nos in Luce timemus
Interdum nibilo quae sunt metuenda magis, quàm
Quæ Pueri in Tenebris pavitant, fingunque futura.
Hunc igitur terror em animi, tenebrasque necessè est
Non Radii solis, neque lucida tela diei
Dissimiant, sed Natura species, Ratioque.

Nunc age, quo mota Genitalia Materiae
Corpora res varias gignant, genitæque resolvant,
Et qua vi facere id cogantur, quæve sit ollis
Booke II. Of the Nature of Things.

dies, nor Nobleness, nor the Glory of Ambition, 'tis plain you are to think they do the Mind no good. If, when you behold your furious Legions embattled o'er the Plains, waging mock War, or when you view your Navy fand eager to engage, or bear away o'er the wide Sea, if struck with Sights like these, your fearful Superstitions, and the Dread of Death, forsake your Mind, and leave your Breast serene, and free from Care, 'twere something. But if these Things are vain and all Grimace, and the truth is, that nor the Fears of Men, nor following Cares fly from the Sound of Arms or cruel Darts, but boldly force their way among the Kings and Mighty of the Earth; nor do they Homage pay to shining Gold, nor the gay Splendor of a purple Robe. Do you doubt but all this Stuff is want of Sense, and all our Life is grooping in the dark?

For as Boys tremble and fear every thing in the dark Night, so we, in open Day, fear Things as vain, and little to be feared, as those that Children quake at in the dark, and fancy making towards them. This Terror of the Mind, this Darkness then, not the Sun's Beams, nor the bright Rays of Day can scatter, but the Light of Nature and the Rules of Reason.

But now, come on, remember you attend, while I explain by what Motion the Genial Seeds of Matter produce the various Kinds of Bodies, and dissolve them when produced, and by what Force compelled they act, and what Celerity of

As Children dread every thing in the dark, so Men are terrified with a Belief of Providence and of Punishments after Death, which, according to Epicurus, are but the Day-Dreams of a crazy Mind.
Reddita Mobilitas magnum per Inane meandi, 
Expediam: Tu te dictis præbere memento. 65
Nam certè non inter se stipata cohæret
Materies, quoniam minui rem quamque videmus,
Et quasi longinquò fluere omnia cernimus ævo;
Ex oculisque vetustatem subducere nostris:
Cum tamen incolunt videatur Summa manere, 70
Propterea quia, quæ decedunt Corpora cuique,
Unde abeunt, minuunt: quo venere, augmine donant:
Illa senescere, at hoc contra florescere cogunt.
Nec remorantur ibi: sic rerum Summa novatur
Semper, & inter se mortales mutua vivunt. 75
Augescunt aliae gentes, aliae minnuntur:
Inque brevi spatio mutantur sæcla animantium:
Et, quasi Curfores, vitae lampada tradunt.
Si cessare putas rerum Primordia posse,
Cessandoque novos rerum progignere Motus: 80
Avius à vera longe ratione vagaris.

Nam,
Book II. Of the Nature of Things.

Motion they possess, to force their way through all the mighty Void.

For certain it is, that no seeds of Matter stick close and unmoved among themselves; for we see every thing grows less, and perceive all Things wear away by a long Tract of Time, and old Age removes them quite from our Sight. And yet the Mass of Things still remains safe and entire; and for this Reason, because the particles of Matter which fall off, lessen the Bodies from whence they fall, but add to those to which they join. These they force to decay; those, on the contrary, they increase: Nor do they remain in this Posture. And thus the Universe of Things is continually renewing; Generations succeed one another, one Kind of Animal increases, another wastes away; and in a short time the living Creation is entirely changed, and, like \( ^e \) Racers, delivers the Lamp of Life to those that are behind.

But if you think the Seeds of Things can be at rest, and, being themselves unmoved, can give Motion to Bodies, you wander wildly from the Way of true Reason. For since all the Seeds of

\[ ^d \text{ He proves there is Motion from the Growth and Decrease of Things; for Things grow, because some Particles of Matter fly, and adhere to them, and Things decrease, because some minute Principles lose their hold and fly away; and this cannot be done without Motion.} \]

\[ ^e \text{ He alludes to certain Games celebrated at Athens in honour of Vulcan, in which the Racers carried Torches in their Hands, and strove who should first reach the Goal, with his Torch not extinguished. In this Contest, he whose Torch was extinguished, yielded the Victory to him who came next after him; and he, in like manner, to the third: And therefore, as the Runner whose Torch went out yielded the Victory to the Follower, so a living Thing, when its Light of Life is extinguished, gives up to another living Thing, as it were, its Lamp of Life.} \]
Nam, quoniam per Inane vagantur, cuncta necessa sunt
Aut Gravitate sua ferri, Primordia rerum,
Aut id tu forte alterius: nam cita superna
Obvia cum fixerea, fit, ut diversa repente
Diffilient: neque enim mirum, Durissima quae sint,
Ponderibus solidis, neque quicquam à tergis obstet.

Et quo jaëtari magis omnia Materiæ
Corpora pervoidas, reminiscere Totius imum
Nil esse in Summa: neque habere ubi Corpora
prima

Constat: quoniam Spatium sine fine, modoque sunt:
Immensumque patere in cunctas undique parteis,
Pluribus ostendi, & certa ratione probatur.

Quod quoniam constat, nimimum nulla quies est
Reddita Corporibus primis per Inane profundum:
Sed magis assiduo, varioque exercita motu,
Partim intervallis magnis conflécta resultant:
Pars etiam brevibus spatiis nexuntur ab Idæu.
Et quæcumque magis condenso conciliant.
Exiguis intervallis connexa resultant.
Things are rambling through the Void, they must necessarily be born along either by their own natural Gravity, or by the outward Stroke of something else; for when these Seeds tending downwards meet with others, they must all fly off, and rebound a different way, and no wonder, since they are hard Bodies, and of solid Weight; nor is there any thing behind to stop the Motion: But, that you may perceive more plainly how all the Seeds of Matter are tossed about, you must recollect, that there is no such thing in the Universe as the Lowest Place, where the first Seeds may remain fixed, because I have shewn fully, and proved by certain Reason, that Space is without End, without Bounds immense, and lies extended every way.

This being plain, there can be no Rest possibly allowed to these first Seeds, for ever wandering through the empty Void; but being tossed about with constant and different Motion, and striking against other Bodies, some rebound to a great Distance, others fly off, but not so far; such of them as rebound but for a small Distance, their Contexture being more close, and being hinder'd

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\( ^f \) The Seeds being solid are therefore heavy, and heavy Things tend downwards, and in their Defcent lighting upon Bodies that are either at rest, or move more slowly than themselves, they must necessarily rebound; and this is the Cause of the ascending Motion, which is violent, the other is natural, and both are necessary to the Generation and Dissolution of Things.

\( ^g \) Since the Seeds are in continual Motion, and strike and rebound, this Rebounding is made to unequal Distances; those Seeds that rebound to a less Distance, and are tossed in a narrower Space, compose hard Bodies, as Iron and Stone; and such as rebound to a greater Distance, and wander in a wider Space, compose Bodies that are soft and rare, such as Air and Fire.
Indupedita suis perplexis ipsa figuris;
Hae validas Saxi radices, & fera Ferri.
Corpora constiunt, & cetera de genere borum
Paucula: Quae porro magnum per Inane vagantur,
Et cita diffiliumt longe, longèque recurcant
In magnis intervallis: bæc Æra varum
Sufficiunt nobis, & splendida lumina Solis.

Multaque præterècæ magnum per Inane vagantur,
Conciliis rerum quæ sunt rejetla, nec usquam
Con sociare etiam motus potuere recepta:
Cujus, uti memoro, rei simulacrum, & imago
Ante oculos semper nobis versatur, & instat.
Contemplator enim, cum Solis lumina cunque
Insertim fundunt radios per opaca domorum:
Multa minuta modis multis per Inane videbis:
Corpora misceri radiorum lumine in ipso:
Et velut æterno certamine prælia, pugnasque
Edere turmatim certantia: nec dare pausam,
Conciliis, & discidiis exercitâ crebris:
Conjicere ut possis ex hoc, Primordia rerum,
Quale sit, in magno jaëtari semper Inani,
Duntaxat rerum magnarum parva poëst res
Exemplare dare, & vestigia notitiai.

Hoc etiam magis bæc animum te advertere par est
Corpora, quæ in Solis radiis turbare videntur:
Quod tales turbæ motus quoque Materiæ
Significant clandestinos, cæcosque subesse.
Multa videbis enim plagis ibi percita cæcis
Commutare viam, retrœque repulsa reverti
Nunc luc, nunc illuc, in cunctas denique parteis.

Scilicet
by their natural Twinings, these compose the solid Roots of Rocks, and the hard Bodies of Iron, and a few other Things of the same Nature; but such as wander widely through the Void, and moved by the Blow, fly further off, and rebound to greater Distances; these compose the thin Air, and the Sun's brighter Light.

Besides, there are many Seeds keep wandering through the Void, that are refused all Union with other Seeds, nor could ever be admitted to join their Motion to any thing else. An Instance or Representation of this, as I conceive, is always at hand, and visibly before our Eyes. When the Sun's Light shoots its Rays through a narrow Chink into a darkned Room, you shall see a thousand little Atoms dance a thousand ways through the empty Space, and mingle in the very Rays of Light, engaging, as it were, in endless War, drawing up their little Troops, never taking breath, but meeting and exercising their hostile Fury with constant Blows. And hence you may collect, in what Manner the Principles of Things are tossed in this empty Void; so small an Instance will give you an Example of these extraordinary Motions, and open a Way to your Knowledge of greater Events.

But here it is fit you should apply yourself more closely to observe these Bodies which seem so disturbed in the Sun's Beams; for it appears by these Disorders, that there are certain secret Principles of Motion in the Seeds themselves, tho' invisible to us; for some of these Motes you will see struck by secret Blows, and forc'd to change their Course, sometimes driven back, then again returning, now this, now that, and every other way; and this Variety of Motion is certainly
Scilicet hic à Principiis est omnibus error.

Prima movetur enim per se Primordia rerum

Inde ea, quae parvo sunt Corpora conciliatu,
Et quasi proxima sunt ad vires Principiorum,
Isibus illorum cacis impulsæ ciuntur:

Ipfaque, quae porro paullo majora, lacesjunt.

Sic à Principiis ascendit motus, & exit

Paullatim nostros ad sensus, ut moveantur

illa quoque, in Solis quæ lumine cernere quimus;

Nec quibus id faciant Plagis appetet.

Nunc, quæ Mobilitas sit reddita Materialibus,

praecis licet binc cognoscere, Memmi.

Primum Aurora novo cum spargit lumine terras,
Et varie volucres nemora avia pervolitantes,
Aëra per tenerum liquidis loca vocibus opplent:

Quam subitò soleat Sol ortus tempore tali

Convestire sua perfundens omnia luce,

Omnibus in promptu, manifestumque esse videmus.

At Vaporis quern Sol mittit, lumenque serenum,

Non per Inane mea vacuum, quod tardius ire

Cogitur, aërias quasi cum diverberet undas:
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certainly in the very Seeds; for the Principles of Things first move of themselves, then compound Bodies that are of the least Size, and approach nearest, as it were, to the Exility of the first Seeds, are by them struck with Blows unseen, and put into Motion, and these again strike those that are something larger; so from first Seeds all Motion still goes on, till at length it becomes sensible to us; and thus we see how those Motes that play in the Sun's Beams are moved, tho' the Blows by which they are driven about do not so plainly appear to us.

And now, my Memmius, you may in brief, from the following Instance, collect how rapid is the Motion of the first Seeds; for when the Morning spreads the Earth with rising Light, and sweet Variety of Birds frequent the Woods, and fill each Grove with most delightful Notes through the soft Air, every one perceives, and the Thing we see is plain, how suddenly, and in a moment, the rising Sun covers the World, and shines with instant Light. But that Vapour, that glittering Ray, which the Sun sends forth, does not pass through mere empty Space, and therefore is forced to move slower, as it has the resisting Air to part and divide as it goes; nor

h Since all Bodies will keep the same Line, unless they are diverted by some outward Violence, or by the Pressure of their own interior Weight, it follows that some Motions of the Seeds, tho' invisible to the Eye, agitate those Motes or little Bodies, and drive them about in that manner; for he insists, that all Motion that is observ'd in Things is in the Seeds themselves.

i The Heat of the Sun passes through the Air, which is full of Atoms and other Bodies, as Winds and Exhalations, which hinder the Course of his Rays; and the Corpuscles of Light pass not through the whole Air in an instant of Time; nor singly one by one, but conglobed and intangled in one another, which must hinder the Swiftness of their Motion.
Nec singillatim corpuscula quæque Vaporis,
Sed complexa menti inter se, conque globata.
Quapropter simul inter se retrabuntur, & extra
Officiuntur, uti cogantur tardius ire. 155
At, quæ sunt solida Primordia simplicitate,
Cum per Inane menti Vacuum, nec res remoratur
Ulla foris, atque ipsa suis e partibus unum,
Unum in quem cæpere locum connixa feruntur:
Debent nimirum præcellere Mobilitate, 160
Et multi citiūs ferri, quàm lumina Solis:
Multiplexque loci spatium transcurrere eodem
Tempore, quo Solis pervolgant fulgura cælum:
Nam neque consilio debent tardata morari,
Nec perscrutari Primordia singula quæque, 165
Ut videant, quà quidque geratur cum ratione.

At quidam contra bæc, Ignari Materiaï
Naturam non posse Deam sine numine rentur
Tantopere humanis rationibus, ac moderatis
Tempora mutare annorum, frugesque creare: 170
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are the Principles that compose this Ray simple first Seeds, but certain little globular Bodies made up of these first Seeds, that pass thro' the Air; and these first Seeds being agitated by various Motions, these little Bodies which are form'd of them are retarded by different Motions within themselves, and are likewise hinder'd from without by other Bodies, and so are obliged to move the flower.

But Seeds that are solid and simple in their Nature, when they pass through a pure Void, having nothing to stop them from without, and being one, and uncompounded thro' all their Parts, are carried at once, by an instant Force, to the Point to which they first set out. Such Seeds must exceed the Rays of the Sun in their Motion, and be carried on with much more Celerity; they must pierce through longer Tracts of Space in the same Time in which the Sun-Beams pass through the Air; for these Seeds cannot agree together by Design, to move slowly, nor stop in the Air to search into Particulars, and be satisfied for what Reason their several Motions are thus carried on and disposed.

But some object to this, Fools as they are, and conceive that simple Matter cannot of itself, without the Assistance of the Gods, act so agreeably to the Advantage and Convenience of Mankind, as to change the Seasons of the Year,

k He most ridiculously insists, that Matter, rude as it was, did make this World without Art or Design; that Pleasure is the Guide and Life of Man, that all Things are govern'd by her, and that the World nor any Thing else was made for the Use of Man; and then promises in another Place to shew, that the Frame of this World is so ill contriv'd, that it would be a Scandal to the Gods to charge them with the Creation of it.
Nec jam cætera, mortaleis quæ suadet adire,
Ipfaque deducit dux vitæ Dia Voluptas,
Ut res per Veneris blanditim sæcla propagent,
Ne genus occidat Humanim: Quorum omnia causa
Constituiffe Deos fingunt, sed in omnibus rebus
Magnopere à vera lapsi ratione videntur.
Nam quamvis rerum ignorem Primordia quæ sint,
Hoc tamen ex ipsis Cali rationibus ausim
Confirmare, aliisque ex rebus reddere multis,
Nequaquam nobis Divinitus esse creatam
Naturam mundi, quæ tanta a prædita culpa:
Quæ tibi posterius, Memmus, faciemus aperta;
Nunc id quod superest de Motibus expediamus.

Nunc locus est (ut opinor) in bis illud quoque rebus
Confirmare Tibi, nullam rem posse sua vi
Corpoream surgum ferri, surgumque meare.
Ne tibi dent in eo Flammarem corpora fraudem:
Sursum enim vorsum gignuntur, & augmina sumunt:
Et surgum nitidæ Fruges, Arboriaque crescent,
Pondera quantum in se ë, cum deorsum cuncta fer-
raniur.

Nec cum suffiliunt Ignes ad testa domorum,
Et celeri flamma digestant tigna, trabeisque,
Sponte sua facere id, sine vi subigente, putandum ë:
Quod genus, è nostro cum missus corpore Sanguis

Emicat
to produce the Fruits, and do other Things which Pleasure, (the Deity and great Guide of Life,) persuades Men to value and esteem. It could not induce us to propagate our Race, by the Blandishments of tender Love, lest the Species of Mankind should be extinct, for whose sake they pretend the Gods made all the Beings of the World; but all Conceits like these fall greatly from the Dictates of true Reason: for tho' I were entirely ignorant of the Rise of Things, yet from the very Nature of the Heavens, and the Frame of many other Bodies, I dare affirm and insist, that the Nature of the World was by no means created by the Gods upon our account, it is so very faulty and imperfect, which, my Memmius, I shall hereafter fully explain. But now let us explain what remains to be said of Motion.

And here, I think, is the proper Place to prove to you, that no Being can be carried upwards, or ascend by any innate Virtue of its own, left by observing the Tendency of Flame, you should be led into a Mistake. For Flame, you know, is born upwards, as well when it begins to blaze, as when it is increased by Fuel; so the tender Corn and lofty Trees grow upwards. Nor when the Flames aspire, and reach the Tops of Houses, and catch the Rafters and the Beams with a fierce Blaze, are you to suppose they do this by voluntary Motion, and not compelled by Force. 'Tis the same when the Blood gushes

* He had said before, that the Seeds tend downwards; and to the Objection that Fire moves upwards, he answers, that Plants and Trees rise upwards likewise, by reason of the driving Force which breaks out of the Earth, and compels them to grow by Ascent. The ambient Air drives the Flames upwards, and makes it yield to an Element more dense than itself.
Emicat exsultans altè, spargitque cruorem. 195
Nonne vides etiam, quanta vi Tigna Trabeisque Respuat humor Aqua? nam quam magis mersimus altum
Directa, & magna vi multi pressimus agrè;
Tam cupidè surgum revomit magis, atque remittit,
Plus ut parte foras emergant, exsiliantque. 200
Nec tamen hæc, quantu 'st in se, dubitamus, opinor,
Quin vacuum per Inane deorsum cuncta feruntur.
Sic igitur debent Flammae quoque poßè per auras
Aëris expresse surgum succedere; quamquam
Pondera, quantum in se 'st, deorsum deducere pug-
nent:
Nocturnasque faces Cæli sublime volanteis
Nonne vides longos flammarum ducere tractus,
In quascunque dedit parteis Natura meatum?
Non cadere in terram Stellas, & Sidera cernis?
Sol etiam summo de vertice diffutat omnes 210
Ardorem in parteis, & lumine conferit arva:
In terras igitur quoque Solis vergitur ardor.
Transferosque volare per imbres Fulmina cernis:
Nunc hinc, nunc illinc abrupti nubibus Ignes
Concurrisant, cadit in terras vis Flammea volgò.
Illud in his quoque Te rebus cognoscere avenus:
Corpora cum deorsum pestum per Inane feruntur,
Ponderibus propriis incerto tempore ferme,

Incertisque
from a Vein, it spouts bounding upwards, and sprinkles all about the purple Stream. Don't you observe likewise, with what Force the Water throws up the Beams and Posts of Wood? The more we plunge them in, and press them down with all our Might, the more forcibly the Stream spews them upwards, and sends them back; so that they rise, and leap up at least half their thickness above the Water. And yet I think, we make no question that all Things, as they pass through empty Void, are carried naturally down below. So likewise the Flame rises upwards, being forcibly pressed through the Air, tho' its Weight, by its natural Gravity, endeavours to descend. Don't you see the nightly Meteors of the Sky flying aloft, and drawing after them long Trains of Flame, which way for ever Nature yields a Passage? Don't you see also the Stars and fiery Vapours fall downwards upon the Earth? The Sun too scatters from the Tops of Heaven his Beams all round, and sows the Fields with Light: Its Rays therefore are downwards sent to us below. You see the Lightning through opposing Showers fly all about; the Fires burst from Clouds, now here now there engage, at length the burning Vapour falls down upon the Ground.

I desire you would attend closely upon this Subject, and observe that Bodies, when they are carried downwards through the Void in a straight Line, do at some time or other, but at no fix'd and determinate Time, and in some Parts of the Void likewise, but not in any one certain and de-

1 The Stars never fall, but he means a fat, oily, and fulphurous Exhalation, which kindles in the Air; and falls to the ground in a purple-colour'd Jelly.

I terminate
Incetisque locis spatio decedere paulum:
Tantum quod Momen mutatum dicere possis. 220
Quod nisi Declinare solerent, omnia deorsum,
Imbris uti guttae, caderent per Inane profundum:
Nec foret Offensus natus, nec Plaga creata
Principiis: ita nil unquam Natura creasset.
Quod si forte aliquis credit Graviora potess 225
Corpora, quod celerius refulim per Inane seruntur,
Incidere supero Levioribus, atque ita Plagas
Gignere, quae possint genitalis reddere motus:
Avius a vera longè ratione recedit.
Nam per Aquas quæcunque cadunt, atque Aëra de-
orsum:
Hæc pro ponderibus casus celerare necesse 'st,
terminate Place of it, decline a little from the direct Line by their own Strength and Power; so nevertheless, that the direct Motion can be said to be chang'd the least that can be imagined.

If the Seeds did not decline in their Descent, they would all fall downwards through the empty Void, like Drops of Rain; there would be no Blow, no Stroke given by the Seeds overtaking one another, and by consequence Nature could never have produced any Thing.

But if any one should suppose, that the heavier Seeds, as they are carried by a swift Motion through the Void in a strait Line, might overtake, and fall from above upon the lighter, and so occasion those Strokes which produce a genial Motion by which Things are formed, he is entirely out of the way, and wanders from the Rule of true Reason. Indeed, whatsoever falls downward through the Water, or through the Air, must necessarily have its Speed hastened in pro-

He says, that all Seeds are hurried through the Void with equal Swiftness; he grants that the Medium through which they pass, may hasten or retard their Motion, and that Bodies of the same Matter, but different in Weight, when they fall through Water or Air, are not equally swift, which is false; but he will have the Motion to be the swifter, the more empty the Place is thro' which the Bodies move; so that where the Space is most void and empty, there the Motion is most swift; and be there ever so many Motions or Things moving in that Space, they are all of the like Swiftnes.
Propter eoa, quia corpus Aqua, naturaque tenuis
Aëris baud possunt æquè rem quamque morari: 235
Sed citiûs cedunt Gravioribus exsuperata.
At contra nulli de nulla parte, neque ullo
Tempore Inane potest Vacuum subsistere rei,
Quin, sua quod natura petit, concedere pergat.
Omnia quapropter debent per Inane quietum
Æquæ ponderibus non æquis concita ferri.
Haudigitur poterunt Levieribus incidere unquam
Ex supero Graviora, neque Iius gignere per se,
Qui varient motus, per quos Natura genat res.
Quare etiam atque etiam paullum clinare ne-
cesse est
Corpora, nec plus quàm minimum, ne fingere motus
Obliquos videamur, & id res vera resulet. 246
Namque hoc in promptu, manifestumque essevidentum:
Pondera, quantum in se est, non posse Obliqua meara,
Ex supero cum præcipitant, quod cernere possis.
Sed nihil omnino reæta regione viae
Declinare, quis est, qui posset cernere, sece ? 250
Denique si semper motus connectitur omnis,
Et vetere exoritur semper novus ordine certo,
Nec Declinando faciunt Primordia motus
Principium quoddam, quod Fati fædera rumpat,
Ex infinito ne causam causa sequatur:
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portion to its Weight; and for this Reason, because the Body of the Water, and the thin Nature of the Air, cannot equally delay the Progress of every thing that is to pass through it, but must be obliged to give way sooneft to heavy Bodies. But, on the contrary, mere empty Space cannot oppose the Passage of any thing in any manner; but must, as its Nature requires, continue for ever to give way: Therefore all Things must be carried with equal Force through a Void that cannot resist, tho' their several Weights be unequal; so that the heavier Bodies can never fall from above upon the lighter, nor occasion those Blows which may change their Motions, and by which all Things are naturally produced.

It follows then, that the Seeds do every now and then decline a little from a direct Line in their Descent, tho' the least that can be imagined, left we should think their Motion were oblique, which the Nature of the Thing refutes. For we see this is plain and obvious, that Bodies by their natural Gravity do not obliquely descend, when they fall swiftly from above through a Void, which you may discover by your Eyes. But that Nothing declines in its Descent, ever fo little from a direct Line, who is fo sharp-fighted as to distinguish?

Besides, were all Motion of the Seeds uniform, and in a ftrait Line, did one succeed another in an exact and regular Order, did not the Seeds, by their declining, occasion certain Motions, as a Sort of Principle, to break the Bonds of Fate, and prevent a Necessity of Acting, and exclude a fix'd and eternal Succession.
Libera per terras unde hæc animantibus extat.
Unde est hæc (inquam) fatis evolvsæ Voluntas,
Per quam progredimus, quo ducit quemque voluptas?
Declinamus item motus, nec tempore certo,
Nec regione loci certa, sed ubi ipsa tulit Mens. 260
Nam dubio procul bis rebus sua cuique Voluntas
Principium dat: & hinc motus per membra rigantur.
Nonne vides etiam patefactis tempore puncto
Carceribus, non posse tamen prorumpere Equorum
Vim cupidam tam desubitò, quàm Mens avet ipsa?
Omnis enim totum per Corpus materia texture. 266
Copia conquiri debet, concita per artus
Omneis, ut studium Mentis connexa sequatur:
Ut video initum motus a Corde creari,
Ex Animique voluntate id procedere primum: 270
Inde dari porro per totum Corpus, & artus:
Nam simile est, ut cum impulsi procedimus idêa,
Viribus alterius magnis, magnoque ooaiculo,
cession of Causes, which destroy all Liberty; whence comes that Free-will, whence comes it, I say, so sensibly observ'd in all Creatures of the World, who act as they please, wholly rescued from the Power of Fate and Necessity? That Will by which we are moved which way ever our Inclination leads us? We likewise forbear to move, not at any particular Time, nor at any certain Place, but when and where our Mind pleases; and without doubt, the Will is the Principle that determines these Motions, and from whence all Motion is conveyed to the Limbs. Don't you observe, when the Barriers of the Lifts are thrown open of a sudden, the eager Desire of the Horses cannot start to the Race with that Celerity as their Mind requires? Because the Spirits or Particles of Matter that maintain the Course, must be got together from all Parts of the Body, and stir'd thro' every Limb, and fitly united, that they may readily follow the eager Desire of the Mind. You see then, the Beginning of Motion rises in the Heart, proceeds then by means of the Will, and is thence diffused thro' every Limb, over the whole Body.

But the Case is otherwise, when we act as we are compelled by Force, by the prevailing Power and the great Violence of another; for then we

* Every one perceives a Liberty in himself, and with Reason concludes, that the same Freedom is in other Animals, who we see vary their Motions as they lift, and live as they please. We find, that when we are compelled to act by any outward Force, there is something within us that resists that Compulsion; that we perceive a great Difference within us, when we act by our own Will, and when we are compelled. There can be nothing of this Liberty in the Seeds themselves; it must therefore be imputed to the Declination of the Atoms: for a direct Motion of them would destroy all our Freedom.
Nam tum materiam totius Corporis omnem Perspicuum est nobis invitis ire, rapique, 275 Donicum eam refranavit per membra Voluntas. Jamne vides igitur, quamquam vis extera multos Pellit, & invitos cogit procedere saepe, Præcipiteisque rapit, tamen esse in pedone nostro Quiddam, quod contra pugnare, obstareque possit, 280 Cujus ad arbitrium quoque copia materiae Cogitur interdum flesti per membra, per artus, Et projeta refranatur, retroque resedit. Quare in Seminibus quoque idem fateare neesse est, Esse aliam præter Plagas, & Pondera causam 285 Motibus, unde hoc est nobis innata potestas: De Nihilo quoniam fieri Nil poñse videmus: Pondus enim prohibet, ne Plagis omnia sient, Externa quasi vi, sed ne Mens ipsa necessum Intestinum habeat cunctis in rebus agendis; 290 Et devicta quasi cogatur ferre, patique: Id facit exiguum CLINAMEN Principiorum Nec regione loci certa, nec tempore certo.
feel plainly, that the whole Weight of our Body moves, and is urged on against our Consent, till our Will restrains the Motion through all our Limbs. Don't you see now, that though an outward Force drives us on, and often compels us to proceed against our Will, and hurries us headlong, yet there is something in the Heart that resists and strives against that Compulsion, at whose Command the Spirits or Particles of Matter are forced through the Nerves into the several Limbs and Members, and are curbed likewise by the same Nerves, and obliged to retire backwards.

Wherefore, you must needs confess there is something else beside Stroke and Weight, which is the Cause of those Motions from whence this innate Power of our Will proceeds. We see Nothing can arise from Nothing; for Weight, which is natural to Bodies, hinders us to conclude, that all Things are moved by Stroke or outward Force; and left the Mind should seem to act by some necessary Impulse within itself, (that is, by Motion that proceeds from Weight) and overpowered, be compelled, as it were, to bear and suffer, this is occasioned by ever so little a Declination of the Seeds, which however is done at no certain or determinate Time or Place.

This Freedom of Will cannot proceed from Stroke; for Motion by Stroke is an outward Force, which is contrary to Liberty; and Weight, tho' it be an inward Principle of Motion, yet since it tends downwards, and in the same manner, is an Enemy to Liberty likewise: Therefore Declination, which is neither made at any certain Time, nor in any certain Place, avoids that Necessity of which both Weight and Stroke are the Cause, and unlinks the Chain of Destiny.
Nec stipata magis fuit unquam Materiai Copia, nec porro majoribus intervallis. 295
Nam neque adaugescit quicquam, neque deperit inde. Quapropter quo nunc in motu Principiorum Corpora sunt, in eodem antealta ætate fuere,
Et posthac semper simili ratione ferentur ; Et quae consuerunt signi, gignentur eadem

Condicione : & erunt, & crescent, inque valebunt,

Quantum cuique datum est per inlera Naturaei,

Nec rerum Summan commutarè uilla potest vis.

Nam neque quo possit genus ullam Materiai Effugere ex Omni, quicquam est, neque rursus, in Omne

 Unde coorta queat nova vis irrumpere, & Omnem Naturam rerum mutare, & vertere motus.
Illud in his rebus, non est mirabile, quare Omnia cum rerum Primordia sunt in motu,
Summa tamen summa videatur stare quiete, 310
Præterquam si quid proprio dat corpore motus.

Omnis enim longè nostris ab sensibus infra
Primorum naturae jacet : quapropter ubi illa
Cernere jam nequeas, motus quoque surpere debent:

Præsertim
Nor was the Mass of Matter ever more close or more loose, nor did the Number of Seeds ever increase or diminish; and therefore the same Course in which the Seeds move now, the same Motion they had for the time past, and they will be carried on hereafter in the very same manner; and the Things that have been hither-to produced, shall be formed again in the same way; they shall come into Being, grow, and arrive at Perfection, as far as the Laws of their respective Natures will admit: For this Universe of Things no Force can change; neither is there any Place into which the least Particle of Matter may fly off from the whole Mass; nor is there a Place from whence any new Seeds may break in upon this All, and so change the Nature of Things, and disorder their Motions.

There is Nothing wonderful in this, that when all the Principles of Things are in continual Motion, the Whole should at the same time seem to be at perfect Rest, tho' every particular Body has a sort of Motion peculiar to itself; for the Nature of first Seeds is so subtil, that they lie far beyond the Reach of our Sense; and therefore, since you cannot perceive them by the Eye, their Motions are much less to be discern'd;

* He had taught, that the Seeds are not liable to Change; now he asserts, that the universal Mass of Matter can neither increase nor diminish, that the Motions of the Seeds are immutable, and therefore, that whatever has been produced heretofore, the same may be produced now.

* If it should be objected against this perpetual Motion of the Atoms, that the All or Universe appears quiet, and seems buried in a profound Tranquillity; he says, that the Motions of the Seeds must needs be imperceptible, since the Seeds themselves are invisible to the sharpest Sight; and adds, that the Motion even of sensible Things, cannot be perceiv'd at a great Distance.

especially,
Presertim cum, quæ possimus cernere, celent
Sepe tamen motus spatio diduicta locorum.
Nam sepe in colli tondentes pabula leta
Lanigeræ repiant Pecudes, quo quamque vocantes
Invitant herbœ gemmantes rore recenti:
Et satiati Agni ludunt, blandéque coniscant:
Ommia quæ nobis longe confusa videntur,
Et veluti in viridi candor consisere colli.
Præterea magnæ Legiones cum loca cursu
Camporum complent, belli simulacra cientes:
Et circumvolitant Equites, medioque repente
Tramittunt valido quatientes impetē campos:
Fulgar ibi ad Cælum se tollit, totaque circum
Ære repindescit Tellus, subterque virum vi
Excitœ pedibus sonitus, clamoreque Montes
Isti rejequant voces ad Sidera mundi:
Et tamen est quidam locus altis montibus, unde
Stare videtur, & in campis consisere Fulgar.
Nunc age jam deinceps cunctarum exordiarum,
Qualia sint, & quam longè distantia formis,
Percipe, multigenis quàm sit variata Figuris:
Non quod multa parum simili sint prædata forma,
Sed quia non volgò paria omnibus omnia constant.
especially, as we observe many Things are dis-
cover'd to us by our Sight, whose Motions we
cannot perceive, by being placed at a remote Di-
stance from us. For oft the woolly Flock upon
a Hill wander about, and crop the tender Grafs,
where-e'er the sweet Herbs crowned with pearly
Dew invite; the Lambs, their Bellies full, wan-
tonly, play, and try their tender Horns: All this
to us standing far off, appears confused, and like
a steady White spread o'er the Green. And
thus a mighty Army fills the Plain, and moves
about, and acts a real Fight; the Horfe scour
o'er the Field, and wheel at once, and in the
Centre charge, and shake the Ground with migh-
ty Force; the Blaze of Arms darts up to Hea-
ven, all the Earth around glitters with brazen
Shields, and groans beneath the Feet of Men en-
raged; the neighbouring Hills, struck with the
Noife, rebound it to the Skies; yet place yourself
upon a Mountain-top, to view this wild Confu-
sion, and you'd think it was a fixed and steady
Light that filled the Plain.

Now learn at length the Form of these first
Seeds, these Principles of Things, how widely
different is their Shape, of what Variety of Fi-

gure their Frame confists; for tho' many are en-
dowed with a Form not much unlike, yet all are
far from being of the fame Figure. And no

* He makes his Atoms of different Figures, not that their
Shape is discernible by the Eye, any more than their Magni-
tude; but because their different Figuration may be proved
by many Arguments: he says, in any Things whatever the
greater their Number is, the greater for the most part is the
Variety of their Figures. He argues further for the different
Figures of his Atoms, from the various Shapes and Figures of
all natural Things composed of them; and shews this different
Figuration not only in all kind of Things taken collectively,
but even in the Individuals of the same kind.

wonder;
Nec mirum: nam cum sit eorum Copia tanta,
Ut neque finis (uti docui) neque Summa sit ulla:
Debent nimium non omnibus omnia prorsum
Esse pari filo, similique affecta Figura.

Præterea genus Humanum, mutæque natantes
Squammigerum Pecudes, & leta Arbusæ, Feræque,
Et variae Volucres, letantia quæ loca aquaticum
Concelebrant circum ripas, fonteijsque, lacusque:
Et quaæ pervolant nemora avia per volitantes:
Horum unum quodvis generatim sumere perge,
Invenies tamen inter se distare Figuris.

Nec ratione alia Proles cognoscere Matrem,
Nec Mater posset Prolem: quod posse videmus,
Nec minus atque homines inter se nota cluire.
Nam sape ante Deum vitulus delubra decora
Turicremas propter matiatus concidit aras,
Sanguinis exspirans calidum de pecore flumen,
At Mater virideis saltus orbata peragrans,
Linguit humili pedibus vestigia pressa bisulcis,
Omnia convisens oculis loca, si queat usquam
Conspicere amissum Factum: complectque querebis
Frundiferum nemus adsumus ; & crebra revisit
Ad stabulum, desiderio perfixa Juveni:

Nec teneræ salices, atque herbæ rore vigentes,
Fluminaque ul'a queunt summis labientia ripis,
Oblecante animam, subitamque avertere curam:
Nec Vitulorum alia species per pabula leta
Derivateque queunt aliæ, curaque levare:

Usque adeo quiddam proprium, notumque requirit.
Præterea teneri tremulis cum vocibus Hædi
Cornigeras nórunt Matres, Agnique petulci

Balantium
wonder; for since (as I have said) their Number is so great, that no End, no Bound is to be set to them, they ought, for the same Reason, to be all of a different Contexture, and not fashioned alike of the same Form.

Besides, consider well Mankind, the scaly Fry of silent Fish that swim the Flood, the verdant Trees, wild Beasts, the various kind of Birds, such as flock about the Banks of pleasant Streams, the Fountains and the Lakes, and those who frequent the thick Covers of the Woods, consider all these in their several Kinds, and you will find them all consist of Forms different among themselves. 'Tis by nothing else the tender Young knows its own Dam, and thus the Dam distinguishes her Young; thus we see each Creature knows its own Kind, no less than Men, and so unite together. For oft before the gilded Temples of the Gods, a young Heifer falls a slain Victim beside the Altar flaming with Incense, and breathes from her Heart a reeking Stream of Blood. The Dam, robbed of her Young, beats o'er the Fields, and leaves the Marks of her divided Hoofs upon the pressed Grafs, and searches every Place with careful Eyes to find her Young she lost; then stops, and fills the branched Woods with her Complaints, and oft returns back to her Stall, distracted with the Love of her dear Young; no more the tender Willows, or the Herbs freshned with Dew, nor can the running Streams within full Banks divert her Mind, or turn away her Care; nor can a thousand other Heifers, as they play wantonly o'er the Grafs, take off her Eye, or ease the Pain she feels; so plain it is she searches for her own, for what she knows full well. And thus the tender Kids find by their Bleat their horned Dams, and
Balantum pecudes: ita, quod natura reposecit,
Ad tua quisque fere decurrunt ubera laetis.

Postremo quodvis Frumentum, non tamen omne
Quodque suo in genere inter se similis esse videbis,
Quin intercurrat quaedam distantia formis,
Concharumque genus parili ratione videmus
Pingere telluris gremium, qua mollibus undis
Littoris incurvo bibulum pavit Aequor arenam.
Quare etiam atque etiam similis ratione necesse sit,
Natura quoniam constant, neque facta manu sunt,
Unius ad certam formam Primordia rerum,
Diffimili inter se quaedam volitare Figura.

Perfacile vs jam animi ratione exfoliaver nobis,
Quare Fulmineus multo penetrator ignis,
Quam noftri fluat & Tedis terrestribus ortus.

Dicere enim possis cælestem FULMINIIS ignem
Subtilem magis e parvis confare figuris:

Atque ideo tranfire foramina, quæ nequit ignis
Nofter hic é Lignis ortus, Tedaque creatus.

Præterea Lumen per cornu tranfit: at Imber
Reipuitur: Quare? Nisi Luminis illa minora
Corpora sunt, quàm de quibus est liquor Almus
Aquarum:

Et quamvis subitò per tulum Vina videmus
Perfluere, at contrà tardum cum cántatur Olibum:

Aut quia nimírum majoribus est Elementis,
Aut magis hamatis inter se, perque plicatis,
Atque ideo sit uti non tam deduélta repente

Inter se possint Primordia singula quæque
Singula per cujusque foramina permanare.

Huc accedit, uti Mellis Lacrisque liquores
Jucundo sensu lingue traiciuntur in ore;
At contrà tetra Absinthì natura, ferique

Contauri facto portorquent ora sapore.
so the sporting Lambs know their own Flocks, and, as by Nature taught, each hastens to the full Dug of its own Dam.

Observe again, the various Sorts of Corn, you'll find each Grain, tho' in Kind the same, not so much alike; but there will be a Difference in their Figure; and so a great Variety of Shells, we see, paints the Earth's Lap, where the Sea's gentle Waves feed the moist Sand along the winding Shore. And thus, by Parity of Reason, it must follow, that the first Seeds of Things, as they are formed by Nature, not made by Art in any certain Figure, must fly about in Shapes various and different among themselves.

'Tis easy for us now to unfold the Difficulty, why the Flame of Lightning is much more penetrating than our common Fire raised from Fuel here below. You may give this Reason, that the subtil, celestial Fire of Lightning consists of Particles much smaller, and so passes through Pores, which our Fire, made from Tow or Wood, cannot.

Besides, Light, we perceive, finds a way through Horn, but Water does not; because the Principles of Light are smaller, than those of which Water is composed. So we see Wine passes swiftly through a Strainer; on the contrary, heavy Oil moves slowly through, either because it is made up of larger Seeds, or its Principles are more hooked and entangled among themselves: and thus it happens, that the several Particles cannot be so soon separated from one another, so as to flow through the little Holes with the same Ease. Thus it is, that Honey and Milk pass in the Mouth with a pleasing Sensation over the Tongue; on the contrary, the bitter Juice of Wormwood and sharp Centaury torment the Palate.
Ut facile agnoscas Ææbus, atque rotundis
Esse ea, quæ sensus jucundè tangere possunt:
At contrà quæ amara, atque aspera cunque videntur,
Hæc magis kamatis inter se nixa teneri;

Propteræaque solere vias rescindere nostris
Sensibus, introituque suo perrumpere corpus.

Omnia postremo Bona sensibus, & Mala tætu,
Diffimili inter se pugnant perfecta Figura:
Ne tu forte putes Serræ stridentis acerbum
Horrorem constare elementis Ææbus æquè
Ac Musea mele, per chordas Organici quæ
Mobilibus digitis expergefaæta figurant:

Neve simili penetrare putes Primordia forma
In nareis hominum, cum tetra Cadavera torrent,
Et cum Scena croco Cilici perfusa recens est,
Araque Panchæos exhalat propter odores:
Neve bonos rerum simili constare Colores
Seminæ constitugas, oculos qui pascere possunt,
Et qui compungunt aciem, lacrymareque cogunt:

Aut fæda specie tetri, turbæque videntur.
Omnis enim sensus quæ mulcit causa, juvatque,
Haud sine Principiali aliquo lævore creatæ est:
At contra, quæ cunque molestæ, atque aspera constat,
Non aliquo sine Materiæ squalore reperta est.

Sunt etiam quæ jam nec Æævia jure putantur
Esse, neque omnino flexis mucronibus Unca:
Sed magis Angululis paullum prosthantibus, & quæ
with a loathsome Taste. From whence you collect easily, that those Things which agreeably affect the Sense, are composed of Particles smooth and round; and such again that seem rough and bitter, are bound together by Parts more hooked, and therefore, they tear the way to our Senses, and wound the Body as they enter through the Skin. In short, such Things as are agreeable to our Senses, and those that are rough and unpleasent to the Touch, are opposite, and formed of a Figure very different from one another; lest you should think perhaps, that the grating Sound of the whetting of a Saw, was made of Parts equally smooth, without the soft Notes of a Lute, which the Musician forms upon the Strings, awaked, as it were, by the gentle Strokes of his Fingers.

Nor are you to suppose, that the Seeds are of the same Form which strike upon our Nerves of Smell, when a filthy Carcase is burning, or when the Stage is fresh-sprinkled with Cilician Saffron, or the Altar sweetens the Air with the Odour of Arabian Incense.

And so in Colours, you must not imagine such as are agreeable, and delight our Eyes, are composed of the same fashioned Seeds with those which prick our Sense, and force us to weep, or seem dark or ugly, and shocking in appearance to us; for whatever pleases and delights our Sense, cannot be composed but of smooth Particles; and, on the contrary, Things that are hurtful and harsh, cannot be formed without Seeds that are filthy and disagreeable.

There are other Seeds likewise, which you cannot properly call smooth, nor are altogether hooked, with their Points bent, but are rather shaped with small Angles, a little jutting out, and...
Titillare magis sensus, quam Ledere possunt:
Facula jam quo de genere 'st, Inuleque sapores. 430
Denique jam calidos Igneis, gelidamque Pruinam,
Diffimili dentata modo compungere sensus
Corporis, indicio nobis est Tacitus uterque.
Tactus enim, Tacitus (pro Divitum numina sancta!) 435
Corporis est sensus, vel cum res Extera se
Insinuat, vel cum ledit, que in corpore nata 'st,
Aut juvat egrediens genitaleis per Veneris res:
Aut ex Offensu cum turbant Corpore in ipso
Semina, confunduntque inter se concita sensum:
Ut si forte manu quamvis jam Corporis ipse 440
Tute tibi partem ferias, æquè experiare.
Quapropter longè formas dïiare necesse 'st,
Principis, varios que possint edere sensus.
Denique, que nobis Durata ac Spissa videntur,' 445
Haeq magis hamatis inter se esse necesse 'st,
Et quasi ramosis altè compacta teneri.
In quo jam genere in primis Adamantina saxa,
Prima acie constant, iëtus contemnere sueta,
Et validi Silices, ac duri robora Ferri,
Æraque, que claustris reßantia vociferantur. 459
may be said rather to tickle than to hurt the Sense; such is the acid Taste of the sweet Sauce made of the Lees of Wine, or the sweet Sauce made of the sweetish-bitter Root of Elecampane. Lastly, that burning Heat, or freezing Cold, being formed of Seeds of different Figures, do affect the Body with different Sensation, our Touch is Evidence sufficient to evince.

For Touch, the Touch (blessed be the Gods Touch above!) is a Sense of the Body, either when something from without enters through the Pores, or something from within hurts us, as it forces its way out, or pleases, as the Effect of Venery tickles as it passes through, or when the Seeds, by striking against each other, raise a Tumult in the Body, and in that Agitation confound the Sense; and this you may soon experience, if you strike yourself in any Part with a Blow of your Hand. It is necessary therefore, that the Principles of Things should consist of Figures very different in themselves, since they affect the Senses in so different a manner.

Further, those Things which appear to us hard and thick, must necessarily be joined together by Particles more hooked among themselves, and be held close by branched Seeds. In the first Rank of these, you are to place the Rocks of Adamant, that defy the Force of Blows, and solid Flints, and the Strength of hard Iron, and brazen Hinges, that creak under the Weight of

The Paeula and the Inula were two Sauces of the Romans; the one was acid, made of the Lees of Wine; the other sweet, made of the sweetish bitter Root of the Herb Inula, Elecampane.

It was the Opinion of Epicurus, that the Seeds of Fire, since they pricked the Sense, had some prominent Angles; and that the Seeds of Cold had a Trigonal or Pyramidal Figure, that is, their Figure consisted of four triangular Faces.
Illa autem debent ex Lævibus atque Rotundis
Esse magis, fluido quae corpore Liquida constant:
Nec retinentur enim inter se glomeramina quaeque,
Et procurfus item in proclive volubilis extat.

Omnia postremo quae punto tempore cernis
Diffugere, ut Funum, Nebulas, Flammaque necesse est,
Si minùs omnibus sunt e Lævibus atque Rotundis,
At non esse tamem perplexis indupedita,
Pungere ut possint corpus, penetrareque saxa:
Nec tamen hæretere inter se, quod quisque videmus
Sentibus esse datum: Facile ut cognoscere possumis
Non est Perplexis, sed Acutis esse Elementis.

Sed quod Amara videas eadem quae fluvida constant,
Sudor uti Maris est, minimè id mirabile habendum.
Nam quod fluvidia est, e Lævibus atque Rotundis
Est, at Lævibus, atque Rotundis mista doloris
Corpora; nec tamen hæc retineri Hamata necesse est:
Scilicet esse globosa, tamen cum Squalida consint,
Providavi simul ut possint, & lædere sensus.

Et quod mista putes magis aspera lœvibus esse
Principiis, unde est Neptuni corpus acerbum:
Est ratio secernundi, seorsumque videndi.
Humor dulcit ubi per terras crebris idem
Percolatur, ut in foveam fluat, ac mansuecat.
Linquit enim suprà tetri Primordia viri.
their Gates. But Liquids that consist of fluid Bodies, must be formed of Seeds more smooth and round; for their globular Particles are not intangled among themselves, and their flowing Motion rolls on forward with the greater Ease.

But, lastly, all such Things which you observe instantaneously to scatter, and fly away as Smoke, Clouds, and Flame, if they do not consist altogether of Particles that are smooth and round, yet neither are they formed of hooked Seeds, and therefore may pierce through Bodies, and penetrate into Stones; nor do their Particles nevertheless stick mutually to one another, as we observe the Particles of Thorns do: From thence you may easily conclude, that they are not composed of hooked or intangled, but of acute Principles.

But because you see the same Things are bitter and fluid, as the Sea-water, are you to wonder in the least at this; For what is fluid, is formed of Principles that are smooth and round; but with these smooth and round Seeds, are mixed others that are sharp, and give pain; Yet there is no Necessity, that these sharp Seeds should be hooked and twined together; it is sufficient, that they be globous as well as rough, that they may be qualified to flow along in their proper Course, as well as to hurt the Sense.

And that you may the sooner believe, that these sharp Seeds are mixed with those that are smooth, from whence the Body of the Sea becomes salt, the way is to separate them, and consider them distinct; for the Sea-water grows sweet by being often philter'd through the Earth, and so fills the Ditches, where it becomes soft: for it leaves behind the pungent Seeds of the rough
T. Lucretii Lib. II.

Aspera, quò magis in terris hærescere possunt.

Quod quoniam docui, pergam connectere rem, quæ
Et hoc apta fidem ducit: Primordia rerum
Finita variare figurarum ratione.

Quod si non ita sit, rursum jam Semina quædam 480
Essē infinitō debēunt corporis ætē.
Namque in eadem una cujuscujus brevitate
Corporis, inter se multum variare figurē
Non possunt: Fac enim minimis ē partibus esse
Corpora prima tribus, vel paullo pluribus auge; 485
Nempe ubi eas parteis unius Corporis omnis,
Summa atque ima locans, transmutans dextera lævis,
Omnimodis expertus eris, quam quisque det ordo
Formaī spectem totius Corporis ejus:
Quod superest, si forte voles variare figurās, 490
Addendum parteis ālias erit: inde sequetur
Adsimili ratione ālias, ut posset ordo,
Si tu forte voles etiam variare figurās.

Ergo formaī novitatem corporis augment

Subsequitur:
rough Salt, which are more inclined to stick as they pass along, than those Particles that are globular and smooth.

This being proved, I shall here join another Obseration, which justly derives its Credit from what is explained before: That the Seeds of Things vary their Figure not without End, but after a finite Manner. If it were not so, some Seeds, by an infinite Increase of their Parts, would be of an immense Size; for in so small a Body as an Atom consists of, the Figures have not room to change often among themselves: Suppose, if you will, these Atoms or first Seeds consist of smallest Parts, three suppose, or a few more, if you please; now, by varying these several Parts of one Atom or Seed into all possible Shapes, placing the Uppermost below, or turning the Right to the Left, you will find the several Figures that every Change will give this Seed in all its Parts: But if you would still change its Figure still further, you must add new Parts to it; and, by the same Reason, you must still add more, if you still think of changing its Figure into more Shapes, so that the Body must increase in proportion as every new Figure appears; and therefore, you

* He has proved, that the Atoms vary in their Figure, and in their Bigness too; now he afferts, that this Variety is not infinite: For to make an infinite Variety of Figures, the Mass of some of the Seeds must of necessity be immensely great, since an immense Magnitude only is capable of an immense Variety of Figure; but take an Atom, and turn and transpofe every way the Parts that can be conceived in it, and you will find only a finite Variety of Figures in so small a Body.

7 The Parts of any finite Magnitude may be transpofed in many ways, that no new Way shall remain to change the Position from what it had been in before; otherwife there would be still new and new Parts, even to an Infinity; and then the Magnitude might be infinite, which an Atom can never be, it being too little even to be seen.
Subsequitur: quare non est ut credere possis, 

Esse infinitis distantia semina formis,
Ne quaedam cogas immani maximitate
Esse, suprà quod jam docui, non posse probari.

Jam tibi Barbaricæ vestes, Melibæaque fulgens
Purpura Thessalico concharum tinta colore,
Aurea Pavonum ridenti imbuta lepore,
Sæcla novo rerum superata colore jacerent:

Et contemptus odor Myrrhae, Mellisque sapores,
Et Cycnea mele, Phæbæaque dædala chordis
Carmina consimili ratione oppressa silerent.

Namque aliis aliud praestantius exoreretur.

Cedere item retrò possent in deteriores

Omnia sic parteis, ut diximus in meliores:
Namque aliis aliud retrò quoque tertius esset

Naribus, Auribus, atque Oculis, Orisque sapori.

Quæ quoniam non sunt in rebus reddita, certa &

Finis utrinque tenet Summam: Fateare necesse est

Materiam quoque finitis differre Figuris.

Denique, ab Ignibus, ad gelidas biemisque Pruinas

Finitu est, retroque pari ratione remensu est.

Finit enim Calor, ac Frigus, mediique Tepores

Inter
cannot conceive, that the Seeds should be distinguished by an infinite Variety of Forms, unless you admit that they are likewise infinite in Magnitude, which, as I said above, is impossible to be proved.

Besides; * the embroider'd Vefts of Asia, the bright * Meliboean Purple, dipt in the Blood of the Thessalian Shell-fish, and the golden Brood of Peacocks, glittering with their gaudy Plumes, would lie undistinguished, being exceeded by other Things of greater Lustre; and the Smell of Myrrh, and the Taste of Honey, would be despised, and the Singing of the Swan, and the noblest Verse sung to sweet Musick would, by the same Rule, be outdone, and cease to please; for some other Things might arise more agreeable than these.

And as some Things, we observe, may advance into greater Perfection, so others likewise may decline, and grow worse; for one Thing may succeed another still more disagreeable to the Nose, the Ears, the Eyes, and Taste. But since this does not appear in the Nature of Things, since there is a certain Boundary to what is best and worst, we are obliged to own, that Matter is diversified by Shapes that are finite, and within fixed Bounds.

Lastly, from Fire, to the piercing Cold of Winter, a Point is set; and so, from Cold to Heat, they are both intenable: For Heat and Cold are the Extremes, the middle Warmth lies between

* If you allow a Variety of Seeds even to Infinity, the outward Qualities of natural Things would never be fixed or determined; they might still be diversified by a new Figuration, that there might arise a Better than the Best, and a Worse than the Worst.

* Meliboea was a City of Thessaly, famous for Purple.

both,
Inter utrumque jacent, explentes ordine Summam.
Ergo finita distant ratione creatae,
Ancipiti quoniam mucrone utrinque notantur,
Hinc Flammis, illinc rigidis insessa Prunis. 520

Quod quoniam docui, pergam connetere rem, quae
Ex hoc apta fidem ducit: Primordia rerum,
Inter se Simili quae sunt perfeclia figura,
Infinita cluere: etenim distantia cum fit
Formarum finita, necesse sit, quae Similes sint, 525
Esse Infinitas: aut summam Materiae
Finitam confare: id quod non esse probavi.

Quod quoniam docui, nunc suaviloquis, age, paucis
Versibus ostendam, corpuscula Materiae
Ex infinito summam rerum usque tenere,
Undique protelo Plagarum continuato.

Namquod rara vides magis esse animalia quae dam,
Facundamque minus Naturam cernis in illis;
At regione, locoque alio, terrisque remotis
Multa licet genereneesse in eo, numerumque repleri. 535
Sicuti Quadrupedum cum primis esse videmus
In genere anguimanos Elefantos, India quorum
Millibus è multis vallo munitur eburno,
Ut penitus nequeat penetrari; tanta ferarum
Vis est, quorum nos perpaucia exempla videmus. 540

Sed tamen id quoque uti concedam, quam libet, esto
Unica res quaedam nativo corpore Sola,

Cui
both, and thus orderly fills up the Whole. This
Warmth therefore is distant equally from both
Extremes, and is confined by Bounds on both
sides, kept in on this by Heat, on that by smart-
ing Cold.

This being proved, b I shall here join another
Observation, which justly derives its Credit from
what is explained before: This is, that the Seeds
of Things that are alike, and perfectly of the
same Figure, are in Number infinite; for tho'
the Variety of their Figures be only finite, yet
the Seeds themselves, that are alike in Nature,
must needs be infinite; otherwise, the whole of
Matter must be finite, which I have fully proved
is not.

Thus having cleared the way, I shall now
shew, in short but sweetest Numbers, that the
Seeds of Matter are infinite, and hold together
the whole of Things, by constant Force of Blows,
on every side.

For though you observe some Species of Ani-
mals are less common, and Nature seems less
fruitful in their Production, yet in other Coun-
tries, in other Places, and in Lands more remote,
you meet with many Creatures of that kind, and
more in Number; for you observe the Elephant;
Chief of Beasts, wreathing his lith Probofcis like
a Snake: How many Thousands of them India
breeds, which fortify her with a Wall of Ivory im-
penetrable, not to be forced, tho' we see but few atRome.
But grant, if you please, there was only one single
Creature of a particular kind in Nature, whole

b The different Figures of his Atoms he has proved to be
finite, but the Seeds of a like Figure, he contends, are in-
finite; for if the Atoms contained under each Sort were finite in
Number, there could be no Infinity of Atoms in the Uni-
verse.
Cui similis toto terrarum non sit in orbe:
Infinita tamen nifi erit vis Materiali,
Unde ea progigni possit concepta; creari
Non poterit: neque quod superest, procrescere, alique.
Quippe etenim sumant oculi, finita per Omne
Corpora jaðari unius genitalia rei;
Unde, ubi, qua vi, & quo patto congressa coibunt
Materie tanto in pelago, turbaque aliena? 545
Non (ut opinor) habent rationem conciliandi:
Sed quasi naufragis magnis multisque coortis,
Disjedare solet magnummare transtra, guberna,
Antennas, proram, malos, tensaque natanteis,
Per terrarum omnes oras fluitantia aplustra:
Ut videantur, & indicium mortalibus edant,
Insidi maris insidias, vireisque, dolumque
Ut vitare velint, neve ullo tempore credant,
Subdola cum ridet placidi pellacia ponti:
Sic tibi si finita semel Primordia quaedam
Constitues, ævum debebunt sparsa per omne
Disjedare æstus diversi Materiali:
Nunquam in concilium ut possint compulsa coire:
Nec remorari in concilio, nec crescere adaequâ.
Quorum utrumque palam fieri, manifesta docet res, 565
Et res progigni, & genitas procreascere possie:
Esse igitur genere in quovis Primordia rerum
Infinita palam 'st, unde omnia suppediantur.

Nec
like was not to be found throughout the World, yet unless the Seeds of which it was formed were in Number infinite, it could never come into Being, or, when once made, could it increase, or be supported.

For, fancy you see the finite Seeds of any Body tossed about through the infinite Space, whence, where, by what Force, by what Design, could they meet and unite in that wide Ocean of Matter, in that strange Confusion? They have no Reason, I suppose, to direct them to this Union. But, as in dreadful Wrecks, when many Ships are lost, the troubled Sea scatters abroad the Seats, the Sterns, the Sail-yards, the Prows, the Masts, the floating Oars, the Flags swimming about all the Shores, that they may be seen, and forewarn poor Mortals to fly, and at no time to trust the Treachery, the Power, and the Deceit of that unfaithful Element, even when the perfidious Flattery of her smooth Face smiles upon them; so, if you allow the first Seeds of Things to be finite, the various Agitation of Matter must for ever toss them about, scatter'd as they are, so that they could never be forced to unite; or, if they could, could they preserve that Union, or admit of any Increase? And yet the Nature of Things evidently proves, that Beings are produced, and, when produced, increase; and therefore, *the Principles of Things, in every kind, 'tis plain, are infinite, and by them all Beings are formed and supported.

* The Notion of the Infinity of the Atoms is the greatest Absurdity; for infinite Atoms must fill all the Parts of Space, and can be nothing but a vast Heap of dull moveless Matter co-extended with it. How then could the World be made? How these various Alterations of Bodies, all which proceed from Motion, be produced?
Nec superare queunt motus utique Exitiales
Perpetuò, neque in æternum sepelire salutem; 570
Nec porro rerum Genitales Austificique
Motus perpetuò possunt servare creatœ.
Sic æquo geritur certamine Principiorum
Ex infinito contradìsum tempore bellum:
Nunc hinc, nunc illinc superant vitalia rerum, 575
Et superantur item; miscetur Funere Vagor,
Quem pueri tollunt visientes luminis oras:
Nec nox ulla diem, neque noctem aurora secuta ßt,
Quae non audierit mistos Vagitibus ægris
Ploratus, mortis comites, & funeris atri. 580
Illud in his obsignatum quoque rebus habere
Convenit, & memoriam mandatum mente tenere:
Nil esse, in promptu, quorum natura tenetur,
Quod genere ex uno consisœt Principiorum:
Nec quicquam, quod non permisso Semine constituere; 585
Et quàm quicque magis multas vis posseœt in se,
Atque poteœtates, ita pluria Principiorum
In seœ generœ, ac varias docet esse figuras.

Principio
Nor do those Motions that are fatal and destructive to Beings, always prevail, and cause a Dissolution never to be recover'd; nor, on the contrary, do those Motions by which Beings are formed and increased, always preserve Things when they are produced, but a perpetual War has been forever carried on, with equal Success, between the Principles of Things; one while the vital Seeds prevail, and now again they are routed, and beaten out of the Field: The Cries of Infant Beings, which they send out as soon as they see the Light, are mingled with the Funeral of others that are departed; nor is there a Night that follows the Day, nor a Morning which succeeds the Night, that does not hear the Groans, the Attendants of Death, and sad Obsequies, mingled with the tender Laments of new-born Babes rising into Being.

'Tis proper likewise, that in this Place you fix it as an established Truth, and impress it deeply upon your Mind, that there is no Being to be found in Nature, that consists altogether of Principles of one kind, nor is there any thing that is not made up of mingled Seeds; and the more Powers and Faculties any Being is endued with, the more it appears to be formed of various Sorts of Seeds, that differ in Figure among themselves.

If the Seeds of a like Figure were finite, the Things composed of those finite Seeds, when once dissolv'd, could never be restored, the Generation and Growth of Things would be in vain expected.

The various Qualities of Things proceed from the Variety of the Seeds, which must necessarily likewise produce a Variety of Contexture. His first Argument he brings from the Earth.
Principiō, Tellus habet in se Corpora prima,
Unde Mare immensum volventes flumina fontes 590
Affiduè renovent: habet, Ignes unde oriantur.
Nam multis succensa locis ardent sola terrae;
Eximiis verò furiit ignibus impetus Ætnae.
Tum porrò nitidas Fruges, Arbustaque lata
Gentibus humanis habet unde extollere posset. 595
Unde etiam fluidas Frondes, & Pabula lata
Montivago generi posset præbere ferarum.
Quare magna Deam mater, materque ferarum,
Et nostrī genetrix Hæc dicta sù Corporis una.
Hanc veteres Graiīm docti cecinere Poëtae
Sublimem in currī bijugos agitare leones:
Aōris in spatio magnam pendere docentes
Tellurem; necque posse in Terra fīstere Terram.
Adjunxere Feras, quia quamvis effera proles
Officiis debet molliri viāta parentum. 600
Muralique caput summum cinxere Corona:
Eximiis munita locis quod fīstinet Urbeis:
Quo nunc insigni per magnus prædita terras
Horribiè furtur divinae Matris imago.
Hanc variae gentes antiquo more sacrorum
Idēam vocitant matrem, Phrygiasque catervas
Dant comites, quia primùm ex illis finibus edunt
Per terrarum orben Fruges capisse creari.
Gallos attribuunt, quia numen qui violarint
Matris, & ingrati Genitoribus inventi sunt. 615

Significare
Book II. Of the Nature of Things.

And first, the Earth contains within herself first Principles, from whence the Fountains, flowing with their Streams, do constantly supply the mighty Sea: She holds likewise within her Womb the Seeds of Fire; we see in many Places how she burns, how Ætna rages with distinguished Flames. She likewise has the Seeds from whence she forms sweet Fruits, and pleasant Trees, for Men; from whence she does afford the tender Shrubs and verdant Grases to savage Beasts that wander on the Hills.

Therefore, this Earth alone is called great Mother of the Gods, Parent of Beasts, and of the human Race. Of her the learned Grecian Bards of old have feigned, that in her Chariot, as she rides aloft, she drives a Pair of Lions harnessed; to teach, that in the spacious Air hangs the vast Mass of Earth, without a lower Earth to prop it up. These Beasts they yoked, to shew that Youth, altho' by Nature wild, yet, softened by the Parents tender Care, grows tame. Her Head they compass with a Mural Crown, because, in Places strongly fortified, she bears up Cities; and in this Pomp adorned, the Image of this sacred Mother is born with dread Solemnity through all the World. Her, after the ancient Use of holy Rites, the different Nations call Mother of Mount Ida, and give her for Attendants a Train of Phrygian Dames, because in Phrygia Corn was first raised, and thence was scatter'd over all the Earth. They serve her by Eunuch Priests, to shew, that those who violate the sacred Character of their Mother, or are found undutiful to their Parents from whence they sprung, should

f He takes occasion to explain the Ceremonies observed in the Mysteries of Cybele, Mother of Gods, which are to be met with in every Dictionary.
Significare volunt indignos esse putandos,
Vivam progeniem qui in oras luminis edant.
Tympana tenua tonant palmis, & Cymbala circum
Concava, raucis nonque minantur Cornua cantu;
Et Phrygio stimulat numero cava Tibia menteis, 620
Telaque præportant violenti signa furoris,
Ingratos animos, atque impia pectora volgi
Conterrere metu que possint numine Divae.

Ergo cùm primum magnas inventa per urbeis
Munificent tacita Mortaleis muta salute: 625
Ære atque Argento sternunt iter omne viarum
Largifica sipe ditantes, singuntque rosarum
Floribus, umbrantes Matrem, comitumque catervas.
Hic armata manus (Curetas nomine Graii
Quos memorant Phrygios) inter se forte catenas 630.
Ludunt, in numerumque exsultant sanguine laeti; &
Terríficas capitum quatientes numine crisías,
Disidæos referunt Curetas: Qui Jovis illum
Vagitum in Creta quondam occultáse feruntur,
Cum pueri circum puerum perrum percussa chorea 635
Armati in numerum pulsarent æribus æra,
Ne Saturnus cum malis mandaret adeptus,
Æternumque daret Matri sub pectore volnus.
be thought unworthy to raise a living Offspring to succeed them. With their Hands they beat loudly upon Drums well-braced; the hollow Cymbals all about, and Horns with their hoarse Noise, threaten dreadfully around her, & the Pipe, with Phrygian Airs, mads their very Souls; and they carry Arms, the Signs of their distracted Rage, to terrify the stubborn Minds and impi- ous Hearts of the Vulgar, with a Fear and Rever- ence of this great Deity.

When therefore she is carried in Procession, through the great Towns, and, dumb as she is, silently bestows Health upon her Votaries, they scatter Brass and Silver in all the Way she passes, enriching her with profuse Oblations; they shower down the Flowers of Roses, and so cover the great Mother, and the whole Train of her At- tendants. Her an armed Troop (the Greeks call them the Phrygian Curetes) leap about, with a Chain through their Hands, and wanton in the Blood they have drawn, dance to exact Time, and, full of the Goddes, shake their dreadful Crefts upon their Heads. They represent the Diàean Curetes, who are said formerly to have drowned the Infant-cries of Jupiter in Crete; when the young Priests, all armed, struck their brazen Bucklers together, as they danced nimbly round the Boy, left Saturn should seize upon him, and devour him, and, by that means, wound his Mother to the Heart, with a Grief never to be*

The Phrygian Mufick was a sort of Enthufiaftick Harmon- ny that raised the Passions of the Mind, and swelled the Soul to Rage and Fury.

This is a sharp Invective of the Poet's; a rough unpol- ished Stone, not given to tattle, must needs do a world of Good; She never laid a word of the Benefits she bestowed.

forgotten:
Propterea Magnam armati Matrem comitantur:
Aui quia significant Divam prædicere, ut armis, 640
Ac virtute velute Patriam defendere terram:
Presidioque parent, decorique Parentibus esse.
Que bene, & eximii quamvis disposta ferantur,
Longè sunt tamen à vera ratione repulsa.
Omnis enim per se Divum natura necesse 'st
Immortali ævo summa cum pace fruatur,
Semota à nostris rebus, sejunctaque longè.
Nam privata dolore omni, privata periclis,
Ipsa suis pollens opibus, nibil indiga nostri,
Nec bene præmeritis capitur, nec tangitur ira. 650
Terra quidem vero caret omni tempore Sen¬su :
Sed quia multarum potitur Primordia rerum,
Multa modis multis effert in lumina solis.
Hic quis Mares Neptunum, Cereremque vocare
Consituet Fruges, & Bacchi nomine abuti
Mavolt, quam Laticis proprium proferre vocamen:
Concedamus ut hic terrarum deititet Orbem
Esse Deum Matrem, dum re non sit tamen apse.
Sæpe itaque ex uno tondentes gramina campo
Lanigera pecudes & equorum duellica proles,
Buceriæque greges sub eodem tegmine cali,
Ex unoque sitim sedantes flumine aquaç,
Diffimili vivunt specie, retinentque parentum
Naturam, & mores generatim quæque imitantur:

Tanta
Book II. Of the Nature of Things.  

forgotten: For this Reason, an armed Train accompany the great Mother; or else the Goddes signifies, that they should preserve their native Country by their Arms and Valour, and be a Protection and Honour to their Parents.

Such Fancies, tho' well and wittily contrived, yet are far removed from Truth and right Reason; for the whole Nature of the Gods must spend an Immortality in softest Peace, removed from our Affairs, and separated by Distance infinite; from Sorrow free, secure from Danger, in its own Happinefs sufficient, and nought of our's can want; is neither pleased with Good, nor vexed with Ill.

The Earth is indeed at all times void of real Sense; but as it contains within itself the first Seeds of many Things, it produces them into Being after various Manners; so, if any one here resolves to call the Sea by the Name of Neptune, and Corn by the Title of Ceres, and chuses rather to abuse the Name of Bacbus, than to speak the proper Appellation of Wine, such a one, we allow, may style this Globe of Earth the Mother of the Gods, when really she is no such thing.

But to return; we see the woolly Sheep, the warlike Breed of Horses, and horned Bulls, living under the same Covert of the Sky, grazing together in the same Field, and quenching their Thirst in the same Stream of Water; yet they are each of a different Species, and retain the Nature of their Sires, and every Kind imitates the Dispositions of the Race from whence they came; so different

1 Since so many Sorts of Animals are fed by the fame Herbs, and drink of the same Water, the Herbs and Water must contain several Sorts of Principles, to make them proper Nourishment for each sort.
T. Lucretii Lib. II.

Tanta igitur in quovis genere Herbae Materiæ 665.
Diffimilis ratio: tanta igitur in Flumine quoque.

Jam vero quamvis animantem ex omnibus unam
Ossa, Cruor, Vena, Calor, Humor, Viscera, Nervi
Constituunt, quae sunt porro distantia longè
Diffimili perfecta figura Principiorum. 670

Tum porro quæcunque Igni flammatum cremantur;
Si nil præterea, tamen ex se ea corpora tradunt,
Unde Ignem jacere, & Lumen summittere possunt:
Scintillasque agere, ac latè differre Favillam.
Cætera consimili mentis ratione peragrants, 675
Invenies intus multarum Semina rerum
Corpore celare, & varias cohibere Figureas.

Denique multa vides, quibus est Odor, & Sapor una
Reddita sunt cum Odore, imprimis pleraque done,
Religione animum turpi cum tangere parto. 680
Hac igitur variis debent constare Figureis:
Nidor enim penetrat, qua Succus non it in artus:
Succus item seorsum, & rerum Sapor insinuatur
Sensibus, ut noscas primis differre figuris.
Diffimiles igitur Formæ glomeramen in unum 685
Convenient: Et res permisso Semine constat.

Quin etiam passim nostra in versibus ipsis
Multa Elementa vides multis communia verbis:
Cùm tamen inter se Versus, ac Verba necesse igitur
Constituere alia ex aliis constare Elementis: 690
is the Nature of the Seeds in every Herb, so various are the Principles of the Water in every Stream.

Now tho' Blood, Bones, Veins, Heat, Moisture, Bowels, Nerves, go to the Formation of every Animal; yet of what Variety of Figures, widely different in themselves, do their Seeds consist?

And then all Bodies that are combustible, and burnt by Fire, if they agree in nothing else, yet discharge from themselves such Parts, by which they spread about their Flame and Light; from whence they raise Sparkles, and scatter their Embers all abroad. So if you examine other things by the same Rule, you will find Seeds of different kind lie concealed in all Bodies within, and shew themselves of a different Figure.

Lastly, you observe many Things that emit both Smell and Taste, especially those Victims you offer when your Mind is religiously moved for something you have unjustly acquired. These Sensations, therefore, must be raised by Seeds of different Figure; for Smell pierces through Pores where Taste can find no Passage: The Juice likewise, and the Taste of Things, affect the Sense by proper Organs, to convince that their Seeds vary in their Figure. Principles therefore of various Shape, make up every particular Mais, and Things in general are composed of mingled Seeds; for, in these Verstes of mine, you may all along observe, that many Letters are common to many Words, and yet you must confess, that some Verstes and some Words consist of very different Letters; not because the Number of Let-

\* All combustible Matter is resolved into Fire, Light, Smoke, and Ashes; and we may believe, that the Dissolution is not made into any Thing, but what was actually contained in the Thing dissolved: And therefore, in combustible Things, here lie hid those different Kinds of Seeds, of which Fire, Light, Smoke, and Ashes consist.
Non quod multa parum communis Littera currat,  
Aut nulla inter se duo sint ex omnibus isdem:  
Sed quia non volgo paria omnibus omnia constant.  
Sic aliis in rebus item communia multa,  
Multarum rerum cum sint Primordia longè  
Diffimili tamen inter se confistere summa  
Possunt: ut meritò ex aliis constare serantur  
Humanum genus, ac Fruges, Arbustaque leta.  
Nec tamen omnimodis conneoti posse putandu ἢ  
Omnia: nam volgo fieri Portenta videres,  
Semiseras Hominum species existere; & altos  
Interdum Ramos egigni corpore vivo:  
Multaque conneoti Terrestria membra Marinis.  
Tum flammam tetro spiranteis ore Chimeras  
Pascere Naturam per terras omniparenteis.  
Quorum nil fieri manifeštu ἢ: omnia quando  
Seminibus certis certa genetricie creata  
Conservare genus crescentia posse videmus.  
Scilicet id certa fieri ratione necessi ἢ  
Nam sua cuique Cibis ex omnibus intus in artus  
Corpora discedunt: Connexaque convenientieis  
Efficient motus: At contra aliena videmus  
Rejicere in terras Naturam: Multaque cæcis  
Corporibus fugiunt è corpore percita plagis,  
Quæneque conneoti cuiquam potuere, neque intra  
Vitaleis
Book II. Of the Nature of Things.

ters are few, or no two Words are formed of the same Letters, but because every Verse and every Word is composed of Letters altogether different. So, tho' the fame Principles are common to many Things, yet the Things may remain very different among themselves; and it may properly enough be said, that Men, and Fruits, and pleasant Trees are made up of different Seeds.

Yet we are not to suppose, that All Seeds of whatever Figure, do mutually unite to the Production of Beings; for then you would observe Monsters springing up every day, Creatures half Man, half Horse, the lofty Boughs of Trees growing out of a living Body, and the Limbs of Land-Animals joined to the Bodies of Fish, and Nature forming every where out of the Earth (the Mother of all Things) Chimæras from their dreadful Mouths breathing out Flames; but 'tis plain, nothing of this happens, since we see all Things are formed from certain Seeds, and regular Principles, and preserve their Kind as they grow up and increase.

Nor indeed can it, by the fixed Rules of Reason, be other wise; for, out of the several Sorts of Food, the Particles of that which is proper to every Animal, descend into the Limbs, and there united, produce the Motions suitable to that Animal; but, on the contrary, those Particles of Food that are destructive, some of them, we find, Nature throws off through open Passages, others are, insensibly to us, forced out of the Body through the Pores, such as would admit of no

1 Tho' many Seeds are common to many Things, yet each Thing requires a certain Order and Disposition of Union, and Association of the Seeds that compose it; and when the Thing is dissolved, the congruous Atoms mutually withdraw from the incongruous.

Union
Vitaleis motus consentire, atque animari.

Sed ne fortè putes animalia sola teneri

Legibus bis : Eadem ratio res terminat omneis.

Nam veluti tota natura dissimiles sunt

Inter se genitæ res quæque, ita quamque neceffe ist

Dissimili consiarc figura Principiorum ; 721

Non quòd multa parum similis sint præedita forma :

Sed quia non volgo paria omnis omnibus omnia constent.

Semina cum porro dißent, differre neceffe ist

Intervalla, Vias, Connexus, Pondera, Plagas, 725

Concursus, Motus : quæ non Animalia folium

Corpora sejungunt, sed Terras, ac Mare totum

Secernunt, Cæolumque à Terris omne retentant.

Nunc age, dixta meo dulce quaestia labore

Percipe : ne fortè hæc Albis ex Alba rearis 730

Principiis esse, ante oculos quæ Candida cernis :

Aut ea, quæ Nigrant, Nigro de Semine nata :

Neque alium quemvis quæ sunt induta colorum,

Propterea gerere bunc credas, quod Materiaï

Corpora dissimili sint ejus tincta colore. 735

Nullus enim Color est omnino Materiaï

Corporibus, neque par rebus, neque denique dispar.

In quæ corporæ si nullus tibi fortè videtur

Posse animi injexibus fieri, procul avius erras :

Nam cum Cæcigeni, Solis qui lumina nunquam 740

Aspexere,
Book II. Of the Nature of Things.

Union with others, nor agree to promote the vital Motions and Purposes of Life.

But left you should think, that living Creatures only are bound by these Laws, the same Reason holds with regard to all other Beings; for as all Bodies are in their Nature different in themselves, so it is necessary that each should consist of Principles of a different Figure, not but that many Seeds are the same in Shape, but they do not all agree in Form perfectly alike.

Since then the Seeds differ, it is necessary that their Intervals, their Courses, Connexions, Weights, Strokes, Concussions, Motions, should differ likewise; Properties, that not only make a Distinction between Animals, but divide the Earth and the Sea, and preserve the Heavens separate from the Earth, and secure all Things from being confusedly mingled together.

Now, come on, attend to Rules which I have found, by a Labour very delightful to myself; let you should think those Bodies that appear white to your Eyes, are composed of white Seeds, or such as shew black, are formed of black; or what Colour soever a Thing wears, you should conclude the Cause of it to be, that the Seeds of which it is made are trained with the same Colour: For the Principles of Matter are void of all Colour, both like or unlike what appears upon the Bodies they produce.

If you should chance to think, that the Mind cannot possibly form an Idea of Seeds without Colour, you are under a strange Mistake; for Persons born blind, who never saw the Light of

\[m\] He means, that the Atoms have no Colour whatever, like or unlike those that we discover on the Surface of concrete Bodies.
Aspexere, tamen cognoscent corpora Tastu,
Ex ineunte ævo nullo continuum colore:
Scire licet menti quoque nostra Corpora posse
Verti in notitiam nullo circumlita fuco.
Denique nos ipsi caecis quæcumque tenebris
Tangimus, haud ullo sentimus tincta Colore.
Quod quoniam vinco fieri, nunc esse docebo.
Omnis enim Color omnino mutatur in omnis:
Quod facere haud ullo debent Primordia pæto,
Immutabile enim quiddam superare necesse est;
Ne res ad Nilium redigantur funditus omnes.
Nam quodcunque suis mutatum finibus exit,
Continuô hoc mors est illius, quod fuit antè.
Proinde Colore cave contingas Semina rerum:
Ne tibi res redeant ad Nilium funditus omnes.

Præterea, si nulla Coloris Principis est
Reddita natura, at variis sunt praedita Formis;
E quibus omnigenos gignunt variantque Colores.
(Præterea magni quod refert Semina quæque
Cum quibus & quali postura contineantur,
Et quos inter se dent motus, accipientque);
Perfacilè extemplè rationem reddere possis,
Cur ea, que Nigro fuerint paullo ante Colore,

Marmoreo
the Sun, yet discover Bodies by the Touch, as if they had no manner of Colour belonging to them. So that Seeds imbued with no Colour, can offer themselves to our Mind, and be conceived by us. And besides, the Things we touch in the dark Night, we distinguish without any regard to the Colour they may otherwise appear in.

That Seeds may be void of Colour I have shewed; I shall now prove that they actually are so. Now every Colour may be changed one into another; but the Principles of Things will by no means admit of Change, there necessarily must be something that remains immutable, lest all Things should be utterly reduced to Nothing; for whatsoever is changed, and breaks the Bounds of its first Nature, instantly dies, and is no more what first it was. Be cautious therefore, how you stain the Seeds of Things with Colour, lest all Things should recur to Nothing, and be utterly destroyed.

Besides, tho' Nature beffows no Colour upon Seeds, yet they are endued with different Figures, from whence they form and vary the Colours of every kind which shew upon them. (For it is of great Concern what Seeds unite with others, in what Position they are preserved, and what Motions they give and receive among themselves;) and thus you may readily account, why Things that just before appeared black, should

All Colour is liable to Change, but the Seeds of Things are immutable, otherwise all Things would fall into Nothing. If Colour were intrinsically in the Seeds, the Seeds would be mutable; for all Colour is mutable.

There is no Necessity that the Seeds should be imbued with Colours; for allow them a Variety of Figures, and, from the different Order, Site, and Disposition of them, Colours will proceed.

Vol. I.

suddenly
Marmoreo fieri possint Candore repente:
Ut Mare, cum magni commorunt Aequora venti, 765
Vertitur in canos candenti marmore fluétus.
Dicere enim possis Nigrum, quod sepe videmus,
Materies ubi permista’st illius, & ordo
Principiis mutatus, & addita, demptaque quædam,
Continuò id fieri ut Candens videatūr, & Album: 770
Quod si Cæruleis conslarent Aequora ponti
Seminibus, nullo possint Albescere pæto.
Nam quocunque modo perturbes, Cærula quæ sint
Nunquam in Marmoreum possunt migrare Colorem.

Sin alio, atque alio sunt Semina tinīta colore, 775
Quæ Maris efficiunt unum purumque Nitorem:
Ut sepe ex aliis Formis, variisque Figure
Efficitur quidam Quadratum, unœque figure:
Conveniebat, uti in Quadrato cernimus esse
Diffimileis formas; ita cernere in Aequore ponti 780
Aut alio in quovis uno puroque Nitore,
Diffimileis longè inter se, varioisque colores.

Preterea, nihil officiunt, obstantique Fīgūrāe
Diffimile, quod Quadratum minus omnes extra:
At varii rerum impedient, prohibentique Colores,
Quo minus esse uno possit res tota Nitore. 786

Tum porro, quæ ducit & illicit, ut tribuamus
Principiis rerum nonnunquam, causa, Colores,
Occidit, ex Albis quoniam non Alba creantuqur:

Nec
suddenly look white. As the Sea, when the
rough Winds enrage the Waters, grows white
with foaming Waves. So you may say of what
commonly appears black to us, when the Seeds
of which it is formed are mingled, and their Or-
der changed, when some new Seeds are added,
and some old ones are removed, the direct Con-
fsequence is, that its Colour is changed, and ap-
ppears white. But if the Water of the Sea con-
stituted essentially of blue Particles, it could by no
means change into a white Colour; disturb the
Order of the Seeds how you would, the Prin-
ciples that are blue could never pass into a white.

But if you say, that the Seeds which make
the Sea look of one uniform White, are stained
with different Colours, as a perfect Square that
is of one Figure, is made up of several Bodies
that are of several Figures, then it would follow,
that as we perfectly see the dissimilar Figures
which the Square contains within it, so we might
discover in the Water of the Sea, or in any other
Body of one simple Colour, the mixt and dif-
f erent Colours from which that simple Colour
proceeds.

Besides; the dissimilar Figures that go to
make up a Square, do by no means hinder, that
the Surface of the Body should appear square; but
a mixt Variety of Colours will for ever prevent,
that the Surface of any Body should appear of
one fixed and uniform Colour.

And then, the very Reason that would incline
us sometimes to impute Colours to Seeds, is by
this means destroyed; for, in this Case, white

Bodies of a different Figure may unite into another dif-
ferent Figure, as Triangles into a Square; but the same can-
not be said of Colours, for different Colours can never com-
pone one simple Colour.
Necque Nigracuent, de Nigris: sed Variis de. 790
Quippe etenim multo procliviis exorientur
Candida de nullo, quam de Nigrante colore;
Aut alio quovis qui contrà pugnet, & obstet.

Præterea, quoniam nequeunt sine Luce Colores
Esse, neque in Lucem existunt Primordia rerum: 795
Scire licet quàm sint nullo velata Colore.
Qualis enim cæcis poterit Color esse tenebris,
Lumine qui mutatur in ipso, propterea quòd
Refla aut obliqua percussus Luce refulget?
Pluma Columbarum quo paсто in Sole videtur: 800
Quæ fita cervices circius, collumque coronat:
Namque aliis fit uti rubro fit clara Pyropo:
Interdum quodam sensu fit, uti videatur
Inter Cæruleum virideis miscere Smaragdos.
Caudaque Pavonis, larga cum Luce repleta fit, 805
Consimili mutat ratione obversa Colores.
Qui, quoniam quodam gignuntur Luminis istu,
Scilicet id sine eo fieri non posse putandi fit.

Et quoniam plagœ quoddam genus excipit in se
Pupula, cùm sentire Colorem dicitur Album, 810

Atque
Of the Nature of Things.

Bodies are not produced from white, nor black from black, but from Seeds of various Colours. Now a White would much sooner proceed from Seeds of no Colour at all, than from such as are black, or any other opposite Colour whatsoever.

Besides, since Colours cannot appear without Light, and since the Seeds of Things cannot appear in the Light, you may thence conclude, that they are covered with no Colours at all; for how can any Colour shew itself in the dark, which surround in the Light itself, as it is differently struck either with a direct or oblique Ray of Light? After this manner the Plumes of Doves, which grow about their Neck, and are an Ornament to it, shew themselves in the Sun. In one Position they appear red like a fiery Carbuncle; in another Light, the Greenness of the Emerald is mingled with a Sky-blue. So likewise the Tail of the Peacock, all filled with Light, changes its Colours, as the Rays strike directly or obliquely upon it. Since therefore Colours are produced only by the Strokes of Light, we cannot suppose they can possibly exist without it.

And since the Eye receives within it self one Sort of Stroke when it is said to perceive a white

* Colour is nothing but Light, reflected from the Surface of an opacous Body; and therefore in dark Places, where no Rays of Light enter, and out of which none are reflected, there is no such Thing as Colours: And therefore the Colours which appear in Things when the Light returns, are produced from the Light itself, according to the Dispositions the Things have to receive, reflect, refract, and convey it to the Eyes.

* There is no Occasion for the Seeds to have any Colours; for allow that they are of different Figures, and disposed in different Manners; and from thence will arise various Images, by which they will variously strike the Eyes, and stir up different Motions in the Organs.
Atque aliiud porro, Nigrum cùm, & cætera, sentit, Nec refert ea, quæ tangis, quo forte Colore
Pradita sint, verum quali magis apta Figura:
Scire licet, nil Principiis opus esse Colores:
Sed variis Formis varianteis edere tactus.
Præterea, quoniam non certis certa figuris
Est natura Coloris, & omnia Principiorum
Formamenta queunt in quovis esse Nitore:
Cur ea, quæ constant ex illis, non pariter sunt
Omnigenis perfusa Coloribus in genere omni?
Conveniebat enim Corvos quoque fæpe volanteis
Ex albis album pennis jactare colorem,
Et nigros fieri nigro de semine Cycnos,
Aut alio quovis uno, varioque colore.
Quinetiam quantò in partis res queque minutas
Disfrabitur magis, hoc magis est ut cernere possis
Evanescere paullatim, sìnguique Colorem:
Ut fit ubi in parvam partis disserpitur Aurum,
Purpura, Pæniceusque color clarissimu' multo,
Filatim cùm dispersus disperditur omnis:
Noscre ut hinc possis, prīus omnem effare Colorem
Particulas, quàm discedant ad Semina rerum.
Posfremo quoniam non omnia Corpora vocem
Mittere concedis, neque Odorem: propterea fit,
Book II. Of the Nature of Things.

Colour, and another contrary one, when it views an object of a black or any other Colour; and since it is of no moment, by what Colour any thing you touch is distinguished, but rather of what peculiar Shape and Figure it is, you may conclude, there is no manner of Occasion that Seeds should be stained with any Colours, but that they should cause that Variety of Touch, by the various Figures with which they are indued.

Besides, since there are no certain Colours peculiar to certain Figures, and since Seeds of any Figure may be of any Colour, whence is it that Bodies that consist of such Seeds, are not in their several kinds imbued with all sorts of Colours? It would be common to see Crows, as they fly about, cast a white Colour from their white Feathers, and black Swans might be produced from black Seeds, or be of any other one or more Colours, as their Seeds chance to be distinguished.

Further, the more any Body is broken into small Parts, the more you may perceive its Colour languishes by degrees, and dies away; this is the Case of Gold, when it is divided into thin Shavings, its Luster is extinguished, and the Purple Dye, by much the richest, when it is drawn out Thread by Thread, is quite lost; hence you may infer, that the Particles of Bodies discharge themselves of all Colour, before they come to be as small as Seeds.

Again, since you allow that all Bodies do not emit Sound and Smell, and therefore you do

4 The Senses, he says, are the sole Judges of the Qualities of Things; and therefore, since we allow there are Bodies, which the Nostrils cannot smell, and that those which the Ear cannot hear have no Sound, why should not we allow that Bodies, which the Eyes cannot perceive, have no Colours?
Ut non omnibus attribuas Sonitus, & Odores: 835
Sic, Oculis quoniam non omnia cernere quimus,
Scire licet, quædam tam confare orba Colore,
Quam fade Odore ullo quædam, Sonituque remota:
Nec minús hæc animum cognoscere possit sagacem,
Quam quæ sunt aliis rebus privata, notifque. 840

Sed ne forte putes solo spoliata Colore
Corpora prima manere: Etiam secreta Teporis
Sunt, ac Frigoris omnino, calidique Vaporis:
Et sonitu stérala, & Succo jejuna feruntur:
Nec jaciunt ullum proprio de corpore Odorem. 845
Sicut Amaracini blandum, Staæque liquorem,
Et Nardij florum, neñar qui naribus balant,
Cum facere insitus quæ cunprimis querere par est,
Quod licet, ac potis es reperire, inolentis Olivi
Naturam, nullam quæ mittat Noribus auram: 850
Quam minimò ut possit mistos in corpore Odorem,
Concoetoque, suo contactos perdere viro.

Propteræa demum debent Primordia rerum
Non adhibere suum gignundis rebus Odorem,
Nec Sonitum, quoniam nihil ab se mittere possunt:
Ne similis ratione Saporem denique quemquam, 856
Nec Frigus, neque item calidum, tepidumque Vapo-
rem, &

Caetera, quæ cum ita sunt tandem, ut mortalia constent,
Molli Lenta, Fragosæ Putri, Cava corpore raro,
Omnia sunt a Principiis sejuncta necesse sint, 860
Immortalia si volumus subjungere rebus

Fundamenta,
not attribute Sound and Smell to every Body; so, since we cannot discover every thing by our Eyes, you may conclude, there are some Bodies as much void of Colour, as there are others without Smell or Sound; and a judicious Mind can as properly form a Notion of such Bodies void of Colour, as it can of others that are without Smell or Sound, or any other Qualities whatsoever.

But left you should conceive the first Seeds are void only of Colour, you must know that they are without Warmth, are altogether free from Cold or Heat, they emit no Sound, are without Moisture, nor do they send out any Smell from their several Bodies; so when you propose to compound a pleasant Ointment of sweet Marjoram, Myrrh, and Flowers of Spikenard, that send out the richest Odour to the Nose, the first thing you are to do is to chuse, as far as lies in your power, an Oil that has no Smell, that it may, as little as possible, infect and corrupt those sweet Ingredients, being mix'd and digested with them, with its native Rankness.

Lastly, the Seeds do not bestow any Smell upon the Bodies they produce, nor any Sound, for they can exhale nothing from themselves; and, for the same Reason, they can communicate no Taste, nor Cold, nor any Vapour hot or warm. You must separate all Qualities from the Seeds, that render them liable to Dissolution, such as viscous, brittle, hollow, which proceed from Qualities that are soft, putrid, and rare, the Seeds must have nothing of these Properties if you would fix them upon an eternal Foundation, upon which alone depends the Security of

His Atoms are not only void of Colour, but of all other Qualities, as Smell, Cold, Heat, &c. and this is proved to be true by modern Experiments.

Beings.
Fundamenta, quibus nitatur summa salutis:
Ne tibi res redeant ad Nilum funditis omnes.

Nunc ea, quae Sentire videmus cunque neceffe est
Ex Insenilibus tamen omnia confiteare

Principiis confiari: neque id manifesta refutant,
Nec contrà pugnant, in promptu cognita quae sunt:
Sed magis ipsa manu ducunt, & credere cogunt,
Ex Insenilibus, quod dico, Animalia gigni.

Quippe videre licet, vivos existere Vermeis
Stercore de tetro, putrorem cum sibi naeta est
Intempestivis ex imbris humida tellus:
Præterea cunctas itidem res vertere seæ.

Vertunt se Fluvii, Frondes, & Pabula leta
In Pecudes: vertunt Pecudes in Corpora nostra

Naturam, & nostro de Corpore seæ Ferarum
Augescunt vires, & corpora Pennipotentum.
Ergo omnes natura cibos in corpora viva
Vertit, & binc Sensus animantium procreat omnes:
Non alia longè ratione, atque arida ligna

Explicat in flammas, & in igneis omnia versat.

Jamne vides igitur, magni Primordia rerum
Referre in qui sunt ordine quæque locata,
Et commissæ quibus dent motus, accipientque?

Turn porro quid id est, animum quod percutit ipsum?

Quod movet? & varios sensus expromere cogit,
Ex Insenilibus, ne credas Sensile gigni?
Book II. Of the Nature of Things.

Beings, left all Things should fall to Nothing, and perish beyond Recovery.

Now farther, those Beings we see induced with Sense, you must needs own are produced from insensible Seeds; nor is there any thing we perceive by common Experience, which refutes or opposes this Opinion. Every thing rather leads us on, and compels us to believe that Animals, I say, proceed from Principles that are void of Sense; for we observe living Worms come into Being from flinking Dung, when the Earth, moistened by unseasonable Showers, grows putrid and rotten.

Besides, Beings of all kinds undergo continual Changes; the Waters, the Leaves, and the sweet Grasf turn themselves into Beasts; the Beasts convert their Nature into Human Bodies; and the Bodies of wild Beasts and Birds increafe and grow strong by these Bodies of our's. Nature therefore changes all Sorts of Food into living Bodies; and hence she forms the Senses of all Creatures, much after the fame manner as she quickens dry Wood into Fire, and fets every thing in a blaze. You see now it is of the utmost Importance, in what Order these firft Seeds are ranged, and, when mingled together, what Motions they give, and receive among themselves.

But tell me, what is it that lays a Force upon your Mind? What moves you? What drives you into another Opinion, that you should not believe a Thing sensible can be formed from insensible Seeds? Perhaps you observe that Stones,

\[ u \] He undertakes to prove, that Things of Sense can spring from senseles Seeds, and that there is no Seed of any superior Principle to Matter, but a fit Combination of Atoms can Think, Will, and Remember. Philosophical Nonsense!
Nimirum, Lapides, & Ligna, & Terrâ quâd una Miïta, tamen nequeunt vitâlem reddere Sensum.

Illud in his igitur sâdus meminisse debebit, 890
Non ex omnibus omnino, quâcunque creant res,
Sensilia extemplo, & Sensus me dicere gigni:
Sed magni referre, ea primum quantula consênt,
Sensile quâ faciunt, & qua sint prâedita Forma,
Motibus, Ordinis, Posituris denique quâ sint:
Quarum nil rerum in Lignis, Glebisque videmus.
Et tamen bâc cùm sint quasi putrescâta per imbreis,
Vermiculos pariunt, quia Corpora materiae
Antiquis ex Ordinis permota nova re,
Conciliantur ita, ut debent Animalia gigni. 900

Deinde ex Sensilibus cum Sensile posse creari
Constituunt, porro ex aliis sentire sütis;
Mollia tum faciunt: nam Sensus jungitur omnis
Visceribus, Nervis, Venis, quâcunque videmus
Mollia mortali consîstere corpore creta. 905

Sed tamen esto jam posse bâc Æterna manere:
Nempe tamen debent aut Sensum partis habere;
and Wood, and Earth, when mingled together, can produce no Creature indued with Sense; * but you will do well to remember, upon this Occasion, that I did not say Things sensible, or Sense, could instantly proceed from all Seeds in general, which go to the Production of Beings, but that it was of great Consequence, of what Size the Seeds are that create a Being of Sense, with what Figures, Motions, Order, and Position they are distinguished; Nothing of which we observe in Wood, or Clods of Earth: Yet these, when they are made rotten by Moisture, produce Worms, because the Particles of Matter being changed from their former Course by some new Cause, are so united and disposed, that living Creatures are formed, and creep into Being.

Besides, those who contend that a sensible Being may be raised from sensible Seeds, (and this you are taught by some Philosophers) must needs allow those Seeds to be soft; for all Sense is joined to Bowels, Nerves, and Veins, all which, we know, are soft, and consequently liable to Change and Dissolution.

* But grant their Seeds to be eternal, yet if they are sensible, each Seed must be indued with Sense, either as a Part or a whole, and be like a

* He confesses, that insensible Things, unless they have a certain Figure and Magnitude, and are agitated in a due Motion, and disposed in a certain Order, never compose sensible Things; but let all Things necessary and requisite be allowed them, and then an Animal may be produced from the most insensible of all Things.

* Let us suppose these sensible, as Plato and Anaxagoras will have them to be, and soft Principles of Things to be eternal, and not subject to Dissolution, yet they cannot be said to be sensible as Parts, because separated Parts have no Sense; nor as Wholes, because they then would be a certain Kind of Animals, and therefore mortal and corruptible.
Aut familia totis Animalibus esse putari.
At nequeant per se Partes sentire, nec esse.
Namque aliium Sensus membrorum resput omnium:
Nec Manus a nobis potis est secreta, neque ulla
Corporis omnino sensum pars sola tenere.
Linquitur, ut totis Animalibus adversulentur;
Viteli ut possint consentire undique Sensu.
Qui poterunt igitur rerum primordia dici,
Et letbi vitare vias, Animalia cum sint,
Atque Animalibus sint mortalibus una, eademque?
Quod tamen ut possint: ab 5atu concilioque,
Nil facient, prater volgum, turbamque Animantum;
Scilicet ut nequeant Hominem, Armamenta, Feraeque;
Inter seque illam rem gignere conveniendo
Per Veneris res, extra Hominem, Armamenta, Feraeque.
Quod si forte sium dimittunt corpore sensum,
Atque alium capiunt: quid opus fuit attribui, quod
Detrabitur? Tum praeterea, (quod fugimus ante,)
Quatinus in Pullos animaleis vertier Ova
Cernimus Alitum, Vermeisque effervere, terram
Intempestivos cum putror cepit ob imbreis:
Scire licet gigni posse ex non Sensibus Sensus.
Quod si forte aliquis dicet, duntaxat oriri
Posse ex non Sensu Sensus, sed mobilitate
Ante aliqua tanquam partum, quam proditur extra:

Hui4
complete Animal of itself; but no single Part can perceive or exist of itself, for each Part requires an Union with the other Parts, to make it capable of Sense, nor can the Hand feel any more, or any other Part retain its Sense, when separated from the Body. These Seeds therefore must be perfect Animals, and so unite together in a vital Sensibility; but how then can these Seeds be said to be eternal, and secure from Death, when they have the Nature of Animals, and are one and the same with them in all Respects, and therefore are mortal, and must die?

But allow these Seeds to be sensible and incorruptible too, yet, by their Union and Agreement, they can produce nothing but Animals and Things sensible; that is, Mankind, and Cattle, and wild Beasts, can produce nothing but Men, and Cattle, and wild Beasts. [How then could Things insensible, as Trees, Metals, have a Being?]

If you say these Seeds, in mingling together, lose their own proper Sense, and assume another, what need you impute any Sense at all to them, when they must lose it again? Besides, as we have proved before, since we perceive the Eggs of Birds are changed into living Young, and that Worms break out of the Earth, when it is made rotten by unseasonable Showers, we may conclude, that Things sensible may arise from insensible Seeds.

If any one will affect here, that Sense indeed may proceed from insensible Seeds, by a Sort of Change made in the Seeds, by virtue of the Thing that generates, before the Animal is formed,

* The Principles, separately taken, are incapable of Change, and the Sense of no Animal can be produced, before the
Huic satis ilud erit planum facere, atque probare,
Non fieri partum, nisi concilio ante coacito:
Nec commutari quicquam fine conciliatu
Primorum, ut nequeant ullius corporis esse
Sensus ante ipsam genitam naturam Animantis.
Nimirum quia Materiae disjebita tenetur
Aëre, Fluminibus, Terris, Flammaque creatis:
Nec congressa modo vitaleis convenienti
Contulit inter se motus, quibus omnituentes
Accensi Sensus animantem quamque tuentur.

Præterea quamvis Animantem grandior ictus,
Quam patitur natura, repente adfligit, & omnes
Corporis, atque animi pergit confundere Sensus.

Disjovvuntur enim positurae Principiorum
Et penitus motus vitales impediuntur,
Donee Materies omnes concussa per artus,
Vitales Animæ nodos è corpore solvit,
Dispersamque foras per caules ejectum omnes.

Nam quid præterea facere ictum posse reamur
Oblatum, nisi disscutere, ac dissolvere quæque?

Fit quoque, uti solet minus oblato acriter ictu
Reliquiæ motus vitalis vincere sepe,
Vincere, & ingenteis plagæ sedare tumultus.
formed, it will be sufficient plainly to shew him, that no Animal can be formed but by an Union first of the Seeds, nor can any thing be changed but by Agreement of the Seeds, so that there can be no such thing as Sense in any Body, before the Animal is completely formed; and for this Reason, because the Seeds lie scattered in the Air, the Water, the Earth, the Fire, nor have they yet united together; after a proper manner, into any vital Motions, by which the Senses of any Animal may be produced, in order to guide and preserve it.

Besides, a Blow falling upon any Animal, heavier than its Nature can endure, immediately torments it, and confounds all its Senses both of Body and Mind; for the Connexion of the Seeds is dissolved, and the vital Motions are wholly obstructed, till the Force of the Blow being agitated violently through the Limbs, dissolves the vital Ties of the Soul from the Body, and compels her, scatter’d and broken to pieces, to fly out through every Pore: For what can we conceive to be the Effect of such a Stroke, but to separate and dissolve the Seeds that were united before?

And then it happens, when the Blow falls with less Violence, that the Remains of vital Motion often get the better, they recover and calm the great Disorders of the Blow, and recall the Animal is perfected; because Sense requires such an Agreement of vital Motions, as we should in vain expect in the Seeds of Things, which fly confusedly scatter’d up and down in the Air, the Earth, the Water, and Fire.

He appeals to Experience, for a violent Stroke, which only dissolves the Texture and Connexion of the little Bodies of which the Animal consists, takes away all manner of Sense; if the Stroke be weaker, the Animal may be restored to its proper State, after some small Discomposure of the little Bodies, the Disposition to vital Motion still having the upper hand, and not being quite broken and dissolved.
In quæ sus quicquid rursus revocare meatus,
Et quasi jam lebhi dominantem in corpore motum
Dificutere, ac pane emissos accendere Sensus.
Nam, quare potius lebhi jam limine ab ipso
Ad vitam possint conlesta mente reverti,

Quam quo decursum prope jam fiet, ire, & abire?

Præterea, quoniam dolor est ubi Materiæ
Corpora vi quadam per viscera viva, per artus
Solicitata suis trepidant in sedibus intus:
Inque locum quando remigrant, fit blanda Voluptas:
Seire licet, nullo Primordia posse dolore

Tentari: nullamque Voluptatem capere ex se:
Quandoquidem non sunt ex ullis Principiorum
Corporibus, quorum Motus novitale laborent:
Aut aliqueum fructum capiant Dulcedinis alæ.
Haud igitur debent esse ullo prædita sensu.

Denique, uti possint sentire Animalia queque,
Principiis etiam est Sensus tribundus eorum:
Quid? Genus humanum proprimit de quibü fa-

Scilicet & rifu tremulo concussa cachinnant,
Et lacrymis spargunt roantenibus ora, genasque,
Multaque de rerum mistura dicere callent,
Et jbi proporro quæ sint primordia quærunt.

Quandoquidem
every thing again into its proper Channel, they rescue the Body, as it were, from the Jaws of Death, and give new Life to the Senses that were almost destroyed; else why should Creatures rather return to Life from the very Gates of Death with new Spirits, than when they were just entering in, proceed on, and utterly perish?

Further, since we feel Pain when the Seeds are shaken from their natural State and Situation within, and are disordered through all the Bowels and Limbs by any outward Force, and when they return again into their proper Place, a quiet Pleasure immediately succeeds, you may conclude, that simple Seeds cannot be tormented with Pain, nor of themselves be affected with Pleasure; because they do not consist of Principles or other Seeds, by whose violent Motions they may be disturbed, or be delighted with any Pleasure they can give; and therefore they cannot possibly be induced with any Sense at all.

Again, if, in order to produce Creatures with Sense, Sense must be imputed to the Seeds from whence they are formed, of what Principles, I pray, is the human Race properly composed? Of such, no doubt, as laugh, and shake their little Sides, such as bedew their Face and Cheeks with flowing Tears, such as can wisely talk how Things are mixed, and such as search of what first Principles themselves are formed;

The Principles of Things are simple, nor can their Parts be driven from the State in which they are, nor restored into the same State again; and therefore, being not to be affected with Pleasure or Pain, they must be destitute of all Sense.

If Things, because they are sensible, must spring from sensible Seeds, then Men who laugh, weep, &c. must be formed of Seeds that laugh, weep, &c. If laughing, weeping, and wise Things can be made of Seeds that neither laugh, weep, nor are wise, why should not sensible Things proceed from Seeds that are wholly insensible?
Quandoquidem totis mortalibus adsimulata
Ipfa quoque ex aliis debent consolare elementis; 980
Inde alia ex aliis, nusquam consolare ut aphis.
Quippe sequar, quocunque Loqui, Ridereque dices,
Et Sapere, ex aliis eadem hæc facientibus, ut fit.
Quod fugi delirat hæc, furiosaque cernimus esse:
Et ridere poteft ex non ridentibus fatius, 985
Et sapere, & diotis rationem reddere diotis,
Non ex Seminibus sapientibus, atque disertis:
Quia minus esse queant ea, quæ Sentire videmus
Seminibus permissa carentibus undique Sensu?
Denique cælesti sumus omnes semine oriundi: 990
Omnibus ille idem Pater est, unde alma liquenteis
Humorum guttas Mater cum Terra recepit,
Fæta parit nitidas fruges, arbustaque lata,
Et genus humanum, & parit omnia sæcla ferarum,
Pabula cùm praebet, quibus omnes corpora pas-
cunt, 995
Et dulcem ducunt vitam, prolemque propagant.
Quapropter merito Maternum nomen adepta est.
Cedit item retrò de Terra quod fuit ante,
In terras: & quod missum est ex Aethoris oris,
Id rursum Cæli rellatum templam receptarum: 1000
Nec sic interimit mors res, ut Materiæ
Corpora conficiat, sed cætum dissipat ollis.

Inde
for all Things that enjoy the Faculties of perfect Animals, must consist of other Seeds like them, and these must arise from others; and thus the Progression would be infinite. I urge further, whatever you observe to speak, to laugh, to be wise, must proceed from other Seeds that can perform the same; but if this be ridiculous and downright Madness, and Things that can laugh, can spring from Seeds that never smile, and the Wise, that learnedly dispute, are produced from foolish Seeds and stupid, what hinders, that sensible Things may not as well be formed from Seeds without any manner of Sense at all?

Lastly, we all spring from Aëtherial Seed; we have all one common Parent; when the kind Earth, our Mother, receives the quickening Drops of Moisture from above, she conceives and brings forth shining Fruits, and pleasant Trees, the human Race, and all the Race of Beasts; she yields them proper Food on which they feed, and lead a pleasant Life, and propagate their Kind, and therefore has she justly gained the Name of Mother. The Parts that first from Earth arose, return to Earth again; what descended from the Sky, those Parts brought back again the Heavens receive; nor does Death so put an end to Beings, as to destroy the very Seeds of them, but only disunites

d He recapitulates his former Arguments; the Earth becomes fruitful by the Showers, and produces Corn, Grains, &c. by which sensible Things are nourished; but the Heavens, from whence the Showers fall, are insensible, the Showers are insensible, and the Earth no more sensible than they. When Animals are dissolved, Part of them flies back to Heaven, Part returns to Earth, insensible Things both of them. The Particles that at one time are wholly destitute of Sense, being disposed in a new Order, become sensible at another; and sensible Things, when that Order of the Seeds is changed, grow stupid, and lose their whole Power of Sense and Perception.

N 3 them,
Inde aliis aliud conjungit, & efficit, omnes
Res ut convertant formas, mutentque colors,
Et apliant Sensus, & puncto tempore reddant: 1005
Ut noscas referre, eadem Primordia rerum
Cum quibus, & quali postura contineantur.
Et quos inter se dent motus, accipientque:
(Neve putes ætarna penes residere potesse)
Corpora prima, quod in summis fluitare videmus
Rebus, & interdum nasci, subitoque perire: ) 1011
Quin etiam refert nosris in Versibus ipsis,
Cum quibus, & quali sint ordine quæque locata.
Namque eadem Cælum, Mare, Terras, Flumina,
Solem
Significant: eadem Fruges, Arbusa, Animanteis:
Si non omnia sint, at multo maxima pars est 1016
Consimilis: Verum postura discrepant bæc.
Sic ipsis in rebus item jam Materiâ,
Intervalla, Vie, Connexus, Pondere, Plaga,
Concursus, Motus, Ordo, Postura, Figurae
1020
Cum permutantur, mutari Res quoque debent.

Nunc animum nobis adhibe veram ad rationem.
Nam tibi vehementer nova res molitur ad aureis
Accedere, & nova se'species ostendere rerum.
Sed neque tam facilis res ulla 'st, quin ea primum
Difficilis magis ad credendum constet: itemque 1026
Nil adeo magnum, nec tam mirabile quicquam
Principio, quod non minuant mirarier omnes
Paullatim: ut Cæli clarum purumque colorem,
Quemque in se cobibent palantia sidera, passim, 1030
Lunaque, & folis præclara luce nitorem:
Book II. Of the Nature of Things.

them, then makes new Combinations, and is the Cause that all Things vary their Forms, and change their Colours, become sensible, and in a moment lose all their Sense again. You may know from hence, of what Importance it is, with what the first Seeds of Things are united, and in what Position they are contained, and what are the several Motions they give and take among themselves; and from hence you may conclude, that these first Seeds are not the less eternal, because you perceive them floating, as it were, upon the Surface of Bodies, and subject to change, to be born, and die. It is of like Concern, with what the several Letters are joined in these Verses of mine, and in what Order each of them is disposed; for the same Letters make up the Words to signify the Heaven, the Sea, the Earth, the Rivers, the Sun; the same express the Fruits, the Trees, the Creatures; if they are not all, yet by much the greater Part are alike, but they differ in their Situation: so likewise in Bodies, when the Intervals of the Seeds, their Courses, Connexions, Weights, Strokes, Union, Motions, Order, Position, Figure, when these are changed, the Things themselves must be changed likewise.

Now, apply your Mind closely to the Documents of true Reason, for a new Scheme of Philosophy presses earnestly for your Attention, a new Scene of Things displays itself before you; yet there is nothing so obvious, but may at first View seem difficult to be believed, and there is nothing so prodigious and wonderful at first, that Men do not by degrees cease to admire: for see the bright and pure Colour of the Sky, possessed on every side by wandering Stars, and the Moon's Splendor, and the Sun's glorious Light, these,
Omnia quae si nunc primùm mortalibus adint,
Ex improviso eee sint objécta repente:
Quid magis bis rebus poterat mirabile dici,
Aut minus ante quod auderent fore credere gentes?
Nil ut opinor, ita bec speciès miranda fuisset; 1036
Quom tibi jam nemo fessus fatiœte videndi
Suspicere in cæli dignatur lucida templo:
Define quapropter novitate exterritus ipsa
Exspuere ex animo rationem: sed magis acri 1040
Judicio perpende, & si tibi vera videtur,
Dede manus: aut, si falsa est, accingere contra.
Quærit enim ratione Animus, cum summa loci sit
Infinita foris hæc extra maniæ mundi;
Quid sit ibi porro, quod prospicere usque velit mens,
Atque animi jactus liber quo pervolet ipse. 1046
Principio, nobis in cœnas undique parteis
Et latere ex utroque, infra, superaque, per Omne
Nulla 8 finis, (uti docui) res ipsaque per se
Vociferatur, & elucet natura Profundi. 1050
Nullo jam pacto verisimile esse putandum 8,
Undique cum vorìus spatium vacet infinitum,
Seminaque innumero numero, summaque profunda
Multimodis volitent æterno percita motu:
Hunc unum Terrarum orbem, Cælumque creatum:
Nil agere illa foris tot corpora Materiai, 1056
Cum præsertim bic sit natura factus, & ipsa

Sponte
Book II. Of the Nature of Things.

these, if they now first shone to mortal Eyes, and suddenly presented to our View, what could more wonderful appear than these? and what before could Men less presume to expect? Nothing surely, so surprizing would the Sight have been; but now, quite tired and cloyed with the Prospect, none of us vouchsafes, so much as to cast our Eyes upwards towards the bright Temples of the Sky; therefore do not be frightened, and conceive an Aversion to an Opinion, because of its Novelty; but search it rather with a more piercing Judgment, if it appears true to you, embrace it, if false, set yourself against it.

Now, I should be glad to know, since, without the Walls of this World, the visible Heavens, there lies an infinite Space, what is contained there: This the Mind desires eagerly to search into, and, by its own Vigour, to range over freely, and without obstruction.

And first, since there is no Bound to Space in any Part of it, on no Side of it, neither above or below, as I have proved, and the Thing itself proclaims it, and the very Nature of Space confirms it; we are not to suppose, (since this Space is infinitely extended every way, and the Seeds innumerable fly about this mighty Void in various manners, urged on by an eternal Motion) that this one Globe of Earth, and the visible Heavens only were created, and that so many Seeds of Matter that lie beyond do nothing; especially since this World was made naturally, and without Design, and the Seeds of Things of

Lucretius insists, that there is an infinite Void, and that an Infinity of Seeds are flying up and down in it, but all those Seeds did not unite to produce this World of our's; and therefore why should not some Atoms, in other Parts of this infinite Void, compose other Frames very like or unlike this World that we inhabit? Especially since Nature acts the same throughout, and exercises the same Power through all Space?

their
Sponte sua forte offensando semina rerum Multimodis, temerè, incassùm, frustraque, cæsâ Tandem cooluerint ea, que coniecta repente 1060 Magnarum rerum jierent exordia semper, Terraï, Maris, & Cæli, generisque Animantium. Quare etiam atque etiam taleare necessè fit Essè alios alibi congressus materiaii, Qualis hic est, avido complexu quem tenet æther.


Quapropter
Book II. Of the Nature of Things.

their own accord justling together by Variety of Motions, rashly sometimes, in vain often, and to no purpose, at length suddenly agreed and united, and became the Beginning of mighty Productions, of the Earth, the Sea, and the Heavens, and the whole Animal Creation. Wherefore it needs must be allowed, there were in many other places Agreements and Unions of the Seeds of the fame Nature with this World of our's, surrounded as it is with the fast Embraces of the Heavens above.

Besides, since there is a large Stock of Matter ready, and a Place suitable, nor is there any Thing or Cause to hinder and delay, Things must necessarily be produced, and come into Being. Now, since there is so great a Plenty of Seeds, that all the Ages of Men would not be sufficient to number them, and the fame Power, the fame Nature remains, that can dispose the Seeds of Things in any other Place, by the fame Rule as they united in this World of our's, we must needs confess, that there are other Worlds in other Parts of the Universe, possessed by other kind of Inhabitants, both of Men and Beasts.

Add to this, that in the Universe there is no Species that has but one of a sort, that is produced alone, that remains single, and grows up by itself; but whatever Species Things are of, there are many more Individuals of the same kind. This you may observe in the Animal Creation, this you will find to be the State of the wild Beasts, of the Human Race, of the silent Fish, and of the whole Brood of Birds. By

There must be more Suns, more Earths than one, because the Earth, the Heavens, &c. are equally subject to perish with other compound Bodies; for the Philosophers against whom Lucretius disputes, asserted, that the Reason why the several Kinds of Animals contain many of each Kind, is, because the Individuals die.
Quapropter Cælum simili ratione fatendum est, Terramque, & Solem, Lunam, Mare, cætera, quæ sunt,
Non esse unica, sed numero magis innumerali, 1085
Quandoquidem vitae desperatus terminus altè Tam manet bis, & tam nativo hæc corpore constant,
Quæm genus omne, quod bis generatim rebus abun-
dat.

Quæ bene cognita si teneas: Natura videtur
Libera continuo Dominis privata superbis, 1090
Ipsa sua per se sponte omnia Diis agere expers.
Nam (prob sancta Deum tranquilla pectora pace,
Quæ placidum degunt ævum, vitamque serenam! )
Quis regere Immensi Summam, quis habere Profundi
Indu manu validas potis est moderanter habenas?
Quis pariter Cælos omnes convertere? & omneis
Ignibus ætheriis terras suffire seraceis?
Omnibus inque locis esse omni tempore praesto?
Nubibus ut tenebras faciat cælique serena
Concutiat sonitu? tum fulmina mittat, & ædeis
Sæpe suas disturbet, & in deserta recedens
Sæviat exercens telum, quod sæpe nocenteis
Præterit, examinatque indignos, inque merenteis?

Multaque
the same Reason you must own, that the Heavens, the Earth, the Sun, the Moon, the Sea, and all other Beings that are, do not exist singly, but are rather innumerable in their kind; for every one of these have a proper Limit fixed to their Beings, and are equally bound by the general Laws of Nature, with all those whose Species include a numerous Train of Individuals under them.

These Things, if you rightly apprehend, Nature will appear free in her Operations, * wholly from under the Power of domineering Deities, and to act all Things voluntarily, and of herself, without the Assistance of Gods. For (O the undisturbed Bosoms of the Powers above, blessed with sacred Peace! how they live in everlasting Ease, a Life void of Care!) Who can rule this infinite Universe? Who has the Power to hold the mighty Reins of Government in his Hands over this whole Maws? Who likewise can turn about all these Heavens? and cherish all these fruitful Globes of Earth with celestial Heat? Who can be present at all Times, and in all Places? To darken the World with Clouds, to shake the vast Expansion of the serene Heavens with Noise; to dart the Thunder, and often overturn his own Temples, to fly into the Wilderness, and furiously brandish that fiery Bolt, which often passes by the Guilty, and strikes dead the Innocent and Undeserving?

* He now falls foul upon Omnipotence and Divine Providence, and could not believe that the Nature of the Gods were sufficiently powerful to govern the Affairs of the Universe; Chance, he insists, is the sole Director of all, because he observ'd, that the Virtuous and Good frequently suffer, when the Wicked prosper.

** Besides, **
Mululaque post Mundi tempus genitale, diemque Primigenum Maris, & Terrae, Solisque coortum, Addita corpora sunt extrinsecus, addita circum Semina, quae magnum jaculando contulit Omne: Unde Mare, & Terrae possent augescere: & unde Adpareret spatium Celis dominus, altaque teitia Tolleret à terris procul; & confurgeret Aër. Nam sua cuique locis ex omnibus omnia plagis Corpora distribuuntur, & ad sua sæcla recedunt: Humor ad Humorem, Terreno corpore Terra Crescit; & Ignem ignes producit, Ætheraque Æther: Donicum ad extremum crescendi perpica finem Omnia perduxit rerum Natura creatrix: Ut fit, ubi nihilo jam plus est, quod datur intra Vitaleis venas, quæm quod fluit, atque recedit: Omnibus his ætas debet consiöere rebus: His Natura suis refrenat viribus aurum. Nam, quæcunque vides bilaro grandescere adætæ, Paullatimque gradus ætatis scandere adultæ: Plura sibi adsuntur, quàm de se corpora mittunt, Dum facilè in venas cibus omnis diditur: & dum Non ita sunt latè dispersa, ut multa remittant: Et
Besides, after this World was formed, and the Birth-day of the Sea, the Earth, and the Sun was over, there were many Particles of Matter added to them from without, many Seeds were received every way, which the infinite Mafs or Universe constantly discharg'd; from whence the Sea and the Earth grew more strong and vigorous; from whence the Mansions of the Heavens were enlarged, and raised their lofty Arches higher from the Earth, and new Air was produced: for from all the Parts of the Universe the proper Seeds are distribut'd, and retire severally in all Places to their proper Kinds; the Watery to the Water, the Earth increases by earthy Particles, the Fiery produce Fire, the Airy Air, till Nature, the Parent and Perfectress of all Things, improves all Beings, to the utmost Extent of Growth they are capable of. This comes to pass, when no more is received into the vital Passages, than what is perspired, and flies off; then it is, that the Growth of the Creature is at a full stand, and Nature restrains it from further Increase.

For whatever Creature you observe to thrive and grow lively and large, and by degrees climb up to a mature Age, receives more Particles into it self than it emits, because all the Nourishment is easily distribut'd into the Veins, and there confined, and the Particles are not so widely scatter'd, as in any Proportion to fly off, and so

n The infinite Universe supplies Seeds which the World receives, and they duly joining with it, becomes more strong and vigorous. When it emits as many Seeds as it receives, it is at a stand, neither increases nor decreases; but when more Seeds fly away than it receives, then it decays, and draws to an end. The Reason of the Growth and Decay of Animals is the same.
Et plus dispendi faciant, quæm vescitur Ætas,
Nam certè fluere, ac decedere corpora rebus
Multa, manus dandum Æst: sed plura accedere dé-
bent,
Donicum olecendi summum tetigere cacumen.
Inde minutatim vircis, & robur adultum 1130
Frangit, & in partem pejorem liquitur Ætas.
Quippe etenim quanto est res amplior, augmine demto,
Et quò latior est, in cunctas undique parteis
Pluria eò dispersit, & à se corpora mittit:
Nec facile in venas cibus omnis diditur eij:
Nec satis est, pro quàm largos exèstuat æstus,
Unde queat tantum suboriri ac suppeditare,
Quantum opus est: & quod satis est, Natura novare.
Jure igitur percunt, cum rarefaèta fluendo
Sunt: & cum externis succumbunt omnia plagis: 1140
Quandoquidem grandi cibus ævo denique defit:
Nec tuiditantia rem cessant extrinsecus ullam
Corpora conficere, & plagis infesta domare.
Sic igitur magni quoque circum mania mundi
Expugnata dabunt labem, putresque ruinæ. 1145
Omnia debet enim cibus integrare novando:
Nequicquam, quoniam nec vena perpetiuntur
Quod satis est, neque quantum opus est, natura mi-
nistrat.
Jamque adeo affecta Ætæ, effètaque tellus
Vix animalia parva creat, que cunèta creavit 1150
Sæcla, deditque ferarum ingentia corpora partu.

Haud
it bore formerly a lusty Race, and brought forth such prodigious Bodies of wild Beasts. For I can-

\[\text{Vol. I.}\]
receive a Loss faster than they are supplied. For we
must allow that many Particles certainly fly off from
Bodies, but many others ought to be coming on,
till the Thing arrives to its utmost Pitch of Bulk.
Then, by degrees, its Strength and Maturity of
Vigour decays, its Age melts away and dissolves;
for the larger any Body is, the greater it is in Size,
when its Growth is over, it waftes the more
every way, and sends out more Particles from it
self; nor is the Nourishment easily distributed
into the Veins, or Nature sufficient to renew and
supply those Effluvia it throws off in such Abun-
dance, in proportion as the Defect and the Loss
require. The Animal therefore must necessarily
perish, when it is made thin by continual Perspira-
tion, and all Things must at length fall by consta\nStrokes from without; for the Supplies from
Food must fail in Old Age, nor do Bodies from
without ever cease to batter and break to pieces
all Things with Strokes not to be refilled.

By the same Rule the visible Heavens, the The World
surrounding Walls of this great World must
 tumble down by continual Attacks, and fall to
Ruins; it is Nourishment that preserves Things in
being by constant Supplies, but it is all to no purpose:
for neither are the Veins capable to receive what is
sufficient, nor can Nature afford a proper and need-
ful Recruit, even now the Age of the World is
broken, and the Earth so feeble and worn out, that
it scarce produces a puny Kind of Creatures, when
it bore formerly a lufty Race, and brought forth
such prodigious Bodies of wild Beasts. For I can-

I The World, he concludes, grows old; the Earth, he
says, produced formerly all Animals and Fruits of her own
accord; but now, we find, she is past her Teeming-time,
and therefore it must be allowed she grows old.

Vol. I. O not
Haud (ut opinor) enim mortalia sæcla superne
Aurea de Cælo demissit funus in arva:
Nec mare, nec fluīdus plangentes saxa creārunt:
Sed genuit Tellus eadem, quæ nunc alit ex se, 1155
Præterea nitidas fruges, vinetaque lēta
Spontē sua primum mortalibus ipsa creāvit.
Ipsa dedit dulceis fætus, & pabula lēta:
Quæ nunc vix nostrō grāndescunt aūta labore:
Conterimusque boves, & vires agricolarum: 1160
Conficimus ferrum vix arvis suppeditati:
Usque adeo pereunt fætus, augentque labores.
Jamque caput quassāns grandis suspirat arator
Crebriūs incassum magnum cecidisse laborem:
Et cūm tempora temporibus præsentia consert 1165
Præteritis, laudāt fortunās sēpe parentis:
Et crepat, antiquum genus ut pietate repletum
Perfaciliā angustis tolerārit fīnibus ēvum,
Cum minor ēsset agri multō modūs ante virītīm:
Nec tenet, omnia paullatim tabescere, & ire 1170
Ad scopulum spatīo ētatis defessa vetuṣtō.
not think all Species of Creatures descended from the Sky by a golden Chain upon the Earth, nor were they by the Sea created, nor by the Waves that beat the Rocks; but the same Earth which now supports them, at first gave them Being. At first she kindly, of her own accord, raised the rich Fruits and delightful Vines for the Benefit of Men; she freely of herself offered her sweet Produce, the Corn and tender Grasfs, which now scarce rise to Perfection with all our Labour. We wear out our Oxen, and the Strength of our Husbandmen, we can scarce find Plough-shares sufficient to till the Fields, Things are so averse to grow, and our Labours are for ever increasing. And now the lusty Plowman shakes his Head, and laments the Pains he took was oft in vain; and when he compares the present Times with the glorious Days that are past, he blesses the good Fortune of those that were before him; he talks loudly how the old Race of Men, filled with Piety, no doubt spent their happy Days within the narrow Bounds of their own Field, (for then every Man's Share of Ground was much less than it is now) but has no Notion, fond Fool! that Things by degrees decay, and worn out by old Age, hasten to Ruin to the utmost Period of their Duration.

k It was the Opinion of Homer, that all Things were let down from Heaven to Earth by a Golden Chain.

1 He scoffingly insinuates, that since the Earth produced of her own accord, Men had nothing to do but to worship the Gods.
THE

ARGUMENT

OF THE

THIRD BOOK.

THIS is that Book of Lucretius which ought above all the rest to be read with the greatest Judgment and Discretion; for here he exerts his whole Force to prove, that the Soul is of a corporeal Nature, and consequently subject to Death and Dissolution, and that the Generality of Men being overaw'd by the Tyranny of Religion, are horribly mistaken to believe, that they have reason to dread eternal Torments after Death. In the former Book, having explained the Nature and Properties of his Atoms, in the four remaining he applies himself to describe the Effects which those Atoms produce. He begins with the Praise of Epicurus, whom he extols for being the first who taught, that this World and all Things in it were
The Argument.

were not made by the Deity, but by a fortuitous Concourse of Atoms; and, by that means, delivering the Minds of Men from the Fear of the Gods, from the Terrors of Death, and the Dread of Punishments after Death. He then advances, that the Mind and the Soul are a Part of Man, in the same manner as the Feet, the Hands, the Arms, the Head, and other Members, and not a vital Habit of the whole Body, or an Accord and Consent of all the Parts of the Body, which some of the ancient Philosophers called Harmony. To proceed with the greater Perspicuity, he observes, that he uses the words Mind and Soul promiscuously, that they are both but one Thing, only the Mind is the chief Part, and resides in the Heart, because Fear, Joy, and all the other Passions which obey and depend upon the Mind, discover themselves there, while the Soul, in which the locomotive Faculty is solely placed, being diffused through the whole Body, is moved as the Mind pleases. He then endeavors to demonstrate, that the Nature of the Mind and Soul is corporeal, because the Mind touches the Soul, and moves it, and the Soul touches the Body; but where there is no Body, there can be no Touch. That this corporeal Mind is composed of Atoms extremely subtil, minute and round; and particularly, that this Mind consists of Heat, Wind or Vapour, and Air, and of a Fourth, I know not what nameless Thing, wonderfully subtil, and most easy to be moved, which being seated in the Heart, is the Principle of Sense. But how the Heat, the Wind, the Air, and this fourth nameless Thing are mingled, or what Proportion of each makes up the Composition, he confesses ingenuously he cannot tell. He asserts, that the Soul and the Body are so united together, that they cannot be separated without the Destruction
of both of them; and insists, that not only the Mind but the Body too has Perception, or rather the whole Animal composed of Body and Soul. He refutes the Opinion of Democritus, who taught, that the respective Parts of the Soul are fitted and joined to the respective Parts of the Body; and having affirmed before, that the Mind is the most excellent Part of the whole Compound, he now further afferts, that the Life and Preservation of the Animal depends more on the Mind than on the Soul. He attempts to prove by six and twenty Arguments, that Minds and Souls are born with Bodies, and die with them; and, by the way, derides the Transmigration of Pythagoras. Death, he says, is Nothing, because the Soul being mortal, has Nothing to fear after Death; and urges, that if it be granted that the Soul is immortal, as Plato held, yet Death still is Nothing, since the separated Soul would not remember that she had ever been before. He laughs at the vain Anxiety of Men concerning their Sepulture, and proves that Death is not an Evil, because the Dead want not those good Things which the Living enjoy, but are exempted from those Calamities which afflict and torment us Wretches that are alive; that even Life itself is not a Thing very desirable, because it has Nothing new to give us, but always the same surfeiting Repetition of Pleasures, till at length we loath them. But lest the Fables which the Poets feign of Hell and of future Punishments should terrify us, he explains those Fables, and shews, that we feel those Torments while we are living, and have no reason to dread them after we are dead. And lastly, to the End of this Book, he puts us in mind that it is both foolish and absurd to bemoan ourselves that we must die, since the wisest of Men, and the greatest Princes and
and Emperors have been forced to submit to the inevitable Stroke of Death; and insists, that Men lead unquiet and anxious Lives, because they avoid the Thoughts and Contemplations of Death, and are foolishly fond of that Life which they must one day lose, which can supply them with no new Delights, and is exposed to innumerable Dangers and Afflictions. And that after all, by the longest Life they can attain, they save not one Moment from the Length of Death, which is as much eternal to them who die to-day, as to those who died many Ages ago.
T. Lucretii Carī

DE

RERUM NATURA

LIBER TERTIUS.

E Tenebris tantis tam clarum extollere
lumen
Qui primus potuisti, illuстрans commoda vitæ:
Te sequor d Grae gentis decus, inque tuis nunc
Fixa pedum pono pressis vestigia signis,

Non
Of the Nature of Things.

The Third Book.

Epicurus, who could first strike to clear a Light from so great Darkness, and direct us in the proper Advantages of Life, Thee, the Glory of the Grecian Name, I follow; Thy Steps I closely trace with mine, not so much from a Desire to rival Thee, as

He addresses himself to Epicurus of Athens, and calls him the Parent and Inventor of the Epicurean Philosophy; he praises him for the Happiness of his Wit, and the Benefits he conferred upon Mankind, by freeing them from the Belief of a Providence, and from the Fears and Terrors that attend that Opinion.
Non ita certandi cupidus, quam propter amorem, 5
Quod te imitari aveo: Quid enim contendat Hircundo
Cyenis? aut quidnam tremulis facere artubus Hadii
Consimile in cursu potissit, ac fortis Equi vis?
Tu Pater, & rerum Inventor: tu patria nobis
Suppeditas præcepta, iuisque ex, Inclute, chartis, 10
Floriferis ut apes in saltibus omnia limant,
Omnia nos itidem depascimur aurea diœta,
Aurea, perpetua semper dignissima vita.
Nam sinul ac Ratio tua capit vociferari,
Naturam rerum haud Divina mente coortam, 15
Diffugiant Animi terrores; mœnia mundi
Discedunt, totum video per Inane geri res.
Apparet Divum numen, sedesque quietae:
Quas neque concutiunt venti, neque nubila nimbis
Adspersunt, neque nix acri concreta pruina 20
Cana cadens violat: semperque innubilus æther
Integit, & largè diffuso lumine ridet.
Omnia suppeditat porrò Natura, neque ulla
Res animi pacem delibrat tempore inullo.
At contra nusquam apparent Acherusia templar
Nec Tellus obstat, quin omnia dispicientur,
Sub pedibus quœcumque infra per Inane geruntur.
His tibi me rebus quœdam divina Voluptas
Percipit, atque Horror, quod sic Natura tua vi
Tam manifesta patet ex omni parte reteœta. 30
Et quoniam docui, cunctarum exordia rerum
Qualia sint: & quæm variis distantia formis
from the Love I bear, and the ardent Passion I profess to imitate thee; for how can the Swallow contend in Singing with the Swan? or what can Kids, with feeble Limbs, perform in running with the noble Horse’s Speed? Thou great Father, Founder of Philosophy! Thou with Paternal Precepts dost inspire thy Sons, and from thy Writings, most illustrious Chief, as Bees suck Honey from the flowery Fields, we feed upon thy Golden Sentences, Golden, and fit eternally to live. For when thy Reason first began to prove, that Nature was not formed by Powers Divine, the Terrors of the Mind all fled, the Walls of this great World lie open, and I see how Things are managed through the mighty Void. The Deity of the Gods, their calm Abodes appear, which neither Winds disturb, nor Clouds o’erflow with Showers, nor the white-falling Snow, congealed by sharpest Frost, does spoil; but the unclouded Air surrounds them always, and smiles on them fully with diffused Light. Nature in every thing supplies their Wants; Nothing at any Time destroys their Peace. But the wide Tracts of Hell are no where seen; nor does the interposing Earth prevent our Sight, but we discover what beneath our Feet is doing in the Space below. In these Pursuits a certain Divine Pleasure spreads round me, and I stand amazed, that by Thy Strength of Mind, all Nature every way lies naked to our View.

Since then I have taught what are the first Seeds and Principles of Things, how they differ from the Subject, he says, of this Book will be an accurate Enquiry into the Nature of the Soul, whose Mortality he will endeavour to evince, in order to free Mankind from the Fear of Death, and the Terrors of future Punishment.
Sponte sua volitent alterno percita motu, Quoque modo possint ex bis res quæque creari: Hæc secundum res Animi natura videtur, 35 Atque Animæ claranda meis jam versibus esse: Et metus ille foras præceps Acheruntis agendus Funditus, humanum qui vitam turbat ab imo; Omnia suffundens mortis nigrore: neque ullam Esse voluptatem liquidam puramque relinquit. 40

Nam, quod sèpe homines morbos magis esse timendos,
Infamemque ferunt vitam, quàm Tartara letbi,
Et sè scire Animi naturam sanguinis esse,
Nec prorsum quicquam nostræ Rationis egere:
Hinc licet advertas animum, magis omnia Laudis,
Aut etiam Venti, si fert ita forte voluntas, 46
Faètari causas quàm quod res ipsa probetur:
Extorres iidem patria, longèque fugati
Conspectu ex hominum, fædati crimen turpi,
Omnibus ærumnis affetti denique vivunt:
Et quocunque tamen miseri venere, parentant,
Et nigras maètant pæcedes, & Manibu' divis

Inferias
in their Figures, and of themselves fly about, beaten by mutual Strokes, and how from them all Beings are produced, the Nature of the Mind and of the Soul comes next to be explained in these my Lines, and all the Terrors of infernal Pains banished, and headlong driven quite away, that from the Bottom so disturb the Life of Man, and cover all Things with the Gloom of Death, and leave no Place for pure and unmixed Pleasure to possess.

For what Men vainly talk, "that Diseases and an infamous Life are more to be feared than the Terrors of Death, and they know that the Soul consists wholly in the Blood, and therefore they want no Assistance from our Philosophy, I would have you observe, that those Boasts are thrown out more for the sake of Praise and popular Breath (if their Vanity by chance leads that way) than that they believe any such thing; for let these very Men be banished from their Country, and driven into a Desert far from human Sight, stained with the Guilt of the foulest Crimes, yet they live on, afflicted as they are, with all Sorts of Misery, and wherever the Wretches come, they fall a-sacrificing, and slay black Cattle, and offer Victims to the infernal

"Other Philosophers, he says, have talk'd big about the Soul's Mortality, but when the Trial came, theystartled at the Approach of Death, and chose patiently to live on, though ever so miserably; and, when they came to die, were Cowards.

"Some were of Opinion, that the Soul was a Suffusion of Blood about the Heart, and consequently, that it is the Blood itself.

"The Ancients were used to offer black Victims to the infernal Gods and to the Dead, but white to the Gods above."
Inferias mittunt: Multoque in rebus acerbis
Acrius advertunt animos ad Relligionem.
Quod magis in dubiis hominum speelare periclis
Convent, adversisque in rebus noscere qui sit.
Nam veræ voces tum denum pestore ab imo
Efficiuntur, et eripitur Persone, manet Res.
Denique Avarities, & Honorum cœca cupidio,
Quæ miseros homines cogunt transcendere fines
Juris, & interdum socios scelerum, atque ministros
Nolesi atque dies niti praestante labore
Ad summas emergere opeis: Hec vulnera vitae
Non minimam partem Mortis formidine aluntur.
Turpis enim Fama, & Contemptus, & acris Egestas
Semota ab dulci Vita stabilique videntur:
Et quasi jam Lethi portas cunsterant ante:
Unde homines, dum se falso terrore coacli
Refugisse volunt longè, longèque recéssent:
Sanguine civili rem conflant: divitiisque
Conduplicant avidi, cœdem cædi accumulantes.
Crudeles gaudent in tristi funere Fratris:
Et Confanguineum mensas odere, timentque.
Confimili ratione ab eodem sœpe timore
Macerat invidia: ante oculos illum esse potentem:
Illum aæstari, claroque incedere honore;
Of the Nature of Things.

207

Gods; and in this deplorable State, they, with more than common Zeal, apply themselves to the Offices of Religion.

And therefore it is proper to view Men rather under a doubtful Fortune, and observe how they behave in Circumstances of Distress: for then they speak Truth from the bottom of their Hearts, the Mask is pulled off, and the real Man shews undisguised.

Besides, Covetousness and the blind Desire of Honours, which compel unhappy Men to exceed the Bounds of Right, and urge on the Partners and Assistants of their Crimes to strive Day and Night with the utmost Pains, to arrive at the Height of Wealth: These Plagues of Life are chiefly nourished by the Fear of Death; for Infamy, and Contempt, and sharp Want, seem far removed from a sweet and pure State of Life, and, as it were, hover about the Gates of Death; and therefore whilst Men, possesed by a false Fear, labour to avoid, and stand at the remotest Distance from them, they add to their Heaps by Civil War, and, insatiable as they are, double their Riches, heaping one Murder upon another. They laugh with cruel Delight at the sad Funeral of a Brother, and hate and fear the Entertainments of their nearest Relations.

From the same Cause and from the same Fear, Envy often becomes the Tormentor of Mankind; they complain that one is raised to Power before their Eyes, another to Respect, a third distinguished by shining Honours, whilst they

Faber says, the following Lines contain so many excellent Things in them, that they cannot be sufficiently considered and admired.

lie
Ipsi se in tenebris volvi, canoque queruntur.
Intereunt partim statuarum, & nominis ergò:
Et sēpe usque adeo, Mortis formidine, vitæ
Percipit humanos odium, lucisque videndæ,
Ut sībi consciscant mārenti peōlore Letum,
Obliti fontem curarum hunc esse Timorem,
Hunc vexare pudorem, Hunc vincula amicitiae
Rumpere, & in summa piētem evertere fundo.
Nam jam sēpe bōmines patriam, carōisque parentēis
Prodiderunt, vitare Acherusia templā petentes.

Nam velutī Pueri trepidant, atque omnia cēcis
In tenebris metuent: Sic Nos in luce timemus
Interdum, nibilo quae sunt metuenda magis, quàm
Quae Pueri in tenebris pavitant, finguntque futūra.
Hunc igitur terrōrem animi, tenebrāsque necesse sit
Non radiī solis, neque lucida tela "ei
Discessiant, sed Naturā species, I. tioque.

Primum Animum dico (mentem quem sēpe vocamus)
In quo consilium vitæ, regimentque locatum sit,
Essé bōminis Partem nibilo minus, ac Manus, &
Pes,
Atque Oculi partes animantis totius extant.
Quamvis multa quidem Sapientium turba putārunt
Sensum animi certa non esse in parte locatum:
Verum Habitum quendam vitalem corporis esse,
Harmoniam Graii quam dicunt, quod faciat nos

Vivere
lie buried in Obscurity, and are trod upon like Dirt, and so they pine themselves to death for the sake of Statues and a Name; and some Men, from a Fear of Death, conceive so great a Hatred for Life, and the Preservation of their Being, that in a gloomy Fit they become their own Executioners; not considering that this Fear of Death is the Source of all their Cares, this breaks through all Shame, dissolves the Bonds of Friendship, and in short overturns the Foundations of all Goodness; for some we see betray their Country and their dear Parents, striving by that means to deliver themselves from Death, and the Pains of Hell.

For as Boys tremble, and fear every Thing in the dark Night, so we, in open Day, fear Things as vain and little to be feared, as those that Children quae at in the dark, and fancy advancing toward them. This Terror of the Mind, this Darkness then, not the Sun's Beams, nor the bright Rays of Day can scatter, but the Light of Nature and the Rules of Reason.

First then, I say, the Mind of Man (which we commonly call the Soul) in which is placed the Conduct and Government of Life, is a Part of Man no less than the Hand, the Foot, the Eyes, are Parts of the whole Animal; though many of the Philosophick Herd have fancied, that the Sense of the Mind is not fixed to any particular Part, but is a sort of vital Habit of the whole Body, which the Greeks call

Some Philosophers held the Mind (the chief Part of the Soul, the Soul consisting of three Parts, the Mind, the Memory, and the Will) to be a vital Habit of Body, as Health in a Man; he infers it is a Part of Man distinct from the Body no less than the Hand, the Foot, &c. he will have it to be corporeal, and an integral Part of Man.

Vol. I.
Vivere cum sensu, nulla cum in parte sit Mens:
Ut bona sepe Valetudo cum dicitur esse
Corporis, & non est tamen haec pars una Valentis:
Sic Animi sensum non certa parte reponunt:
Mognopere in quo mi diversi errare videntur.
Sepe utique in promptu Corpus, quod cernitur,
agrit,
Cum tamen ex alia latamur parte latenti:
Et retro fit, uti contra sit sepe vice sium,
Cum miser ex animo, letatur Corpore toto:
Non alio paeso, quause Peso cum dolet agri,
In nullo Caput interea sit forte dolore.
Pratera molli somno cum dedita membra,
Effusumque jacet sine sensu Corpus onustum:
Est aliud tamen sine in nobis, quod tempore in illo
Multimodis agitatur, & omnes accipit in se
Latitie motus, & curas cordis inaneis.
Nunc Animam quoque ut in membris cognoscere possis
Esse, neque Harmoniam corpus retinere solere:
Principio fit, uti detracto Corpore multo,
Saepe tamen nobis in membris Vita moretur.
Atque eadem versus cum Corpora pausa caloris

Diffugere
Book III. Of the Nature of Things.

Harmony; and thence flows all our Sense, and the Mind has no particular Place for its Abode: As when we say, Health belongs to the Body, yet it is no Part of the Body that is in Health, so no particular Part, they tell us, is the Residence of the Mind; but in this they seem to be egregiously in the wrong, for often when some visible Part of the Body suffers Pain, we feel Pleasure in some other Part to us unseen; and the contrary often happens in its turn, that a Man disturb'd in Mind is perfectly well all over his Body, in the same manner as when a Man has the Gout in his Foot, his Head at the same time is free from Pain.

Besides, when our Limbs are given up to soft Sleep, and the wearied Body lies stretched at length without Sense, there is something within that in the very time is variously affected, and receives into itself all the Impressions of Joy, and empty Cares that torment the Heart.

But to convince you, that the Soul is a Part like other Limbs, and not as a Harmony, takes up the whole Body, observe first that many Members of the Body may be cut off, yet often Life remains in the rest; and again, the same Life, when a few certain Particles of vital Heat

\[\text{In Musical Instruments, if you take off some of the Strings, the Accord perishes; so if the Soul were the Harmony of the Body, when some of the Members were lopt off, the Harmony of the whole Body would perish likewise, and so the Life and Sense would be gone; but we know some of the Limbs may be lopt, and Men may retain their Senses: And therefore the Life and Sense do not proceed from the Harmony of the Members. Indeed if some certain Particles of Heat and Vapour fly off from the Body, the Animal will die; and therefore Life and Sense depend upon these Particles of Heat and Vapour.}\]
Diffugere, forasque per os est editus aër:
Deserit extemplo venas, atque ossa relinquit:
Noscere ut hinc possis, non aequas omnia parteis 125
Corpora habere, neque ex aequo fulcire salutem:
Sed magis hæc, Venti que sunt, calidique Vaporis
Semia, curare in membris ut Vita moretur.
Est igitur Calor, ac Ventus vitalis in ipso
Corpore, qui nobis moribundos deserit artus. 130
Quapropter, quoniam est Animi natura reperta,
Atque Animæ, quasi pars Hominis: redde Harmoniæ
Nomen ab organico saltu delatum Heliconis,
Sive aliunde ipsi porro traxere: & in illam
Transtulerunt, proprio quæ tum res nomine egebatur,
Quicquid id est, habeant: Tu cætera percipe dicta. 136
Nunc Animum, atque Animam dico conjunctiona teneri
Inter se, atque unam naturam conficere ex se:
Sed Caput esse quasi, & dominari in corpore toto
Consilium, quod nos Animum, Menteque vocamus:
Idque situm media regione in peptonis hæret. 141
Hic exsultat enim Pavor, ac Metus hæc loca circum
Laetitiae mulcent: hic ergo Mens Animusque est.
Cætera pars Animæ per totem diffusa corpus
Paret: & ad numen Mentis, momenque movetur:
By off, and our last Breath is blown through the Mouth, immediately leaves Possession of our Veins and Bones; and this will give you to understand, that all the Particles of Matter are not of equal Consequence to the Body, nor do they equally secure our Lives; but the Particles of our Breath, and the warm Vapour, are of principal Concern to preserve Life to us in all our Limbs. This Warmth therefore, this Vapour resides in the Body, and leave our Limbs as Death makes Approaches towards us.

But since the Nature of the Mind and Soul is discover'd to be a Part of the Man, give these Fiddlers their favourite word Harmony again, taken from the Musick of the Harp, or whence foever they borrowed the Name, and applied it to the Soul, which then forsooth! had no proper Name of its own; however it be, let them take it again, and do you attend what follows.

I Say then, that the Mind and Soul are united together, and so joined make up one single Nature; but what we call the Mind is as it were the Head, and conducts and governs the whole Body, and keeps its fixed Residence in the middle Region of the Heart. Here our Passions live, our Dread and Fear beat here, here our Joys make every thing serene, here therefore must be the Seat of the Mind. The other Part, the Soul, spread through the whole Body, obeys this Mind, and is moved by the Nod and Impulse of it,

He uses the words Mind and Soul indifferently; the Mind, which is the noblest Part in which the Reason resides, he places in the Heart, where all the Passions have their Seat likewise: The Soul, which is the inferior Part of this Nature, and in which the locomotive Faculty is placed, is diffused through the whole Body, and moves as the Mind directs; yet, tho' it obeys the Mind, it partakes not of all its Passions, but of those alone that are violent.
Idque sibi solum per se sapit, & sibi gaudent: 146
Cum neque res Animam, neque Corpus commovet utta.
Et quæsi cum Caput aut Oculus, tentante dolore,
Leditur in nobis, non omni concruciamur
Corpore: sic Animus nonnumquam leditur ipse, 150
Lætitiaque viget, cum catena pars Animai
Per membra, utque artus nulla novitiae cietur.
Verum ubi vehementi magis est commota metu Mens
Consentire Animam totam per membra videmus:
Sudores itaque & pallore existere toto 155
Corpore, & infringi linguam, vocemque aboriri,
Caligare oculos, sonere aureis, succidere artus.
Déique concidere ex Animi terrore videmus
Sæpe homines, facilè ut quivis hinc nocere posset,
Essè Animam cum Animo conjunctam, quæ cum A-
nimi vi 160
Percussa est, exin corpus propellit, & icit.
Hæc eadem ratio naturam Animi, utque Animali
Corpoream docet esse, ubi enim propellere membra,
Conripere ex somno corpus, mutareque voltum,
Atque hominem totum regere ac versare videtur: 165
(Quorum nil fieri sine tætu posse videmus:
Nec tætu porro sine Corpore) nonne fatendum est
Corporea natura Animam comiare, Animamque?
Praeterea pariter fungi cum Corpore: & una
Consentire Animum nobis in corpore cernis. 170
Si minus offendit vitam vis horrida teli
Offibus ac nervis disclusiis intus adæfi:
Attamen insequitur languor, terreaque petitus
Suavis, & in terra Mentis qui gignitur æstus,
Interdumque quasi exsurgen di incerta voluntas. 175
This Mind can think of itself alone, and of itself rejoice, when the Soul and Body are no ways affected; as when the Head or the Eye is hurt by sensible Pain, we are not tormented over all the Body, so the Mind is sometimes grieved or cheered with Joy, when the other Part, the Soul, diffused through the Limbs, is agitated with no new Motion at all. But when the Mind is shaken with violent Fear, we see the Soul through all the Limbs partakes of the same Disorder. Cold Sweats and Pale-ness spread all the Body over, the Tongue faulcers, the Speech fails; the Eyes grow dim, the Ears tingle, and the Limbs quake; in short, we often see Men fall down from a Terror of the Mind: From whence we may easily conclude, that the Soul is united with the Mind, and when she is pressed forcibly with its Impulse, then she drives on the Body, and puts it in Motion.

By this Rule therefore we find, that the Nature of the Mind and Soul is corporeal; for we see it shakes the Limbs, rouses the Body from Sleep, changes the Countenance, and directs and governs the whole Man. (Nothing of which can be done without Touch, and there can be no Touch without Body.) Should we not then allow that the Mind and Soul are corporeal in their Nature?

Besides, you see the Mind suffers with the Body, and bears a share with it in all it endures; if the violent Force of a Dart pierces the Body, and shatters the Bones and Nerves, tho' Death does not instantly follow, yet a Faintnefs succeeds, and a fort of pleasing Desire of sinking to the ground, a passionate Resolution to die, and then again the Will fluctuates and wishes to live: the Mind therefore must needs be of a corporeal Nature,
Ergo corporcam naturam Animi esse neceffè iSt : Corporeis quoniam telis, iduque laborat.
Is tibi nunc Animus qualis sit corpore, & unde:
Consiterit, pergam rationem reddere dictis.
Principio esse ait per subtilem atque minutis
Perquam Corporibus factum constare : id ita esse,
Hinc licet advertas animum, ut per noscere possis,
Nil adeo fieri celeri ratione videtur,
Quam si Mens fieri proponit, & inchoat ipsa.
Ocius ergo Animus, quam res fe perciet ulla,
Ante oculos quarum in promptu natura videtur.
At quod mobile tantopere iSt constare rotundis
Perquam feminibus debet, perquamque minutis:
Momine uti parvo possint impulsa moveri.
Namque movetur Aqua, & tantillo momine flutat:
Quippe volubilibus, parvisque creada Figuris.
At contrà Mellis constantior est natura,
Et pigri latices magis, & cunctantior atius.
Haret cuim inter fe magis omnis materiai
Copia : Nimirum quia non tam lavibus extat
Corporibus, neque tam subtilibus atque rotundis :
Namque Papaverum, aura potest suspensa, levisque
Cogere, ut ab summo tibi diffluat altus acervus :
At contra Lapidum conveniunt, Spiclorumque
Nenupoteft : igitur parvisima corpora quantò
Et levissima sunt, ita mobilitata feruntur.
At contrà quò quæque magis cum pondere magno,
Asperaque inveniuntur, eo stabilita magis sunt.
Nunc igitur, quoniam iSt Animis natura reperta
Mobilis egregie : Perquam constare necessè iSt
Corporibus parvis & lavibus atque rotundis.
Nature, because it suffers Pain by the Stroke of Darts, which we know are Bodies.

I shall now go on to explain clearly of what sort of Body this Mind consists, and of what Principles it is formed. And first I say, that the Mind is composed of very subtil and minute Seeds; that it is so, attend closely, and you will find that nothing is accomplished with so much Speed as what the Mind attempts, and proposes to execute; the Mind therefore is swifter in its Motion, than any thing in Nature we can see or conceive. But that which is so exceedingly quick to move, must consist of the roundest and most minute Seeds, that may be set a-going by the lightest Impulse. So Water is moved and disposed to flow by ever so little Force, because it is composed of small and slippery Seeds; but the Nature of Honey is more tenacious, its Moiſture is more unaclive, and its Motion slower; its Principles stick cloſer among themselves; and for this Reafon, because it consists of Seeds not so smooth, so subtil, and so round. And thus, a large Heap of Poppy-Seeds is blown away by the gentle Breathing of Wind, and scatter'd abroad; but no Blast can shake a Heap of Stones or Darts: Therefore the smoother and smaller the Principles of Bodies are, the more easily they are disposed to Motion, and the heavier and rougher the Seeds are, the more fixed and flable they remain.

Since therefore the Nature of the Mind is so exceedingly apt to move, it must needs consist of small, smooth, and round Seeds; and your

k The Atoms that compose the Mind are very small, smooth and round; for the Mind is most easy to be moved, and therefore must be composed of Particles which by their Texture are most subject to Motion.
Quae tibi cognita res in multis, O Bone, rebus Utilis invenietur, & oportuna cuebit.

Hec quoque res etiam naturam deliquat ejus, Quam tenui constet textura; quamque loco se Contineat parvo, si posset conglomerari:

Quod simul atque Hominem lethi secura quies est Indepta, atque Animii natura, Animaeque recessit:

Nil ibi limatum de toto Corpore cernas

Ad speciem, nil ad pondus: Mors omnia praestat, Vitalam praeter sensum, calidumque vaporem.

Ergo Animam totam perparvis esse necessa est Seminibus, sexam per venas, viscera, nervos:

Quocinus omnis ubi est toto jam Corpore cessit,

Extima membrorum circum-caesura tamen se

Incolunm praestat: Nec defit ponderis bilum:

Quod genus est Bacchi cum flos evanuit, aut cium Spiritus Unguenti suavis diffugit in auras:

Aut aliquo cium jam Succus de corpore cessit:

Nil oculis tamen esse minor res ipsa videtur

Propterea, nèque detraetum de pondere quicquam:

Nimirum, quia multa, minutaque semina Succos Efficiunt, & Odorem in toto corpore rerum.

Quare etiam atque etiam Mentis naturam, Animaeque Seire licet perquam pauxillis esse creatam

Seminibus: Quoniam fugiens nil ponderis aufert.

Nec tamen hæc simplex nobis natura putanda est. Tenuis enim quaedam moribundos deserit Auræ
knowing this, my sweet Youth, will be found of great use, and very reasonable for your future Enquiries. This will discover clearly to you its Nature, of what tenuous Parts it is formed, in how small a Space it might be contained, if it could be squeezed together; for when the calm Rest of Death has possession of a Man, and the Mind and Soul are retired, you will find nothing taken away from the Body as to its Bulk, nothing as to its Weight. Death leaves every thing complete, except the vital Sense and the warm Breath; the whole Soul therefore must needs be formed of very small Seeds, as it lies diffused through the Veins, the Bowels, and the Nerves; because when it has wholly left every Part of the Body, the outward Shape of the Limbs remains entire, and they want not a Hair of their Weight. And this is the Nature of Wine, when the Flavour of it is gone, and of Ointments, when their sweet Odours are evaporated into Air. And thus it is, when any Moisture perspires through the Pores of the Body, the Bulk does not appear less to the Eye, upon that account, nor is there any thing taken off from the Weight; for many and small are the Seeds that compose the Moisture and the Smell in the Contexture of all Bodies: And therefore we may be well assured, that the Nature of the Mind and Soul is formed of exceeding little Principles, because when it leaves the Body, it detracts nothing from the Weight.

Yet we are not to suppose this Nature of the Mind to be simple and unmixed; for

1 He had observed, that a Vapour exhales from dying Animals, and that warm too, together with Air intermixed, without which there is generally no Heat; but a dying Person expires or breathes out his Soul, therefore that Soul consists of Vapour, Air, and Heat.
Lucretii Lib. III.

Misfa Vapore, Vapor porro trabit Aëra secum;
Nec Calor est quisquam, cui non sit mistus & Aër.
Rara quod ejus enim constat natura necesse est
Aëris inter eum primordia multa cierit.

Jam triplex Animi est igitur natura reperta.
Nec tamen bae sat sunt ad Sensum cuncta creandum:
Nil horum quomiam recipit mens posse creare
Sensiferos motus, quaedam qui mente volunt.
Quarta quoque bis igitur quaedam natura necesse est
Attribuatur: (ea est omnino nominis expers:)
Quae neque mobilius quicquam, neque tenius extat,
Nec magis e parvis, aut lœribus ex elementis:
Sensiferos motus qui didit prima per artus.
Prima cietur enim parvis perfecta figuris,
Inde Calor motus, & Venti caca poestas
Accipit: inde Aër: inde omnia mobilitantur:
Tum quatitur sanguis, tum viscera persentiscunt
Omnia; postremo datur ossibus, atque medullis
Sive voluptas est, sive est contrarius ardor.

Nec temerè bue dolor usque poesta penetrare, neque acre
Permaneare malum, quin omnia perturbantur:
Usque adeo ut vitae desit locus, atque Animal
Diffugiant partes per caulas Corporis omnes.
Sed plerumque fit in summo quasi corpore finis
Motibus, banc ob rem vitam retinere valemus.

Nunc, ea quo paeco inter se ne mista, quibusque
Compta modis vigant, rationem reddere aventem

Abfrabit
Book III. Of the Nature of Things.

Breath mingled with a warm Vapour, forsakes the Bodies of dying Men; and this Vapour draws the Air along with it, for there can be no Heat without Air intermix'd, and Heat being in its Nature rare, must needs have some Seeds of Air united with it. We find then the Mind consists of three Principles, of Vapour, Air and Heat; yet all these are not sufficient to produce Sense: For we cannot conceive that either of these, or all of them united, can be the Cause of sensible Motions that may produce Reason and Thought.

And therefore a fourth Nature must needs be added to these (and This indeed has no Name at all) but nothing can be more apt to move, nothing more subtil than it is, nor consist more of small smooth Seeds; and this is what first raises a sensible Motion through the Body: This, as it is formed of the minutest Particles, is first put into Motion, then the Heat, and the unseen Vapour receive a Motion from it, and then the Air, and so all the Limbs are set a-going; then is the Blood agitated, and all the Bowels become sensible, and last of all, Pleasure or Pain is communicated to the Bones and Marrow. But no Pain or any violent Evil can pierce so far without disordering and setting the whole into confusion, so that there is no more Place for Life, and the Parts of the Soul fly away through the Pores of the Body. But this Motion often stops upon the Surface of the Body, and then the Soul remains whole, and the Life is preserved.

Now, how these four Principles are mixed, and in what manner they subsist, I am very desirous.

The Epicurean Soul consists of these four Things, Heat, Vapour or Wind, Air, and the fourth, something without a Name.
Tractavit invitem patrii sermonis egestas. 261
Sed tamen, ut potero summam attingere, tangam.
Inter enim cursant Primordia principiorum
Motibus inter se, nihil ut secernier unum
Possit; nec spatii fieri divisa potestas: 265
Sed quasi multae vis uniis corporis extant.
Quod genus in quovis Animantium viscere volgò
Est Odor, & quidam Calor, & Sapor: Et tamen
ex his
Omnibus est unum perfectum Corporis augmen.
Sic Calor, atque Aër, & Venti caca potestas 270
Misra creant unam naturam, & mobilis illa
Vis, initium motus ab se qua dividit olis,
Sensifer unde oritur primum per viscera motus.
Nam penitus prorsus latet Hec natura, subesique:
Nec magis Hac infra quicquam est in corpore nostro:
Atque Anima est Animæ proporrro totius ipsa: 276
Quod genus in nostris membris, & corpore toto
Misra latens Animi vis est, animaque potestas;
Corporibus quia de parvis, paucisque creata est:
Sic tibi nominis Hec expres Vis, factura minitus 280
Corporibus latet: Atque Animalis totius ipsa
Proporro est Anima, & dominatur corpore toto.
Consimili ratione necessè est Ventus, & Aër,
rous to explain, but the Poorness of the Latin Tongue prevents me, against my Will; yet, as far as that permits, I will endeavour briefly to touch upon this Subject. The Seeds then of these Principles move so confusedly among themselves, that no one of them can be separated from another, nor is there any Place severally allotted to each, where any one can act by itself; but they are, as it were, many Powers of the same Body. As in a Piece of any Animal there is Smell, and Heat, and Taste, and out of all these one perfect Body is composed; so Heat, and Air, and the invisible Vapour, and that fourth active Quality, (which is the Principle of Motion to the other three, and from whence all sensible Motion rises through the Limbs) compose by their Mixture one most subtil Substance, or one Nature. This fourth Something is deeply fixed in the inmost Recesses of the Body, nor is there any thing in the whole Body more secretly and inwardly placed; it is, as it were, the very Soul of the Soul itself: For as in the Limbs, and through all the Body, the united Force and Power of the Mind and Soul are hid and unseen, because they are formed of small and few Seeds, so this Something without a Name being composed of minute Principles, lies deep and concealed; it is the very Soul of the whole Soul itself, and governs the whole Body. By the same Rule it is necessary that the

Name. They are all blended together, so as to compose one most subtil Substance, which being diffused through the whole Body of the Animal, is contained by and within the Body, and is the Cause of its Preservation; yet they are not all seated in the same Place. That Part of the Body which is properly called the Mind is placed deepest in the inmost Recesses of the Body, and is, as it were, the Foundation of the whole Soul.

Vapour,
Et Calor inter se vigeanct commissa per artus:
Atque aliis aliud subfit magis, emineatque: 285
Ut quiddam fieri videatur de omnibus unum:
Ne Calor, ac Ventus seorsum, seorsumque poteatas
Aëris interimant sensum, diduæaque solvant.

Est etiam Calor ille animo, quem sumit in ira,
Cum serviscit, & ex oculis micat acribus ardor. 290
Est & frigida multa comes formidinis Aura:
Quæ ciet horrorem in membris, & concitat artus.
Est etiam quoque pacati status Aëris ille,
Peëore tranquillo qui sit, volutque sereno.
Sed Calidi plus est illis, quibus acria corda, 295
Iracundaque mens facile efferviscit in ira:
Quo genere in primis vis est violenta Leonum:
Peëora qui fremitu rumpunt plerumque gementes,
Nec capere irarum fluctus in peëore possunt.
At Ventosa magis Cervorum frigida mens est, 300
Et gelidas cefius per viscera concitat auras:
Quæ tremulum faciant membris existere motum,
At natura Boum placido magis Aëre vivit,
Nec nimis irai fax unquam subdita percit
Fumida suffundens caæ caæ caliginis umbras; 305
Nec gelidi torpet telis perfixa pavoris:
Inter utrosque sita est, Cervos, sævosque Leones.

Sic Hominum genus est. quamvis Doctrina po-
litos
Of the Nature of Things. 225

Vapour, the Air, and the Heat be so properly mingled through the Limbs, and be disposed either higher or lower than one another, that one certain Nature may be formed from all; left the Power of the Heat, the Vapour, and the Air being divided and separately placed, might destroy the Sense, and prevent its Operation.

Heat prevails in the Mind when the Creature is enraged, grows hot, and Fire sparkles from its glowing Eyes. Much Vapour is cold, and the Companion of Fear, it excites Horror in the Body, and shakes the Limbs; but Air is of a calm, and mild Quality, it resides in a quiet Breast, and a serene Countenance. But those have most Heat whose Hearts are fierce, and whose angry Mind is soon inflamed into Passion. Of this sort, in the first place, is the distracted Fury of Lions, who roaring, often burst their very Breasts, and are unable to contain the Torrent of Rage that swells within. The cold Temper of the Deer has more of Vapour, and sooner incites a Chilliness in the Limbs, which causes a trembling Motion through the whole Body. But the Nature of the Ox consists more of soft Air, nor does the smoaky Firebrand of Anger (that spreads a Shade of black Darkness over the Mind) too much inflame him, nor is he stupified by the Darts of chilling Fear, but his Nature is placed between both, between the fierce Lion and the Deer.

The Mind of Man is formed of the same Principles, tho' the Discipline of Philosophy may

n The infinite Variety of Tempers proceeds from the Variety of Mixture that may be made of these three Things, by reason of the different Degrees of each Ingredient; yet a vicious Nature may be greatly corrected by Philosophy, tho' not wholly subdued.
Constituat pariter quosdam, tamen illa reliquit
Nature cujusque Animæ vestigia prima.

Nec radicitus evelli mala posse putandum est,
Quin proclivius Hic iras decurrat ad acreis;
Ille metu citius paullo tentetur: at Ille
Tertius accipiat quaedam clementius aequo.
Inque aliis rebus multis differre necesse est
Naturas hominum varias, moresque sequaceis:
Quorum ego nunc nequeo cæcas exponere causas,
Nec reperire figurarum tot nomina, quot sunt
Principiis, unde hæc oritur variantia rerum.
Illud in his rebus videor firmare potesse,
Usque adeo Naturarum vestigia linqui
Parvola, quæ nequeat Ratio depellere dictis:
Ut nihil impediat dignam Diis degere vitam.

Hæc igitur Natura tenetur Corpore ab omni,
Ipsaque corporis est custos, & causa salutis;
Nam communibus inter se radicibus færent:
Nec sine pernicie divelli posse videntur.
Quod genus æ Turis glebis evellere Odorem
Haud facile est, quin intereat natura quoque ejus.
Sic Animi, atque Animæ naturam corpore toto
Extrahere haud facile est, quin omnia dissolvantur:
Implexis ita principiis ab origine prima

Inter
polish and correct some, yet it leaves behind the Marks of the original Nature of the Mind, nor are we to think, that the Seeds of Vice can be wholly rooted out. One Man, we see, runs more rashly into Passion, another is more disposed to Fear, and a third is apt to be more merciful than just; it is impossible but the various Tempers of Mankind, and the Actions that follow them, must differ in many other Instances, the Reasons of which are at present out of my power to explain; nor can I find Words to express that Variety of Figures by which the Seeds are distinguished, and from whence this Variety of Disposition is produced. This however may justly be asserted on this occasion, that the Traces of original Nature, which cannot be corrected by the Rules of Reason, are so very small, that nothing hinders us from leading a Life worthy of the Gods.

*This Nature therefore of the Soul is contained by the whole Body; it is the Keeper of the Body, and the Cause of its Safety: for they are both united closely together by mutual Bonds, nor can they be torn asunder but by the Destruction of both. As it is impossible to separate the Odour from a Lump of Frankincense, but the Nature of both must perish, so it is equally difficult to part the Mind and Soul from the whole Body, but they must all be dissolved. Of such interwoven Principles are they formed.*

° The Epicureans believed an Animal to be as it were a Web in the Loom, that the Body is as the Chain, and the Soul the Woof, so that the Intermixture of each with the other composes the whole Work; but if either of them be dissolved, the other, and therefore both together, must be dissolved likewise.
Inter se fiunt consorti praeda vita:
Nec fine vi quicquam alterius sibi posse videtur
Corporis, atque Animi sors sum sentire potestas: 335
Sed communibus inter eos conflaturn utrinque
Motibus accensus nobis per visceram Sensus.

Præterea, Corpus per se nec gignitur unquam,
Nec crescit, nec post mortem durare videtur.
Non enim ut Humor aque dimittit sèpe vaporem;
Qui datusest, neque ab hac causa convellitur ipse, 341
Sed manet incolumis: non, inquam, sic Animae
Discidium possumt artus perferre relieti:
Sed penitús pereunt convolvi, conque putrefcunt.
Ex ineunie ævo sic Corporis atque Animaei 345
Mutua vitaleis dicipunt contagia motus,
Maternis etiam in membris, alvoque reposta;
Discidium ut nequeat fieri fine pestis, maloque:
Ut videas, quoniam conjuncta est causa salutis,
Conjuncta quoque naturam consibere eorum. 350

Quod supra est, si quis Corpus sentire renutat:
Atque Animam credit permisstam Corpore toto
Suscipere hunc motum, quem Sensum nominamus:
Vel manifeestas res contra, verasque repugnat.
Quid sit enim Corpus sentire quis afferet unquam, 355
Si non ipsa palam quod res dedit ac docuit nos?
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from their very Beginning, that they enjoy a common Life, nor have either of them, either the Mind or the Body in a separate State, the Power of Sense without the Assistance of each other, but Sense is incited in us by the Nerves, from the common Motions of both, and by their joint Operations.

Besides, the Body is never born alone, nor does it grow or continue after the Soul is fled; for tho' Water throws off a Vapour when it is made hot, yet it is not by that means destroyed, but remains entire: The Limbs, I say, cannot with the same Safety bear the Separation of the Soul when it retires from them, but thus divided, they must all perish and rot together. For the mutual Conjunction of the Soul and Body from the very Beginning, even as they lie in the Womb of the Mother, does so jointly promote the vital Motions, that no Separation can be made without Death and Dissolution; from hence you learn, that since their Preservation so much depends upon each other, their Nature also are inseparably joined and united together.

But further, if any one denies that the Body has Sense, and believes that the Soul diffused through the whole Body is only capable of that Motion we call Sense, he opposes the plainest Evidence, and the Truth of all Experience; for who would ever pretend to say, that the Body has Sense, if the Thing itself did not fully prove, and convince us of it? But it is plain,

p The Reason why the Body does not retain the Faculty of Sense after the Soul is gone, is because that Power and Faculty belong not to the Body alone, but to the Body conjoin'd and united to the Soul.
At dimissa Anima corpus caret undique sensu, Perdit enim quod non proprium fuit ejus in ævo: Multaque præterea perdit, cum expellitur ævo:

Dicere porro Oculos nullam rem cernere posse: 360
Sed per eos Animum ut foribus spectare reclusis, Desipere sit, contra cum sensus dicat eorum:
Sensus enim trahit, atque acies detrudit ad ipsas. Fulgida præsertim cum cernere sepe nequimus,
Lumina luminibus quia nobis praepediuntur: 365 Quod foribus non sit: neque enim, quod cernimus ipsi,
Ostia suscipiunt ullam reclusa laborem.

Præterea, si pro Foribus sunt lumina nostra,
Jam magis exemptis Oculis debere videtur
Cernere res Animus sublatis postibus ipsis. 370

Illud in his rebus nequaquam sumere posse,
Democriti quod sancta viri sententia ponit,
Corporis atque Animis primordia singula primis
Adposita alternis variare, ac neblera membra.
Nam cum multò sunt Animalis elementa minora, 375
Quod quibus est Corpus nobis & Viscera constant,
Tum numero quoque concedunt, & rara per artus.
you'll say, that the Body is void of all Sense when
the Soul is gone: True, for this Faculty is not
peculiar to the Body alone, but to the Soul and
Body united; and we know the Sense becomes
weaker, and decays as the Body and Soul grow
old together.

To say likewise, that the Eyes can see no-
thing of themselves, but the Mind looks through
them as through Doors laid open, this is ridi-
culous, when Sense itself tells them the contrary,
and sets it full in their View; especially when we
are unable to look upon Objects that dazzle the
Eyes, because our Sight is confounded by too
great a Light. This could not be, if they were
mere Doors, nor are open Doors that we look
through capable of Pain. Besides, if our Eyes
were no more than Doors, the Mind would see
clearer when the Eyes were pulled out, and the
whole Frame taken away.

In this Case it is in vain to take shelter under
the sacred Opinion of a Democritus, who says,
that as many Parts as there are of the Body, so
many Parts too of the Soul are answerable, and
are contained in them; for since the Principles of
the Soul are not only much smaller than those of
which the Body and its Parts consist, but are
fewer in Number, and are spread thinly in di-

4 It was the Opinion of the Philosopher Democritus, that
the Soul has as many Parts as the Body, but were this true, we
should feel every thing that touch'd any Part of the Body; for
when any Particle of the Body, and the Part of the Soul that
is joined to it come to be moved, why should not Sense arise
from that Motion? But there are many Things, he observes,
which we do not perceive when they touch us; therefore they
mistake who join a Part of the Soul to every Part of the Bo-

Q 4
Diffusa sunt, duntaxat ut hoc promittere possis,
Quantula prima queant nobis iniecta ciere
Corpora sensiberos motus in Corpore, tanta
Intervalla tenere exordia prima Animali.
Nam neque Pulveris interdum sentimus adhæsum
Corpore, nec membris incussam insidere Cretam,
Nec Nebulam nostu, nec Aracnë tenuia fila
Obvia sentimus, quando obretimur euntes:
Nec supra caput ejusdem cecidisse vietam.
Vestem, nec Plumas avium, Papposque volanteis,
Qui nimia levitate cadunt plerumque gravatim:
Nec repentis itum cujusvis cunctque Animalis
Sentimus, nec priva pedum vestigia quæque,
Corpore que in nostro Culices, & cætera ponunt.
Usque adeo prius est in nobis multa ciendum
Semina, corporibus nostris inunísta per artus,
Quam primordia sentiscant concussa Animali,
Et quæm intervallis tantis tuditantia possint
Concursare, coire, & diffultare vicissim.
Et magis est Animus vitæ clausura coerens,
Et dominantior ad vitam, quam vis Animali.
Nam sine Mente, Animique nequit residere per artus
Temporis exiguan partem pars ulla Animali:
Sed comes insequitur facile, & discedit in auras;
Et gelidos artus in lethi frigore linquit.
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Digit Spaces over all the Limbs, you may affirm so far, that the Principles of the Soul take up only so many different Spaces and Intervals, as may be sufficient for those little Seeds that are in us to incite those Motions that produce Sensation. That this Sense does not affect every minute Part of the Body is plain; for we seldom feel the Dust that sticks upon us, nor the Particles of Chalk that drop upon our Limbs; nor do we perceive the Dew by Night, or the fine Threads of the Spider meeting us, when we are intangled by the subtle Net as we pass along; nor the decaying Web lighting upon our Heads, nor are we sensible of the soft Feathers of Birds, nor of the flying Down of Thistles, which from their natural Levity are scarce able to descend upon us; nor do we feel the Motion of every creeping Insect, nor the little Traces of the Feet which Gnats and such Animals make upon us. So that the many Seeds which are diffused over all the Limbs, must be first put into motion before the Principles of the Soul are agitated and made capable to feel, and before its Seeds, by striking upon each other through so many distant Spaces, can meet, unite, and part again, and be so variously moved as to produce Sense and Perception in us.

But the Mind it is that keeps up the Defences of Life, and has a more sovereign Power to preserve our Beings, than all the Faculties of the Soul; for, without the Mind, the least Part of the Soul cannot secure its Residence in the Body for a Moment, but follows it readily as a close Companion, and vanishes into Air along with it, and leaves the cold Limbs in the frozen Arms of Death. But the Man, whose Mind is whole and
At manet in vita, cui Mens Animusque remansit, Quamvis est circum-caesis lacer undique membris: Truncus, adenta Anima circum, membrisque re-motis, Vivit, & aetherias vitales succipit auras: Si non omnimodis, at magna parte Anima privatus, tamen in vita cunctatur, & heret. Ut lacerato Oculo circum si Pupula mansit Incolunmis, stat cernendi vivata potestas; Dummodo ne totum corrumpas luminis orbem, Sed circumcidas aciem, folumque relinquas: Id quoque enim fine pernicie confiet eorum, At si tantula pars Oculi media illa perefa st, Incolunmis quamvis aloqui splendidus orbis, Occidit extemplo lumen, tenebraque sequuntur: Hoc Anima atque Animus vineti sunt fædere semper. Nunc age, nativos animantibus, & mortales, Essè Animos, Animasque levatis ut noficere possis; Conquisita diu, dulciique reperta labore digna tua pergam disponere carminìa vita. Tu fac utrumque uno subjungas nomen eorum, Aique Animam, verbi canja, cum dicere pergam, Mortalem esse docens; Animun quoque dicere credas: Quatinus est unum inter se, conjuntiaque res est. Principio, quoniam tenuem consolare minutis corporibus docui, multòque minoribus esse principis fasiam, quam liquidus humor Aquae st. Aut Nebula, aut Fumus: Nam longè mobilitate praistiat, & à tenui causa magis icta movetur; Quippe ubi Imaginibus Fumi, Nebulaque movetur: Quod genus in somnls sopiti ubi cernimus alta
and entire, remains alive, tho' he be mangled and all his Limbs lopt off; yet his Trunk, tho' his Soul be so far gone, and his Members separated from him, still lives and breathes the vital Air; the Trunk, if not spoil'd of the whole, yet of a great Part of the Soul, still continues alive, and holds fast its Being. So, if you tear the Eye all round, if the Pupil remains safe, the Power of Sight continues entire, so long as you do no injury to the Apple, but cut the White all round, and leave that whole, this may be done without any Danger or Loss to the Sight; but if ever so little of the middle of the Eye be prick'd through, tho' the Ball otherwise looks bright and sound, the Light instantly dies away, and Darkness follows. This is the Case of the Mind and Soul, and by such Bonds are they always held together.

And now, for your sake, my Memmius, and to let you know that the Mind and Soul are born in us and die with us, I will go on to write Lines worthy of thy Genius, and which I have been long preparing, and have at last by sweet Labour happily perfected. Observe only that you apply both Names indifferently, or, more plainly, when I offer to say the Soul is mortal, you are to understand I mean the Mind likewise, since they are both so united together, that in this respect they make but one and the same Thing.

First then, since I have proved that the Soul consists of very minute Seeds, and is formed of Principles much less than clear Water, or Mist, or Smoke, because it is more apt to move, and is set a-going by a much lighter Stroke (for it is moved by the very Images of Mist and Smoke) as when, by Sleep o'ercome, in Dreams we see the
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the lofty Altars exhale a Vapour, and send up Smoke into the Air, the Images of these Things no doubt produce these Phantasmis in us. And since you see, when the Vessel is broken to pieces, the Water breaks loose and flows away in a Stream; and since Mist and Smoke vanish into Air, conclude the Soul likewise to be poured out, and that its Principles much sooner perish, and its Seeds are more easily dissolved, when it is separated and retires from all the Limbs; for since the Body, which is as it were a Vessel to it, when it is bruised to pieces by any outward Force, or rarefied by the Blood being drawn out of the Veins, cannot keep it in, how can you suppose it can be contain'd by subtil Air? How can that which is more rare than this Body of our's preserve it entire?

Besides, we perceive the Soul is born with the Body, grows up with it, and both wax old together. For as Children are of a weak and tender Body, their Mind likewise is of the same frail Complexion. As their Age improves, and their Strength is more confirmed, their Judgment ripens more, and the Powers of their Mind are more enlarged. But when the Body is shaken by the irreifiable Stroke of Time, and the Limbs fail without Strength, the Understanding grows lame, the Tongue and the Mind lose their Vigour, all the Faculties fail, and go away together. The whole Nature of the Soul therefore must needs be dissolv'd, and scatter'd like Smoke into the Air, since we see it is born with the Body, increases together with it, and with it, as I said before, becomes feeble by Age, and decays.

*It is in vain to say, that when the Soul is dissolved from the Body it remains entire in the Air; for how can the subtil Air preserve that safe, which often exhales through the Pores of a thick Body?*
Huc accedit, uti videamus Corpus ut ipsum
Suscipere immancis morbos, durumque dolorem;
Sic Animum curas acreis, lactumque, metumque,
Quare participem letbi quoque convenit esse:
Quinetiam Morbis in Corporis avius errat
Saepem animus, dementit enim; deliraque fatur:
Interdumque gravi Letargo fertur in altum,
Æternumque soporem, oculis, mutuque cadenti:
Unde neque exaudit voces, neque noscere vultus
Illorum potis est, ad vitam qui revocantes
Circumstant lacrymis rorandes ora, genasque.
Quare Animum quoque dissolvit fateare necesse est,
Quandoquidem penetrunt in eum contagia morbi:
Nam Dolor, ac Morbus letbi fabricator uteque est,
Multorum exitio perdediti quod sumus antè.
Denique cur, hominem cum Vini vis penetravit
Acris, & in venas discessit diditus arbor,
Consequitur gravitas Membrorum? praepediuntur
Crura vacillanti? tardescit Lingua? madet Mens?
Nant oculi? Clamor, Singultus, Jurgia gliscunt?
Et jam caetera de genere hoc quæcunque sequuntur?
Cur ea sunt, nisi quod' vehemens violentia Vini
Conturbare Animam consuevit Corpore in ipso?
At quæcunque queunt conturbari, inque pediri,
Significant, (paullò si durior insinuārit
Causa) fore ut pereant, ævo privata futuro.
Quinetiam, subita vi morbi sepe coaet
Ante oculos aliquis nostror, ut fulminis ictu,

Concidit,
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Add to this, that as the Body is subject to violent Diseases and tormenting Pains, so the Mind is affected by sharp Cares, by Griefs and Fear, and therefore must equally partake of Death and Dissolution with it. And then, in great Disorders of the Body, the Mind frequently grows mad, raves, and talks wildly; sometimes it is sunk into a profound and never-ending Sleep by a heavy Lethargy, the Eyes shut, and the Head nodding, so that it neither hears the Words, nor is able to distinguish the Face of those who stand about bedewing their Cheeks with Tears, and striving to recall the departing Breath. Wherefore you must needs allow that the Mind may be dissolved, since the Infection of the Disease pierces through it; for Grief and Diseases are both the Causes of Death, as we are taught by Experience in a thousand Instances.

And again, why is it, when the quick Force of Wine strikes through a Man, and the inti-minating Heat works in all his Veins, why follows a Heaviness of the Limbs? The Legs no longer support the reeling Body, the Tongue faulters, the Mind is drowned, the Eyes swim; Noife, Hiccups, Brawlings deafen your Ears, and many other Evils, the Consequence of such Debauches; how could this be, did not the im-petuous Force of the Wine distract the Soul as it lies diffused through the Body? Now what-ever can be thus disturb’d, and hinder’d in its Operations, would (were the Force to grow more violent) be destroy’d and utterly deprived of future Being.

Besides, a Person surprized with a sudden Fit of a Disease, drops down before our Eyes as if he were thunder-struck. He foams, he groans and trembles
Concidit, & spumas agit, ingemit, & tremit artus, Despit, extentat nervos, torquetur, anbelat, Inconstant & in jactando membra fatigat: 490
Nimirum, quia vis Morbi distraeta per artus Turbat agens Animum, spumans ut in aquore salvo Ventorum validis servescit viribus Unda.
Exprimitur porro Gemitus, quia membra dolore Afficiuntur; & omnino quod semina vocis 495
Exprimitur, & ore foras glomerata feruntur,
Qua quasi consuerunt, & sunt minuta viai.
Despicientia fit, quia vis Animii, atque Animali Conturbatur, & (ut docui) divisa seorsum Disjedatur, eodem illo distraeta veneno.
Inde, ubi jam Morbi se flexta causa, reeditque In latebras ater corrupti Corporis humor,
Tum quasi talipedans primum consurgit; & omnis Paullatim redit in sensus, animamque receptat.
Hae igitur tantis ubi morbis Corpore in ipso 505
Jactetur, miserisque modis distraeta laboret:
Cur eandem credis sine Corpore in Aere aperto Cum validis ventis atatem degere posse?
Et quoniam Mentem sanari, Corpus ut aegrum,
Cernimus, & fleti medicina posse videmus; 510
Id quoque praesagit mortalem vivere Mentem:
Addere enim partibus, aut ordine tragiicare aequum est,
Aut aliud prorsum de summâ detrabere illum,
Commutare Animum quicunque adoritur, & inquit:
Aut Aliam quamvis naturam fletiere querit:
At neque transferri fibi partibus, nec tribui vult,
Immortale quod est quicquam, neque defluere bilum.
trembles all over, he is distracted, stretches his Nerves, is distorted; he pants, he tosses and tires his Limbs with strange and unnatural Postures: The Reason is, because the Force of the Disease, driven violently through the Limbs, agitates and disturbs the Mind, as the foaming Waves of the Sea are enraged by the strong Blast of Winds. And then Groans are forced from the Wretch, because the Limbs are tormented with Pain, and the Seeds of the Voice are thrown out from the Bottom of the Breast; and hurried in confusion, without any distinct Accent through the Mouth. The Man raves, because the Powers of the Mind and Soul are distracted, and their Principles, as I said, broken, disjoin'd, and divided by the Violence of the Distemper. But when the Cause of the Disease gives way, and the black Humour of the corrupt Body retires into some convenient Vessel, then the Patient begins to rise, feeble and staggering; and by degrees returns to all his Senses, and recovers Life. Since therefore this Soul is so tossed about with such strange Disorders, and labours with such Agonies in so miserable a manner, as it is inclosed in the Body, how do you think it can subsist without the Body in the open Air, and expos'd for ever to the raging Fury of all the Winds?

And since we see the Mind can be made found, and be affected by the Powers of Medicine, as well as a disorder'd Body, this is a strong Evidence that the Mind is mortal; for whoever attempts to make any Alteration in the Mind, or offers to change the Nature of any other Thing, must either add some new Parts to it, or take off some of the old, or else transpose the former Order and Situation; but what is immortal can have

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Nam quodcunque suis mutatum finibus exit,
Continuò hoc mors est illius quod fuit ante.
Ergo Animus sive ægrescit, mortalia signa
Mittit (uti docui) seu fletitit à medicina:
Usque adeo falsæ rationi vera videtur
Res occurrere, & effugium præcludere eunti:
Ancipitque refutatu convincere falsum.

Denique seupe hominem paullatim cernimus ire,
Et membratim vitalem dependerc sensum:
In pedibus primum Digitos livescere, & Ungueis,
Inde Pedes, & Crura mori: Post inde per artus
Ire alios tractâtim gelidi vestigia lethi:
Scinditur atqui Animæ quoniam natura, nec uno
Tempore sincera exiicit, mortalis habenda s. 531
Quòd si forte putas ipsam se posse per artus
Introrsum trabere, & parteis conducere in unum,
Atque ideo cunctis sensûm deducere membris:
At locus ille tamen, quò copia tanta Animæ
Cogitur, in sensu debet majore videri.
Qui quoniam nusquam s, nimirum, (ut diximus ante)
Dilaniata foras dispersitur; interit ergo.
Quinetiam, si jam libeat concedere falsum,
Et dare, posse Animam glomerari in Corpore eorum,
Lumina qui linquent moribundi particularim: 541
Mortalem tamen esse Animam fateare necesse s. 531

Nec
Nothing added to it, or taken from it, nor will admit of any Change in the Order of its Parts: for whatever is so alter'd as to leave the Limits of its first Nature, is no more what it was, but instantly dies. The Mind therefore, whether it be distemper'd, or reliev'd by Medicine, shews (as I observ'd) strong Symptoms of its Mortality. So evidently does the true Matter of Fact overthrow all false Reasoning, that there is no Possibility to escape its Force; and the contrary Opinion is either way fully refuted.

Besides, we often see Men perish by degrees, and lose their vital Sense Limb by Limb; first, the Nails and Toes grow black, then the Feet and Legs rot; at length the Traces of cold Death proceed on, step by step, over the other Parts of the Body. Since therefore the Soul is divided, and does not at such a time continue whole and entire, you must pronounce it mortal. But if you think the Soul retires out of the dying Members into the more inward Parts of the Body, and contracts its Seeds into one Place, and so withdraws the Sense from the rest of the Limbs, yet that Place to which the Soul retreats, and where so much of it is crowded together, ought to enjoy a more lively and brisker Sense; but, since there is no such Place, 'tis plain, as we said before, it is scattered piece-meal through the Air, and therefore perishes. But suppose we grant, which is false in itself, and allow that the Soul may be huddled up together in the Bodies of those who die one Limb after another, yet then the Soul must be confessed to be by Nature mortal. 

* The Reasons he gives for the Soul's Mortality are very intelligible, tho' far from being conclusive; he means here, that what decays and loses its Nature by being thus contracted and huddled up, is as much mortal as that which is thus dispersed and is torn to pieces in the Air.
Nec refert, utrum pereat dispersa per auras, An contra his in se partibus obbrutescat:
Quando Hominem totum magis, ac magis undique sensus
Defcit, & vitae minus, & minus undique restat.
Et quoniam Mens est Hominis pars una, locoque
Fixa manet certo, velut Aures, atque Oculus sunt,
Atque alii sensus, qui vitam cunque gubernant:
Et veluti Manus, atque Oculus, Naresve seorsum
Secreta à nobis nequeant sentire, neque esse:
Sed tamen in parvo linquuntur tempore tali.
Sic Animus per se non quit sine corpore, & ipso
Esse Homine, illius quasi quod Vas esse videtur:
Sive aliud quidvis potis es conjunctius ejus
Fingere, quandoquidem connexus corpori adhæret.
Denique Corporis, atque Animi vivata potebant
Inter se conjuncta valent, vitaque fruuntur.
Nec sine Corporae enim vitaleis edere motus
Sola potest Animi per se natura, nec autem
Cassum Anima Corpus durare, & sensibus uti:
Scilicet, avolsus radicitus ut nequit ullam
Dispicere ipse Oculus rem seorsum Corpora toto:
Sic Anima atque Animum per se nil possit videntur:
Nimirum, quia per venas & viscera mislim
Per nervos, atque osfa tenentur corpore ab omni.
Nec magnis intervallis Primordia possunt
Libera diffultare, ideo conclusa moverunt
Sensiseros motus; quos extra corpus in auras
Aëris baud possunt post mortem ejecla moveri:
Propterque quia non simili ratione tenentur.
it signifies not whether the Soul dies scattered through the Air, or perishes with its Parts contracted into one Place, while the Senses steal away from the whole Body more and more, and the Powers of Life by degrees appear less and less.

And since the Mind is a Part of Man fixed in one certain Place, as the Ears, Eyes, and other Senses that preside over Life, and as the Hands, and Eyes, and Nose, when separated from the Body, are incapable of Sense, or even to Be, but must in a very short time corrupt and putrify; so the Mind cannot subsist of itself without the Body, (or even Be in the Man) which is as it were a Vessel to the Soul, or any thing else you can conceive more closely united to it; for it sticks inseparably to the Body, and cannot be divided from it.

Further, the vital Powers of the Body and Mind exert themselves together, and live united by the strongest Bonds; neither can the Nature of the Mind alone dispense the vital Motions of itself without the Body, nor can the Body, void of Soul, continue or use the Faculties of Sense: For as the Eye, torn out by the Roots and separated from the Body, can see nothing, so the Soul and Mind cannot act of themselves, because they are spread over all the Body by the Veins, the Bowels, the Nerves and Bones. Nor could the Seeds of the Soul exercised those Vibrations that produce Sense, were they disposed at wide Intervals, and inclosed by no solid Body; they shew those sensible Motions because they are shut up close, which they cannot exert when they are forced out of the Body into the wide Air after Death, because they are not under the same Restraint.
Corpus enim atque animans erit Aër, si cohibere,
Sese Anima, atque in ea poterit concludere motus,
Quos ante in Nervis, & in ipso Corpore agebat.
Quare etiam atque etiam resoluto Corporis omni 575
Tegmine, & ejdeis extra vitalibus auris,
Dissolvi sensus Animi fateare necesse est,
Atque Animam, quoniam conjuncta est causa duobus.

Denique cum Corpus nequeat perferre Anima
Discidium, quin id tetro tabescat odore:
Quid dubitas, quin ex imo, penitusque coorta
Emanabit, uti Fumus, diffusa Anima vis?
Atque ideo tanta mutatum putre ruina
Conciderit Corpus penitus, quia mota loco sunt
Fundamenta foras animae; manantique per artus,
Perque viaram omnes flexus, in corpore qui sunt,
Atque foramina? Multimodis ut noscere possis
Dispersitam Anima naturam exisse per artus:
Et prius esse fidei dispersitam Corpore in ipso,
Quam prolapso foras enaret in Aëris Auras?
Quinetiam, fineis dum vitæ vertitur intra,
Sæpe aliqua tamen est causa labefacta videtur
Ire Anima, & ito solvi de corpore membra:
Et quasi supremo languescere tempore voltus,
Molliaque exangui cadere omnia Corpore membra:
Quod genus est, Animo male factum cum perhibetur,
At Animam liquisse, ubi jam trepidatur, & omnes
Extremum cupiunt vires reprendere vinclum.

Conquassatur enim tum Mens, Animaque potestas
Omnis: & haec ipso cum Corpore conlabefiunt.
ftraint as they are within the Inclosure of the Body; for the Air would be an Animal, if the Soul could be confined within it, and maintain those Motions of Sense which before it exercis'd in the Nerves and through the Limbs. You must confess therefore, over and over, that the Mind and Soul (for they both make up but one Substance) must needs be dissolv'd, as soon as they are stripp'd of the Covering of the Body, and their vital Powers thrown out into the thin Air.

Again, since the Body cannot bear the Separation of the Soul, but it soon putrifies and stinks, how can you doubt but that the Principles of the Soul dissolv'd through the whole Body, and rais'd from the very inmost Parts of it, flow out like Smoke; and therefore the rotten Body thus changed falls to pieces in so ruinous a manner, because the Seeds of the Soul, which preserved the whole, are moved widely from their Place, and flow through the Limbs, and all the winding Passages of the Body. And hence you are fully satisfied, that the Nature of the Soul is spread over all the Limbs, and is first broken and divided in the Body itself, before it flies out into the Air abroad.

Nay more, whilst the Man is still living, the Soul seems often to receive a violent Shock, so that the Limbs are dissolv'd all over, the Face looking pale, as if it were real Death, and all the Members of the Body wan and ghastly, falling to pieces. This happens in a swooning Fit, when the Soul is going, and trembles upon the Verge of Life, and all the Faculties strive to hold fast the Chain that binds up Soul and Body together. The Mind and all the Powers of the Soul are then shaken, and are so stagger'd with the Body, that a Force...
Ut gravior paullo possit dissolvere causa.

Quid dubitas, tandem quin extra prodita corpus
Imbecilla foras, in aperto, tegmine dempto,
Non madò non omnem possit durare per ãevum, 604
Sed minimum quodvis nequeat consitère tempus?

Nec fìbi enim quisquam moriens sentire videtur
Ire foras Animal inçolumem de Corpore toto,
Nec priùs ad jugulum, & superas succedere fauceis:
Verùm deficere in certa regione locatam:
Ut sensus alios in parti quemque sua fciit

Dissolvi: Quòd si immortalis nostra foret Mens:
Non jam se moriens dissolvi conquereretur:
Sed magis ire foras, vestemque reliquere, ut Anguis,
Gauderet, prælonga senex aut cornua Cervus.

Denique cur Animi nunquam mens consiliumque
Gignitur in Capite, aut Pedibus, Manibusque; sed
unis
Sedibus, & certis regionibus omnis inçeret:
Si non certa loca ad nascentum reddita cuique
Sunt: & ubi quicquid possit durare creatum:
Atque ita multimodis pro totis artibus esse,
Membrorum ut nunquam existat præposterus ordo?
Usque adeo sequitur res rem, neque Flamma creari in
Fluminibus solita 6is, neque in Igni gignier Algor.

Præterea,
Do you doubt now, whether this Soul thrown out of the Body, abroad, destitute, into the open Air, stript naked, be so far from remaining entire to eternal Ages, that it cannot subsist so much as for the least moment?

And then, no dying Man ever perceived his Soul go out whole from all Parts of the Body at once, nor felt it first creeping up his Throat, and then rising up to his Jaws; but he finds it fail in that Part of the Body wherein it is placed, as he knows that every Sense expires in its proper Organ. But if this Mind were immortal, it would not, when dying, complain of its being dissolv'd, but rather rejoice that it was going freely abroad, that it had thrown off his Coat as a Snake, or as an old Stag that casts his heavy Antlers.

And why is not the Mind, with all its Reason and Conduct, produced in the Head, the Feet, the Hands, but that every Part is fixed to one Place, and to a certain Situation? If proper Places were not appointed to all Beings in which to be born, and when produced where they might abide, and where every Member might be so conveniently disposed, that there might be no preposterous Order of the Limbs throughout the whole? So regularly does one thing follow another, that Fire is never raised from Water, nor Cold from Heat.

The Mind is confined to the Heart, and he that looks for Souls in the Air, may as reasonably expect to find Flames in Water, and Ice in Fire; for all natural Things have certain and fixed Places to be born and live in.

Besides,
Praeterea, si immortalis natura Animai est,
Et sentire potest secreta a Corpore nostro:
Quinque (ut opinor) eam faciendum est Sensibus auctam:
Nec ratione alia nosmet proponere nobis
Possimus infernas Animas Acherunte vagare.
Pictores itaque, & Scriptorum sacra priora
Sic Animas introduxerunt sensibus auctas.
At neque seorsum Oculi, neque Nares, nec Manus ipsa
Esse potest Anima, neque seorsum Lingua, nec Aures
Abisque anima per se possunt sentire, nec esse.
Et quoniam toto sentimus Corpore inesse
Vitalem sensum, & totum esse animale videmus,
Si subitum medium celeri praeciderit istu
Vis aliqua, ut seorsum partem secernat utramque:
Dispartita procul dubio quoque vis Animai,
Et discissa simul cum Corpore disjicietur:
At quod scinditur, & parteis discedit in ulla,
Scilicet aeternam sibi naturam abnuit esse.
Falciferos memorant currus abscindere membra
Sape ita desubit se permissa caede calenteis,
Ut tremere in terra videatur ab artibus id quod
Decidit abscessum: Cum Mens tamen, atque hominis vis
Mobilitate mali non quis sentire dolorem:
Et simul in pugna studio quod dedita Mens est,
Besides, if the Nature of the Soul be immortal, and enjoys the Power of Sense when separated from the Body, you must, as I conceive, supply her with the Use of the five Senses, nor can we imagine how without them the Soul can live in the Shades below. The Painters and the Poets, many Ages ago, have represented the Souls invested with Sense; but neither Eyes nor Nose, nor Hands, nor Tongue, nor Ears can be separately in the Soul, nor can they separately retain any Sense, nor even be without it.

And since the vital Sense, we perceive, is diffused through the Body, and we see the whole Body animated throughout, if any Weapon cuts it in two in the middle with a sudden Stroke, and divides the Parts asunder, the Powers of the Soul, without doubt, being separated and disunited, will follow the Fate of the Body; but whatever is cut asunder, and falls into Parts, can have nothing immortal in its Nature. Chariots, we read, armed with Scythes, and reeking with confused Slaughter, would cut off a Limb with so quick a Force, that the divided Part that fell off from the Body, might be seen trembling upon the Ground, when the Mind and Heart of the Man feel nothing of the Pain, so sudden was the Wound. His whole Soul is so taken up with the Heat of Action; that he pursues the Fight,

* He derides the Fables of the Ancients concerning the Souls of Men, which, as they feigned, went into Hell after Death, where they enjoyed all their Senses as when they were alive.

* The Soul being diffused through the whole Body, must of necessity be divided, if the Body be cut in two by a violent and sudden Stroke: If the Limb of a Soldier be cut off by an armed Chariot, the Motion of the disected Part is a Proof that the Soul is divided likewise.

and
Corpore cum reliquo pugnam, cædeisque petisset:
Nec tenet, anissam levam cum tegmine sēpe
Inter equos abstraxe rotas, falceisque rapaeis: 650
Nec eciddisse alius dextram, cūm scandit, & infist.
Inde alius conatur adempto surgere crūre,
Cūm digitos agitat propter moribundus hūmī pes:
Et caput abscissum calido, viventeque trunco,
Servat hūmī vōltum vitalem, oculosque patenteis,
Donec reliquias Animāi reddidit omnēs. 656
Quin etiam tibi sī lingua vibrante minantis
Serpentis caudam procero corporē, utrinque
Sit libitum in multas parteis discindere ferro;
Omnia jam seorsum cernes amcīsa recenti
Volnere tortari, & terram conspargere tabo,
Ipsam seque retrō partem petere ore priorem,
Volneris ardenti ut morfu premat ītīa dolore.
Omnibus esse igitur totas dicemus in illis
Particulis Animas? At ea ratione sequetur, 665
Unam animantem Animas habuisse in Corpore multas.
Ergo divisa sī ea, qua fuit una simul cum
Corpore, quapropter Mortale utrumque putandum sī
In multas quoniam parteis discinditur aequē.
Prēterea, sī immortalis natura Animāi 670
Constat, & in Corpus nascentibus insinuatūr:
Cur super anteaēam ātatem meminisse nequimus?
Nec vestigia gestarum rerum ulla tenemus?
Nām sī tantopere sī Animī mutata potēbas,
Omnis ut aētarum exciderit retinentia rerum: 675
Non
and the intended Slaughter, with the Remainder of his Body; nor does he imagine that the Wheels and mangling Hooks have torn off among the Horses his Left-hand, or that he has loft his Shield. Another knows nothing that his Right-hand is lopt off, as he scales the Wall, and presses eagerly forward. Another attempts to rise with one Leg, while the dying Foot moves the Toes as it lies by him upon the Ground; and the Head cut off, the Trunk yet warm and heaving, preserves the same fierce Look in the Face, and keeps the Eyes open, till it has loft all Remains of the Soul within it. And fo, divide with a Sword, if you please, into many Parts, the Tail of a long Snake, threatening, and brandishing his Tongue, you'll fee every divided Part wriggling with the fresh Wound, and staining the Ground with Blood. You'll perceive the Serpent turning his Head about to find his divided Body, and bite it with his Teeth, from the fore Anguish of the Pain he suffers. Shall we say, that a proper Soul belongs severally to all these Parts? By this Rule it will follow, that the same Creature is animated by many Souls at the same time. 'Tis plain therefore, the Soul that before was one, and diffused through the whole Body, is divided, and consequently they are both mortal, because they are both equally divided into many Parts.

Further, if the Nature of the Soul be immortal, and is infused into the Body when a Child is born, why do we remember nothing of the Life we led before? nor retain any Traces of Things done long ago? For if the Power of the Soul be so utterly changed, that all Recollection of past Actions is entirely gone, this kind of Oblivion is
Non (ut opinor) id ab letho jam longiter errat.
Quapropter fateare necessè fùt, quæ fuit ante,
Interiisse : Et quæ nunc est, nunc esse creatam.
Præterea, si jam perfecto corpore nobis
Inferri solita fùt Animi vivata potestas,
Tum cum gignimur, & vitæ cum limen inimus :
Haud ita conveniebat, uti cum Corpore, & ìnd
Cum membri videatur in ipfo sanguine crèße :
Sed velut in cavea, per se fìbi vivere solam
Convenit, ut fensu Corpus tamen affluat Omne.
Quare etiam atque etiam nec originis esse putandum fùt
Experteis Animas, nec leghi lege solutas.
Nam neque tantopere adneti poituisset putandum fùt
Corporibus nostris extrinsecus insinuatas :
Quod fieri totum contrà manifeṣta doct res.
Namque ita connexa fùt per Venas, Viscera, Nervos,
Ossaque, uti Dentes quoque sensu participentur :
Morbus ut indicat, & gelidai stringor aquāi,
Et lapid oppressus sub dente è frugibus asper :
Nec tam contextae cum sint, exire videntur
Incolumes possè, & salvas exsolvère sèse
Omnibus è Nervis, atque Offibus, Articulisque.
Quod si fortè putas extrinsecus insinuatam
Permanare
Book III. Of the Nature of Things.

(I think) not far removed from Death itself. We must needs allow therefore, that the Soul that was before utterly perished, and that which now is was newly created.

But, when the Body is completely formed, when we are born, and enter within the Door of Life, if then the vital Power of the Soul were infused, it would have nothing to do to grow up together with the Body and the Limbs, and be united with the very Blood, but, as it were in a Cage, it would live entire of itself, and so diffuse the Faculties of Sense through all the Body. Again then and again it must be said, that the Soul is neither without Beginning, nor exempt from the Laws of Death; for we cannot conceive that the Soul, when infused from without into the Body, could be so nicely and closely united to the several Parts of it, as the Thing itself evidently proves she is. She is indeed so diffused through the Veins, the Bowels, the Nerves, and Bones, that even the Teeth are not without Sense. This appears from the acute Pain we feel from the Chillness of cold Water, or the grinding of a rough Stone when we eat. The Soul therefore being so closely connected with the several Parts, cannot be supposed to depart whole, or deliver herself entire from the Bones and Nerves, and Joints of the Body.

*But if you think the Soul is infused from

If the Soul were infused into a perfect Body, it ought to have been done in such a manner that it might be in that Body like a Bird in a Cage, not as it now is when it seems to grow, and be so much of a piece with it, that it cannot be safe and whole out of it.

*Let us grant, says the Poet, that the Soul is first formed, and infused afterwards, yet it must of necessity suffer Change, as it passes thro' all the different Mazes and Pores of the Body, and consequently is mortal.

without,
Permanare Animam nobis per membra solere;
Tanto quæque magis cum corpore fusa peribit; 700
Quod permanat enim, dissolvitur: Interit ergo.
Dispertitur enim per caulas Corporis omnis:
Ut cibus in membra atque artus cùm diditur omnis,
Disperit, atque aliam naturam sufficit ex se:
Sic Anima atque Animum quamvis integra recens in
Corpus eunt, tamen in manando dissolvuntur; 706
Dum quasi per caulas omnis diduntur in artus
Particulae quibus haec Animi natura creatur:
Quæ nunc in nostro dominatur Corpore nata
Ex illa, quæ tunc peritât partita per artus. 710
Qua propter neque natali privata videtur
Essè die natura Anima, neque funeris expers.
Semina præterea linquuntur, necne, Animæ
Corporis in examino? quod si linquuntur, & insunt,
Haud erit, ut meriti immortalis possit haberi; 715
Partibus amissis quoniam libata recellit.
Sin ita sinceris membris ablata profugit,
Ut nullas partis in Corpore liquerit ex se:
Unde cadaver a rancenti jam viscere vermis
Expirant? atque unde animantum copia tanta 720
Exos, & exsanguus tumidos perfluabat artus?
Quod si forte Animas extrinsecus insinuari
Vermibus, & privas in corpora posse venire
Credis, nec reputas cur millia multa Animarum
Conveniant, unde una recesserit: Hoc tamen est ut 725
Quærendum videatur, & in discrimen agendum:
Utrum tandem Animæ venentur semina quæque

Vermiculorum,
Book III. Of the Nature of Things.

without, and so spread over all the Limbs, she is for this reason still more liable to perish with the Body; for a Thing that flows through so many Passages is dissolved, and therefore dies, for she must be thus divided through all the Pores: And as the Food, when it is distributed through the Members and the Limbs, loses its first Form, and takes up another quite different, so the Soul, tho' it enters whole and fresh into the Body, yet, in passing through, its Parts are dissolved, because the Particles of which the Soul is formed must be diffused through all the Pores into all the Body; and that Soul which now rules and governs the Body, is produced from that which perished, and was dissolved in passing through into the Limbs. The Nature of the Soul therefore is neither without Beginning, nor free from Death and Dissolution.

Besides, in a dead Body some Particles of the Soul remain, or they do not. If they do remain and abide in it, you can by no means properly say she is immortal, because she withdrew with her Seeds divided, and with some of them left behind. But if she retired from the Body with all her Parts whole, and left none of her Seeds behind, how comes the Carcass to breed so many Worms in the corrupted Bowels? And whence do such Abundance of Creatures without Bones and Blood swarm over the bloated Limbs? But if you fancy that Souls formed without creep into these Worms, and every single Worm has a particular Soul, nor think it strange that so many thousand Souls should flow together from without, to the Place from whence one departed, yet it is proper to enquire and to examine into This, Whether every particular Soul searches into the
Vermiculorum, ipsæque sibi fabricentur abisint:
An jam corporibus perfectis insinuentur.
At neque, cur faciant ipsæ, quareve laborent, 730
Dicere suppediit, neque enim, sine corpore cùm sint,
Sollicitæ volitant morbis, algoque, fameque.
Corpus enim magis bis vitiiis adfìne laborat:
Et mala multa Animus contage fungitur ejus.
Sed tamæ bis esto quamvis facere utile Corpus, 735
Cùm subeant: At qua possint, via nulla videtur.
Haud igitur faciunt Anima sibi corpora, & artus.
Nec tamæ est ut jam perfectis insinuentur
Corporibus: Neque enim poterunt subtiliter esse
Connexæ; neque consensu contagia fient. 740
Denique cur acris violentia triste Leonum
Seminium sequitur: Dolu Volpibus, & fuga Cervis.
A patribus datur, & patrius pavor incitat artus?
Et jam cætera de genere hoc, cur omnia membris
several Seeds of the Worms, and chooseth for itself what Seeds are most proper to make itself a Body, or whether she enters into a Body already formed. But there is no Reason to be given why she should build a Dwelling for herself, and go through such Fatigue; especially since, disentangled from Matter, she cannot be tormented with Diseases, with Cold and Hunger; for Body only can labour under these Calamities, and the Soul suffers many such Distresses only by her Conjunction with it. But allow it convenient for Souls to fashion out Bodies for themselves to dwell in, yet there is no way possible for them to do this. They do not therefore make up Bodies and Limbs for themselves, nor are they infused into Bodies ready made; for they could not be so nicely united as to inform every Part of the Body, nor could the vital Motions be mutually carried on between them.

Besides, *Why does fierce Rage affect the fullen Breed of Lions? Why is Craft derived to the Fox, and Flight to Stags from their Sires, and Paternal Fear gives Wings to all their Limbs? Whence come other Passions of this kind? Why*

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*a Here he attacks the Doctrine of Pythagoras and Plato: If these immortal Souls, says he, had so often been shifted out of one Animal into the Body of another, the natural Dispositions of the Animals would by little and little have been altered and changed; which we see they are not, but continue the same: If you say, that of whatever kinds the Souls are, they change their Nature, and put on the Manners that agree with the Bodies into which they enter; he answers, whatever can be changed is mortal. If it be pretended, that Human Souls pass into Human Bodies, why does that Soul that behaved wise in the Body of a Man at full Age, play the fool as it does when infused into the Body of a Child? Does the Mind grow weak in a weak Body? If it does, it is changed; and a Thing so frequently changed cannot be immortal.*
Ex ineunte ævo ingenerascunt, inque genuntur, 745
Si non certa suo quia semina feminioque
Vis Animis pariter crescit cum corpore toto?
Quod si immortalis foret, & mutare soleret:
Corpora, permìstis animantes moribus essent:
Esflugeret Canis Hyrcano de semine sepe
Cornigeri incursum Cervi, tremeretque per auras
Àëris Accipiter fugiens veniente Columba:
Désperent Homines, faperent fera sæcla Ferarum.

Illud enim falsa fertur ratione, quod aiunt,
Immortalém Animam mutato Corpore fleeti:

Quod mutatur enim, dissolvitur: Interit ergo.
Trajiciuntur enim partes, atque ordine migrant.
Quare dissolvit quoque debent possè per artus,
Denique ut interesant unà cum Corpore cunctè.

Sin Animas hominum dicent in Corpora semper
Ire humana, tamèn quæram cur è sapienti
Stulta queat fieri, nec prudens sit puer ullus?
Nec tam doctus equæ pullus, quàm fortis equi vis?
Si non certa suo quia semina, feminioque
Vis Animis pariter crescit cum Corpore toto.

Scilicet in tenero teneràscere Corpore Mentem
Confugient; quod si jam sit, fateare nesse sit,
Mortalem esse Animam, quoniam mutata per artus
Tantopere amittit vitam, sensumque priorem.

Quo ve
do they belong to all Creatures from their tender Age, and seem born with them, if the peculiar Powers of the Soul were not produced from peculiar Seeds in every particular kind, and did not they grow up together with the whole Body? But were the Soul immortal and used to change her Body, Creatures would be strangely confused in their Dispositions and Qualities; the fierce Dog of Hircanian Breed would fly the Attack of the horned Stagg, and the fearful Hawk would tremble in the Air at the Approach of the Dove; Men would be void of Reason like Brutes, and the savage Race of Beasts might become Philosophers.

But what is said in this Case is supported by false Reasoning; that the immortal Soul is changed according to the different Body it is united with; for what is changed is dissolved, and therefore dies; the Parts are transposed, and vary in their Situation. It follows therefore, that the Principles of it may be dissolved through the Limbs, and may all perish together with the Body. But they cry, that the Souls alway pass into Bodies of the same kind, the Souls of Men into the Bodies of Men; then I would ask why a Soul from being wise should become a Fool, and a Child is not made a Privy Counsellor? and why a young Colt has not the Paces of a full-grown Horse? If the peculiar Powers of the Soul were not produced from peculiar Seeds in every particular kind, and did they not grow up together with the whole Body? They'll say perhaps, that the Mind becomes equally weak in a tender Body; if so, they must allow the Soul to be mortal, because, when infused into the Body it is so much changed, it loses the Life and Sense it enjoyed before.

And
T. Lucretii Lib. III.

Quoove modo poterit pariter cum Corpore quoque Confirmata cupitum etatis tangere florem 771 Vis Animi, nisi erit consors in origine prima? Quidve foras sibi vult membris exire seneatis? An metuit conclusa manere in Corpore putri? Et domus etatis spatio ne fessa vetusto 775 Obruat? At non sunt Immortali uilla pericla.

Denique connubia ad Veneris, partusque ferarum. Esse Animas præsto, deridicum esse videtur: Et speßare immortaleis mortalia membra Innumero numero, certarque praèproeranter 780. Inter se qua prima, potissimaque insinuetur: Si non fortè ita sunt Animarum fædera patta, Ut, qua prima volans advenuerit, insinuetur Prima, neque inter se contendant viribus bilum.

Denique in ætheræ non Arbor, non æquore in alto 785 Nubes esse queunt, nec Pisces vivere in arvis, Nec Cruor in lignis, nec saxis Succus inesse. Certum ac dispostum igit, ubi quicquid crescat, & insit:

Sic Animæ natura nequit sine Corpore oriri Sola, neque à nervis, & sanguine longius esse. 790 Hoc si posset enim, multò priùs ipsa Animi vis In Capite, aut Humeris, aut imis Calcibus esse Posset, & innasci quavis in parte soleret: Tandem in eodem homine, atque in eodem vaso maneret.

Quod
And why should the Powers of the Soul desire passionately to grow and attain to a full Maturity of Age together with the Body, if it were not a Companion with it from the very Beginning? And why is the fond of flying away out of old decayed Limbs? Is she afraid of being confined a close Prisoner in a rotten Body, and left her old Tabernacle, worn out by Time and Age, should fall and crush her to pieces? But no Danger can affect a Nature that is immortal.

Besides, it is ridiculous to suppose, that a Flock of Souls are ready hovering about, whilst Brutes are in the Act of Luft, and drop their Young, that they, immortal as they are, should attend upon perishing Bodies, in Troops without Number, hurrying and coming to Blows as it were, which first should get possession and enter in; unless perhaps they rather choose to agree among themselves, that the first come should be first served, and there should be no further Dispute about it.

Again, there are no Trees in the Sky, no Clouds can be in the deep Sea, nor can Fish live in the Fields, nor can there be Blood in Wood, nor Moisture in Stones. It is fixed and established where every thing should grow and subsist. The Soul therefore cannot come into Being alone without the Body, nor can she exist separately without the Nerves and the Blood; if this could be, the Powers of the Soul, you would rather feel sometimes in the Head or Shoulders, or even in the very Bottom of the Feet, or in any other Part of the Body, and so you would perceive it diffusing itself through the whole Body; as Water poured into a Vessel first covers one Part, then spreads over the whole. Since therefore
Quod quoniam in nostro quoque constat Corpore certum

Dispositumque videtur, ubi esse, & crescere possit

Serorum Anima, atque Animus: Tanto magis in- 

ciandum

Totum possi extra Corpus durare, genique.

Quare, corpus ubi interiit, perisse necesse est

Confiteare animam distraéam in Corpore toto. 800

Quippe etenim Mortale Æterno jungere, & unde

Consentire putare, & fungi mutua posse,

Despere est: quid enim diversius esse putandum est,

Aut magis inter se disjunctum, discrepatisque,

Quam, Mortale quod est, Immortali, atque perenni

Junctum, in concilio saevas tolerare procellas? 806

Praterea, quaecunque manent Æterna, necesse est,

Aut quia sunt Solido cum corpore respuere istus,

Nec penetrare pati fibi quicquam, quod queat

aréfas

Dissociare intus parteis; ut Materiae:

Corpora sunt, quorum naturam ostendimus ante;

Aut ideo durare ætatem posse per omnem,

Plagarum quia sunt expertia, sicut Inane est;

Quod manet intaétum, neque ab istu fungitur bilum:

Aut ideo, quia nulla loci sit copia circum,

Quò quâs res possint discedere, dissoluâtque:

Sicut Summarum Summa est æterna, neque extra

Quis locus est, quò diffugiat: neque corpora sunt,

qua

Possint incidere, & valida dissolvere plaga:
fore there is a proper and determinate Place in
this Body of ours, for the Mind and Soul distinctly
to Be and increase in, we have the more reason
to deny that they can continue or be born without
it; and consequentially when the Body dies, the Soul
diffused through the whole Body must be allow-
ed to die likewise.

And then to join a mortal Nature to an im-
mortal, and to think they can agree together,
and mutually unite in their Operations, is Folly
and Nonfence; for what can be conceived more
absurd, what can be more impracticable in itself,
more disagreeing to Reason, than a mortal Na-
ture joined to one eternal and immortal, and so
united as to be liable to all the Pains and Distref-
ses of Human Life?

Besides, whatever is immortal must be so,
either because it is solid, and cannot be affected
by Blows, so that nothing can pierce it, and
break through the close Union of its Parts, (fuch
are the first Seeds of Matter, as we proved be-
fore;) or it is eternal, and lafts for ever, because
it is free from Stroke, as a Void is, which is not
liable to Touch, nor affected by the Force of
Blows; or lastly, because there is no Space any
way about it into which its broken Parts can be
dispersed, (in this Senfe the Universe is eternal;
beyond which there is no Place where its Parts
may retire, nor any Bodies to fall upon it, and
dissolve and break it to pieces by mighty Blows

Whatever is immortal is so, either by reason of its Soli-
dity as an Atom, or because it is free from Stroke, as the
Void, or because there is no Place out of which or from
whence any Bodies can come to dafl it to pieces, or into
which its dissolvd or broken Parts can retire, as the Uni-
verse; but the Soul is nothing like any of these; it is compo-
sed of Seeds, and therefore not perfectly solid; it is not a
Void, because it affects the Body, and in its turn is affected
by it; and it is not the Universe, therefore it is mortal.

from
At neque (uti docui) Solido cum corpore Mentis 820
Natura "f, quoniam admisistum "f in rebus Inane;
Nec tamen est ut Inane : neque autem corpora defunt,
Ex infinito quae consistunt fortè coorta
Pronuere banc Mentis violento turbine molem,
Aut aliam quamvis cladem importare pericli : 825
Nec porro natura Loci, spatiumque Profundi
Deficit, exspergi quod possit vis Animai,
Aut alia quavis possit vi pulsâ perire :
Haud igitur lehdi praecursa "f janua Menti.
Quod igitur ideo magis immortalis babenda "f,
Quod lethalibus ab rebus munia tenetur ; 831
Aut quia non veniunt omnino aliena salutis:
Aut quia quæ veniunt, aliqua ratione recedunt
Pulsâ prius, quam, quid noceant, sentire queamus :
Scilicet à vera longè ratione remotum "f. 835
Præter enim quâm quod morbis tum Corporis agrit,
Advenit id, quod eam de rebus sepe futuris
Macerat, inque metu male habet, curisque fatigat :
Præteritisque admissa annis peccata remordent.
Adde furorem Animi proprium, atque oblivia rerum,
Adde quod in nigras Lethargi mergitur undas. 841
Nil igitur Mors est, ad nos neque pertinent bilum,
Quandoquidem natura Animi mortalis habetur :
Et velut antealio nil tempore sensimus agri,
Ad conflagendum venientibus undique Panis; 845

Omnia
Book III. Of the Nature of Things.

from without.) But, as I said, the Nature of the Mind is not solid, because there is empty Space in all compound Beings; nor yet is it a Void, nor are there wanting Bodies for ever beating upon it from without, and driving the whole Frame of this Mind by impetuous Force into utter Dissolution, or to distress it any other way with extreme Danger; nor is there any Want of Place or Space where the Seeds of the Soul may be dispersed, or where they may be dissolved by any Violence whatsoever. The Gate of Death therefore is not barred against the Soul.

But if you think she may the rather be pronounced immortal, because she is placed secure from Things that may destroy her Being, or that Things opposite to her Safety never come near her, or if they do, they are diverted by some Cause, before you perceive they have done her any signal Injury; this is a great Mistake, and far from Truth: For, not to mention how she sickness with the Diseases of the Body, how something happens that torments her about future Events, how she is disorder'd by Fear, and vexed by Cares, and how the Conscience of Crimes past many Years ago, pierces her through; consider the peculiar Distraction that affects the Mind, how she forgets every thing, and is overwhelmed by the black Waves of a Lethargy.

Death therefore is Nothing, nor is it of the Consequence of a Rush to us, since the Nature of the Soul is certainly mortal; and as we were no way concerned at what formerly happened when the Carthaginians muster'd their Armies on all sides

As the Carthaginians Wars gave us no Trouble who were not born in those Days, so, since the Soul is mortal as well as the Body, no Wars, Cares or Afflictions will torment us after Death.
T. Lucretii Lib. III.

Omnia cum belli trepido concussa tumultu
Horrida contremuere sub altis aetheris auris;
In dubioque sult sub utrorum regna cadendum
Omnia humanis esset, terraque marique:
Sic ubi nonerimus, cum Corporis, atque Animal
Discidium fuerit, quibus est sumus uniter apti,
Scilicet baud Nobis quicquam, qui non erimus tum,
Accidere omnino poterit, sensumque movere:
Non sit terra mari miscebitur, & mare caelo.

Et si jam nostro sentit de Corpore, posse quam
disraeta est Animi natura, Animaque potestas:
Nil tamen hoc ad Nos, qui cætu, congregioque
Corporis, atque Animal consitisimus uniter apti.
Nec, si materiam nostram coniugerit ætas
Post obitum, rursumque redegerit, ut sita nunc est;
Atque iterum Nobis fuerint data lumina vitae.
Pertinacat quicquam tamen ad Nos id quoque factum,
Interrupta semel cum fit repetentia nostra.
Et nunc nil ad Nos de nobis attinet, antè
Qui fuimus, nec jam de illis Nos afficit angor.
Quos de materia nostra nova proferet ætas:
Nam cùm respicias immensi temporis omnem
Præteritum spatium, tum motus Materiae
Multimodi quàm sint; facile hoc adcedere possis,
Semina sépe in eodem, ut nunc sunt, ordine posta:
Nec memori tamen id quimus deprehendere mente.
Inter enim Jesu est vitae pausa, vagàque
Deerrannunt possim motus ab Sensibus omnes:

Debet
against us, and all the World trembled, and shook with the dreadful Alarms of War, and it was undecided under the Power of which Empire the Land and the Sea, and all Things here below should be subjected; so, when we shall be no more, when the Separation happens between the Soul and the Body, which together make up our Being, Nothing shall befall us who then shall no where be, nor affect our Sense; not tho' the Earth be swallowed up by the Sea, and the Sea confounded with the Heavens above.

But if the Nature of the Soul, and the Powers of it, when divided from the Body, had the Faculty to think, this would signify nothing to us, who are formed and compounded by a strict and inseparable Union of Soul and Body together.

Nay, if Time could collect together our scat-ter'd Particles after Death, and reduce them into the same Frame they are now in, and the Light of Life were again bestowed upon us, can all this, if it were done, relate any thing to us, when all the Memory of past Life were interrupted and gone? And now we give ourselves no Trouble about what we were formerly, nor are we under any Anxiety what Persons the Time to come will raise from our Matter, when it is moulded up again; for when you look back upon that infinite Space of Time that is past, and consider how various are the Agitations of Matter, you will easily believe those Seeds of ours have been often ranged in the same Order they are now in, tho' we can recollect nothing of what was then trans-acted; for a Pause of Life is thrown in between, and the Seeds, so variously tossed about, took such Motions as were averse and opposite to all Sense.

For
Debet enim, miserè quòi fortè agrèque futurum fì, Ipse quoque esse in eo tum tempore, cum male possit Accidere: At quoniam mors eximit im, prohibetque, Illum, cui possint incommoda conciliari. 877
Hec cædem, in quibus & nunc Nos sumus, ante fuiffe ;
Scire licet Nobis nihil esse in morte timendum :
Nec miserum fieri, qui non est, posse : neque bilum Differre, an nullo fuerit jam tempore natus, 881
Mortalem vitam mors cui immortalis ademit.

Proinde ubi se videas hominem miserarier, ipsum,
Post mortem fore, ut aut putrescat corpore pòsto ;
Aut flammis interfiat, malisve ferarum : 885
Scire licet, non fìncerus nonere, atque subesse
Cæcum aliquem cordi stimulum, quamvis neget ipse
Credere se quemquam fìbi Sensum in morte futurum.
Non (ut opinor) enim dat, quod promittit ; & inde
Nec radicitus è vita Se tollit, & eicit ; 890
Sed facit esse Sui quiddam super inscius ipse.
Vivus enim Sibi cùm proponit quisque, futurum
Corpus uti volucres lacerent in morte feraæque ;
Ipse Sui miseret : neque enim Se vindicat bilum,
Nec removet satis à proiecto corpore : & illud 895
Se fingit, sensuque suo contaminat adstans.

Hinc indignatur Se Mortalem esse creatum,
Nec videt, in vera nullum fore morte alium Se ;
Qui posset vivus fìbi Se lugere peremptium,
Stansque jacentem, nec lacerari, urive dolore. 900
Nam fì in morte malum fìt malis morfuque ferarum

Trañari,
For whoever is to become wretched and miserable, must exist at that very time when such misfortunes are to fall upon him; but since Death puts an end to his Being, and hinders the Man from feeling those misfortunes which we the living endure, it is plain that we have nothing to fear in Death, and none can be unhappy who are not in Being; nor is it of the consequence of this, whether such a one had ever been born, whose mortal Life immortal Death had once put an end to.

And then, when you see a Man lament himself, because his rotten Body shall after Death putrefy in the Earth, or be consumed by Fire, or by the Jaws of wild Beasts, this Man you must observe does not speak out, but has some secret Sting concealed at his Heart within, tho' he pretends to say that the Body has no Sense after Death; for I think he does not come up to his Word, nor believes that the Whole of him is deprived of Life when he dies, but, like a Fool, that something of himself remains still. When a Man alive torments himself, that Birds or Beasts will tear his Body to pieces after Death, he bemoans the Misery of his Fate, but does not fully distinguish, nor set himself at a proper Distance from his dead Carcase, he believes himself to be That, and rots with all his Senses about him. Hence it is he grieves that he was born mortal, nor sees that in Death there can be no other Self that can survive, and mourn over him after he is dead, that can stand by him as he lies along, or suffer Pain or Affliction for him.

For if it be an Evil to be crushed after Death by the Teeth and Jaws of wild Beasts, I do not

* He alludes to three different ways of Sepulture in use by the Ancients; some were burnt, some buried in the Earth, and some were put into Stone-Coffins filled up with Honey.
T. Lucretii Lib. III.

Traiectari, non invento qui non sit acerbum
Ignibus impostum calidis torrefcere flammis;
Aut in meli situm suffocari, atque rigere
Frigore, cum in summo gelidi cubat æquore saxi: 905
Urgerive superne obtritum pondere terræ.

At jam non domus accipiet te leta, neque uxor
Optima, nec dulces occurrent oscula nati
Præripere, & tacita pestus dulcedine tangent;
Non poteris factis tibi fortibus esse, tuisque
Præsidio: Miser! o miser! aiunt, omnia ademit
Una dies infesta tibi tot præmia vitae.
Illo in his rebus non addunt, Nec tibi earum
Jam desiderium insidet rerum insuper unā.
Quod bene si videant animo, diēsque sequantur: 910
Dissolvant animi magnō se angore, metuque.
Tu quidem ut es lepto sopitus, sic eris avi
Quod superest, cumis privatu doloribus ægris:
At nos horrisico cinesactum te propè busō
Insatiabiliter deslebimus, æternumque
Nulla dies nobis mœrem em pestore demet.
Illud ab hoc igitur querendum 'st, quid sit amari
Tantopere, ad somnum si res redit, atque quietem,
Cur quisquam æterno possit tabescere lucē?
Hoc etiam faciunt, ubi discubuere, tenentque
Pocula sēpe homines, & inumbrant ora coronis,
Book III. Of the Nature of Things.

See why his Fate is not equally wretched to be laid upon a burning Pile, and consumed to ashes, or to be suffocated with Honey, or to be stiff with Cold, as he lies upon the Top of a bleak Rock, or pressed with a heavy Weight of Earth upon him.

But now no more will your glad Family welcome you home, nor your best of Wives, nor sweet Children run to meet you, and strive who first shall have a Kifs, and make your Heart leap with silent Delight; no more shall you be a Defence to yourself and Friends by your brave Exploits: Ah Wretch, thou criest, Ah miserable Me! One woeful Day has robbed me of so many Blessings of my Life. But, in this Case, he never goes on and says, that the Desire of these Things is gone likewise. If Men would well consider, and accordingly express their Complaints, their Minds would be free from much Anxiety and imaginary Fear; for Thou sleeping in the Arms of Death, shalt lie for ever discharged from all Sorrow and Pain, but we shall never cease to lament Thee, reduced to Ashes, near thy sad Urn, and no Time shall remove our never-ending Grief from our Minds. Now I would gladly know if the matter be no more than sleeping and going to Rest, what there is so exceeding bitter in Death, that any one should upon that account pine his Life away in eternal Lamentation?

And yet This the gayest Part of Mankind do, even when they sit down at their Carousals, with Bumpers in their Hands, and their Heads crowned

*It was the Custom among the Greeks and Latins, at their Feasts and Entertainments, for the Guests, and even the Waiters to wear Garlands of Flowers upon their Heads. This they did, says Pliny, to dispel by the Fragrancy of the Flowers the Vapours and Heaviness that proceeded from too much Drinking.*

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crowned with Flowers; they turn serious and cry, Short is the Pleasure of us poor Creatures, we can just say it was, and once gone, it will never return more. As if the greatest Evil in Death to them was, that a parching Thirst should scorch the Wretches, and burn them up, or an insatiable Desire of any thing they love should follow them beyond the Grave. No Man gives himself any Concern about himself or his Life, when the Soul and Body are sleeping at Rest together (tho' we were to sleep so eternally) no Appetite for any thing we love best would then affect us; and yet then the Principles of the Soul are alive, and are moved almost with a sensible Motion within us, the Man roused from his Sleep soon recollects and recovers himself; Death therefore, we should imagine, would give us much less Anxiety than Sleep, if there can be less than what seems nothing at all; for there is in Death a wider Separation of the Seeds, nor does the Man ever wake, when once the cold Pause of Life comes upon him.

But if the Nature of Things should offer to speak of a sudden, and upbraid the Folly of any one of us in a manner like this: Pry thee, Man, why is it that thou indulgest thy self in such sharp Sorrow and Complaints? Why dost thou groan and weep because thou shalt die? If your Life past has been agreeable to you, and all the abundant Delights of it did not pass your Mind as through a Sieve, and perished without Pleasure to you, why do not you, as a Guest plentifully regaled with Life, take your leave; and, fond Fool! enjoy your sweet Repose with a cheerful Mind? But if the good Things thou hast received have been idly squandered and are gone, and Life is grown a Burden to you, why do you covet more, that may come to the same unhappy End, and vainly die away like
T. Lucretii Lib. III.

Rursum quod pereat male, & ingratum occidat omne:

Nec potius vitae finem facis, atque laboris?

Nam tibi praeterea quod machiner, invencionque
Quod placeat, nihil est: eadem sunt omnia semper.

Si tibi non annis Corpus jam marcet, & artus
Confettì languent: eadem tamen omnia restant, 960

Omnia si pergæs vivendo vincere sæcla:
Atque ctiam potiüs, si nunquam sis moriturus.

Quid respondeamus, nisi justam intendere litem
Naturam? & veram verbis exponere causam?

At qui obitum lamentetur miser amplìus æquo, 965

Non meritò inclamet magis, & voce increpet acri?

Aufer ab hinc lacrymas, Barathro, & compesse querelas.

Grandior bic verò si jam, Seniorque queratur:

Omnia perfructus vitae præmia, marces?

Sed quia semper aves, quod abest, præsentia temnis,

Imperfecta tibi elapsa est, ingrataque vita, 971

Et nec-opinati Mors ad caput adstitit antè

Quam satur, ac plenus possis discedere rerum.

Nunc aliena tua tamen Ætate omnia mitte,

Æquo animoque, agedum, jam aliis concede: ne-

cesse est. 975

Jure (ut opinor) agat, jure increpet, incilitque,
Cedit enim rerum novitate extrusa vestitas; 980

Semper & ex aliis alium reparare necesse est:

Nec quidquam in barathrum, nec tartara decidit atra.

Materies opus est, ut crescant postera sæcla:

Quae tamen omnia Te vita perfuncta sequentur.

Nec
like those that were before; and not rather put a period to thy Life and all thy Cares? For there is nothing further I can contrive or invent that can please thee more. Things always con-
tinue the same; if thy Body was not to decay by Years, nor thy Limbs grow feeble by Age, Things will ever remain the same, tho' thou wert to goon and live for ever, and much more so if thou wert never to die. What could we say but that Nature gave a very just Reproof, and set the Case in a very proper Light?

But the Wretch that deplores his Death be-
yond all Bounds, may not She deservedly cry out the louder upon such a one, and chide him in a sharper Note, Get thee gone with thy Tears, thou Booby, and leave sobbing. If he be an old Fellow, and far advanced that complains, Dost thou fret thy self that hast run through all the Delights of Life? Because thou art reaching after absent Pleasures, thou despisest the present, and so thy Life passes away imperfect, and without relish, and Death stares thee in the Face before thou art aware, before thou hast enough, and canst go off the Stage satisfied and full of Joy. It is high time to take thy leave of every thing that does not agree with thy Age; come, make way cheerfully for others, there is no help for it: I think Nature, upon such occasions, would act justly, and, by such a Rebuke, use him as he deserves; for old Things must be thrust off, and give way as new come, and one thing must needs be repaired by another; but nothing sinks into Hell, or descends into the dark Shades. There must still be a Stock of Matter to produce future Generations, all which likewise, when their Race is run, shall follow thee; nor did Things lefs
Nec minus ergo ante bæc, quæm nunc, cecidere, ca-
dentque:

Sic alid ex alio nunquam desistet oriri,
Vitaque mancipio nulli datur, omnibus usu.

Respice item quæm nil bil ad Nos antea étà ve-
tuías

Temporis æterni fuerit, quæm nasceitur antè.
Hoc igitur speculum nobis Natura futuri
Temporis exponit post mortem denique nostram:
Num quid ibi horribile apparat? num triste videtur
Quicquam? nonne omni somno securius existat?

Atque ea nimium, quæ cunctæ Acherunte profundo
Prodita sunt esse, in vita sunt omnia nobis.
Nec mifer impendens magnum timet aère saxum
Tantalus, ut fama sit, cæsa formidine torpens:
Sed magis in vita Divûm metus urget inanis
Mortaleis, casumque timent, quemcunque serat Fors.

Nec Tityon Volucres ineunt Acherunte jacentem,
Nec, quod sub magno scrutentur peñore, quidquam
Perpetuam ætem poterunt reperire profecto,
Quamlibet immani proiectu Corporis esset,
Qui non sola novem dispensis jugera membris
Obtineat, sed qui Terraï totius orbem:
Non tamen æternum poterit perferre dolorem,
Nec præbere cibum proprio de corpore semper:
pas away in the Ages before than they do now, and so shall they do for the Ages to come; for Beings never cease to rise from the Ruins of one another, and Life was given to none for a Property, but to all for Use.

Look back then, how that infinite Tract of Time that vanished before we were in Being, how it has no Relation to us; and the Nature of the Time to come will be of the same Concern to us after we are dead. And now does any thing shew dreadful in Death? Has it any thing melancholy in its Appearance? Is it not more serene than the softest Sleep?

And truly, all those dreadful Things that are said to be in the Shades below, are all felt by us whilst we are in this Life; nor is there, as they tell us, such a miserable Wretch, so stupified with idle Fear as Tantalus, who dreads the Fall of the huge impending Stone upon him from above; but rather a vain Fear of the Gods torments Men in this Life, and terrifies them with all the Ills that Fortune thinks fit to lay upon them.

Nor do the Vultures dig into the Bowels of Tityus, as he lies in Hell, nor can they find in that large Breast of his a Liver they shall be for ever tearing out, tho' his Body were ever so big, tho' he not only covered nine Acres with his expanded Limbs, but could spread them over all the Earth; yet he would not be able to bear eternal Pains, nor could he furnish an everlasting

Lucretius represents the Fable of Tantalus different from the common Fiction of the Poets; they place him up to the Chin in the River Eridanus, with Apples about his Head, but not admitted either to drink of the Water, or eat of the Apples. He follows their Opinion who say, that a Stone is hanging over the Head of Tantalus in Hell, the Fall of which he perpetually dreads.
Sed Titios nobis Hic est, in amore jacentem
Quem volucre lacerant, atque exest anxius angor;
Aut alia quavis scindunt cuppedine curæ.

Sisyphus in vita quoque nobis ante oculos est,
Qui petere à populo fasceis, sævæque secureis
Imbibit; & semper visitus, triestisque recedit: 1010
Nam petere imperium, quod inane est, nec datur unquam,
Atque in eo semper durum sufferre laborem,
Hoc est adverso nixantem trudere monte
Saxum, quod tamen à summo jam vertice rursum
Volvitur, & plani raptim petit æquora campi. 1015

Deinde animi ingrātam naturam pascere semper,
Atque explere bonis rebus, fatiareque nunquam,
Quod faciunt nobis annorum tempora, circum
Cum redeunt: fætusque ferunt, variisque lepores,
Nec tamen explemur Vitaæ fruætibus unquam; 1020
Hoc (ut opinor) id est, ævo florente puellas
Quòd memorant, laticem pertusum congerere in vas:
Quod tamen expleri nulla ratione potestur.

Cerberus & Furiae jam verò, & lucis egenus
Tartarus, horriferos eruētans fauciæ aditus, 1025
Hæc neque sunt usquam, neque possum esse profecto.
Sed metus in vita pænarum pro malefatis
Est insignibus insignis, scelerisque luæla
Carcer, & horribilis de saxo faētæ deorsum,
Verbera, Carnifices, Robur, Pix, Lamina, Tædæ:
Meal out of his Body. But that Man is Tityus, whom by Love oppressed the Birds of Prey devour, and piercing Sorrow eats through, or any other impetuous Passion tears in pieces.

Sisyphus walks visibly before us in this Life; it is he who sets his Heart to court the People for Honours, for the Rods and cruel Axes, and is ever repulsed, and retires sad and disappointed; for in vain to hunt after empty Power, which is never obtained, and to suffer the hardest Labour in the Pursuit of it; This is to thrust with all one's might the Stone up the Hill, which again tumbles down upon us from the Top, and rolls swiftly into the Plain below.

And then to be always obliging an ungrateful Mind, to be ever pouring Favours upon it, and never satisfy it, which the Seasons of the Year, as they turn about, are always doing; they produce their Fruits, and the whole Variety of their Delights, and yet we are never filled with the Blessings of Life. This, I think, is what they feign of the young Maids below, that they pump Water into a leaky Vessel, which all their Labour can never raise to the Top.

Besides, Cerberus, and the Furies, and Hell void of Light, belching dreadful Flames from its Jaws, there are no such Things in Nature, nor ever can be; but the Fear of fore Punishment in this Life for distinguished Crimes, and the Rewards of Villainy affright us: The Prison, the terrible Fall from the Tarpeian Rock, Stripes, Executioners, the Gallows, melted Pitch, Saws,

A common Dictionary will explain the History of all these Fables, and give an Account of those illustrious Persons he mentions. He means here the fifty Daughters of Danaus King of the Argives.
Qua tamen & si absunt, at Mens sibi conscia faeit
Prametuens, addibet stimulos, torretque flagellis;
Nec videt interea, qui terminus esse malorum
Possit, nec que sit pænarum denique finis:
Atque eadem metuit magis bæc ne in morte gra
vescant:

Hinc Acheronica fit Stultorum denique vita.

Hoc etiam tibi Tute interdum dicere possis:
Luminauis oculis etiam bonus Ancu reliquit,
Qui melior multis, quàm, Tu, fuit Improbe, rebus.
Inde alii multi reges, rerumque potentis
Occiderunt, magnis qui gentibus imperitârunt.

Ille quoque Ipse, viam qui quondam per mare
magnum

Stravit, iterque dedit legionibus ire per altum,
Ae pedibus falsas docuit super ire lacunas:
Et contemnit, aquis insultans, murmura ponti,
Lumine ademto, animam moribundo corpore fudit.

Scipiades, belli fulmen, Carthaginis horror,
Ossa dedit terrae, proinde ac famul insimus effet.
Adde repertores doctrinarum, atque leporum,
Adde Heliconiadum comites, quorum unus Ho
merus
Sceptra potitus, eadem aliis fopitu' quiete sit:
Denique Democritum postquam matura vetusfas
Admonuit memorem matut languescere Mentis,
and suffocating Smoke; and if there be none of these, yet the Mind, conscious of Guilt, is ever in dread of these Tortures, it stings us to the Heart, and lashes us with Rods, not to be endured: Nor has the Wretch a Prospect of any End to the Miseries he suffers, nor what can set Limits to his Punishment, and he fears lest these Tortures should fall the heavier upon him after Death; so that the Fools live as deplorable a Life as if they were really in Hell.

Thus then you may justly reason with yourself: The good King Ancus has long since bid adieu to Life, a better Man by much than such a Wretch as Thou, and so have many Kings and Potentates of the Earth, who ruled over mighty Nations.

Consider, even He, that He himself, who formerly made a Road over the wide Sea, gave a Passage to his Legions to march over it, and taught them to walk upon the salt Deep; who despised and insulted the Waves and the Roarings of the Ocean: This Xerxes, cover'd with Darkness, has breath'd his Soul out of his Body long ago.

Scipio, that Thunderbolt of War and Dread of Carthage, has given up his Bones to the Earth, as if he had been the meanest of Slaves.

Add to these the Founders of Arts, and the Inventers of Verse; add further the Companions of the Muses, the mighty Homer, the sole Sovereign of them all, he sleeps quietly in the same Grave with the rest.

Besides, when a ripe old Age gave Democritus warning that the Strength of his Mind decayed

When Democritus was worn out with Age, and seem'd to be near his Death, his Sister was one day complaining to him, that if he should die she should not perform her Vows.
Sponte sua letbo caput obvius obtulit ipse.
Ipse Epicurus obit decurso lumine vitae.
Qui genus humanum ingenio superavit, & omnis
Praetinixit, stellas exortus uti aetherius Sol.
Tu verò dubitabis, & indignabere obire,
Mortua quòi vita est prope jam vivo, atque videnti?
Qui somno partem majorem conteris ævi?
Et vigilans sertis, nec somnia cernere cessa,
Solicitamque geris caosa formidine mentem?
Nec reperire potes, quid sit tibi sæpe mali, cùm
Ebrius urgeris multis Misér undique curis,
Atque animi incerto fluitans errore vagaris?
Si possent Hominæ, proinde ac sentire videntur,
Pondus inesse Animo quod se gravitate fatiget,
Et quibus id fiat causis cognoscere, & unde
Tanta mali tanquam moles in pectore constet;
Haud ita vitam agerent, ut nunc plerumque vide-
mus.
Quid sibi quisque velit, nescire, & querere semper,
Commutare locum, quasi onus deponere possit.
Exit sæpe foras magnis ex adibus Ille,
Esse domi quem pertæsum sit, subitoque revertit:
Quippe foris nibilo meliùs qui sentiat esse.
Currit agens mannos ad villam Hic praècipitantor,
Auxilium testis quasi ferre ardentibus instans;
Osciát extemplo, tetigit, cùm limina villæ:
cayed, he met Death half-way, and cheerfully obeyed the Summons.

Epicurus himself, who excelled the whole World in Wisdom, and darkened all about him with his superior Luftre, as far as the bright mid-day Sun outshines the Stars, is dead, and his Light of Life run out.

Shalt thou then repine, and grieve to die, whose Life is little more than a Scene of Death whilst thou livest, with thy Eyes open? Who wearest the greater Part of thy Life away in Sleep, who fnoreft and art ever dreaming whilst thou art awake, and haft thy Mind always tormented with empty Fear, nor art able to find what is the Malady that troubles thee, when thou reeleft about, born down on all sides by the severest Misery, and wanderest in the uncertain Mazes of Doubt and Error?

But if Men would really consider, as they would be thought to do, that they are pressed down by the natural Weight of their own Minds, and find out the Causes whence This proceeds, and whence so heavy a Load of Evils torments their Breast, they would not spend their Lives as we now see they do, not knowing their own Desires, but every one striving to change his Situation, as if that was the way to eafe him of his Burden.

One, tired at home, leaves his noble Seat, and goes often abroad, but returns suddenly again; for he finds no Relief by shifting his Place. Another hurries and drives full-speed to his Country-house, as it was all o' fire, and he came to extinguish it; he no sooner sets his foot within the doors, but presently begins to yawn, or falls at the Festival in honour of Ceres; but he bid her take heart, and bring him every day some warm Loaves of Bread, by smelling to which he kept himself alive till that Solemnity was over, and then willingly died.

heavily
T. Lucretii Lib. III.

Aut abit in somnum gravis, atque oblivia quærit,
Aut etiam properans urbem petit, atque revisit.
Hoc se quisque modo fugit: At, quem scilicet, ut fit,
Effugere haud potis est, ingratìs hæret, & angit,
Propeterea, morbi quia causam non tenet æger:
Quam benè si videat: jam, rebus quisque relietis
Naturam primum studeat cognoscere rerum, 1085
Temporis æterni quoniam, non unius bore
Ambigitur status, in quo sit mortalibus omnis
Ætas post mortem, quae restat, cumque, manenda.

Denique tantopere in dubiis trepidare periclis
Quæ mala nos subigit vitae tanta cupidio?
Certa quidem finis vitæ mortalibus adstat,
Nec devitari lethum pote, quin obéamus.

Præterea, versamur ibidem, atque insumus usque:
Nec nova vivendo procuditur ulla voluptas.
Sed dum abest, quod avemus, id exsuperare vi-
detur.

Cætera: post aliquid, cùm contigit illud, avemus;
Et sitis æqua tenet vitæ semper bianteis:
Posteraque in dubio ſt fortunam quam vebat ætas,
Quidve ferat nobis casus, quive exitus infet.

Nec prorsum, vitam ducendo, deminis bilum 1095
Tempore de mortis, nec delibrame valemus,
Quo minùs esse diu possimus morte peremti.
Proinde licet quot vis vivendo condere sæcla,
Mors æterna tamen nibilominùs illa manebit:
Nec minùs Ille diu jam non ærit, ex bode Castro
Lumine qui finem vitæ fecit, & ille
Mensibus atque annis qui multis occidit ante.
heavily to sleep, and strives to forget himself, or else posts as hard back, and returns to Town again. Thus he tries all ways to fly himself, but that Self it is, as it must be, out of his power to escape; he sticks close to him against his will, and sorely torments him. The restless Fool does not know the Cause of his Disease, if he thoroughly did, every one would give up all other Pursuits, and apply chiefly to search into the Nature of Things; I do not mean to trouble himself about the Event of the present Hour, but inquire into the doubtful State of Eternity after Death, which is every one's Concern, and which must be the Lot of all Mankind.

Lastly, how many Evils does a fond Desire of Life oblige us so much to apprehend, tho' they may never happen? But there is a Boundary fixed to the Age of Man; we cannot avoid the Stroke of Death, die we must.

Besides, we are ever running on in a Circle of the same Actions, and ever pursuing them; nor does living on afford us any new Delight. The Pleasure we covet eagerly exceeds every thing we enjoyed before, as long as it is absent; but when we have it in possession, we long passionately for another, and the same Thirst of Life hangs upon us, still gaping for more; and yet we know nothing what the Time to come may produce, what Chance may happen to us, and how the Scene will end: Nor can we, by living forward, take off a Moment from the Length of Death, it will always shew as if we had been dead ever so long. Though you live ever so many Ages, the State of Death will be still eternal; and he that died to-day, is to all purposes as long dead, as he that died a thousand Years ago.

The END of the THIRD BOOK.
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The Argument.

thains, or of some monstrous Beast; the other, such as fly off from the Surface of Bodies, and are, as it were, the Films or Membranes of them. He calls them Exuviae Rerum, and then teaches that these Exuviae are perpetually flying off from the Surface of all Bodies, and are carried through the Air with such wonderful Celerity, that they exceed even the Rays of the Sun in Swiftness. The Sight being the principal of the Senses, he begins with that, and teaches that it proceeds from the Incursion and Striking of those Images upon the Eyes, in the same manner as the other Senses are caused by Corpuscles, that strike from without upon the several Organs of Sensation. He explains in the mean time all Things that relate to the efficient Causes of Sight, and proposes several Problems relating to Vision, which he solves with Truth and Propriety. But that no one, from the Explication of these Problems, might accuse the Senses of Deception or Fallacy, he at large asserts their Certainty, and by the way takes Occasion to confute the Sceptick, and lays it down as an indisputable Maxim, that all Truth is grounded on the Certainty and on the Belief of the Senses. He then proceeds to the other Senses, and insists that Voice and Sound are corporeal Images, which strike the Ear, and are the Cause of Hearing. He then explains the Nature of Voice, and the Manner of its Formation, and gives a Reason why the same Voice is heard by many Persons at once, and treats of what an Echo is, and what is the Cause of it. He then gives Instructions concerning Savour, and Taste, and Odour, and Smell; particularly what Savour and Odour are, and why all do not perceive them; why the same Food is sweet to some, and bitter to others; why one Odour is more agreeable to one, than it is to another; and why the same Voice strikes a Terror into some, and is agreeable, at least not frightful, to others. He proceeds to treat of Imagination and Cogita-
Cogitation, which he says are made likewise by the same most subtil Images of Things presenting themselves to the Mind: He then explains several Problems relating to Cogitation; why, for Example, we seem to see in our Dreams Persons who are dead; why the Images of Things seem to tarry with us, while we are thinking of the Things whose Images they are; why we think of a sudden upon whatever we will; why we seem to ourselves to move in our Dreams. He says the Tongue, the Eyes, the Nostrils, the Ears, and all the Organs of Sensation were made before the Use of them, quite contrary to what has happened in regard to all Artificial Things, the Invention of which succeeded the foreseen Want and Usefulness of them. He gives the Reason why Animals seek after their own Meat and Drink, why we move whenever we please, and explains what it is that actuates and drives forward the Bulk of our Bodies: He treats of Sleep and Dreams, and teaches in the first Place, how Sleep is caused in us, and in all other Creatures; then he assigns several Causes of different Dreams: At last, he falls upon the Subject of Venery; and to the End of the Book continues to treat of Love, of Barrenness, of Fruitfulness, and other Points relating to Generation, with more Freedom perhaps than is becoming: But Natural Philosophers generally allow themselves uncommon Liberties upon such Occasions.
T. Lucretii Cari

DE

RERUM NATURA.

LIBER QUARTUS.

Via Pieridum perago loca nullius antè
Trita solo, iuvat integros accedere fonteis;
Alq; haurire: iuvatq; novos decerpere flores,
Insignemque Meo capiti petere inde coronam,
Unde prius Nulli velardint tempora Musæ.

Primùm quòd magnis doceo de rebus, & arùis
Religionum animos nodis exsolvvere pergo;
Deinde, quòd obscura de re tam lucida pango
Carmina, museo contingens cuncta lepore:
Id quoque enim non ab nulla ratione videtur.

Nam veluti Pueris absynthia tetra Medentes,
T. Lucretius Carus,

OF THE

NATURE of THINGS.

THE

FOURTH BOOK.

INSPIR'D, I wander o'er the Muses Seats, of difficult Access, and yet untrod; I love to approach the purest Springs, and thence to draw large Draughts; I love to crop fresh Flowers, and make a noble Garland for my Head from thence, where yet the Muses never bound another's Temples with a Crown like mine. And first I write of lofty Things, and strive to free the Mind from the severest Bonds of what Men call Religion; then my Verse I frame so clear, altho' my Theme be dark; seasoning my Lines with the Poetic Sweets of Fancy, and Reason justifies the Method; for as Physicians when

* The first twenty-nine Lines of this Book, in which the Poet invites the Reader's Attention, are to be found near the latter End of Book the First.
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T. L u c r e t i i L i b. IV.

Cum dare conantur, priùs oras pocula circum
Contingunt mellis dulci, flavoque liquore,
Ut Puerorum ætas improvida ludioceitur

Laborum tenus, interea perpotet amarus

Absynthi laticem, deceptaque non capiatur;
Sed potiùs tali tactu recreata valescat.

Sic Ego nunc, quoniam bæc Ratio plerumq; videtur-
Tristior esse, quibus non est tractata, retroque
Volgens abhorret ab Hac; volui tibi suaviloquenti

Carmine Pierio rationem exponere nostram,
Et quasi Museo dulci contingere melle;
Si tibi forte animum tali ratione tenere

Versibus in nostris posse, dum perspicis omnem

Naturam rerum; ac persentis utilitatem.

Sed quoniam docui, cunctarum Exordia rerum

Qualia sint, & quam variis distantia formis
Sponte sua volitent æterno percita motu:
Quoque modo possint res ex bis quæque creari:
Atque Asini quoniam docui natura quid esset,

Et quibus est rebus cum Corpore compta vigeret;
Quoque modo distraëta rediret in Ordia prima:
Nunc agere incipiam tibi, quod vehementer ad bas res

Attinet, esse ea, quæ rerum Simulacra vocamus:
Quæ quasi Membranae summo de corpore rerum

Derepta volitant ultimo citroque per auras:

Atque
they would prevail on Children to take down a bitter Draught of Wormwood, first tinge the Edges of the Cup with sweet and yellow Honey, that to the Children's unsuspecting Age, at least their Lips, may be deceived, and take the bitter Juice; thus harmlessly betrayed, but not abused, by tasting thus they rather have their Health restored: So I, because this System seems severe and harsh, to such who have not yet discerned its Truth, and the common Herd are utterly averse to this Philosophy, I thought it fit to shew these rigid Principles in Verse, smooth and alluring, and tinge them, as it were, with sweet Poetic Honey, thus to charm your Mind with my soft Numbers, till you view the Nature of all Things clearly, and perceive the Usefulness and Order they display.

Now since I taught what are the first Principle of all Things, and how they differ in their Figures, and wander of their own accord, urged on by an eternal Motion, and how of them all Beings first are formed; and I have shewn the Nature of the Mind, of what Seeds composed, and how it exerts itself united with the Body, and separated from it, how it returns to its first Principles again: I shall now begin to explain what is of the nearest Concern to these Inquiries, and prove that there are what we call the Images of Things, which, like Membranes, or Films, flowing from the Surface of Bodies, fly every Way abroad through the Air. These, while we are

After he has recited the Subjects of his Inquiries in the preceding Books, he says, he will now treat of the Images, which, like Films and Membranes of Bodies, are perpetually flowing from the Surface of Things, and presenting their Species and Figures to us. If they come whole, and without Mixture, we then perceive Things that truly have a Being; if they come maimed, inverted, or joined to one another, from thence proceed the Phantasm of Centaurs, and the like Monsters, and sometimes too the Spectres of the Dead; for the Soul, we are told, dies with the Body.
T. L u c r e t i i L i b. I V.

Atque eadem nobis vigilantibus obvia menteis
Terrificant, atque in somnis, cùm sæpe figuras
Contuimur miras simulacraque luce carentum;
Quae nos horrificè languenteis sæpe sopore
Excierunt : Ne forte Animas Acheruntre reamur
Effugere, aut Umbras inter vivos volitare:
Neve aliquid nostrī post mortem posse relinqui,
Cùm Corpus simul, atque Animi natura peremta,
In sua discessum dederunt Primordia quæque.

40

Dico igitur, rerum Effigias, tenuisque figuras
Mittier ab rebus summo de corpore earum;
Quæ quasi Membrana, vel Cortex nominantanda òst,
Quod speciem, ac formam similèm gerit ejus Imago,
Quo jusunque cluet de corpore suà vagari.

50

Id licet binc quamvis bebeti cognoscere corde;
Principio, quoniam mittunt in rebus apertis
Corpora res multæ, partim diffusa solutè,
Robora seu Fumum mittunt, ignesque Vaporem:
Et partim contexta magis, condensaq; ut olim
Cùm veteres ponunt tunicas æstate Cicadae;
Et Vituli cùm membranas de corpore summo
Nascientes mittunt, & item cùm lubrica Serpens
Exuit in spinis vestem : Nam sæpe videmus
Illorum spoliis vepreis volitantibus aufltas.

55

Hæc quoniam sunt, tenuis quoque debet Imago
Ab rebus mitti summo de corpore earum.
Nam, cur illa cadant magis, ab rebusque recedant,
Quàm quæ tenuia sunt, biscedi òst nulla poteüas.
Præsertim cum sint in summis corpora rebus
Multas minutas, jacite possint ordine eodem
Quo fuerint, veterem & formæ servare figuram;

60

Et
Book IV. Of the Nature of Things.

awake, often rush upon our Minds and terrify us, and likewise sleeping, when we think we see strange Phantoms and Spectres of the Dead, which shake us horribly when fast asleep. For sure we are not to imagine, that the Souls are broke loose out of Hell, or that the Ghosts hover and play about the Living, or that any Part of us remains after Death; since the Soul and Body, once dissolved, return severally into their first Seeds from whence they were produced.

I say then, that Images or tenuous Figures are always flowing, or sent out from the Surface of Bodies, which may be called the Membranes or the Bark of Things; and these several Images bear the same Shape and Form, as the particular Body from whence they flow.

This requires no extraordinary Apprehension to conceive, for to give a plain Instance; many Things emit Bodies from themselves, some more rare and diffused, as Wood discharges Smoke, and Fire a Vapour; others more dense and compact, as when Grasshoppers in Summer cast their old Coats, and Calves new-born drop the Pellicules in which they are inclosed; or as the Winding Snake leaves his Skin among the Thorns, for the Briers we often see adorned with their light Spoils. This being so, it follows, that a very subtle Image may fly off from the utmost Surface of Bodies; for there can be no Reason given, why these, and not others more thin than these, may not fall off and be discharged; especially since in every Surface there are many minute Corpuscles, that may be cast off in the very same Order they are ranged in the Body, and so preserve their old Form and Figure; and

That is, the Image of their Form; for Form, according to Epicurus, is that which continually remains in the Surface of the Body, while the Image, as a Spoil, is continually flying away.
Et multo citius, quantò minus endopediri
Pauca queunt, & sunt in prima fronte locata.
Nam certè iaci, atque emergere multa videmus, 76
Non solum ex alto, penitusque, ut diximus ante,
Verum de sumi, ipsium quoque fiepe colorem:
Et volgò faciunt id lutea, ruflaque Vela,
Et ferrugina, cum magnis intenta Theatris
Per malos volgata, trabeisque trementia fluctant: 75
Namque ibi confessum Caveæi subter, & omnem
Scenæi speciem, Patrum, Matrumque, Deorumque,
Inficiunt, coguntque suo fluitare colore:
Et quantò circum mage sunt inclusa Theatri
Mænia, tam magis bæc intus perfusa lepore
Omnia conrident conrepta luce diei.
Ergo Lintea de summo cùm corpore súcum
Mittunt, Effigias quoque debent mittere teneuis
Res quæque, ex summo quoniam jaculantur utraque.
Sunt igitur, jam formarum vestigia certa, 85
Quæ vulgò volitant subtili praedita filo,
Nec singillatim poffunt secreta videri.
Præterea, omnis Odos, Funus, Vapor, atque aliœ res
Consimiles, ideo diffusæ rebus abundant,
Ex alto quia dum veniunt intrinsecus ortœ,
Seinduntur per iter flexum; nec reâa viaram
Ostia sunt, qua contendunt exire coortœ.
At contrà, tenuis summi membrana Coloris
Cum jacitur, nibil est, quod eam discerpere poffit,
In promptu quoniam, 75 in prima fronte locata. 95

Postremo
they are the readier to fly off, because they are small, and not so liable to be stopped, and are placed likewise upon the utmost Surface.

For it is certain, that many Particles are not sent out and get loose only from the middle and inward Parts, as we said before, but Colour itself is discharged from the Surface of Bodies. And so Curtains, yellow, of a deep red, or blew (as they hang in lofty Theatres, waving expanded on the Beams, and flowing on the Pillars with the Wind) do this; for they stain the Stage, the Scenes, the Audience, Senators, Matrons, and the Images of the Gods, and cause them to wave in their own gaudy Dye; and the more the Walls of the Theatre are darkened, and the Day-light shut out, every Thing within is spread over and shines out with a brighter Lustre. Since therefore these Curtains discharge their Colours from the Surface, all Things, by the same Rule, may emit subtle Images, for those are thrown off from the Surface as well as these.

There are therefore certain Images of Things, of a fine and subtle Contexture, that are always flying about, and are impossible severally to be discovered by the Eye.

Besides, all Smell, Smoke, Vapour, and other such Things fly off from Bodies in a diffused and scatter'd Manner, because as they pass to the Outside of Bodies from within, they are broken and divided by the crooked Pores they must make their Way through; the Road they are to take is full of Windings, as they attempt to rise and fly out; but, on the contrary, when the Membrane of Colour is thrown off, there is nothing to disorder it, because it lies disentangled upon the very Surface.

And

Colours get loose and are reflected from the Images of Things.
T. Lucretii Lib. IV.

Postremo, in Speculis, in Aqua, Splendoreque in omni

Quaecunque apparent nobis Simulacra necesse est,
Quandoquidem similis specie sunt praeda rerum,
Eesse in imaginibus missis consi stere eorum:
Nam cur illa cadant magis, ab rebusque recedant
Corpora res multae qua mittunt Corpore aperto,
Quam qua tenuia sunt, hiscendi est nulla potestias.
Sunt igitur tenues formarum, consimileique
Effigiae, singillatim quas cernere nemo
Cum possit; tamen assiduo, crebroque repulsu
Rejetae, reddunt Speculorum ex aequore visum:
Nec ratione alia servari posse videntur.
Tantopere, ut similes reddantur quoque figurae:
Nunc age, quam tenui natura consistet Imago,
Percipe: & imprimis quoniam Primordia tanta

Sunt infra nostros sensus, tantique minora,
Quam qua primium oculi capitant non posse tueri.

Nunc tamen id quoque uti confirmem, Exordia rerum
Cunctarum quam sint subtilia, percipe paucis.
And then since the Forms that appear to us in Looking-glasses, in Water, and all polished Bodies, are exactly like the Things whose Images they are, they must necessarily be composed of the Images that flow from the Substance of the Things themselves; for why those Particles should fall away, and be discharged from Bodies which are discovered by the Eye, rather than these that are more thin and subtle, no Reason can properly be assigned.

There are therefore tenuous and fine Shapes of the same Figure with the Things themselves, which, tho' they cannot singly be distinguished by the Sight, yet being reflected, and swiftly and constantly repelled from the smooth Plane of the Glass, become visible, nor can any other Reason be so properly offered, why Forms so like the Things are returned to us.

And now conceive, if you can, of what a tenuous and subtle Nature an Image consists; and for this Reason, in the first place, because the Seeds of Things are so much beyond the Reach and Discovery of our Senses, and are infinitely less than those Bodies that escape the Observation of the most curious Eye; as a Proof, how subtle the first Principles of Things are, attend to these short Observations.

Things in such a manner, as argues likewise the Direction and getting off of Images.

Since the Images, we see in Mirrors, in Waters, or in any smooth and polished Body, are exactly like the Things whose Images they are, therefore those Forms must necessarily be composed of the Images that flow from the Substances of the Things themselves; the very utmost Film, which before adher'd to the whole Thing, is separated from it, as it were a Membrane, and strikes into the Glass or Water. We are to observe, that the Image of each Thing, that is seen in the Glass, or in Water, is not single and one only, but many, which, nevertheless by being reflected to the Eyes by a never-ceasing Reverberation, seem not to be many, but only one.
T. L u c r e t i i L i b . I V .

Primum Animalia sunt jam partim tantula, eorum
Tertia pars nulla ut possit ratione videri.
Horum Intestinum quodcivs quale esse putandum est ?
Quid ? Cordis globus aut Ouli ? quid ? Membra ?
quid ? Artus ?
Quantula sunt ? quid ? praeterea Primordia quacve,
Unde Anima, atque Animi constitutione natura neces-
situm est,
Nonne vides, quam sint subtilia, quamque minuta ?
Praeterea, quacunque suau de corpore odorem
Excipiant acrem, Panaces, Absinthia tetra,
Abrotonique graves, & trisitia Centaurea :
Horum ununquodvis leviter si fortè ciebis,
Quamprimum nofcas rerum Simulacra vagare
Multa modis multis, nulla vi, cajfaque fenu.
Quorum quantula pars sit Imago, dicere nemo est
Qui possit, neque cam rationem reddere dixis.
Sed ne fortè putes ea demum sola vagare,
Quacunque ab rebus rerum Simulacra recedunt :
Sunt etiam, quae sponte sua gignuntur, & ipsa
Constituuntur in hoc caelo, qui dicitur aer :
Quæ multis formata modis sublimè feruntur,
Nec speciem mutare suam liquantia cefiant :
Et quoisque modi formarum vertere in ora.
Ut nubeis facilè interdum concrescere in alto
Cernimus, & mundi speciem violare serene,
Aëra mulcentesis motu : Nam fæpe Gigantum

Ora
AND first there are Animals so exceeding small, that one third Part of them cannot possibly by any means be discover’d. What are you to conceive of the Bowels of these Creatures? Of their little Hearts and Eyes? What of their Members? What are you to think of their Limbs? How very small are they? What besides of the Seeds which compose the Soul and Mind, don’t you imagine how subtile and minute they are?

BESIDES, Herbs that exhale a sharp Smell from their Bodies, such as All-heal, bitter Wormwood, strong Southernwood, and four Centaury, if you shake any of these ever so lightly, you may be sure many Particles fly off, and scatter every way, but without Force, and too weak to affect the Sense; yet how small and subtile are the Images that are formed from these, no one can conceive or express.

But left you should think, that the Images that fly off from the Surface of Bodies, are the only Things that wander abroad, there are other Shapes that are fashioned of their own accord, and are produced in the lower Region we call the Air; these are framed in various Manners, are carried upward, and being very subtile and less compact in their Contexture, are ever changing their Figure, and assume all Variety of Forms. Thus we see the Clouds sometimes thicken in the Sky, darkning the serene Face of the Heavens, and wounding the Air by the Violence of their Motion; now the Shape of Giants seem to fly abroad,

Since an Image consists only of those Particles that fly away from the Surface of Bodies, it surpasses all Belief, how subtile and tenuous an Image must be, especially since in a great Length of Time, nothing can be perceived to be exhaled or worn away.

He speaks now of another Sort of Images, which are certain Compositions or Coagamentations, that are formed in the Air of their own accord as so many Clouds, and do not indeed flow from the Things which they represent.
Ora volare videntur, & umbram ducere latè: 140
Interdum magni mohtes, avolsaque saxa
Montibus anteire, & solem succedere præter:
Inde alios trabere, atque inducere bellua nimbos.

Nunc ea quàm facili, & celeri ratione genantur,
Perpetuòque fluant ab rebus, lapsaque cedant. 145
Semper enim summum quidquid de rebus abundat,
Quòd jaculentur: & hoc alias cùm pervenit in res,
Transit, ut in primis Vestem: Sed in aspera Saxa,
Aut in materiem ut Ligni pervenit; ibi jam
Scinditur, ut nullum Simulacrum reddere possit. 150
At cùm, splendida quæ constant, opposta fuerunt,
Densaque, ut in primis Speculum: Æt: Nibil accidit
borum,
Nam neque uti vestem possit transire, neque ante
Scindi, quàm meminit labor præstare salutem.
Quapropter fit, ut bino nobis Simulacra genantur,155
Et quamvis subitus, quovis in tempore, quamque
Rem contra Speculum ponas, apparat Imago:
Perpetuò fluere ut noceas è corpore summo
Texturas rerum teneiis, teneisque figuris.
Ergo multà brevi spatio Simulacra genuntur,
Ut meritò celer bis rebus dicatur origo.

Et quasi multà brevi spatio summittere debet
Lumina Sol, ut perpetuò sint omnia plena:
Sic à rebus item simili ratione necessè Æt
Temporis in puncto rerum Simulacra ferantur 160

Multa
and project their Shadows all round; and then huge Hills, and Rocks torn from the Mountain-Top, are born before the Sun, and hide his Light. Others again advance and represent the Shape of Monsters wandring through the Sky.

Now learn in how easy and swift a Manner Reflection these Images are produced; how they continually fly and fall off from the Surface of Bodies; for there is always a Store of Forms upon the Outside of Things ready to be thrown off: These when they light upon some Things pass through them, as a Garment for instance; but when they strike upon sharp Rocks, or upon Wood, they are immediately broken and divided, so that no Image can be reflected; but when they are opposed by dense and polished Bodies, such as Looking-glass, then nothing of this happens; for they can neither pass through this as through a Garment, nor are they divided, before the Glass preserves their Figure perfect and entire. Hence it is, that these Forms are presented to our Sight; and place a Thing ever so suddenly, and in a Moment of Time, before the Glass, and the Image instantly appears. So that you find, there are subtle Textures of Things, and subtle Images continually flowing from the Surface of Bodies; and therefore many of these Forms are produced in a short Space of Time, and may be justly said to receive their Being from a very swift Motion.

And as the Sun is obliged to emit many of its Rays in an Instant, that the whole Air might be full of Light, so many Images of Things must needs be carried off in the smallest Point of Time,

That all Things may be full of Light, Rays must be continually emitted from the Sun; for the same Reason Images must likewise be perpetually flying away from Bodies; for which way soever you turn the Mirror, the Images of the opposite Things appear, nor do they ever disappear so long as those Things keep their Places.
T. Lucretii Lib. IV.

Multa modis multis in cunetas undique parteis:
Quandoquidem Speculum quiescunque obvertimus oris,
Res ibi respondent simila forma, atque colore.

Praterea, modò quom fuerit liquidissima cæli
Tempestas perquàm subitò sit turbida fade
Undique, uti tenebras omnès Acheruntia reari,
Liquisse, & magnas cæli compleffe cavernas.
Usque adeò tetra nimborum notæ coorta,
Impendent atrae formidinis ora superne.
Quorum quantula pars sit Imago, dicere nemo potit,
Qui possit, neque eam rationem reddere dìmis.

Nunc age, quàm celeri motu Simulacra ferantur,
Et quæ mobilitas ollis tranantibus auras
Reddita sit, longo ut spatio brevis hora teratur,
In quemcunque locum diverso numine tendunt,
Suavidicis potius, quàm multis versibus edam:
Parvus ut est Cycni melior canor, illum Gruum quàm
Clamor, in aetheriis dispersus nubibus Austeri.

Principio, pershares leveis res, atque minutas
Corporibus factas, celeris licet esse videre.
In quo jam genera Sit Solis lux, & vapor ejus,
Praterea quia sunt è primis facta minutis:
Quæ quasi truduntur, perque Aéris intervallum
Non dubitant transeire, sequenti concita plaga.

Suppeditatur enim conselîm lumine lumen,
Et quasi proteo simulatur fulgure fulgur,
Quapropter Simulacra pari ratione necesse est
Immemorabile per spatium transcurrere posse
Temporis in punito: primum quod parvo causa
Est procul à tergo quæ provebat, atq; propellat:
Deinde, quod usque adeo textura prædita rara
Mittuntur, facilì ut quasvis penetrare queant res,
Et quasi permanare per Aéris intervallum.

Praterea,
and scatter'd every way abroad; for place your Glass in what manner you please, the Things appear in the same Colour and Figure they really are.

So often, when the Face of the Sky is most serene and bright, it becomes on all Sides black and horrid of a sudden, that you would think the whole Body of Darkness had left the Regions below, and filled the wide Arch of Heaven; so dreadful does the Night appear from driving Clouds, and scatters gloomy Terror from above; but how small in Comparison of these Clouds, are the Images of Things, no one can conceive or express.

And now, with how swift a Course these Images are carried on, how suddenly they make their Passage through the Air, how they out-strip dull Time, wherever by various Motion they intend their Way, I choose in sweetest Numbers than in tedious Verse to shew: As the Swan's short Song is more melodious than the harsh Noise of Cranes, scattered by Winds through all the Air.

First then, we observe, that light Things, that are formed of small Particles, are very swift in their Motion; of this Sort, are the Rays and Heat of the Sun; because they are composed of very minute Seeds, which are easily thrust forward, as it were, through the interjacent Air, the following urging on the Part that went before; for one Beam of Light is instantly supplied by another, and every Ray is pressed on by another behind. By the same Rule, the Images may pass through an unaccountable Space in a Moment of Time: First, because there is always a Force behind to drive and urge them forward, and then their Texture, as they fly off, is so thin and subtle, that they can pierce through any Bodies, and, as it were, flow through the Air that lies between.

Besides,
it.

Lucretii Lib. IV.

Praeterea, si quae corpora rerum

Ac vapore, hæc pungo currant igna diei

Per totum celum diffundere se:

Ex alta in terras mittuntur, Solis utius,

Perque soleare mare, ac terras, cumque rigare

Ubi tarn volucrum haec levitate feruntur.

Quidque sunt sita jam præmio in fronte paradis.

Cum jactantur, et emisso res nulla moratur,

Nonne vides citius debere, et longius ire:

Quod omnem simulacra frangat simulacra

Carmina, et simulacra divo splendor

Ponitur, exemplum, ccelo Sellane, Serena

Sidere respondunt in Aqua radiantis mundi.

Ipsa eis etiam, quia pulvis tempore imago.

Si temperis autem, quae rerum accidit oderes

Inaquae, etiam etiam etiam necesse

Corpora, qua simulacra visumque lacessant:

Perpetuoque fluunt certis ab rebus Odores.

Et his in aequinis, Calor a sole, Aquas ab ubitus.
Besides, if those Corpuscles that lie in the inward Parts of Bodies are discharged from above down upon the Earth, such as the Light and Heat of the Sun; if these, we observe, descend in a Point of Time, and spread themselves through all the Expansion of the Air, and fly over the Sea, the Earth, and the upper Regions of the Heavens; if these are diffused with such wonderful Celerity, what shall we say? Those Particles that are always ready upon the utmost Surface of Things, when they are thrown off, and have nothing to obstruct their Motions, don't you see how those may fly swifter, and go further, and pass through a much greater Space in the same Time than the Beams of the Sun take up to make their way through.

Another notable Instance, which fully proves with how swift a Motion the Images are carried on, is this; As soon as a Bowl of clear Water is placed in the open Air, in a Star-light Night, the shining Stars are seen twinkling in the still Water; Don't you see therefore in what a Point of Time the Images descend upon the Earth from the upper Regions of the Air?

Again then, and again, you must allow that Particles are perpetually flowing from the Surface of Bodies, which present themselves to our Eyes and strike our Sight: From some Bodies a Train of Smells are always flying off; so Cold is emitted from the Rivers, Heat from the Sun, a

The Images pass more swiftly than the Rays of the Sun, because they are more subtle, and what conduces much to their Celerity, they flow from the Surface of Things, and easily disengage themselves and get off; but Heat and Light are emitted from the inward Parts of the Sun, and therefore cannot so easily get free.

This Flow or Streaming of Images into the Eyes, he says, must be granted, because certain Effluviums from other Things insinuate themselves into all the other Senses.
Æquoris, exseor marorum litora circum.
Nec variae cessant Voces volitare per auras:
Denique in os falsi venit humor sese Saporis,
Cum mare versamur propter: Dilutaque contra
Cum tumur miseri absintbia, tangit amoros. 225
Usque adeo omnibus ab rebus res quaque fluenter
Fertur: & in cunctas dimititur undique partis,
Nec mora, nec requies inter datur utta fluendi:
Perpetu quoiam sentimus, & omnia semper
Cernere, Odorari licet, & sentire Sonorem.

Præterea, quoiam manibus traxeata figura
In tenebris quædam, cognoscitur esse cadem, quæ
Cernitur in luce, & claro candore; necessa?st
Consimili causa Tætum, Visumque moveri.
Nunc igitur, si Quadratum tentamus, & id nos 235
Commovet in tenebris; in luci quæ poterit res
Accidere ad speciem, Quadrata nisi ejus imago?
Essè in Imaginibus quapropert causa videtur
Cernendi, neque possè fine bis res utta videri.

Nunc ea, quæ dico, rerum Simulacra feruntur 240
Undique, & in cunctas jacuuntur didita partis;
Verum, nos oculos quia solis cernere quimus,
Propterea fit, uti, speciem quò vertimus, omnes
Res ibi eam contra feriant forma, atque colore.

Et quantum quaque à nobis res abst, Imago 245
Efficit ut videamus, & internoscere curat.
Nam cum mittitur, extemplo protrudit, agitque
Aëra, qui inter se cumque?st, oculosque locatus;
salt Vapour from the Water of the Sea that eats through Walls along the Shore, and Sounds are always flying through the Air. Lastly, As we walk upon the Strand a salt Taste offends our Mouth; and when we see a Bunch of Wormwood bruised, the Bitterness strikes upon the Palate: So plain it is that something is continually flowing off from all Bodies, and is scattered all about; there is no Intermi§ion; the Seeds never cease to flow, because we still continue to feel, to see, to smell, and hear.

Besides, since any Figure we feel with our Hands in the Dark, we know to be the same we before saw by Day, and in the clearest Light, the Touch and Sight must needs be moved by the same Cause; and therefore, if we feel a quadrangular Figure, and distinguish its Shape in the Dark, what can present that Shape to us in the Light but its quadrangular Image? The Cause therefore of our Sight must arise from the Images, nor indeed can we distinguish any thing without them.

Now these Images I am speaking of are carried about every Way, and are thrown off and scattered on all Sides; and therefore it is, since with our Eyes alone we are able to see, that which way forever we turn our Eyes, the Objects strike upon them in their proper Form and Colour.

The Image likewise is the Cause that we discover, and takes care to satisfy us at what Distance Bodies are removed from us; for as soon as it is emitted, it instantly thrusts forward, and drives on the Air that is placed between itself and the

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1 The Image striving to get to the Eyes, drives forward all the Air before it: Now this Stream of Air is longer or shorter, as the Object is more or less distant; but the longer or shorter that Stream of Air is which protruded by the Image strikes the Eye, so much longer or shorter the Interval of Space between the Object and the Eye must be allowed to be.
T. Lucretii Lib. IV.

Ifque ita per nostras acies perlabitur omnis:
Et quasi perterget pupillas, atque ita transit. 250

Propter ea fit, uti videamus quâm procul absit
Res quaeque: & quantò plus aëris amè agitatur,
Et nostros oculos perterget longior aura,
Tam procul esse magis res quaeque remota videtur:
Scilicet hæc summè celeri ratione geruntur,
Quale sit ut videamus: Et una quâm procul absit.

Illud in his rebus minimè mirabile babendum est,
Cur ea, quæ seriant oculos Simulacra, visi
Singula cùm nequeant, res ipsæ perspiciantur:
Ventus enim quoque paullatim cùm verberat, &
cùm

Acre ferit Frigus, non privam quamque solemus
Particulam Venti sentire, & Frigoris ejus;
Sed magis unversum: fierique perinde videmus
Corpore tum plagas in nostro, tanquam aliqua res
Verberet, atque sui det sensum corporis extra. 265
Præterea, Lapidem digito cùm tundimus, ipsum
Tangimus extremum Saxi, summumque colorum.
Nec sentimus eum taetu, verùm magis ipsam
Duritiem penitus Saxi sentimus in alto.

Nunc age, cur ultra Speculum videatur Imago
Percipe, nam certè penitus remmota videtur. 271
the Sight; this Stream of Air then glides to the Eye, and as it were grates gently upon the Ball, and so passes through. Hence it is that we perceive how far Things are distant from our Sight; for the more Air there is that is driven before the Image, and the longer the Stream of it is that rubs upon the Ball, the longer the Interval of Space between the Object and the Eye must be allowed to be. All this is done with the utmost Celerity; for we see what the Object is, and know its Distance in the same Instant.

Nor are we to think it at all strange in this Case, that the Objects may be perfectly seen, and yet the Images that singly strike the Eye cannot themselves be discovered; for when the Wind blows gently upon us, and its sharp Cold pierces our Bodies, we cannot distinguish the several Particles of Wind or Cold that so affect us, but we are sensible of their whole Strength together; we perceive their Blows laid upon our Bodies, as if something were beating us, and made us feel the Effects of its outward Force upon us. And so, when we strike a Stone with our Fingers, we touch the Surface and remotest Colour of the Stone; but then we feel nothing of the Colour or Surface by our Touch, we perceive no more than the Hardness of the Stone that lies within.

And now learn why the Image is always seen beyond the Glass, for it certainly appears at a remote Distance from us. For Instance: When

The Eye knows the Distance of the Things seen by means of the Air that is driven by the Image to the Eye; now when two Airs are driven, the Interval must of necessity be more extended and ever doubled; but the Image of the Glass (for we see the Glass itself, as well as the Thing whose Image is reflected) protrudes one Air, and the Image reflected another. And this is the Reason why the Image appears not to be in the Surface of the Glass, but as if it were within and beyond it.
Quod genus illa, foris quæ verè transspiciuntur,
Janua cùm per se transpectum præbet apertum,
Multa facitque foris ex ædibus ut videantur.
Is quoq, enim duplici, geminoq; sit Aëre Vísus. 275
Primus enim'śt, citra postesis qui cernitur Aër.
Inde fores ipsae dextra, lævaque sequuntur.
Post extraria lux oculos perterget, & Aër
Alter, & illa, foris quæ verè transspiciuntur.
Sic ubi se primium Speculi projicit Imago, 280
Dum venit ad nostras acies, protrudit, agitque
Aëra, qui inter se cunque'śt oculosque locatus:
Et facit, ut priùs Hunc omnem sentire queamus,
Quam Speculum: Sed ubi Speculum quoque sensimus
ipsum
Continuò à nobis in id hæc, quæ furtur, Imago 285
Pervenit, & nostros oculos rejetta revisit:
Atque alium præ se propellens Aëra volvit,
Et facit, ut priùs bunc, quàm se, videamus: eoque
Dispare à Speculo tantum remmota videtur.
Quare etiam atq; etiam minimè mirarier est par 290
Illis, quæ reddunt Speculorum ex æquore visum,
Aëribus binis, quoniam res confit utroque.
Nunc ea, quæ nobis membrorum dextera pars est,
In Speculis fit ut in læva videatur, eo quòd

Planitiem
you are placed in an inner room, and things are seen at a distance from you; when the door is open, and gives you a clear prospect, and allows you plainly to discover any object without, your sight in this case is formed, as I may say, by a double air; the air that lies within the door is the first; then the door is placed in the middle between, and then the light without that rubs gently upon the eye, this is the other air; and at length the object is discovered. so, when the image of the glass first flies off, as it makes a passage to our sight, it strikes forward, and drives on the air that lies between itself and the eye, so that we feel all this interjacent air before we see any thing of the glass; but when we discover the glass, the image that is emitted from us instantly flies to it, and being reflected and sent back, returns again to our sight, and forces the air that is before it; which is the reason that we perceive this interjacent air before the image is seen by us. now when two airs are driven (the image of the glass forcing on one, and the image reflected another) the interval must of necessity be more extended, and even doubled. hence it is that the image appears not in the surface of the glass, but beyond it; and therefore we are not to wonder at all, that the images of things are reflected to our sight, from the surface of a smooth glass, by means of a double air, because it appears plainly that they are so.

but more n; that part of the body that is why the image is the right side, appears in the glass to be the left; transposed.

n since the image flows from us, and goes straight forward, it ought as it goes away to shew us its hinder parts, so that the right may answer to the right, and the left to the left. he answers the objection by this example: take (says he) a mask made of clay, not harden'd, but while it is yet
Planitiem ad Speculi veniens cum offendit Imago, 295
Non convertitur incolmis: sed recta retrorsum
Sic eliditur, ut siquis prius arida quidem fit
Cretea persona, adlidat pilae, trabive:
Atque ea continuo rectam si fronte figuram
Servet, & elisam retro se se exprimat ipsa:

Fiet ut, ante oculus fuerit qui dexter, hic idem
Nunc sit laevus, & e laevus sit mutua dexter.

Fit quoque de Speculo in Speculum ut tradatur Imago:
Quinque etiam, sexve ut fieri Simulacra suarent.

Nam quacunque retro parte interiore latebunt:
Inde tamen, quamvis torte, penitusque remota,
Omnia per flexos aditus educta licebit
Pluribus hoc Speculis videantur in aedibus esse.

Utque adeo è Speculo in Speculum traducet imago,
Et cum laeva data sit, fit retrorsum dextera fit:

Inde retrorsum reddit se, & convertit eodem:
Quinetiam, quacunque latuscula sunt Speculorum

Adsimili
Left; because the Image, when it strikes upon the Surface of the Glass, is not reflected again unchanged, but is turned a different Way about. For Instance: Take a Mask made of Clay, before it be dry, and dash it against a Pillar or Beam; if it preserves its Figure entire, and appears inverted only so that the Face fills up the Hollow, the Event will be, that the Right Eye will now be the Left, and the Left the Right.

And then it may be contrived that the Image shall pass from one Glass into another, so that five or six Images shall be reflected at once; and Objects that are placed backwards in the inward Part of the House, let them be ever so much out of Sight, and the Turnings ever so crooked, they may be all drawn out through the winding Passages, and by the placing of many Glasses be perfectly discovered. The Image may be so transferred from one Glass into another, that it will change its Left into its Right; but when it is again reflected from the second Glass into the third, it will resume its Left Part again, and will continue to change in the same manner as it passes into all the Glasses that follow.

But in Glasses joined together in the Convex Convex Glasses, yet moist, and dash it against a Beam or Pillar, so as to invert it backwards, that the Face may fill up the Hollow; and by this you may imagine, that Images being, as they are, very tenuous Substances, may by dashing against the Glass be inverted backwards in like manner.

Each Image flies away from the Object, and the Departure of the first is supplied by the coming of a second, in a perpetual and never-ceasing Flux; for the Image behind impels the Image before, and thus they run in a successive Course, and urge on their predecessor Images; so that the Image which we this Moment see in the last Glass, was but just now in the first, and a new succeeds in the room of that which went last away; and thus a perpetual Succession of Images is made from Glass to Glass.

The Pillar'd Convex is one of the sort of Glasses that restores the Image after the usual manner.
T. Lucretii Lib. IV.

Adsimili lateris flexura praedita nostri:
Dextera ea propter nobis Simulacra remittunt,
Aut quia de Speculo in Speculum transferitur Imago,
Inde ad nos elisa bis advolat; aut etiam quodd
Circumagitur, cum venit Imago, propertea quodd
Flexa figura docet Speculi convertier ad nos.

Indugredi porro pariter Simulacra, pedemque
Ponere nobiscum credas, gestunque similari:
Propterea, quia de Speculi qua parte recedas,
Continuò nequeunt illinc Simulacra reverti:
Omnia quandoquidem cogit natura referri,
Ac resflire ab rebus ad aequos reddita flexus.

Splendida porro oculi fugitant, vitantque tueri:
Sol etiam cacat, contra si tendere pergas,
Propterea, quia vis magna et ipsius: & alia
Aéra per plurum graviter Simulacra seruntur,
Et feriunt oculos turbantia compositturas.

Praeterea, Splendor, quicunque si acer, adurit
Sæpe oculos, ideo quodd semina possidet ignis
Multa, dolorem oculis quae gignunt insinuando.

Lurida præterea sunt quaeunque tuentur
Arquati, quia luroris de corpore eorum
Semina multa fluunt Simulacris obvia rerum,
Multaque sunt oculis in eorum denique misia;
Quae contage sua palloribus omnia pingunt.

E tenebris autem quae sunt in luce tuemur,
Propterea, quia cum proprior caliginis Aër

Aler
Book IV. Of the Nature of Things.

Figure of a Pillar, the Side of the Image reflected is returned so, that the Right Part of the Image answers to the Right of the Object or Thing seen; either because the Image, being transferred from one Glass into another, is reflected twice; or that the Image, when it comes to us, is turned about; for, that the Face is turned about as it passes backwards, we learn from the Figure of the Glass.

Besides, you would believe that the Image moves with us, and attends all our Steps, and imitates our Gestures; because, when you retire from any Part of the Glass, the Image cannot be reflected from that Part; for Nature ordains, that all Images that are emitted from Bodies, should be returned and reflected by equal Angles.

The Eyes, you observe, fly and avoid a glaring Object; the Sun likewise blinds you if you look too intensely against it, because its Force is great, and its Images are discharged from above through the pure Air, and strike violently upon the Eyes, and disturb and loosen their Contexture; besides, a Brightness too powerful for the Sight, often burns the Eye; because it contains many Seeds of Fire, which piercing the Ball, give it sensible Pain.

And then, Whatever a Person looks upon that has the Yellow Jaundice, becomes pale and lurid; because many lurid Seeds flow from such a Body, and meet with the Images of Things as they advance. And further, There are many Seeds within the Eyes of One so distempered, which stain all Things with their Infection, and make them look pale.

Again, If we are placed in the Dark, we see Objects that are in the Light; because when the dark

\* When the lucid Air follows the dark, it, by reason of its Subtity, purges and cleanses the Pores of the Eye, and makes room for the Images to enter; but when the dark Air follows
Ater init oculos prior, & possedit apertos:

Insequitur candens confessiim lucidus Aër,

Qui quasi purgat eos, ac nigras disceutit umbras
Aëris illius : Nam multis partibus hic est
Mobilior, multisque minutor, & mage pollens.

Qui simul atque vias oculorum luce replevit,

Atque patescit quas ante obsederat ater :

Continuò rerum Simulacra adaperta sequuntur
Quae sita sunt in luce, lacesjuntque, ut videamus.

Quod contra facere in tenebris à luce nequimus,

Propterea, quia posterior caliginis Aër

Crassior insequitur, qui cuncta foramina complet :

Obsiditque vias oculorum, ne Simulacra
Possint ullam rerum coniecta moveri.

Quadrataque procul terreis cum cernimus urbis:

Propterea fit uti videantur sepe rotunda,

Angulus obtusius quia longè cernitur omnis,
Sive etiam potius non cernitur, ac perit ejus

Plaga, nec ad nostras acies perlabitur istus :

Aëra per multum quia dum Simulacra feruntur,

Cegit bebescre cum crebris offensibus Aër.

Hinc, ubi suffugit sensum simul angulus omnis,

Lit, quasi tornata ut saxorum structa tuantur :

Non tamen ut coram que sunt, erigite rotunda,

Sed quasi adumbraetim paullum simulata videntur.

Umbra videtur item nobis in Sole moveri,

Et vestigia nostra sequi, gestumque imitari,
SoOK

IV. Of the Nature of Things.

35

dark Air, which is nearer, first enters and takes Possession of the open Eyes, the bright clear Air immediately follows, which as it were purges the Eye, and dissipates the Darkness the dusky Air had infused into it; for this lucid Air is by many Degrees more apt to move, is more subtle, and has more Force. This, as soon as it has filled the Passages of the Eyes with Light, and opened those Pores that the dark Air had stopped before, the Images of Things conveyed in the Light immediately follow, and strike upon the Eye, and move the Sight. But if we are placed in the Light, we cannot discover Objects in the Dark; because a Train of dark and thicker Air follows the bright, which is nearest the Eye, and stops up all the Pores, and so choaks up the Passages of the Sight, that the Images of Things cannot be moved or received into it.

Further, When we see the square Towers of a City at a Distance, they commonly appear round to us; because all Angles, seen far off, shew obtuse, or rather they do not shew at all: Their Strokes die away, and the Blows never reach our Eyes; for, as the Images are carried through a long Tract of Air, the Air beats upon them continually in their Passage, and so wears off their Corners. Hence it is that, since no manner of Angle strikes the Eye, the Flony Fabrick appears of a circular Figure; yet that Roundness is not so distinct as if the Object itself were really round, and seen at a small Distance; but it bears a kind of Resemblance to such a Figure, yet is not completely so.

Our Shadows seem to move with us in the Sun, to follow our Steps, and imitate our Gestures follows the bright, the Passages of the Eye are so clefted and choaked up by that dull and heavy Air, that it becomes incapable to receive the Images of Things that offer themselves to it.
Of the Nature of Things.

(If you can suppose that Air, void of Light, is able to walk, and to follow the Motions and Gestures of the Body; for what we usually call Shadow, can be nothing but the Air deprived of Light). The Reason is, because as we walk we hinder the Rays of the Sun from striking upon a certain Part of the Earth, which by that means becomes dark; but that, as we leave the Place it is covered with Light; and therefore it is that the Shadow of the Body over-against it follows us in all our Motions. For a Train of new Rays are continually flowing from the Sun, and the first die away like Threads of Wool drawn through a Flame; and by this means that Part of the Earth is soon deprived of Light, and again becomes bright, and discharges the black Shade that hung upon it.

But in this case we are not in the least to allow that the Eyes are deceived; it is their Business to discover only where the Light and Shade are, but to determine nothing whether the Light be the same, or the Shadow be the same that moves from one Place to another, or whether it be as we explained above. It is the Office of the Mind and Judgment to distinguish This; for the Eyes can know nothing of the Nature of Things, and therefore you are not to impute to them the Failures of the Mind.

He teaches us, by an Example, in what manner new Rays are continually flowing from the Sun's Orb, and how they supply the Place of the former that vanish away, viz. as it were like Wool drawn through a Flame; for then the Wool that is first drawn would be consumed by the Fire, whilst other Wool is in the mean time drawing through it. Thus Lambinus explains this Passage, but it is still obscure.

He undertakes to defend the Certainty of the Senses, which (he says) receive the Images of Things just as they are brought to them, but all Errors proceed from the Judgment of the Mind; which he attempts to illustrate by many Examples.
Qua vehimur Navi, fertur, cum stare videtur:
Quae manet in statione, ea praeter creditur ire:
Et fugere ad puppim colles, campiq; videntur, 390
Quos agimus praeter navim, velisque volamus.

Sidera cessare aetheriis adfixa cavernis
Cunnea videntur: at adsiduo in sunt omnia motu:
Quandoquidem longos obitus exorta revifunt,
Cum permessa suo sunt celum corpore claro:
Solque pari ratione manere, & Luna videntur
In statione, ea quae ferri res indicat ipsa.

Exstantesque procul medio de gurgite Montes,
Claffibus inter quos liber patet exitus, idem

Apparent, & longe divolvi licet, ingens
Insula coniectis tamen ex his una videntur.

Atria versari, & circumcurfare columnae
Usque adeo fit uti quieris videantur, ubi ipsi
Deserunt verti, vix ut jam credere possint,
Non supra seque ruere omnia teelia minari. 405

Jamque rubrum tremulis jubar ignibus erigere altè
Cum capiat Natura, supraque extollere monteis;
Quos tibi tum supra Sol monteis esse videntur,
Cominus ipsa suo contingens servidus igni,
Vix absunt nobis missus bis mille fagittae;
Vix etiam cursus quingentes sapè veruti:
Inter eos, Solenque jacent immania ponti
Æquora, substrata aetheriiis ingentibus oris:
Interjeclaque sunt terrarum millia multa,
Quae variae retinent gentes, & facla ferarum. 415

At coniectus aquæ digitum non altior unum,
Qui lapides inter sittit per strata viarum,
Despectum praebet sub terras impete tanto,
A terris quantum cali patet altus hiatus:

Nubila
When we are on Ship-board, the Vessel drives on when it seems to stand still, and when it lies at Anchor it seems to move; the Hills and Plains seem to fly and retire from us as we row, or scour with full Sails before the Wind.

And thus all the Stars seem fixed in the vaulted Sky, when they are all in continual Motion: They rise; and when they have measured the Heavens with their bright Orbs, they set again at an immense Distance. The Sun and Moon, by the same Rule, appear fixed, when Experience tells us that they move.

And Mountains, standing at a Distance from one another in the Middle of the Sea, so that a Fleet of Ships may sail easily between them, appear like one continued Ridge of Rocks; and though widely separated, yet shew like one vast Island, formed by all of them joined together.

So Boys, when they have made themselves giddy, so strongly fancy that the Walls are turned about, and the Pillars run round, that, even when they stand still, they can scarce believe but that the whole House threatens to tumble upon their Heads.

Thus, when Nature begins to display the bright Splendor of the Sun with trembling Light, and to raise it above the Top of the Mountains, that Hill over which the Sun just appears, and glowing seems to scorch with his Beams, is scarce two thousand Bow-shot distant from us, perhaps not five hundred Casts of a Dart; when yet, between that and the Sun lie many mighty Seas, spread under a vast Expansion of the Heavens; many thousand Leagues of Land lie between, possessed by many Nations, and the whole Race of wild Beasts.

So a Puddle of Water, no deeper than one of your Fingers, that lies in the Street between the Stones, affords a Prospect so deep under the Earth, as the Distance between the Earth and the wide Arch of Heaven;
T. Lucretii Lib. IV.

Nubila despicere, & cæolum ut videare videre, & 420
Corpora mirando sub terras abdita calo.

Denique, ubi in medio nobis equus acer obhæsit
Flumine, & in rapidas amnis despeximus undas;
Stantis equi corpus transversum ferre videtur
Vis, & in adversum flumen contrudere raptim: 425
Et, quocunque oculos trajecimus, omnia ferri,
Et fluere adsimili nobis ratione videntur.

Porticus æquali quamvis est denique duætu,
Stansque in perpetuum paribus suffulta columnis;
Longa tamen parte ab summa cùm tota videtur, 430
Paullatim trabit angusti fasīgia coni,
Testa solo jungens, atque omnia dextra levis:
Donicum in obscurum coni conduxit acumen.

In pelago nautis ex undis ortus, in undis
Sol fit uti videatur obire, & condere lumen: 435
Quippe ubi nil aliud nisi aquam, cælumq; tuentur,
Ne leviter credas labefacari undique sensus.

At maris ignaris in portu clauda videntur
Navigia, aplustris fraedis, obni tier undis.
Nam quæcunque supra rorem salis edita pars est 440
Remorum, recta fì; & recta supernè Gubernà:
Quæ demersa liquore obeunt, refracta videntur
Omnia converti, sursumque supina reverti:
Et reflexa prope in summo fluitare liquore.

Raraque per cælum cum venti nubila portant 445
Tempore nocturno, tum splendida Signa videntur.
Labier adversum nubeis, atque ire supernæ

Longe
Heaven; so that you seem to look down upon the Clouds, to take a clear Survey of the Sky; and view with wonder the celestial Bodies contained in it, as they seem beneath the Earth.

Observe, When your mettled Horse stands still with you in the Middle of a River, and you look down upon the rapid Stream of the Water, the Force of the Current seems to drive your Horse violently upwards, and hurry you swiftly against the Tide; and on which Side soever you cast your Eyes, all Things seem to be borne along, and carried against the Torrent in the same manner.

A long Portico, though it be of equal Breadth from one End to the other, and reaches far, supported by Pillars of an equal Height; yet when you stand at one End, to take a View of its whole Extent, it contracts itself by degrees to a narrow Point at the further End; the Roof touches the Floor, and both Sides seem to meet, till it terminates at last in the sharp Figure of a dark Cone.

The Sun, to Mariners, seems to rise out of the Sea, and there again to set and hide his Light; for they see nothing but the Water and the Sky; and therefore you are not to conclude rashly that the Senses are at all deceived.

To those who know nothing of the Sea, a Ship in the Port seems disabled, and to strive against the Waves with broken Oars; for that Part of the Oar and of the Rudder that is above the Water, appears straight; but all below, being refracted, seems to be turned upwards, and to be bent towards the Top of the Water, and to float almost upon the Surface of it.

So, when the Winds drive the light Clouds along the Sky in the Night, the Moon and Stars seem to fly against the Clouds, and to be driven above
Longè aliam in partem, quàm quo ratione feruntur. 

At si forè oculo manus uni subdita subter 
Pressit cum, quodam sensu fit, uti videantur 450 
Omnia, quæ tuimur, fieri tum bina tuendo;
Bina Lucernarum florentia lumina flammis,
Binaque per totas ædeis geminare Supellex:
Et duplices Hominum facies, Æ corpora bina.

Denique cum suavi devinxit membra sopore
Sommus, & in summa corpus jacet omne quiete:
Tum vigilare tamen nobis, & membra movere 
Nostra videmur, & in noetis caligine cæca
Cernere cenfemus Solem, lumenque diurnum:
Conclusoque loco Cælum, Marc, Flumina, Monteis 460
Mutare, & campos pedibus transire videmur:
Et sonitus audire, severa silentia noetis
Undique cùm conßent, & reddere diéta tacentes.

Cætera de genere hoc mirando multa videmus, 
Quæ violare fidem quasi sensibus omnia querunt 465 
Nequicquam: quoniam pars horum maxima fallit
Propter opinatus Animi, quos addimus ipsi,
Pro visis ut sint, quæ non sunt sensibû vîsa.
Nam nihil egregius, quàm res secernere apertas
A dubiis, Animus quas ab se protinus addit. 470

Denique, nil Sciri siquis putat, id quoque nescit,
above them in a Course quite opposite to that in
which they naturally move.

And if you chance to press with your Fingers
under one of your Eyes, the Effect will be, that
every thing you look upon will appear double,
every bright Candle will burn with two Flames,
and all the Furniture of the House will multiply
and shew double; every Face about you, and
every Body will look like Two.

Lastly, When Sleep has bound our Limbs
in sweet Repose, and all the Body lies dissloved in
Rest, we think ourselves awake; our Members
move; and in the gloomy Darkness of the Night,
we think we see the Sun and broad Day-light; and,
though confined in Bed, we wander o'er the Hea-
vens, the Sea, Rivers and Hills, and fancy we
are walking through the Plains: And Sounds we
seem to hear; and, though the Tongue be still,
we seem to speak, when the deep Silence of the
Night reigns all about us.

Many more Things of this kind we observe
and wonder at, which attempt to overthrow the
Certainty of our Senses, but to no Purpose; for
Things of this sort generally deceive us, upon ac-
count of the Judgment of the Mind which we
apply to them, and so we conclude we see Things
which we really do not; for nothing is more dif-
ficult than to distinguish Things clear and plain
from such as are doubtful, to which the Mind is
ready to add its Assent, as it is inclined to believe
every thing imparted by the Senses.

Lastly, t If any one thinks that he knows
nothing, he cannot be sure that he knows This,

t He falls upon the middle Academicks, of whom Arces-
       s was Author; who introduced an incoherent kind of Philo-

       phy, and asserted that nothing could be known; for some-
       thing (as our Poet says), must be known, otherwife it could
       not be known that nothing can be known.
T. Lucr. i. Lib. IV.

An Scire possit, qui se nil Scire fatetur:
Hunc igitur contra mittam contendere causam,
Qui capite ipsa suo insituit vestigia retrò.

Et tamen hoc quoque uti concedam, scire, at id ipsum

Quæram, (quam in rebus veri nil viderit antè)
Unde sciat, quid sit Scire, & Nescire vicissim:
Notitiam veri qua res, falsque creārit;
Et dubium certo qua res differre probārit?

Invenies primis ab Sensibus esse creatam

Notitiam veri, neque Sensus posse refelli:
Nam majore fide debet reperirier illud,
Sponte sua veris quod posset vincere falsa.
Quid majore fide porro, quàm sensus haberi
Debet? An ab sensu falso Ratio orta valebit

Dicere eos contra, qua tota ab Sensibus orta'st?
Qui nisi sint veri, Ratio quoque falsa fit omnis.
An poterunt Oculos Aures reprehendere? an Aureis
Tætus? an hunc porro Tætum Sapor arguet oris?
An consubstant Nares, Oculive revinent?

Non (ut opinor) ita'st: Nam seorsum quoque po-
testas

Divisa'st: sua vis quoque'st: idqueque necessē'st,
Quod molle, aut durum est, gelidum, fervensve,
seorsum
Id molle, aut durum gelidum, fervensve videri;
Et seorsum varios rerum sentire Colores.
when he confesses that he knows nothing at all. I shall avoid disputing with such a Trifler, who perverts all Things, and, like a Tumbler with his Head prone to the Earth, can go no otherwise than backwards.

And yet allow that he knows This, I would ask (since he had nothing before to lead him into such a Knowledge) whence he had the Notion, what it was to know, or not to know; what it was that gave him an Idea of Truth or Falshood, and what taught him to distinguish between Doubt and Certainty?

But you will find that the Knowledge of Truth is originally derived from the ^Sense^s, nor can the Sense be contradicted; for whatever is able, by the Evidence of an opposite Truth, to convince the Sense of Falshood, must be something of greater Certainty than They. But what can deserve greater Credit than the Sense require from us? Will Reason, derived from erring Sense, claim the Privilege to contradict it? Reason, that depends wholly upon the Sense, which unless you allow to be true, all Reason must be false. Can the Ears correct the Eyes? or the Touch the Ears? or will the Taste confute the Touch? or shall the Nose or Eyes convince the rest? This, I think, cannot be, for every Sense has a separate Faculty of its own; each has its distinct Powers; and therefore an Object, soft or hard, hot or cold, must necessarily be distinguished as soft or hard, hot or cold, by one Sense separately, that is, the Touch. It is the sole Province of another, the Sight, to perceive the Colours of Things, and the

u He attacks the ancient Academicks, who held the Mind to be the sole Arbiter and Judge of Things, and establishes the Senses to be the sole Arbitrators; For (says he) whatever can correct and confute what is false, must of necessity be the Criterion of Truth; and this is done by the Senses only.

several
Et quæcunque coloribus sunt conjuncta, necesse est.

Seorsus item Sapor oris habet vim, seorsus Odores Nascuntur, seorsum Sonitus: ideoque necesse est,

Non possint alios alii convincere Sensus.

Nec porro poterunt ipsi repondere se, æqua fides quoniam debebit semper haberi.

Proinde, quod in quoque est bis visum tempore, verum est.

Et, si non poterit ratio dissolvere caufam,

Cur ea, quae fuerint juxtim quadrata, procul sunt Vīsa rotunda; tamen praefat rationis egentem

Reddere mendoza causas utriusque figurae,

Quam manibus manifesta suis emittere quæquam ;

Et violare fidem primam, & convellere tota Fundamenta, quibus nixatur Vita, Salusque.

Non modò enim Ratio ruat omnis, Vīta quoque ipsa

Concidat extemplo, nisi credere sensibus ausis,

Præcipiteisque locos vitare, & cætera, quæ sint In genere boc fugienda; sequi, contraria quæ sint. Illa tibi est igitur verborum copia cæsa

Omnis quæ contra sensus instruxit, parata est.

Denique ut in Fabrica, si prava est, Regula prima,

Normaque si fallax esthis regionibus exit,

Et Libellæ aliqua si ex partì claudicat hilum ; Omnia mendoza fieri, atque obßipa necessum est,

Prava, cubantia, prona, supina, atque absdera testa ;

Jam ruere ut quædam videantur velle, ruantque,

Prodita judiciis fallacibus omnia primis.

Sic igitur Ratio tibi rerum prava necesse est,

Falsaque sit, falsis quæcunque ab Sensibus orta est.

Nunc alii Sensus quo pacto quisq; suam rem

Sentiat, baud quæquam ratio scrupulosa relieta est.

Principio
several Properties that belong to them. The Taste has a distinct Office. Odours particularly affect the Smell, and Sound the Ears; and therefore it cannot be that one Sense should correct another, nor can the same Sense correct itself, since an equal Credit ought to be given to each; and therefore whatever the Senses at any time discover to us, must be certain.

And though Reason is not able to assign a Cause why an Object that is really four-square when near, should appear round when seen at a Distance; yet, if we cannot explain this Difficulty, it is better to give any Solution, even a false one, than to deliver up all Certainty out of our Power, to break in upon our first Principle of Belief, and tear up all Foundations upon which our Life and Security depend; for not only all Reason must be overthrown, but Life itself must be immediately extinguished, unless you give Credit to your Senses: These direct you to fly from a Precipice and other Evils of this sort which are to be avoided, and to pursue what tends to your Security. All therefore is no more than an empty Parade of Words, that can be offered against the Certainty of Sense.

Lastly, As in Building, if the principal Rule of the Artificer be not true, if his Line be not exact, or his Level bear in the least to either Side, every thing must needs be wrong and crooked, the whole Fabrick must be ill-shaped, declining, hanging over, leaning and irregular; so that some Parts will seem ready to fall and tumble down, because the Whole was at first disordered by false Principles. So the Reason of Things must of necessity be wrong and false, which is founded upon a false Representation of the Senses.

And now, in what manner each of the other Senses distinguishes its proper Object, is a Subject of no great Difficulty to explain.
Principio, quiditur Sonus, & Vox omnis, in Aureis,
Insinuata suo pepulere ubi corpore sensum.
Corpoream quoque enim Vocem consolaris radiens est.
Et Sonitus, quoniam possunt impellere Sensus. 530
Preterradit enim Vox fauceis sepe, factaque
Asperiora foras gradiens arteria Clamor.
Quippe, per angustum turba majore coorta
Ire foras ubi caeperunt primordia Vocum,
Scilicet explelits quoque jana raditur cris.
Rauca viis, & iter laedit qua Vox it in auras.
Haud igitur dubium est, quin Voces, Verbaque consistent
Corporeis & principiis, ut laedere possint.

Nec te fallit item, quid corporis auferat, & quid
Detrabat ex Hominum nervis, ac viribus ipsis
Perpetuus Sermo nigrae adumbram,
Aurorae perduelus ab exoriente nitore;
Præsertim si cum summo f],' clamore profusus.
Ergo corpoream Vocem consolaris necesse est,
Multa loquens quoniam amittit de corpore partem

Alpem autem Vocis fit ab aisperitate
Principiorum, & item laevor laevore creatur.
Nec simili penetrant Aureis primordia forma,
Quom Tuba depressa graviter sub murmure mugit,
Aut reboant rauca Retrocita cornua bombum.
Vallibus & Cycni gelidis orti ex Heliconis
Cum liquidam tollunt lugubri voce querelam.

Hanc igitur penitus Voces cum corpore nostro
Exprimiminus, restoque foras emittimus ore,
Mobilis articulat verborum dædala lingua;
Formaturaque labororum pro parte figurat.
And first, Sound and all Voices are heard when they enter the Ears, and strike with their Bodies upon the Sense; for we must allow that Sound and Voice are Bodies, because they have Power to make Impression upon the Sense; for the Voice often scrapes the Jaws, and the Noise makes the Windpipe rough as it passes through. When the Seeds of Words begin to hurry in a Crowd through the narrow Nerves, and to rush abroad, those Vessels being full, the Throat is raked and made hoarse, and the Voice wounds the Passage through which it goes into the Air. There is no Question then but Voice and Words consist of corporeal Principles, because they affect and hurt the Sense.

You are likewise to observe how much a continual Speaking, from Morning to Night, takes off from the Body; how much it wears away from the very Nerves and Strength of the Speaker, especially if it be delivered in the highest Stretch of the Voice. Of necessity therefore Voice must be a Body, because the Speaker loses many Parts from himself.

The Roughness then of the Voice depends upon the Roughness of the Seeds, as the Smoothness is produced from smooth Seeds; nor are the Seeds of the same Figure that strike the Ears when the Trumpet sounds with grave and murmuring Blasts, as when the Sackbut rings with its hoarse Noise, or Swans in the cold Vales of Helicon sing out with mournful Notes their sweet Complaint.

When therefore we press out this Voice from the Lungs, and send it abroad directly through the open Mouth, the nimble Tongue, with curious Art, fashions it into Words, and the Motion of the Lips assists likewise in the Formation of them.

* Voice without doubt is a Body, because it rakes and scrapes the Jaws, makes them rough and hurts them, and therefore must of necessity touch them; and whatever touches or is touched, is a Body.
Atque ubi non longum spatium est, unde illa profecta
Perveniat vox quaeque, necesse est Verba quoque ipsa
Planè exaudiri, discernique articulatim.
Servat enim formaturam, servatique figuram.

At si interpositum spatium sit longius aequo,
Aëra per multum confundi Verba necesse est,
Et conturbari Vocom, dum transfolet auras.

Ergo fit, Sonitum ut possis audire, neque bilum
Internoscere Verborum sententia quae sit,
Usque adeo confusa venit Vox, inque pedita.

Præterea, Edictum sæpe unum perciet aureis
Omnibus in populo emissum praæonis ab ore:
In multas igitur Voces Vox una repente
Diffugit, in privas quoniam se dividit aureis,
Obsignans formam verbis, clarunque sonorem.

At quæ pars Vocum non aureis accidit ipsas,
Præterlata perit frustra diffusa per auras:
Pars solidis alia locis, rejestia sonorem
Reddit, & interdum frustratur imagine Verbi.

Quæ bene cum videas, rationem reddere possis
Tute tibi atque aliis, quo pacto per loca sola

Saxa
And where the Distance is not long from whence any Voice proceeds, the Words must of necessity be plainly heard and articulately distinguished, for in this Cafe the Voice preserves its proper Frame and Figure; but if the interjacent Space be more than it should be, the Words must needs be confused by reason of the Length of Air, and the Voice be disordered as it passes through. Hence it is that you may hear a Sound only, but discover nothing at all of the Meaning of the Words, the Voice comes so broken and obstructed.

Besides, one Sentence delivered from the Mouth of a bawling Cryer, strikes the Ears of all about him; for the one general Voice, that is pronounced instantly, breaks instantly into innumerable little Voices, and so reaches every particular Ear, giving a proper Form and a distinct Sound to every Word.

But that Part of the Voice that does not reach the Ear, is diffused through the Air to no Purpose, but there dies; some Parts strike upon solid Places, and being reflected return a Sound, and sometimes disappoint us with the Echo or Image of the Word.

If you well consider this, you will be able to account to yourself and others, why, in solitary Places, the Rocks regularly return Words the

There is one whole or rather general Voice, which being pronounced from the Mouth, divides itself into innumerable other little Voices, which are wholly like one another; thus, when the Voice is uttered by the Speaker, the Formation of the Bodies that burst out of the Mouth is compressed, broken, and as it were ground to Pieces, in such a manner that it divides and goes away into minute Parts or little Voices, altogether alike and of a like Figure, which instantly leap abroad, and diffuse themselves through the Air or ambient Space, and still preserve that Likeness, till they reach the Ears of all that are within hearing; and thus the same Voice is at once heard by many, as all drink of the same Water who drink out of the same River.
Saxa pareis formas Verborum ex ordine reddant,  
Palanteis comites cum monteis inter opacos  
Quarimus, & magna dispersos voce ciemus.  
Sex etiam, aut septem loca vidi reddere Voces  
Unam cum jaceres: Ita colles collibus ipsis  
Verba repulsantes iterabant dicta referre.  

Hae loca capripedes Satyros, Nymphasque tenere  
Finitimi fingunt, & Faunos esse loquuntur;  
Quorum nostivago strepitu, ludoque jocanti  
Adfirmant volgò taciturna silentia rumpi,  
Chordarumque sonos fieri, dulceisque querelas,  
Tibia quas fundit digitis pulsata canentum:  
Et genus Agricolam latè sentiscere, cum Pan  
Pinea semiferi capitis velamina quaflans,  
Unco sepe labro calamos per curtir biantes,  
Fistula silvestrem ne cesset fundere musam.  
Cætera de genere hoc monsra, ac portenta loquuntur,  
Ne loca deserta ab Divis quoque fortè putentur.
fame with those we speak, while we seek our Com-
panions wandering o'er the dark Mountains, or
call after them aloud when they are dispersed and
lose their Way. * I myself have seen Places that
return six Words for one; the Hills so reverberate
the Words from one another, that they severally
repeat them and send them back.

The neighbouring People fondly imagine such
Places to be frequented by Goat-footed Satyrs and
Nymphs, and tell Stories of the Fawns. They
say, that the dead Silence of the Night is disturbed
by their late Revels and wanton Sports; that they
hear the Sound of Mufick, and the soft Notes of
the Harp, as the Artift touches and sings to it to-
gether; that the Swains all about can distinguish
plainly when a Pan, shaking his Garland of Pine-
leaves upon his Head, with long-hung Lip, runs
o'er the hollow Reeds, and so his Pipe prolongs
his rural Song. They speak of many other strange
Sights, and monstrous Fables of the same kind;
left, perhaps, they should be thought to dwell in
Places where the Gods never come, and therefore

* An Eccho is formed by the Reverberation of the vibrated
Air, when it meets with a smooth and solid Body; for the
Air, as well as other Mediums, must glance and reflect from
Objects, if it cannot pass through them. Thus it changes its
first Determination, and is variously reflected, according to
the various Situation of the Object upon which it strikes.
The Reason why the same Sound is several times reflected, is,
because there sometimes happens to be several Places disposed
among themselves, in such a manner and at such Distances
one beyond the other, that the circular Undulations of the
Air, in different Places and at different Distances, meeting
with Bodies solid and impenetrable, the same Sound will be
often rebounded, according to the Number and Site of the
Objects; so that, after we have received the Sound reflected
from the nearest, we receive it likewise returned from those
that are more remote from us.

* Pan was represented with a Garland of Pine-leaves on
his Head; in one Hand he bears a Pipe, made of seven Reeds
joined together with Wax, of which he was the first Inventor.
Solo tenere: Ideo saéiant miracula diéis.
Aut aliqua ratione alia ducuntur, ut omne
Humanum genus est avidum nimirum auricularum.
Quod superest, non est mirandum, qua ratione
Quæ loca per nequeunt Oculi res cernere apertas, 600
Hæc loca per Voces veniant, Aureisque lacessant.
Conloquimur clausis foribus: quod sœpe videmus.
Nimirum, quia Vox per flexa foramina rerum
Incolumis transire potest, Simulacra renuntiant;
Perscinduntur enim, nisi ré€ta foramina tranant: 605
Qualia sunt vitri, species quæ travolat omnis.
Prœterea, parteis in cunctas dividitur Vox,
Ex aliis alie quoniam gignuntur; ubi una
Dìsiluit femel in multas exorta, quas ignis
Sæpe folet scintilla suos se spargere in igneis,
Ergo replentur loca Vocibus, addita retrò
Omnia quæ circum fuerint, sonituque cierunt.
At Simulacra viis directis omnia tendunt,
Ut sunt missa femel, quapropter cernere nemo
Se supra potis est; at Voces accipere extra. 615
Et tamen ipsa quoq, hæc, dum transit clausa viarum,
Vox obtunditur, atque aureis confusa penetrat:
Et Sonitum potius, quàm Verba, audire videmur.
Hæc, quæis sentimus succum, lingua atque palatum,
Plusculum habent in se rationis, plusque operaï. 620

Principio
they invent wonderful Tales like these; or they are induced by some Reason or other, as Man-kind in general are mighty eager after Prodigies.

In short, it is nothing strange, that those Places through which the Eye can see nothing, that through such the Voice can pass and strike the Ears. We can converse together in different Rooms, when the Doors are shut, as we frequently do, because Voice can pierce safely through the crooked Pores of Bodies, which Images cannot, for they are broken if the Passages are not straight; such are the Pores of Glass through which all sorts of Images freely find way.

Besides, the Voice divides itself into several little Voices, and these are broken again into others, as soon as the first single Voice breaks into many more, like a Spark of Fire that leaps abroad into a Thousand; so that all Places about, even those behind you, are filled with Voice, and are moved by the Sound; but all Images direct their Course through straight Passages, as soon as they are thrown off from Bodies, and therefore no one can see any thing over his Head; you hear Words that are spoken without, yet even these, as they pass through the Doors that are shut, grow weak, and strike the Ears in a confused Manner, so that we rather seem to hear a Sound than to distinguish the Words.

Nor is the Account of the Tongue and Palate, by which we taste, a Subject of greater Nicety or more Difficulty to explain.

The Voice divides itself and leaps abroad into little Voices, which diffuse and scatter themselves abroad on all Sides, so that they light into the Ears that are all around, and not only those that are placed in a direct Line from the Speaker; but no such Thing can happen to the Images which are broken in passing through tortuous Pores and Holes of Bodies. Yet the Voice itself, by penetrating through such Mazes and Windings, becomes weak, indistinct, and breaks into Murmurs.
Principio, succum sentimus in ore, cibum cum
Mandendo exprimimus: ceu plenam spongiam aquae
Si quis forte manu premere, exsiccareque capiti:
Inde, quod exprimimus, per caulas omne palati
Diditur, & rarae perplexae foramina linguae.

Hac ubi lavia sunt manantis corpore Succi,
Suaviter attingunt, & suavitur omnia tradant
Humida linguae circum sudantia templar.

At contrà pungunt sensum, lacerantque coorta,
Quantè quæque magis sunt asperitate repleta.

Deinde voluptas est è succo in fine palati,
Cùm vero deorsum per fauceis precipitavit;
Nulla voluptas est, dum diditur omnis in artus:
Nec refert quicquam, quo visum corpus alatur,
Dummodo, quod capias, concexum didere posse.

Artibus, & stomachi humanae servare tenorem.

Nunc aliis alius cur sit Cibus, ut videamus,
Expediam, quareve, aliis quod triste, & amarum
Hoc tamen esse aliis posse praeulce videri.

Tantaq, in his rebus distantia, differitisque,
Ut quod aliis Cibus est, aliis suat acer venenum.

Est utique, ut Serpens hominis contacta salivis
disperit, & se se mandendo conscit ipsa.
Book IV. Of the Nature of Things.

And first, We perceive a Tast in the Mouth when we squeeze the Juice from our Food by chewing, as if we were to press a Spunge full of Water in our Hands to make it dry; then the Juice we draw out is spread over the Pores of the Palate, and through the crooked Passages of the spungy Tongue. When the Seeds of this flowing Juice are smooth, they gently touch, and affect all the moist and sweating Surface of the Tongue with sweet Delight; but the Seeds, the more rough and sharp they are, the more they stimulate and tear the Sensé.

And then the Pleasure of Taste we feel no further than the Palate; when the Food is driven down through the Jaws, and divided among the Limbs, the Pleasure is gone; nor is it of any Concern with what Meat our Bodies are nourished, if you can but digest what you eat, and separate it among the Members, and preserve the moist Tenor of the Stomach.

I shall now account why, as we find, "differernt Sorts of Food are agreeable to different Palates; or why, what is four and bitter to some, seems to others exceeding sweet. In these Cases the Variety and Difference are so great, that what is Food to one will prove sharp Poison to another; and it happens that a Serpent touched with the Spittle of a Man, expires and bites himself to Death.

The Reason why the same Meat has different Effects upon different Palates, is, because the Organ of the Taste is different in some Men, and in some Animals, from what it is in others; either in its Texture or Configuration of the Atoms, or of the Spaces that intervene between them; even as the other Parts of Men or Animals are different, especially the outward. But the different Passages or Pores must necessarily admit and receive different Corpuscles of Juice; and every thing out of which Juice is squeezed, contains Seeds of different Figures; and the Corpuscles of all Juices, by reason of their various Figuration, do not agree with and fit the Organs of all Animals.

Besides,
Præterea, nobis Veratrum est acre venenum, At Capris adipes, & Coturnicibus auget. Ut, quibus id fiat rebus, cognoscere posse, Principiò meminiisse decet, quæ diximus ante, Semina multimodis in rebus misita teneri.


Nunc facile ex his est rebus cognoscere quæque. Quippe, ubi quot Febris, bilis fuperante, coorta est, Aut alia ratione aliqúa est vis excita morbi; Perturbatur ibi totum jam Corpus, Æ omnes Commutantur ibi postitūre Principiorum: Fit, priùs ad sensum ut quæ corpora conveniēbant, Nunc non conveniēnt, & cōtēra sunt magis apta, Quæ penetrata queunt sensum prorignere acerbum. Utraque enim sunt in mellis commissa sapore, Id quod jam superà tibi sepe ostendimus ante.

Nunc
Besides, to Us Hellebore is strong Poison, but Goats it fattens, and is Nourishment to Quails; and to understand by what means this comes to pass, you must recollect what we observed before, that Seeds of different kinds are mingled in the Composition of all Bodies.

And then, all Animals supported by Food, as they differ in outward Shape, and after their several kinds have a different Form of Body and Limbs, so they consist of Seeds of different Figures; and since their Seeds differ, the Pores and Passages which (as we said) were in all the Parts, and in the Mouth and Palate itself, must differ likewise; some must be less, some greater; some with three, some with four Squares; many round, and some with many Corners in various Manners: For as the Frame of the Seeds and their Motions require, the Pores must differ in their Figure. The Difference of the Pores depends upon the Texture of the Seeds, and therefore what is sweet to one is bitter to another: It is sweet, because the smoothest Seeds gently enter into the Pores of the Palate; but the same Food is bitter to another, because the sharp and hooked Particles pierce the Jaws and wound the Sense.

Now, by observing this, Things will appear plain; for when a Man has a Fever, either by the overflowing of the Gall, or whether the Violence of the Disease be raised by any other Means, in such a Case all the Body is disturbed, and all the Order and Disposition of the Seeds are changed. And hence it is, that the Juices that were before agreeable to the Sense, are no longer pleasing, and those are more fit to enter the Pores that fret and produce a bitter Taste; for even in Honey there is a Mixture of rough and smooth Seeds, as we had frequent Occasion to mention to you before.

And
And now shall I pass on, and shew in what manner the Approach of Smells affect the Nose. And first, A various Stream of Odours is continually flowing from all Bodies; for you must suppose that Smells are perpetually thrown off, are emitted and dispersed abroad; but some are more peculiar to some Animals than others, because they consist of Seeds of different Figures; and therefore the Bee is attracted by the Smell of Honey in the Air afar off, and Vultures by the Stink of Carcases; and so the natural Quality of the Hound drives him on where the Hoof of the Stag has led the Way, and the white Goose (the Saviour of the Capitol) can perceive the Smell of a Man at a great Distance.

So it is the Difference of Smell, peculiar to different Creatures, that directs every Species to its proper Food, and makes it start at the Approach of Poison; and by that means the Race of Beasts is constantly preserved.

But this Smell or Odour that affects the Nose, some kinds of it are emitted much further than others, but no one of them is carried so far as Sound or Voice (not to speak of those Images that strike the Eye and provoke the Sight) for they wander about and move lazily, and being scattered through the Air, die away by Degrees before they have gone far, and for this Reason, be-

Odours move more slowly through the Air than Sound, are more easily dissipated, and are not dissipated so far, because they flow from the most inward Parts of an odorous Body, and the Principles of which they are composed are larger than the Principles of Sound, and therefore cannot pierce through the Passages that Sound can; and therefore Odour must necessarily move more slowly, and be more easily dissipated by the Air it meets in its Passage. And this too is the Reason why, though we can easily judge from what Part a Sound comes to us, we cannot so easily distinguish on what Side of us the Body is that diffuses an Odour.
T. Lucretii Lib. IV.

Ex alto primo quia vix emittitur ex re.
Nam penitus fluere, atque recedere rebus odores
Significat, quòd fraéta magis redolere videntur 700
Omnia, quòd contrita, quòd igni conlabesfa.  
Deinde videre licet majoribus esse creatum

Principiis Voci : Quoniam per saxea septa.
Non penetrat, quàd Vox volgò, Sonitusque feruntur.
Quare etiam quod olet, non tam facilè esse videbis 705
Investigare, in qua sit regione locatum.
Refrigescit enim cunctando plaga per auras:
Nec calida ad sensum decurrit nuntia rerum.
Errant sève Canes itaque, Æ vestigia quærunt.

Nec tamen hoc folis in Odoribus, atque Saporum 710
In genere est: Sed item Species rerum, atque Colores
Non ita conveniunt ad sensus omnibus omnes,
Ut non sint alii quædam magis acria visu.

Quinetiam Gallum, nostrum explaudentibus alis
Auroram claram consuetum voce vocare, 715
Nenum queunt rapidi contra confire Leones,
Inque tueri: Ita continuò meminere fugäi:
Nimirum, quia sunt Gallorum in corpore quædam
Semen, quæ, cùm sunt oculis immissta Leonum,
Pupillas interfodiunt, acremque dolorem
Prævempt, ut nequeant contrâ durare feroce:
Cùm tamen haec nostras acies nil lædre possint:
Aut quia non penetrant, aut quod penetrantibus illis
Exitus ex Oculis liber datur, in remeando
Lædere ne possint ex ulla lumina parte. 725

Nunc
cause they flow with Difficulty from the most inward Parts of Bodies; and that Odours are emitted from the lowest Profundity of the Subject, is proved from this, that the more they are broken and bruised or scattered by Fire, the stronger they smell.

And then we may observe, that Smells are formed of larger Seeds than those of Voice; for they cannot pierce through Walls of Stone, where Voice and Sound freely pass; and therefore we cannot so easily distinguish on which Side of us the Body is placed that diffuses the Smell; for the Stroke grows cold as it moves slowly through the Air, nor does the hot Scent briskly touch the Organ; and therefore Hounds are often at a Fault, and hunt about for the Trail.

And this happens not only in Cases of Smell and Taste; but the Images of Things, and all Colours, do not affect the Eyes of all Men alike, but to some they are more sharp and painful to the Sense than they are to others.

For the Cock, that claps his Wings and drives away the Darkness, and by his clear Notes calls forth the Morning Light, the fiercest Lion dares not stand against this Creature, nor look him in the Face, but instantly prepares for Flight; and for this Reason, because there are certain Seeds in the Body of the Cock, that when emitted into the Eyes of the Lion, fret and tear the Balls, and cause a very acute Pain, which the Beast with all his Courage is not able to bear; and yet these Particles are no way hurtful to our Eyes; either they do not pierce them, or if they do, they find a free Passage and return easily from the Eyes again, so that they do not the least Prejudice to the Sight.

*The Lion is terrified at the Sight of a Cock; he does not say it is the crowing of the Cock that frightens that wild Animal.*
T. L u c r e t i i  L i b . IV.

Nunc age, quae moveant Animum res, accipe, &
unde,

Quae veniunt, veniant in Mentem, percipe paucis.
Principiō boc dico, rerum Simulacra vagari
Multa modis multis in cunctas undique parteis
Tenuia, quae facile inter se junguntur in auris, 730
Obvia cum veniunt, ut aranea, brasteaque auri.
Quippe etenim multō magis hac sunt tenuia textu,
Quam quae percipiant Oculos, visumque lacefiant:
Corporis hac quoniam penetrant per rara, cienique
Tenuem Animi naturam intus, sensumque lacefiant. 735
Centauros itaque & Scyllarum membra videmus,
Cerberasque canum facies, simulacraque eorum,
Quorum morte obita tellus amplecitur offa:
Omne genus quoniam passim simulacra feruntur,
Partim sponde sua quae sunt Aere in ipso:
Partim quae variis ab rebus cumbque recedunt:
Et quae constunt ex horum sita figuris.
Nam certe ex vivo Centauri non sit imago:
Nulla fuit quoniam talis natura animalis.
Verum ubi equi atque hominis casu convénit imago, 745
Hærescit facilē extemplo, quod diximus antè,
Propter subtilem naturam, & tenuia texta.
Cætera de genere boc eadem ratione creantur.
Quae cum mobiliter summa levitate feruntur,
Ut prius ostendi, facilē uno commovet istu
Qualibet una animum nobis subtilis imago.

Tenuis
And now attend, and observe in short, what The Cause Things affect the Mind, and from whence proceed those Objects that make an Impression upon it. First then, I say that subtle Images of Things, a numerous Train of them, wander about every Way, and in various Manners. These, as they meet, easily twine and are joined together in the Air, as Threads of Gold or the Web of a Spider; for these are much finer in their Contexture than those Images that strike the Eye and move the Sight. These pierce through the Pores of the Body, and move the subtle Nature of the Mind within, and affect the Sense. Hence it is that we see Centaurs, and the Limbs of Scylla's, and the Heads of Cerberus, and the Shadows of those who have been long since dead, and whose Bones are rotting in the Grave; because Images of all kinds are ever wandering about; some of their own accord are formed in the Air, some are continually flying off from various Bodies, and others rise from these Images mixed together: For it is certain, that the Image of a Centaur never flowed from one that was alive; for there never was such an Animal in Nature; but when the Image of a Horse met by chance with the Image of a Man, it immediately stuck to it, which it easily does, by reason of the Subtilty of its Nature and the Fineness of its Texture; and all other monstrous Figures are formed after the same manner. These Images being exceeding light, and easily put in Motion (as I observed before) each of them affects the Mind at one Stroke;

He now explains what Imagination is, and the Cause of it. He says, that many most subtle Images, some flowing from Bodies, others formed in the Air of their own accord, and others differently mixed of different Things, are wandering up and down on all Sides in the Air; that these Images penetrate into the Mind, and gently moving it, are the Cause of Imagination.
Tenuis enim mens est, & mirè mobilis ipsa.

Hæc fieri (ut membro) facile hinc cognoscere pessis,
Quatinitus hoc simile est oculis, quod mente videmus,
Atque oculis simili fieri ratione necejse'st :  755
Nunc igitur quoniam docui me forte Leones
Cernere per simulacra, oculos quæcumque laccfunt :
Scire licet mentem simili ratione moveri
Per simulacra Leonum cætera, quæ videt æquè,
Nec minùs, atque oculi : nisi quod mage tenuia cernit.

Nec ratione alia, cium somnus membra profudit, 761
Mens animi vigilat, nisi quod simulacra laccfunt,
Hæc eadem nostros animos, quæ, quam vigilamus :
Usque adeo, certè ut videamur cernere eum, quem
Reddita vital jam mors, & terra petita'st.  765
Hoc ideo fieri cogit Natura, quod omnès
Corporis offeci sensus per membra quiescunt,
Nec possunt falsum veris convincere rebus.
Præterea, Meminisse jacet, languetque sopore,
Nec dissenti, eum mortis, lethique potitum 770
Jampridem, quem Mens vivum se cernere credit.
for the Mind is of a very subtle Nature, and wonderfully disposed to move.

That the Mind is moved, as I observed, by the Images of Things, you may easily collect from hence, that what we perceive by the Mind is exactly like what we see with our Eyes; and therefore they must of necessity be both affected by the same Things, and in the same manner. And so, when I said, for Instance, that I see a Lion by means of the Image that strikes upon the Eyes, I know by the same Rule that the Mind is moved by another Image of a Lion, which it equally and no less sees, than the Eye sees the Image proper to it; with this Difference only, that the Mind can perceive Images of a more thin and subtle Nature.

Nor from any other Reason is the Mind awake when the Body is asleep, but because those very Images affect the Mind which were used to move the Sense when we were awake, so that we fully believe we see a Person who has been long since dead and buried in the Grave; and it cannot well be otherwise, because all the Senses of the Body are obstructed and bound up by Sleep, and therefore have no Power to convince us of the contrary. Besides, the Memory is feeble and languishes by Rest, and makes no Objection to satisfy us, that the Man has been long in the Arms of Death, whom the Mind really believes it sees alive.

The Images that are continually wandering to and fro in all Places, strike with such Violence upon the Sleeper, that they rush into his Mind, and shake and disturb it to such a Degree, as begets in it an Imagination of the very Things whose Images they are. And the Reason why we believe the Dead are actually present with us, is, because the Senses, by which alone we distinguish between true and false, being lulled and stupified by Sleep, cannot perform their Functions. Besides, the Memory is stupified, and we do not at that time recollect that the Person who seems to be present with us is dead.
Quod superest, non est mirum, simulacra moveri, Brachiaque in numerum jacere, & cetera membra. Nam fit, ut in somnis facere hoc videatur Imago. Quipe, ubi prima perit, alioque est altera nata. 775 Endo statu, prior hac gestum mutasse videtur. Scilicet id fieri celeri ratione putandum est. Multaque in his rebus quaruntur, multaque nobis Clarendum est, planè si res exponere avemus. Quæritur in primis, quare, quod quoique libido Venerit, extemplo Mens cogit et ejus idipsum. Anne voluntatem nostram simulacra tuentur? Et simulac volumus, nobis occurrit Imago? Si Mare, si Terram cordi est, si denique Cælum, Conventus hominum, Pompam, Convivia, Pugnas, Omnia sub verbone creat Natura, paratque? 786 Quom præsertim aliis eadem in regione, locoque Longè diffimilcis Animus res cogit et omnis? Quid porro, in numerum procedere quom simulacra Cernimus in somnis, & mollia membra movere, 790 Mollia mobiliter quom alternis brachia mittunt? Et repetunt oculis gestum pede convenienti? Scilicet arte madent simulacra & dolce vagantur, Nocturno facere ut possint in tempore ludos?
And then it is no wonder that the Images seem to move, and to throw about their Arms and the rest of their Limbs to exact Time, and thus they seem to do when we are in a Dream; for when the first Image is gone, and another springs up in a different Pottle, the first, we think, has changed its Shape; and all this, you must conceive, is done in an Instant of Time. There are many other Inquiries about Things of this Nature, and we must enter into long Disputes if we attempt to give a distinct Answer to every one.

First then, it is asked, How it is that whatever we desire to think of, the Mind immediately thinks upon that very Thing? Is it that the Images are always ready at the Command of the Will? Does the Image immediately occur to us the Moment we desire? If we fancy to think of the Sea, the Earth, the Heavens, of Senates, Shews, Feasts, Battles; does Nature form these, and provide them ready at our Nod? especially since the Minds of others, that are in the same Country and in the same Place with us, think of Things quite different from these?

And then, since we see Images in our Sleep to step to Time, to move their pliant Limbs, and throw about their tender Arms alternately, and keep due Measure with their Feet; are they taught this by Art? Have they learnt to dance, that thus they play their wanton Sports by Night? Is not this

Since we continue some time in the same Imagination, it is not one Image that is before the Mind all that while, but many Images, that offer themselves, successively, Image after Image in a never-ceasing Flow. If these Images remain in the same Posture, the Thing we fancy we see will seem without Motion; but if the Posture of the Images vary, it must of necessity seem to move.

What we take to be one single Moment of Time, is indeed many Moments; so that the Images being, as they are, extremely subject to Motion, a Multitude of them present themselves
An magis illud erit verum, quia tempore in uno Tempore multa latent, ratio quae comperit esse: Propterea fit, uti quovis in tempore quaeque Præsto sunt Simulacra locis in queisque parata? Tanta est mobilitas, & eorum copia tanta.

Et quia tenuia sunt, nisi se contendit, acutè Cernere non potis est Animus; proinde omnia, quæ sunt Preterea, percunt, nisi sic se se ipse paravit. Ipse parat se se porro, speratque futurum, Ut videat, quod consequitur rem quamque: fit ergo.

Nonne vides, Oculos etiam, quom, tenuia quæ sunt, Cernere ceperunt, contendere se, atque parare, Nec sine eo fieri posse, ut cernamus acutè? Et tamen in rebus quoque apertis noscere posse, Si non advertas Animum, proinde esse, quasi omni Tempore remotæ fuerint, longique remotæ. Cur igitur mirum est, Animus si cætera perdit, Pretor quàm quibus est in rebus deditus ipse?

Deinde adopinamur de signis maxima parvis: Ac nos in fraudem induimus, frustraramur & ipsi

Fit quoque ut interdum non suppedietetur Imago Ejusdem generis, sed Fæmina quæ fuit ante, In manibus Vir tum factus videatur adeßee:

Aut
this the Truth rather, that what we take for one Moment of Time, this present Now, has many Parts included, as we find by Reason? And therefore it is, that in every Instant there are a thousand different Images always ready in every Place; so numerous are they, and so apt to move; and then they are so exceeding subtle, that the Mind cannot possibly perceive them distinctly, without the nicest Diligence. And so those Images die away unobserved, which the Mind does not apply itself to perceive; but it does apply itself closely to distinguish the Image it hopes to find, and therefore sees it.

Don't you observe that the Eyes, when they would discover an Object exceeding small, contract themselves close and provide for it; nor can they accurately distinguish, except they do so? And you will find, even in Things ever so plain, unless you strictly apply your Mind, they will be as if they were utterly obscure, and at the greatest Distance undiscovered. Where is the Wonder then, that the Mind should lose the Observation of all other Images but those it particularly inquires after and is employed about?

Besides, we often mistake small Objects for great, and so we contribute to our own Delusion and impose upon ourselves.

It happens likewise, that sometimes an Image, of a different kind, presents itself to the Mind. Thus the Form that was before a Woman, now shews itself a Man, or some other Person of a

themselves to us every Moment, and among them the Image of the Thing of which we please to think. Besides, though all kinds of Images are continually at Hand, yet they being most tenuous and subtle, the Mind cannot perceive them, unless she watch with great Diligence and endeavour to do so; for subtle Things will escape unheeded by a negligent Mind, as they do from a careless and unwatchful Eye.
Aut alia ex alia facies, ataque sequatur:
Quod ne miremur, Sopor, atque Oblivia curant. 820
Illud in bis rebus vitium vehementer, & istum
Effugere errorem, vitareque præmeditator,
Lumina non facias Oculorum clara creata,
Prospicere ut possimus: & ut proferre viaï
Proceros passus, ideo fastigia posse
Surarum, ac Feminum pedibus fundata plicari:
Brachia tum porro validis ex apta lacertis
Esse, Manusque datas utraque à parte minusras,
Ut facere ad vitam possimus, quæ foret usus.
Caetera de genere hoc inter quaœcunque pretantur:
Omnia perversa praepositera sunt ratione.
Nil adeo quoniam natum’est in Corpore, ut uti
Possimus, sed quod natum’est, id procreat usum;
Nec fuit ante Videre Oculorum lumina nata:
Nec dictis Orare prius, quam Lingua creata’est:
Sed potius longè Linguae præcessit origo
Sermonem, multoque creatæ sunt prius Aures,
Quam Sonus est auditus: & omni denique membra
Ante fuere (ut opinor) eorum quam foret usus.
Haud igitur potuere utendi crescere causa. 840
BOOK IV. Of the Nature of Things.

different Age and Complexion; but this we are not to wonder at, since the Senses are all asleep, and we are wholly in a State of Forgetfulness.

But in Subjects of this nature, guard yourself to the utmost of your Power against that Error, that gross Mistake; and never believe that those bright Orbs, the Eyes, were made that we might see; or that our Legs were made upright, and Thighs fixed upon them, and were supported by Feet, that we might walk and take large Strides; that our Arms were braced with strong Sinews, and that our Hands were braced on both Sides, to assist us in those Offices that are necessary to the Support of Life. And whatever Constructions they put upon other Parts of the Body, they are all absurd and against Reason; for no Member of the Body was made for any particular Use, but after it was made each Member found out a Use proper to itself; for there was no such Thing as to see before the Eyes were made, nor to speak before the Tongue was formed; but the Tongue was rather in being long before there was Speech, and the Ears were made long before any Sound was heard. In short, all the Members, in my Opinion, were in being before their particular Uses were set out. This is so true that, to engage in

It was the Opinion of Epicurus, that the Members of our Body were not made designedly for proper Uses, but being made by Chance, the Use that first offered itself was laid hold of by each Member; for if any thing was made for a certain future Use, something must have praecoxited, that signified that such a Use would be convenient or necessary. For Example: If there had not been a previous Use of Fighting, Sleeping and quenching of Thirst, Armour, Beds and Cups had never been thought of; thus the Eye could not be made for the sake of Seeing, &c. This Opinion is ridiculous and extravagant; but the Philosopher was forced to resort to it, otherwise he must have allowed of a Providence, which is not more visible in any thing than in the wonderful Mechanism of the Parts of a human Body.

Battle,
Lucretii Lib. IV.

At contrà conferre manu certamina pugnae,
Et lacerare artus, fædareque membra cruore,
Antè fuit multò, quàm lucida tela volarent.
Et volnus vitare priùs natura coëgit,
Quàm daret objectum parmaï læva per artem. 845
Scilicet & feffum corpus mandare quieti,
Multò antiquius est, quàm leiti mollia frata.
Et sedere stitum priùs est, quàm pocula, natum.
Hæc igitur possent utendi cognita causa
Cum, ex usu quæ sunt vitaque reperta. 850
Illa quidem feorsum sunt omnia, quæ priùs ipsa
Nata, dedere sua post notitiam utilitatis.
Quo genere in primis Senfus, & Membra videmus.
Quare etiam atque etiam procul est ut credere possis,
Utilitatis ob officium potuisse creari. 855

Illud item non est mirandum, Corporis ipsa
Quod natura Cibum quærit quoiusque animantis.
Quippe etenim fluere, atque recedere corpora rebus
Multà modis multis docui, sed plurima debent
Ex animalibus iis, quæ sunt exercita motu; 860
Multaque per sudorem ex alto pressa feruntur,
Multa per os exhalantur, quom languida anhelant:
His igitur rebus rarescit Corpus; & omnis
Subruitur natura, dolor quam consecutur rem:
Propterea capitur Cibus, ut suffultciat artus, 865
Et recreet vireis interdatus, atque patentem
Per membra ac venas ut amorem obturet edendi.
Humor item discedit in omnia qua loca cunque.
Postunt Humorem, glomerataque multa vaporis
Corpora quæ stomacho præbent incendia nostro, 870
Diffupat adveniens liquor, ac res finguit, ut ignem:

Urere
Battle, to mangle the Limbs, and to stain the Body over with Blood, these were in Being before any shining Darts flew through the Air, and Nature taught us to avoid a Wound before the Left Hand learnt to oppose a Shield in our Defence; and so, to commit the Body to Rest was long before the Invention of soft Beds, and to quench the Thirst was practiced before the Use of Cups. All these Things, we may believe, were invented for common Benefit, as they were found proper and convenient for the Occasions of Life. All Things therefore, that were in Being before the Use of them was determined, applied themselves afterwards to the Office that was most suitable and serviceable to them. Of this kind principally, are the Senses and Members of our Bodies; and therefore you are to avoid, upon all Accounts, so much as to think that they were at first formed for any particular Design or Use.

Nor is it wonderful at all, that it is the Nature of every Animal to require Meat; for I have told you that a Train of Effluvia's are ever flowing from all Bodies, in various Manners, but most are discharged from those Animals that are most used to Motion; many Particles forced from within are carried off by Sweat, and many exhale through the Mouth, when we are fatigued and pant for Breath. The Body therefore, by these Discharges, becomes raresied, and all Nature is falling to Pieces, which is attended with great Pain. Food therefore is taken to prop up the Limbs, and being given from time to time, it renews the Strength, and satisfies that gaping Desire of eating through the Limbs and Veins.

The cooling Drink likewise descends into all the Parts that require Moisture, and the flowing Liquor scatters all that Heap of hot Particles that set our Stomach in a Flame, and extinguishes them as Fire,
Urere ne possit calor amplius aridus artus.
Sic igitur tibi anbela sitis de corpore nostro
Abluitur, sic expletur jejuna cupido.

Nunc quì fiat, uti Passus proferre queamus, 875
Cum volumus, varièque datum fit membra movere:
Et quae res tantum hoc oneris protrudere nostrì
Corporis insuerit, dicam: tu percipe dicta.

Dico Animo nostro primum simulacra meandi
Accidere, atque Animum pulsare, ut diximus antè. 880
Inde Voluntas fit: neque enim facere incipit ullam
Rem quisquam, quam Mens providit, quid velit, antè.
At, quod providet, illius rei constat Imago.

Ergo Animus cum sé se movet, ut velit ire,
Ing. gredi, ferit extemplo, quae in Corpore totò 885
Per membra, atque artus, Animaí dissita vis est:
Et facile ist fabr, quoniam conjuncta tenetur.
Inde ea proporro Corpus ferit, atque ita tota
Paullatim moles protruditur, atque movetur.

Præterea, tum rarescit quoque Corporas, & Aër, 890
Scilicet ut debet qui semper mobilis exsìat,
Per patèsa קט venit, penetratque foramina largus;
Et dispersitur ad partes ita quasque minutæs
Corporis: binc igitur rebus fit utrinque duabus,
Book IV. Of the Nature of Things.

Fire, so that the Heat has no longer Power to scorch our Bowels; and thus is panting Thirst washed away from our Bodies, thus our craving Hunger is satisfied.

1 And now attend, and you shall know how it is that we are able to walk when we will, that we have a Power to move our Limbs as we please, and what it is that thrusts the Body forward with all its Weight.

I say then, that the Images of Motion first affect and strike the Mind, as we observed before. This makes the Will; for we never attempt to do any thing before the Mind knows what it is we desire to do, and the Image of that Thing which occurs to the Mind must be present before it. And thus the Mind, having moved itself so as to resolve to go forward, strikes immediately upon the Soul, which is diffused through the whole Body; and this is easily done, because they are both close-ly joined together. The Soul then strikes the Body, and so the whole Bulk by degrees is thrust forward and put into Motion.

Besides, the Body by this means is raresied, and the Air, which is ever disposed to move, enters the open Passages, and pierces through the Pores in great Abundance, and so is dispersed through every minute Part of the Body. By these Two therefore (by the Soul labouring within, and by

1 He now explains the Cause of voluntary Motion. Certain Seeds, by which the Will to move may be stirred up in the Mind, strike the Mind. This causes the Mind to will; and that she may execute what she wills, she rouzes up the Soul, annexed to her and diffused through the whole Body; and hence the whole Frame is thrust forward. But lest the Soul should be unable to move so great a Weight, the Air assists her from without, and entering into the Pores of the Body, as it is rarefied by Motion, helps to drive on the Burden; and thus, by the Soul labouring within, and by the Air entering from without, the Body is shoved forward, as a Ship is driven with Sails and Oars.
Corpus uti, ut Navis velis, ventoque, seratur. 895

Nec tamen illud in his rebus mirabile constat,
Tantula quod tantum Corpus Corpuscula possint
Contorquere, & onus totum convertere nostrum.

Quisque etenim Ventus subteli corpore tenuis
Trudit agens magnam magno molimine Navim: 900
Et manus una regit quantovis impete euntem:
Atque Gubernaculum contorquet quolibet unum.

Multaque per trochleas, & tympana pondere magno
Commovet, atque leviter sustollit Machina nisu.

Nunc quibus ille modis Somnus per membra qui-
etem

Inviget, atque Animis curas è peitore solvat:
Suavidiscis potius, quam multis versibus, edam,
Parvus ut est Cycni melior canor, ille Graum quam
Clamor, in aetheris dispersus nubibus Austri.

Tu nibi da teneuis aureis, animumque sagacem, 910
Ne fieri negites, que dicam posses; retroque
Vera repulsant et discedas peitore dicta:
Tutemet in culpa quem sis ne cernere possis.

Principio Somnus sit, ubi est diserta per artus
Vis Animae, partimque foras egesta recessit: 915
Et partim contrusa magis conceessit in altum.

Dissolvuntur enim tum demum Membra, fluuntque.
Nam dubium non est, Animae quin opera sit

Sensus
the Air entering from without) the Body is moved, as a Ship is by Oars and Wind.

Nor is this at all strange, that Particles so very small should turn about the Bulk of our Bodies, and move so great a Weight; for the driving Wind, formed of so fine and subtle Seeds, thrusts forward a large Ship with mighty Force, and one Hand can govern it under full Sail, by turning one little Helm, which Way it pleases; and an Engine with small Labour is able, by Pullies and Wheels, to move many Bodies of a great Weight.

Next, how soft Sleep dissolves the Limbs in Sleep. Rest, and frees the Mind from anxious Care, I choose in few but sweetest Numbers to explain; as the Swan's short Song is more melodious than the harsh Noise of Cranes scatter'd by Winds through all the Air. Hear me, my Memnius, with attentive Ears and a discerning Mind, left what I shall prove, you think impossible to be; and so your Mind refusing to admit the Truth I shall relate, you make no Progress in Philosophy, when the Fault is in yourself, that you will not see.

And first, m Sleep comes on when the Power of the Soul, diffused through the Limbs, Part of it is thrown out and fled abroad, and Part being squeezed more close retires further within; then are the Limbs dissolved and grow weak. For without doubt the Business of the Soul is to stir up

m He says our Senses are locked up and hindered by Sleep from performing their Functions; but our Senses proceed from the Operation of the Soul; therefore it follows, that when the Animal is asleep his Soul must partly be gone out of him, partly be retired into the inmost Recesses of his Body, and partly be dispersed through the Members. He will not allow that when the Animal sleeps the Soul is entirely retreated from the whole Body, for then neither the Creature nor his Senses could revive after Sleep; for as Fire buried in Ashes is not wholly extinguished, so neither is the Soul extinct in an Animal asleep.

Senfe
Luchetii
Lib. IV.

Sensus bie in nobis, quem cum Sopor impedir esse,
Tum nobis Animam perturbatam esse putandum est.
Ejecetque foras, non omnem; namque jaceret
Æterno Corpus perfusum frigore letbi:
Quippe ubi nulla latens Animai pars remaneret
In membris, cinere ut multa latet obrutus Ignis,
Unde reconsfari Sensus per membra repente
Possit ut ex igni caeco consurgere Flamma.
Sed quibus hae rebus novitas confletur & unde
Perturbari Anima, & Corpus languescere possit,
Expediam: tu fac ne ventis verba profundam.

Principio, externa Corpus de parte neceffum est.
Æriis quoniam vicinum tangitur auris,
Tundier, atque ejus crebro pulsarier istu.
Proptereaque fere res omnes, aut Corio sunt,
Aut Seta, aut Conchis, aut Callo, aut Cortice testa.
Interiorem etiam partem spirantibus Æir
Verberat bic idem cium ducitur, atque reflatur.
Quare utrinque secus quom Corpus vapulet, & quom
Perveniant plaga per parva foramina nobis
Corporis ad primas parteis, elementaque prima;
Fit quafi paulatim nobis per membra ruina.

Conturbantur enim postiture principiorum
Corporis, atque Animi, sic, ut pars inde Animai
Ejiciatur & introrsum pars abdita cedat.
Of the Nature of Things.

1. Sense in us, which since Sleep removes, we must conclude that the Soul then is disturbed and driven abroad: Not the whole Soul; for then the Body would lie in the cold Arms of eternal Death; then no Part of the Soul would lie retired within the Limbs, as a Fire remains covered under a Heap of Ashes; from whence the Senses might be kindled again through the Body, as a Flame is soon raised from hidden Fire.

But by what means this wonderful Change is brought about, how the Soul is thus disordered and the Body languishes, I shall now explain. Do you see that I do not scatter my Words into the Wind.

And first, the outward Surface of Bodies which are always touched by the adjacent Air, must of necessity be struck by it and beaten with frequent Blows; and for this Reason all Things almost are covered either with Skin, or Bristles, or Shells, or Buff, or Bark. This Air then, as it is drawn in and breathed out by Respiration, strikes upon the inward Parts of the Body. Since therefore the Body is beat upon from within and without, and since the Strokes pierce through the little Pores into the Seeds and first Principles of it, this causes a kind of Ruin and Destruction through all the Limbs; the Situation of the Seeds, both of the Body and Mind, are disordered; so that part of the Soul is forced out, and part retires.

The outward Air beats upon the outmost Parts of the Body, and the Air that is breathed in strikes the inward Parts; these two-fold Strokes disturb the Order and Site of the Atoms, and cause a following Weakness in the Soul and Body; part of the Soul is forced out, part retreats inwardly, and part is dispersed through the Limbs; so the Parts thus disjoined cannot perform their ordinary Functions. The Motions therefore of Sense being changed, the Sense too goes away; and thus what was the Support of the Body being absent, the Body must necessarily flag and fail.
Pars etiam disfraction per artus, non queat esse
Conjunctor inter se, nec motu mutua fungi:
Inter enim sepit aditus Natura, viaque.
Ergo Sensus abit mutatis motibus altè.
Et quoniam non est quasi quod suffulciat artus,
Debile fit Corpus, languescunt omnia membra:
Brachia, Palpebraque cadunt, Popliteque procumbunt.

Deinde cibum sequitur Somnus, quia quae facit Aër,
Hæc eadem Cibus, in venas dum diditur omneis,
Efficit: & multis Sopor ille gravissimus existat,
Quem satur, aut laffus capias, quia plurima tum se
Corpora conturbant magno contusa labore.

Fit ratione eadem conjectus porro Animali
Altior, atque foras ejus largior ejus,
Et divisior inter se, ac disfraction intus.

Et quoi quisque fere studio devindicus adhaeret,
Ast quibus in rebus multùm sumus antè morati,
Atque in qua ratione fuit contenta magis Mens,
In Somnis eadem plerumque videmur obire:
Caufidici causas agere, & componere leges:
Induperatores pugnare, ac praxia obire:
Nautæ contraütum cum ventis cernere bellum:

Nos
and lurks close within; and the Part that is diffused through the Limbs is so broken and divided, that the Seeds cannot unite to perform their mutual Operations; for Nature stops up all Passages of Communication between them, and therefore the regular Motions being exceedingly changed, the Sense is entirely gone. Since therefore there is not Power sufficient to support the Limbs, the Body becomes weak; all the Members languish; the Arms, the Eyelids fall; and the Knees sink under the Weight of the Body.

Thus Sleep follows when the Belly is full, because Food, when it is distributed through all the Veins, has the same Effect upon the Soul as the Air had; and that Sleep is by much the founddest which you take when you are weary or full, because then more of the Seeds being agitated and put into Motion by the hard Labour, mutually disturb and disorder one another. And for this Reason the Soul retires further within, and a greater Part of it is thrown out, and the Parts that remain within are the more separated and the further disjoined.

And then the Business we more particularly follow, the Affairs we are chiefly employed in, and what our Mind is principally delighted with when we are awake, the same we are commonly conversant about when we are asleep. The Lawyer is pleading of Causes and making of Statutes, the Soldier is fighting and engaging in Battles, the Sailor is warring against the Winds; for my—

It was the Opinion of Epicurus, that the Minds of sleeping Animals are struck and moved by outward and adventitious Images, and that these are the Causes of Dreams. And we usually dream about what we have been chiefly employed in the Day, because the Passages, through which the Images had so often entered, are not closed up, and therefore more easily receive and admit the Images that belong to the Actions in which we have been employed.
Nos agere hoc autem, & Naturam querere rerum Semper, & inventam patriis exponere chartis.
Catera sic studia, atque artes plerumque videntur In Somnis animos Honinum frustrata tenere.
Et, quicunque dies multos ex ordine ludis Adsiduas dederunt operas, plerumque videmus, Quam jam deftiterint ea Sensibus usurpare, Reliquias tamen esse vias in Mente patenteis, Qua possint easdem rerum Simulacra venire, Permultos itaque illa dies easdem obversantur Ante oculos, etiam vigilantes ut videantur Cernere saltanteis, & mollia membra moventeis : Et citharae liquidum carmen, chordeaque loquenteis Auribus accipere, & confessum cernere eundem, Scenaïque simul varios splendere decoros.
Usque adeo magni reserit studium, atque voluntas, Et quibus in rebus consuerint esse operati Non Hominis solum, sed verò Animalia cuncta.
Quippe videbis Equos forteis, cum membra jacebunt, In Somnis sudare tamen, spirareque fæpe, Et quæsi de palma summas contendere vireis, Tut quaæ Carceribus patetâlis fæpe quiete:
Venantumque Canes in molli fæpe quiete Jactant crura tamen subito, vocelque repente Muitunt, & crebras redundant naribus auras, Ut vestigia si teneant inventa ferarum.
Expergesci et sequuntur inania fæpe Cervorum simulacra, fugæ quaæ dedita cernant;
Donec discussis redeant erroribus ad se:
At confusa domi Catulorum blanda propago Degere, fæpe levem ex oculis, volueremque saporem
Discutere, & corpus de terra conripere instant, Proinde quaæ ignotas facies, atque ora tuantur.
felf, I am always searching into the Nature of Things; and writing my Discoveries in Latin Verse; and so, many other Arts and Employments are commonly the empty Entertainments of the Minds of Men when they are asleep.

And they who spend their Time in seeing Plays for many Days together, when those Representations are no longer present to the waking Senses, there still remain some open Traces left in the Mind, through which the Images of those Things find a Passage, so that for many Days after the whole Performance is acting over again before their Eyes; and even while they are awake they fancy they see the Dancers leaping, and moving their active Limbs; they are ravished with the soft Notes of the Musick, and hear the speaking Strings; they see the same Audience, the same Variety of the Scenes and Decorations of the Stage. So strong Impressions do Use and Custom make upon us; such Effects do the common Business of Life produce in the Minds of Men, and in Beasts likewise.

For you shall see the gallant Courser, when his Limbs are at rest, to sweat in his Sleep, to breathe short, and, the Barriers down, to lay himself out as it were on the full Stretch for the Prize.

And Hounds frequently in their soft Sleep throw out their Legs, and of a sudden yelp and snuff the Air quick with their Nose, as if they were full Cry upon the Foot of the Deer; and when awake they still persue the empty Image of the Game, as if they saw it run swiftly before them, till undeceived they quit the Chace, and the fancied Image vanishes away.

And the fawning Breed of House-Dogs, that live at home, often rouze and shake the drowsy Fit from their Eyes, and start up of a sudden with their Bodies, as if they saw a Stranger or a Face they had not been used to.
Etc quæm quæque magis sunt aspera femina eorum, 
Tum magis in Somnis eadem sœvire necessitatem. 1000
At variae fugient Volucrem, pennique repente
Sollicitant Divum nocturno tempore lucos,
Accipitres somno in leni si prælia, pugnasque
Edere sunt perfecundantes, visque volantes.

Porro Hominum mentes magnis quaæ motibus
edunt?

Magna etenim sœpe in Somnis faciuntque, geruntque.
Rex expugnant, captiuntur, prælia miscent;
Tollunt clamores, quasi si jugulentur ibidem:
Multi depugnant, gemitusque doloribus edunt;
Et quasi pantheræ morsu sævique leonis
Mandantur, magnis clamoribus omnia compleunt.
Multi de magnis per Somnum rebus loquentur,
Indicioque sui facti persœpe fuere:
Multi mortem obeunt, multi de montibus altis
Se quasi praecipitent ad terram corpore toto
Exierrentur, & ex Somno, quasi mentibus capti,
Vix ad se redeunt permoti corporis ætatu.
Flumen item sitiens, ait fontem propter amœnum
Adsidei, & totum prope faucibus occupat amnem.
Pusi sæpe lacum propter, se, ac dolia curta,
Somno devinisti credunt extollere vestem,
Totius humorem facatum ut corporis fundant:
Cùm Babylonica magnifico splendore rigantur.
Tum, quibus ætatis freta primitus insinuantur,
Semen ubi ipsa dies membris matura creavit; 1025

Convenient
The sharper the Seeds are of which the Images Frightful are formed, they strike in the Sleep with the greater Violence; so, many Birds will fly about, and hide themselves in the inmost Recedes of sacred Groves by Night, if in their soft Sleep they see the Hawk pursuing them upon the Wing, or pouncing or engaging with his Prey.

And then, what mighty Deeds are Men hurrying themselves about in their Dreams? Then they shew their Valour, and do wonderful Exploits; they engage with Kings, are taken Captive, are in the Confusion of the Battle; they cry out as if they were expiring upon the Spot. Some are in the hottest of the Fight, and groan with the Anguish of their Wounds, and fill the Air with Complaints, as if they were torn by the Teeth of a Panther or fierce Lion. Some in their Sleep talk of Mysteries of State, and frequently discover the Treason of their own contriving. Some think they are dying away; and others, falling from dreadful Precipices with all their Weight upon the Earth, are terrified, and awake almost out of their Senses, and can scarce recover themselves from the Hurry and Distraction of their Spirits. Another, parched up with Thirst, sits on the River's Bank, or by the Side of a pleasant Fountain, and almost drinks down his Throat the whole Stream: And Children in their Sleep often fancy they are near some Sink or publick Pissing place; they think they are taking up their Clothes, that they may make Water freely, and so the Babylonian Coverlid with its purple Dye, and the rich Bedding, are wet through.

And further, Those who are in the Heat of The Cause Youth, whose ripening Age has well digested the of Love. Semen through all the Limbs, on such the Images

It is no wonder that some Dreams fright us more than others, because those whose Images are composed of rough Seeds, that rudely grate and wound the Mind on which they strike, must of necessity be the most frightful.
T. Lucretii Lib. IV.

Conveniunt Simulacra foris è corpore quoque,
Nuntia praeclari voltus, pulchrique coloris:
Qui ciet irritans loca turgida femine multo,
Ut, quasi "ansatis sapa omnibu' rebu' profundant
Fluminis ingentes fluctus, vestemque cruentent. 1030

Sollicitatur id in nobis, quod diximus ante,
Semen; adulta etas cum primum roborat artus.
Namque alias aliud res commovet, atque lacesit:
Ex homine humanum Semen ciet um: Hominis vis.
Quod simulatque suis ejestum sedibus exit, 1035
Per membra, atque artus decedit corpore toto
In loca conveniens nervorum certa; cietque
Continuo parteis genitaleis corporis ipsas:
Inritata tument loca Semine, fitque voluntas
Ejicere id, quod se contendit dira libito; 1040
Idque petit corpus mens, unde st fuctia amore;
Namque omnes plerumque cadunt in volnus, E illam
Emicat in partem sanguis, unde icimur istu,
Et si comminus est, hostem ruber occupat humor.
Sic igitur, Veneris qui telis accipit istum, 1046
Sive Puer membris muliebribus bunc jaculatur,
Seu Mulier toto jace corpore amorem,
Unde feritur, eo tendit, genteque coire,
Et jacere humorem in corpus de corpore duetum: 1050
Namque voluptatem praegat multa cupidio.
Hac Venus est nobis, hinc autem st nomen Amoris:
Hinc illae primum Veneris dulcedinis in cor
Stillavit gutta, & succisit servida cura.
Nam si abest quod ames, praeio Simulacra tamen sunt
Illius, & nomen dulce obversatur ad aureis. 1056

Sed
of every beauteous Object strike deeply, and shew the lovely Face and blushing Cheek; which to provoke and stimulate the Parts, swelling with Seed in abundance, that they discharge, as if the Deed were done, large Floods of Moisture, and pollute the Robe.

For (as I said before) the Seed begins to boil as soon as mature Age has well-braced the Limbs. Other Things are moved and provoked by other Impressions, but nothing but the Power of Beauty can put the human Semen into Motion, which, as soon as it is ejected from its little Cells, flows through the Limbs and through every Part of the Body, and being received into the Receptacle of the Nerves proper for it, in an instant stimulates the Genitals. These Parts grow turgid with the Semen, and thence proceeds the Will to project it where the Heat of Lust strives to reach; for the Mind drives furiously towards the lovely Body from whence it received the Wound of Love. Men generally fall upon their Wound, and the Blood gushes with Violence towards the Part from whence we received the Blow. If the Murderer be near, the red Liquor will spout all over him. So he that is struck with the Darts of Venus (whether some beauteous Boy, with Female Charms, the Arrow casts; or some more beauteous Maid, that shoots out Love from every Pore) tends to the Part that gave the Stroke; he is in Raptures to enjoy, to inject and to consummate; for the hot Desire to the Act foreshews the mighty Pleasure that attends it. This is properly Venus to us; this is the Deity of Love. Hence the Drops of sweet Delight first strike upon the Heart, and the burning Fever of succeeding Care follows it close; for if the Object of your Love be absent, her charming Image is always before you, and her sweet Name is ever thrilling in your Ears.
Sed fugitare decet Simulacra, & pabula amoris
Abterrere stibi, atque aliò conversere mentem:
Et jacere humorem conlectum in corpora quæque:
Nec retinere semel conversum unius amore:
Et fervare stibi curam, certumque dolorem.
Ulcus enim vivescit, & inveterascit alendo,
Inque dies gliscit furor, atque arunna gravescit,
Si non prima novis conturbes volnera plagis,
Volgivagaque vagus Venere ante recentia eures:
Aut aliò possis Animi traducere motus.

Nec Veneris fruçu caret is, qui vitat amorem:
Sed potius, quæ sunt fine pæna, commoda sumit.
Nam certa, & pura est sanis magis inde voluptas,
Quam misérís, etenim potiundi tempore in ipso
Fluxuat incertis erroribus ardor Amantum:
Nec constat quid primum oculis, manibusque fruantur.
Quod petiere premunt arêtè, faciuntque dolorem
Corporis, & denteis inlidunt sepe labellis,
Osculaque adfigunt, quia non est pura voluptas:
Et stimuli subsunt, qui instigant lædere idipsum,
Quodcunque est, rabies unde illæ germina surgunt.
Sed leviter pænas frangit Venus inter Amorem,
Blandaque refrenat morsus admista voluptas.

Namq; in eo spes est, unde est ardoris origo.
Restringui quoque posse ab edem corpore flammam:
Quod fieri contra coram natura repugnat:
Unaque res hæc est, quois quam pluria habemus,
Tam magis ardecit dira cuppedine pestus.
Nam Cibus, atque Humor membris adsimitur intus,
Quæ quoniam certas possunt obsidere parteis.
But take care that you fly those Images, and avoid those Incentives to Love, and divert your Mind some other way; choose to bestow your Favours in common; don't reserve your whole Stock for One only, left by that means you entail Anxiety and certain Sorrow upon yourself; for the Ulcer spreads and grows stubborn by feeding it, the Madness increases every Day, and the Trouble becomes the heavier, unless you cure old Wounds by new, or, like a Rover, remove your first Smart by wandering over all the Sex, or turn the Passion of your Mind into some other Channel.

Nor is He without the Pleasures of Venus, who disdains the Fetters of Love, but rather takes the Sweet without the Pain that follows it; for such a sober Lover tastes more certain and more unmixed Delight, than those Wretches, those furious Vo-
taries, whose Mind in the very instant of Enjoy-
ment is tossed with a thousand Doubts and Fears. These know not what Sweets they shall first rifle with their Hands and Eyes; what they fasten upon, they strain hard and give Pain to the Body; they often fix their Teeth in the Fair-one's Lips, and pin her down with Kisses: And for this Reason, because the Joy is imperfect, and some Stings re-

main which provoke them to hurt the Thing, whatever it is, that first put them into a Rage; but Venus in the Encounter of Love gently sooths the Pain, and the sweet Pleasure intermixed re-

strains the Lover's Teeth from biting too hard.

The Lover hopes, perhaps, that his Flame may be extinguished by the same Object that first blew the Fire, but Experience shews the contrary of This; for This is the only Thing which, the more we enjoy of it, our Soul still burns with the eager Desire of more. Meat and Drink are taken down into the Body, and because they fill up cer-
tain empty Places, therefore the Appetite of Eat-
Hoc facilè expletur laticum, frugumque cupidus;
Ex hominis verò facie, pulcroque colore,
Nil datur in corpus præter Simulacra fruendum
'Fenestia, quæ vento spes raptat sæpe misella. 1090
Ut bibere in somnis Sitiens quom quarit, & humor
Non datur, ardorem in membris qui finguere possit:
Sed laticum Simulacra petit, frustraque laborat:
In medioque sitit torrenti flumine potans.
Sic in amore Venus Simulacris ludit Amanteis, 1095
Nec satiare queunt spectando corpora coram:
Nec manibus quidquam teneris abradere membris
Possunt, errantes incerti corpore toto.

Denique quom membris conlatis flore fruuntur
Ætatis, quom jam praesagit gaudia corpus,
Atque in eo est Venus, ut muliebria conferat arva;
Adfigunt avidè corpus, junguntque salivas
Oris, & inspiant pressantes dentibus ora,
Nec quicquam: Quoniam nihil inde abradere possunt,
Nec penetrare, & abire in corpus corpore toto. 1105
Nam facere interdum id velle, & certare videntur:
Usque adeo cupidè Veneris compagibus bærent,
Membra voluptatis dum vi labesfaeta liquescunt.
Tandem ubi sà rapit nervis conlesta cupido,
Parva fit ardoris violenti pausa parumper;
Inde redit rabies eadem, & suror ille revist,
Quom fibi quod cupiant ipsi, contingere querunt:
Nec reperire malum id possunt quæ machina vincat:
Usque adeo incerti tabescunt volnere caco.

Adde quod absuunt vireis, pereunteque labore.
BooK IV. Of the Nature of Things.

ing and Drinking is easily satisfied; but from a lovely Face and a fine Complexion, the Body can enjoy nothing but empty Images, and a fleeting Hope scattered by every Wind. As a thirsty Man desires to drink in his Sleep, and has no Moisture to allay the Heat within, but vainly catches at the Images of Rivers, and labours to no Purpose, and is parched up while he fancies himself quaffing in a full Stream; so in the Business of Love, Venus deludes the Lover with empty Images, nor can he quench his Desire by gazing upon the charming Object, nor bring away any thing from the tender Limbs with his Hands, as he wanders with wild Excesses over all the Body of his Mistress.

Besides, when they sport in the Flower of their Age with their Limbs mingled in the Embrace, when their Bodies feel the coming Joy, and Venus is fully employed to sow the Female Soil; though they eagerly twine in amorous Folds, and dart their humid Tongues, and bite, and ardently receive each other's Breath, 'tis all to no Purpose; for they can carry nothing away from the Parts they strain, nor can Bodies pierce or be in Bodies lost: For This they sometimes wish, for This they contend when they engage; so eagerly are they entangled in the Nets of Love, that their very Limbs are dissolved in the Excess of Pleasure. Then, when the collected Lust has burst from the Nerves, a Cessation of the violent Ardour ensues for a while; but the same Rage soon returns, the same Fury is renewed, and again they strive to touch the Point, the End of their Desires: They can find no Device to subdue the Pain they feel, and so they pine and languish by a secret Wound.

And then, " they waste their Strength, and perish

Here the Poet enumerates the many Inconveniences that attend upon the Passion of Love, which at best is a wretched Slavery,

Atque in Amore mala bœc proprio, summiæ se-
cundo

Inveniuntur, in adverso verò, atque inopi sunt, Prendere quæ possis oculorum lumine aperto, Innumerabilia: ut melius vigilare sit ante, Quæ docui ratione, cavereque, ne inlaquearis. Nam vitare, plagas in amoris ne laciæmur,
perish by the Labour they go through. And more, they lie under the Power of another’s Will; while their Fortune decays and their Debts increafe, their Duty is neglected and their tottering Reputation fickens. Rich Pearls, and fine Shoes of Sicyon, fhine upon the Feet of their Miftresfs; the large Emeralds, with their green Luftre, are set in Gold; and the blue Vefl is daily ftained, and continually in use drinks up the Sweat of Luft. The Family Eftate, acquired with Honour, is changed into Coronets of Ribbands, and Head-drefles sparkling with Jewels; and is sometimes turned into costly Gowns, or Garments of Melita, or Cean Robes. Besides, they add to thefe the Luxury of Feasts and ftately Couches, Plays, frequent Caroufals, Crowns and Garlands. But in vain! for fome Bitter bubbles up from the very Fountain of his Delight, and poifons all his Sweets; either his own guilty Mind fhings him for leading fuch a Life of Sloth, and murdering fo large a Part of his Time; or his Miftrefs has dropped fome doubtful Word, which kindles in his fond Heart like Fire; or he thinks fhe has thrown her Eyes too freely abroad, and glanced upon another, and he discovers the Remains of a smiling Pleasure upon her Face.

These are the Misfortunes that attend an A- mour ever fo fortunate and conftant; but the Miseries of a wretched and difaftrous Love are innumerable, and obvious to every one with his Eyes open. You had better therefore be upon your Guard beforehand, and obferve the Rules I have laid down to prevent your being caught; for ’tis not fo difficult to avoid being drawn into the Snares of Slavery, obnoxious to Suspicions and fantafical Surmifes. It wafhes the Strength; for, if we believe fome Physicians, one Drachm of Semen weakens a Man as much as the Lofs of fixty Ounces of Blood.
T. Lucretii Lib. IV.

Non ita difficile est qu'am captum retibus ipsis
Exire: & validos Veneris perrumpere nodos.

Et tamen implicitus quoque possis, inque peditus
Effugere infestum, nisi Tute iti obvius obhies:
Et praetermittas Animi vita omnia primum; 1145
Tum quae Corpori' sunt ejus, quam percupis, ac vis.
Nam hoc faciunt Homines plerumque cupidine caeci:
Et tribuunt ea, quae non sunt his commoda verè.
Multimodiigitur pravas, turpisque videmus
Esse in deliciis, summoque in honore vigere. 1150

' Atque alios alii inrident, Veneremque siudent
' Ut placent, quoniam facio adfistiantur amore :
' Nec sua respiciunt miferi mala maxima saepe.
Nigra, μακάδον' est: Immunda & Fatida, ἀκομω.' Caesia παλαδόν Nervosa, & Lignea, ἄρμας: 1155
Parvola, Pumilio, χαρίτων a, tota merum sal :
Magna, atque Immanis, κατάληξις, plenaque honoris:
Balba, loqui non quit, τραυλίξις: Muta, pudens est.
At Flagrans, Odiosa, Loquacula, καμάδον fit.
'Ισχυρ' ερμήδον tum fit, quam vivere non quit 1160

Præ macie: ἐκατόν verò est, jam Mortua tussi.
At Gemina & Mammosa, Ceres est ipsa ab Iaccho.
Simula, αἰθων, ac Satyr' a, Labiusa, φίλομο
Cætera de genere hoc longum' sì diciere coner.
of Love, as to disengage yourself from the Net when you are taken, and to break through the strong Knots which Venus ties close upon all her Votaries.

And though you are entangled and within the Net, you may still avoid much of the Evil, unless you wilfully set yourself against the Remedy. First then, You are to take no notice of any Imperfections, either of Mind or Body, you find in the Mistress you admire and fondly love. All Lovers, blinded by their Passion, observe this, and attribute Beauties to the Fair, to which they have no real Pretence; and therefore the Ugly and Deformed we see have their several Charms, and secure a sovereign Power over their Admirers. The Lover that has such a forbidding Dowdy for a Mistress, is laughed at by his Companions, who advise him to appease Venus and render her propitious; while they think nothing of their own greater Misfortunes, in placing their Esteem upon others less lovely and less beautiful. The Black seems brown; the Nafty and the Rank is negligent; the Owl-eyed is a Pallas; the Sinewy, with her dry Skin, is a little Doe; the Dwarf, of the Pygmy Breed, is one of the Graces, Wit and Spirit all over; the Large and Gigantick is surprising and full of Majesty. If she stammers and cannot speak, then she lips; she is modest if she is dumb; but the Turbulent, the Violent and the Talkative, is all Fire. If she is worn away with a Consumption, she is my slender Love; you may span her in the Waist if she is dying with a Cough. The two-handed Virago, with her full Duggs, is Ceres herself, a Bedfellow for Bacchus; the Flat-nosed is my Silene, a little Satyr; the pouting Lip is a very Kifs. It would be endless to say all that might be offered upon this Subject.

Vol. II.  H  But
Sed tamen esto jam quantovis oris bonore, 1165
Quoi Veneris membris vis omnibus exoriatur:
Nempe aliae quoque sunt, nempe hac sine virimus
antē;
Nempe eadem facit, & scimus facere omnia turpi:
Et miseram tetris se suffit odoribus ipsa,
Quam famulae longè fugitant, furtimque cachinnant.

At lacrymans exclusus Amator limina sēpe 1171
Floribus & Sertis operit, postesquisque superbos
Unguit Amaracino, & foribus miser oscula figit.
Quem si jam admīssum, venientem offenderit aura
Una modo, causas abeundi quærat bona stas:
Et meditata diu cadat altē sumpta querela:
Stultitiaeque ibi sē damnat, tribuisse quod illi
Plus videat, quām mortali concedere par est.
Nec Veneres nostras hoc fallit: quō magis ipsa
Omnia summopere hos vitae postscenia celant. 1180
Quos retinere volunt, adstrictosque esse in amore:
Nequicquam: Quoniam tu animo tamen omnia possis
Protrabere in lucem, atque omneis anquirere nifus.
Et si bello animōsī, & non odiośa vicīsim,
Prētermittet te humanis concedere rebus. 1185

Nec mulier semper sēlo spirat amore:
Quae complexa vīri corpus cum corpore jungit.
Et tenet adfusēs humēstans oscula labris.
Nam facit ex animo sēpe, & communia quärens
Gaudia, sōlicitat spatium decurrere amoris: 1190
Nec ratione alia Volucre, Armenta, Feræque,
Book IV. Of the Nature of Things.

But allow your Mistress all the Advantages of Beauty in her Face, that Charms of Love arise from every Limb, yet there are others as lovely as she, and Time was when you lived without her; and we know she plays the same Game that homelier Women can do as well. And then she perfumes, rank as she is with filthy Smells, that her Maids cannot come near her, but make a Jest of her when they are not seen.

But when the Lover is shut out, and all in Tears crowns the Gates with Flowers and Garlands, and pours Ointments upon the stately Pillars, and the Wretch warms the very Doors with his Kisses; yet when he is admitted, and one Blast from her Armpits strikes full upon him as he enters, he presently seeks for a plausible Reason to be gone, and all his long-laboured Speeches of Complaint are forgotten, and he condemns himself of Folly for raising such Ideas of her Beauty, which no Mortal could lay Claim to. This Secret is well known to Women of the Town; and they act cunningly behind the Scenes as it were, and conceal their Failings from those whose Love they would secure fixed and lasting to themselves: But all to no Purpose; for you may easily imagine how Things are, and discover all, and prevent their utmost Endeavours to deceive you. And if your Mistress be of an open Temper, and not fallen and reserv'd, she will not so much as hide her Defects, but hope you will allow for Imperfections that are common to the whole Sex.

Nor does the Woman always breathe with feigned Desire when joined in strict Embrace with him she loves, when she holds him close, and on his prefixed Lips imprints her balmy Kisses; for she often does it heartily, and strives to share the common Joy, and run the Heats with Vigour to the Goal. Nor for any other Reason would Birds,
Et Pecudes, & Equæ maribus subsidere possent,
Si non, ipsa quod illorum subat, ardet abundans,
Natura, & venerem salientum lata retrætat.
Nonne vides etiam, quos mutua sæpe voluptas
Vinxit, ut in vinclis communibus excrucientur?
In triviis non sæpe Canes discedere audentes,
Divorsi cupidè summis ex viribus tendunt,
Cum interea validis Veneris compagibus hærent?
Quod facerent nunquam, nisi mutua gaudia nosserent:
Quæ lacere in fraudem possent, viresque tenere.
Quare etiam atque etiam (ut dico) est communis vol-
uptas.

Et commiscendo cum Semen fortè virile
Fæmina commulxix subita vi, conripuitque;
Tum sìmiles Matrum materno femine fiunt:
Ut Patribus patrio: sed quos utriusque figurae
Effè vides juxtim, miscenteis volta Parentum:
Corpore de Patrio, & Materno sanguine crescent,
Semina quom Veneris stimulis excita per artus
Obvia conflīxit conspirans mutuus ardor:

Et neque utrum superavit eorum, nec superatum.Śi.
Fit quoque, ut interdum sìmiles existere Avorum
Possint, & referant Proavorum sæpe figuras,
Properea, quia multa modis primordia multis
Miśta suo celant in corpore sæpe Parentes,
Inde Venus varia tradunt à spiræ profelia.
Quandoquidem nigilo minus bac de femine certo
Fiunt, quam Facies, & Corpora, Membraque nobis.
Et Muliebre oritur patrio de femine sæclum:
Maternoque mares existunt corpore creti.
Semper enim partus duplici de femine constat:

Atque,
and Herds, and wild Beasts, and Cattle, and Mares, bear the Weight of the Male, if they did not burn and rage with equal Heat, and so receive with Joy the luftry Leap. Don’t you observe how those whom mutual Pleasure has bound fast, are tortured as it were in common Bonds? how Dogs in the Street are striving to untie the Knot, and pull with all their Might a different Way, yet they stick fast in the strong Ties of Love? This they would never do if not engaged in mutual Joys, which cheat them with Delight and hold them fast. The Pleasure then is common to them both.

If, in the mixing of the Seed, the Female draws in and snatches with sudden Force the Male Seed, the Child, the Female Seed prevailing, is like the Mother, as he is like the Father if his prevails. But Those who, you observe, express jointly the Resemblance, and mingle the Features of both Parents, are formed equally from the Juices of both; for then the mutual Ardor of the Combatants has justly tempered the conflicting Seed, which, raised by the Stings of Venus, is sent in due Proportion through all the Limbs. The Success of the Battle is equal, neither is Victor nor vanquished. It happens sometimes that Children are like their Grandfathers, and resemble the Persons of their remote Ancestors, because the Parents have frequently many Seeds concealed, and variously mingled in their Bodies, which preserve the Features of the Family, and are delivered down from one to another. These Venus forms into different Figures, as the Qualities of the Seeds require, and represents the Complexion, the Voice and Hair of the Progenitors; for These no less arise from proper Seeds, than the Face, the Body or any Parts of it. And a Female Child proceeds partly from the Father’s Seed, and a Male from the Mother’s, for the Issue always consists of the Seed of both;
T. Lucretii Lib. V.

Atque, utri simile est magis id, quodcunque creatur, Eius habet plus parte aëqua, quod cernere possis, sive Virum suboles sive est Muliebris origo.

Nec divina satum genitalem Numina quoquam Absterrent, pater ad natis ne dulcisbus unquam Appelletur, & ut sterili Venere exigat aërum; Quod plerique putant: Et multo sanguine mæsti Conspergunt aras, adolentque altaria donis, Ut gravidas reddant uxoribus semine largo: Nequicquam Divum numen, sorteisque fatigant. Nam steriles nimium craffo sunt semine partim: Et liquido præter justum, tenuique vicissim. Tenue, locis quia non potis est adfigere adhæsum, Liquitur extemplo, & revocatum cedit ab ortu: Craffius hoc porro, quoniam concretius aëquo Mittitur; aut non tam prolixo provolat istu, Aut penetrare locos aequè nequit; aut penetratum, Aegrè admiscetur muliebri Semine Semen. Nam multitum harmoniae Veneris differre videntur. Atque alias aliis complent magis, ex aliisque Suscipiunt aliae pondus magis, inque gravescunt. Et multæ steriles Hymenais antè fuerunt Pluribus, & natae post sunt tamen, unde puellos Suscipere, & partu possent ditesedere dulci: Et, quibus antè domi facundæ sæpe nequissent Uxores parere, inventa sì illis quoque compar Natura, ut possent natis munire senestam.
both; but the greater Likeness it bears to the one than to the other, it partakes of more than a just Proportion of the Seed of that Sex, which you easily apprehend, whether the Child be Male or Female.

Nor do the Divinities above ever destroy the Bar-
prolific Virtue of the Seed, or prevent a Man’s be-
renness. being called Father by a Number of sweet Children,
or curse him all his Life with unfruitful Love, as some vainly think, and therefore with much Con-
cern stain the Altars with the Blood of many Vic-
tims, and make them smoke with Clouds of Incense,
to implore a Blessing upon the showery Seed and promote Conception; but to no Purpose they tire out the Gods and fatigue the Oracles, for they are frequently unfruitful, because the Seed is too thick or too thin. The thin Seed will not stay in the Parts where it was injected, but soon dissolves and flows back; and the Thick has no Effect, be-
cause it is sent out heavy and condensed, or it does not carry home to the Mark, or it cannot rightly penetrate the Passages, or if it does, it is not at all disposed to mix kindly with the Female Juice.

For the Harmony of Love between the Sexes is widely different; Men are more prolific with some Women, and Women conceive more readily, and swell with their Burden after the Embrace of some Men, than with others. Many Women have been barren in a first and second Marriage, and been fruitful at last, have borne lusty Boys, and blessed the Family with a sweet Offspring; and Men, after marrying several Times without Issue, have at length found out a Wife of a Constitution agree-
able to their own, and supported their old Age

The Poet, after his usual Custom, falls foul upon the Gods and says, 'Tis to no Purpose to apply to them for Chil-
dren, for they never curse with Barrenness either Man or Woman.

H 4
Usque adeo magni refert, ut Semina posse
Seminibus commisceri genitaliter apta,
Crassaque conveniant liquidis, & liquida crassis,
Quae quo juncta vixit semina per Veneris res.
Ateque adeo refert, quo visitu vita colatur. 1255
Namque aliis rebus concrescunt Semina membris,
Ateque aliis extenuantur, tabentque vicissim.
Et quibus ipsa modis traetetur blanda Voluptas,
Id quoque permagni refert: Nam more Ferarum,
Quadrupe dumque magis ritual, plerumque putantur
Concipere Uxores, quia sic loca sumere posse
Pectoribus postis, sublatis Semina lumbis.
Nec molles opus sunt motus Uxoribus bilum.
Nam Mulier prohibet se concipere, atque repugnat,
Clinibus ipsa viri Venerem si leta retraetet:
Ateque exoffato ciet omni pestore fluidus.
Eicit enim Sulci recta regione, viaque
Vomerem, atque locis avertit Seminis idimum.
Idque sua causa confuerunt Scorta moveri,
Ne completentur crebrè, gravidæq; jacerent, 1270
Et simul ipsa viris Venus ut concinnior esset:
Conjugibus quod nil nostri opus esse videtur.
Nec divinitus est interdum, Venerisque sagittis
Deteriore fit ut forma Muliercula amatur.
Book IV. Of the Nature of Things.

with many Children. Of so great Concern it is, that the Seed of both should kindly mix, and mutually glow with genial Heat; that the Thick and the Thin should incorporate together; and that the Woman, in the Art of Love, should engage with a Man whose Nature should be suitable to her own.

And the Food we live upon is of no small Importance; for the Seed increases through the Limbs by some Meats, and it becomes watery and feeble by others.

_I can translate no further._ Dryden, in his Miscellanies, goes on in full Vigour, and keeps up to the Original.

Of like Importance is the Posture too,
In which the genial Twist of Love we do.
For, as the Females of the Four-foot Kind
Receive the Leapings of their Males behind;
So the good Wives, with Loins uplifted high,
And leaning on their Hands, the fruitful Stroke
may try.
For in that Posture they will best conceive;
Not when supinely laid they frisk and heave:
For active Motions only break the Blow,
And more of Strumpet than of Wives they shew;
When answering Stroke with Stroke, the mingled Liquors flow.
Endearment eager, and too brisk a Bound
Throw off the Plough-share from the furrow'd
Ground.
But common Harlots in Conjunction heave,
Because 'tis less their Bus'ness to conceive
Than to delight and to provoke the Deed;
A Trick which honest Wives but little need.

Nor is it from the Gods, or the Darts of Venus,
that a Woman of ordinary Beauty is sometimes beloved. She often secures the Affection by her discreet
T. Lucretii Lib. IV.

Nam facta ipsa suas interdum Fæmina facìs, 1275
Morigerisque modis, & mundo corpori' cultu,
Ut facili insuescat secum Vir degere vitam.
Quod superest, Consuetudo concinnat amorem.
Nam leviter quamvis, quod crebro tunditur istu,
Vinctur in longo spatio tamen, atque labasit. 1280
Nonne vides, etiam guttas in saxa cadenteis
Humoris longo in spatio pertundere saxa?
diffcreet Conduct, by the Sweetness of her Deport-
ment, and an Exactness in the Decency of her
Person; so that a Man, by Use, may spend his
Life happily with her.

To sum up all: It is Custom that reconciles
the Delights of Love; for beat upon any thing
with constant Blows, though ever so lightly, it is
overcome at last, and crumbles to Pieces. Have
not you observed how Drops of Water falling
upon a hard Stone, by Length of Time, wear it
away?

The End of the Fourth Book.
THE ARGUMENT OF THE FIFTH BOOK.

The Poet begins this Book with the Praise of Epicurus, whom he proclaims to be a God, because his Divine Discoveries have been more useful to Mankind than the Inventions of Ceres, or of Bacchus, or than the many glorious Exploits of Hercules. He then lays down the Argument of this Book, and shows the Connection between the Subjects he is now going to treat of, and those of which he has disputed in the preceding Parts of his Poem; and being now to explain the first Rise and future Dissolution of the World, he teaches that the Earth, the Sea, the Heavens, the Sun and Moon, are mortal; that they are not animated nor endowed with a Divine Body, nor, as the Stoicks believed, are they Parts of God himself. He afferts that neither the Heavens, as the general Opinion is, nor indeed any Part or Parts of the World, are the Mansions or Abodes of the Gods; and that none may believe that the World was made by the Gods, and is therefore immortal, he heaps up several Reasons, drawn as well from the Nature of the Gods as from the Defectiveness and ill Contrivance of this vast Frame of the Universe, by which he endeavours to prove that it
The Argument.

It was not the Workmanship of a Deity. He argues that the Four Elements, Earth, Water, Air and Fire, of which the World consists, are nevertheless generated and mortal; and consequently that the World itself once had a Beginning, and will have an End. And he proves, by several other Arguments, that this universal Frame has not existed from all Eternity, nor will be immortal and remain undis solved to all Futurity. Then he describes the Rise or Birth of the World; and among all the Physiologers there is not a Description of it more likely to be true, nor more lively and beautiful. The Atoms are moved by their own Weight; they meet; this makes them rebound; and according to the Difference of the Stroke or Weight, the Reflection is made into different Places, where they combine and grow into Bodies. He proposes many Difficulties concerning the Motions of the Heavens and of the Planets, but determines nothing. He teaches why the whole Frame of the Earth, which is a heavy Body, hangs in the Air without being supported by any Foundation; and then takes the Dimensions of the Sun, Moon and Stars, and pronounces them neither bigger nor less than they seem to us to be. He gives several Reasons of the Summer and Winter Solstices; tells what causes Night; why Aurora, or the Morning, precedes the Sun; why the Nights and Days mutually overcome, and chase away each other by turns; why the Moon changes her Face and Figure, and why the Sun and Moon are sometimes eclipsed. He descends from the Heavens, and describes the first Rise of Herbs, Trees, Birds, Beasts and Man, and adjusts the Order in which each Kind was produced out of the Earth. He says that Monsters, or certain imperfect Animals, might be produced in the Beginning of the World, but Nature denied them the Power to propagate their Kinds. Hence he takes Occasion to deride and explode all Chimæra's, Centaurs, Scylla's, and
and other fabulous Productions, invented by the Poets; and denies there ever were any such Prodigies of Nature, or ever will be. He describes the Strength of the first Men, their robust Constitution of Body, their Meanness of Living, their Food, Wit, Manners, Houses and Marriages. He teaches that after Fire was cast down upon Earth by Lightning, Men began to be more civilized; and having invented the dressing of Meat, fared more deliciously than before. Then they first established Societies, entered into Leagues and Alliances, divided the Land among themselves, and chose Kings to govern them, who were either the most strong, the most beautiful, or the most witty among them, and were elected for one or more of these three Reasons. But at length Gold being found out, the Richer commanded the Poorer; and Envy springing up among them, a Sedition arose, the Kings were deposed, Republicks were instituted, and Laws established to secure every one in his Property. He treats of the Fear of the Gods, and of the first Rife of Religion, which he ascribes merely to Ignorance of the Divine Nature, and of natural Causes. And to the End of the Book he teaches how the several Metals, Gold, Silver, Brass, Iron and Lead, came first to be discovered. He mentions the first Arts of War, and the Weapons then used; and concludes with the Invention and Progress of Spinning, Weaving, Agriculture, Sailing, Musick, Poetry and other Arts.
T. Lucretii Carī

DE

RERUM NATURA.

LIBER QUINTUS.

Quis potis est dignum pollutī pestore carmen
Condere, pro rerum majestate, bisque repertis?
Quisve valet verbis tantum, qui fundere laudes
Pro meritīs Ejus possit, qui talia nobis
Pestore parta suo, quæsitaque præmia liquit?
Nemo (ut opinor) erit mortali corpore cretus.
Nam si, ut ipsa petit majestas cognita rerum,
Dicendum 'st: Deus ille fuit, Deus, inclute Memmi,

Qui
only to their own Philology.

Vol. II.

I

God
T. Lucretius Carus,

OF THE

NATURE of THINGS.

THE

FIFTH BOOK.

Who can, with all his Soul inspired, compose fit Numbers, worthy the Majesty of so great Things, of these Discoveries? Or who, in Words alone, can sing a His Praise, and equal His Deserts, who from the Labour of his Mind has left such Benefits, and bestowed Rewards so glorious on Mankind? No mortal Man alive, as I conceive; for could I raise my Verse to reach the Dignity of Things He knew, He was a God, my Noble Memmius, a

a He makes a God of Epicurus, and says his Discoveries are more useful to Mankind than the Inventions of Ceres and Bacchus, and the Labours of Hercules. He taught true Wisdom, which drives all Uneasiness from the Mind, and instructs us rightly in the Nature of Things; for the Epicureans were so modest, that the Name of Wisdom they applied only to their own Philosophy.
Qui Princeps vitae rationem inventit eam, qua
Nunc appellatur Sapientia: quin; per artem
Fluctibus et tantis viris, tantisque tenebris,
In tam tranquillo, & tam clara luce locavit.

Confer enim Divina aliorum antiqua reperta.
Namque Ceres fertur fruges, Liberque liquoris
Vitigeni laticem mortalibus instituisse;
Cum tamen bis posset sine rebus Vitae manere:
Ut fama'se aliquas etiam nunc vivere genteis.
At bene non poterat sine puro petitore vivi.
Quo magis hic meritor nobis Deus esse videtur,
Ex quo nunc etiam per magnas didita genteis
Dulcia permulcent animos solatia vitae.

Herculis antiistare autem si satis putabis,
Longius a vera multo ratione ferere;
Quid Nemaus enim nobis nunc magnus hiatus
Ille Leonis obeset, & horrens Arcadius Sus?
Denique quid Cretae taurus, Lernaeae pelis
Hydra venenatis posset vallata colubris?
Quidve tripetloras tergemini vis Geryonae?
Et Diomedis qui spirantes naribus ignem
Thracen, Bissoniasque plagas, atque Ithinara propter,
Tantopere officerent nobis? Uncisque timende
Unguibus Arcadiae volucres Symphala colesent?
Aureaque Hesperidum servans fulgentia mala
Asper, acerba tuens, innani corpore Serpens,
Arboris amplexus siripem: quid deniq; obeset,
Propter Atlanteum littus, pelageque severa,
Quod neque no	ter adit quisquam, nequeBarbarus audet?
Cetera de genere hoc quae sunt portenta perserta,
Si non vi	ta forent, quid tandem vivas locerent?
Nil, ut opinor: Ita ad satiatem terra Ferarum

Nunc
God he was, who first found out that Rule of Life which is now called True Wisdom; and who this human Life, so tossed with Storms, and so o'er-whelmed in Darkness, has rendered by his Art so calm, and placed in so clear a Light.

Comparé the Benefits long since found out by Those who now are Gods. Ceres, they say, discovered first the Use of Corn, and Bacchus gave to Men the Knowledge of the Vine and its sweet Juice. Yet Men might still have lived without both these, as many Nations, we are told, do now. But no true Life could be, without the Mind easy and free; and therefore with better Right is he to us a God, whose gentle Rules, received throughout the World, bestowed on Men Tran- quility and Peace.

If you should think the great Exploits of Hercules exceeded His, you are carried far from Truth. For how could the wide, gaping Jaws of the Némaean Lion, or the terrible Arcadian Boar, affright us now? How could the Bull of Crete, or Hydra, the Plague of Lerna, incompassed with his poisonous Snakes? Or Geryon, with his triple Face, and the collected Strength of his three Bodies? Or what can we now suffer from Diomedes' Horses, from their Noftrils breathing Fire, dreadful to Thrace, the Biftonian Plains, and all about Mount Ithmarus? Or what from the Arcadian Birds of Stymphalus, feared for their crooked Talons? Or that huge Dragon, fierce and terrible in Look, that, twining round the Tree, guarded the Gold-en Fruit of the Hesperides? How could he hurt us here, removed far from us near the Atlantick Shore, and the rough Seas, where neither Roman nor Barbarian dared to visit? And other Monsters which that Hero flew, had they not been subdued, how could they hurt us now, were they alive? Not in the least, I think. For now the World abounds with
Nunc etiam scatit, & trepido terrere repleta sit
Per nemora ac monteis magnos, sylvasque profundas:
Quae loca vitandi plerumque est nostra potestas.
At nisi purgatum sit peius, quae praelia nobis,
Atque pericula tunc ingratiss insinuandum?
Quantae consciendunt hominem Cuppedinis acres
Sollicitum cura? Quantique perinde timores?
Quidve Superbia, Spurcities, Petulantia, quantas
Efficient cladies? Quid Luxus, Desidiesque?

Hæc igitur quœ cuncta subegerit, ex animoque
Expulerit dictis, non armis; nonne decibit,
Hunc Hominem numero Divum dignarier esse?
Cur bene praesertim multa, ac divinitus ipsis
Immortaliæ de Divis dare dicta fiuerit;
Atque omnem rerum Naturam pandere dictis.

Quoius ego ingreßus vestigia, nunc rationes
Persequor, ac doceo dictis, quo quæque creata
Fœedere sint, in eo quâm sit durare necemum:
Nec validas ævi vacant rescindere leges.
Quo genere in primis Animi natura reperta sit,
Nativo primo consìstere corpore creta:
Nec posse incolmis magnum durare per ævum:
Sed Simulacra solere in somnis fallere mentem,
Cernere cum videamur eum, quem vita reliquit.

Quod supereß, nunc me bac Rationis detulit ordo,
with frightful Beasts, that fill with dreadful Terror the Forests, the high Mountains and thick Woods; yet these Places commonly 'tis in our Power to avoid.

But unless the Mind be purged, what Wars within, what Dangers wretched Mortals must endure? What piercing Cares of fierce Desire must tear the Minds of Men? And then, what anxious Fears? What Ruin flows from Pride, from Villany from Petulance? What from Luxury and Sloth?

The Man therefore that has subdued these Monsters, and drove them from the Mind by Precept, not by Force; should not this Man be worthy to be numbered with the Gods? especially since of these Immortal Deities he has spoken nobly and at large, and by his Writings has explained to us the Laws of Universal Nature?

His Steps I follow, and now pursue his Rules, and by my Verse I teach, that Things must needs subsist by the same Laws by which they were first formed; nor can they break through the strong Bonds that Nature has fixed to their Being. Of this sort the Soul, in the first Place, I have proved to be originally derived from mortal Seeds, nor can it remain eternally undisolved; and that Images commonly deceive the Mind in our Dreams, when we fancy we see a Person that has been long since dead.

And what remains but now, as the Order of

b In this Book he proposes to shew, that the World had a Beginning, and will have an End; to describe the Rise of the World, and of Animals real and feigned by the Poets; how Names came to be given to Things; how mutual Society arose from Speech, whence proceeded Religion and the Fear of the Gods. And then he will explain the Motions of the Heavens, the Courses and Revolutions of the Sun, the Moon, and other Planets and Stars; and demonstrate that they are whirled about by the Force of Nature only, without the Help or Assistance of Providence.
Ut mibi, mortali consisteri corpore Mundum, Nativumque simul, ratio reddunda sit, esse. Et quibus ille modis congressus Materiæ Fundarit Terram, Cælum, Mare, Sidera, Solem, Lunaique globum; tum quæ tellure Animantes Exsitterint: Et quæ nullo sint tempore natae. Quo modo genus Humanum variante loquela Caeperit inter se vecli per nomina rerum: Et quibus ille modis Divum metus insinuâtir Petora, terrarum qui in orbi sancta tutetur Fana, Lacus, Lucos, Aras, Simulacraque Divum. Preterea, Solis cursus, Lunaque meatus Expediam, qua vi flestat Natura gubernans: Ne fortè hic inter Cælum, Terramque remur Libera sponte sua cursus lufrare perenneis, Morigera ad fruges augendas, atque animanteis: Neve aliqua Divum volvi ratione putenus. Nam, bene qui didicere Deos securum agere ævum, Si tamen interea mirantur qua ratione Quaæque geri possint, praesertim rebus in illis, Quæ supera caput ætheriiis cerniuntur in oris; Rursus in antiquas referuntur Religiones, Et Dominos acreis adsciscunt, omnia possè Quos miseri credunt, ignari quid queat esse, Quid nequeat; finita potestas denique quique Quanam sit ratione, atque allè terminus bærens. Quod superest, ne Te in promissis plura moremur, Principiö, Maria ac Terras, Cælumque tuere: Horum naturam triplicem, tria corpora, Memmi, Treis
my Design requires to convince, by proper Reasons, that this World is formed of mortal Seeds; that it began to be, and must have an End; and to shew how the Seeds of Matter were united and disposed, to produce the Earth, the Heavens, the Sea, the Stars, the Sun and Moon; and then what Creatures sprung from the Earth, and what never had a Being; and how the human Race, with various Language, began to give Names to Things, and to converse together.

And by what means that Dread of Deities above, first crept into the Heart, which preserves the Holy Things throughout the World; the Temples, the Lakes, Groves, Altars, and Images of the Gods.

Besides, I shall explain the Course of the Sun and Moon, and by what over-ruling Force Nature directs their Motions; left you should suppose these Luminaries travel their constant Stages freely and of their own accord between Heaven and Earth, and by their kind Influence promote the Growth of Fruits and the whole Animal Creation; or conceive that they are rolled about by the Will of the Gods. For those who well know that the Gods live a Life of Ease, if they should wonder by what Power the World is carried on, especially in the Things they see over their Heads in the Heavens above, they relapse again into their old Superstition; they raise over themselves a Set of cruel Tyrants, who the Wretches fancy can do all Things, because they know nothing of what can or what cannot be, or by what means a finite Power is fixed to every Being, and a Boundary immoveable which it cannot pass.

And therefore, to keep you no longer in Suspense in what I promised, take a View, in the first Place, of the Seas, the Earth and the Heavens; this triple Nature, these three Bodies, my...
T. Lucretii Lib. V.

Treas species tam dissimileis, tria talia texta, 95
Una dies dabit exitio: multisque per annos
Sustentata ruet moles & machina Mundi.

Nec me animi fallit, quam res nova, miraque menti
Accidat, Exitium Caeli Terraque futurum:
Et quam difficile id mibi sit pervincere dictis:
Ut fit, ubi insolitam rem adportes auribus ante,
Nec tamen hanc possis Oculorum subdere visu,
Nec jacere indu Manus, via quà munita fidei
Proxima fert humanum in poètus, templaque mentis:
Sed tamen effabor: dictis dabit ipsa fidel res
Forsitan, & graviter terrarum motibus orbis
Omnia conquassari in parvo tempore cernes:
Quod procul à nobis fletat Fortuna gubernans:
Et Ratio potius, quam Res persuadeat ipsa,
Succidere horrifono posse omnia visita fragore. 110

Qua prius aggregiar quam de re fundere fata
Sanctius, & multo certa ratione magis quam
Pythia, quae tripode e Phœbi, lauroque profatur;
Multa tibi expediam doctis solatia dictis:

Religione
Memmius, three Beings of so different a Frame, three so wonderfully formed, one Day shall put an End to; and the whole Mas and Fabrick of the World, that has stood for many Ages, shall tumble to Pieces.

I know how this, this future Ruin of Heaven and Earth, seems strange and surprising to your Apprehensions, and how difficult it is to convince you of the Truth of it. This is a common Case, when you offer a Subject to the Ear it has been unused to, and which you cannot discover with your Eyes, nor feel with your Hands, the Ways by which Knowledge and Belief generally find a Passage to the Breast, and affect the Mind. I'll go on however. The very Nature of the Things perhaps will give a Credit to my Words, and you may soon see the whole Fabrick of the World shaken grievously by terrible Convulsions; but the commanding Power of Chance remove that Day far from us! And let Reason, rather than the Thing itself, convince us, that all Things dissolved by the last dreadful Crack will fall to Ruin.

But before I attempt to teach these Truths, more sacred and much more worthy of Belief than what the Pythones deliver from the Tripod and Laurel of Apollo, I shall first offer some Encouragements against your Fears, left, being under

Many of the old Philosophers, Pythagoras, Plato, Trismegistus and others, believed the World to be endued with a rational Soul, and to partake of the Nature of the God that made it. They considered the admirable Order and Connection of all the Parts of the Universe, which they were persuaded could not be sustained but by a Soul intrinsically informing, ordering, disposing and connecting them. The Stoicks went further, and held, that every one of the celestial Bodies that have Motion, were to be esteemed in the Number of the Gods. They observed a Constancy in the Revolutions of the Heavens, and in the Courses of the Stars; and therefore concluded their Motion to be voluntary, and consequently that they are Gods.
Relligione refrænatus ne forè rearis,
Terras, & Solem, Cælum, Mare, Sidera, Lunam,
Corpore divino debere æterna manere:
Properea que putes ritu par esse Gigantum,
Pendere eos pannas immani pro seelere omneis,
Qui ratione sua disturbent mania Mundi,
Præclarumque velint cali restinguere Solem,
Immortalia mortali sermone notantes.

Quæ procul usqueadeo divino ab numine disiunt,
Inque deum numero sic sunt indigna videri,
Notiam potius praebere ut posse putentur,
Quid sit vitali motu, senfuque remotum.
Quippe etenim non est cum quovis corpore ut esse
Posse Animi natura putetur, Consiliumque.
Sicut in ætheræ non Arbor, nec in æquore salso
Nubes esse quaunt, neque Pisces vivere in arvis;
Nec Cruor in lignis, nec faxis Succus inesse:
Certum, ac dispositionem, ubi quicquid crescat, & inest.
Sic Animi natura nequit sine Corpore oriri
Sola, neque à nervis, & sanguine longiter esse.

Hoc si posset enim, multò prius ipsa Animi vis
In Capite, aut Humeris, aut imis Calcibus esse
Posset, & innasque quavis in parte soleret:

Totem in eodem homine, atque in eodem vaso maneret.
Quod quoniam nostro quoque constat Corpore certum,
Dispositionem videtur, ubi esse, & crescere posset
Seorsum Anima, atque Animus: tantò magis insi-

Tandem in eodem homine, atque in eodem vaso maneret.

Totum posse extra Corpus, formamque animalem
Putribus in glebis Terrarum, aut Solis in igni,
Book V. Of the Nature of Things

the Check of Religion, you should by chance imagine that the Earth, the Sun, the Heavens, the Sea, the Stars, the Moon, being animated by a Spirit diffused throughout the Whole, were a Deity, and would remain for ever; and consequently, that all those deserve justly the same Punishment as the Rebel Giants, for their Impiety, who by their Arguments would assault and break down the Walls of the World, and would extinguish the Sun (the bright Luminary of the Sky) and pronounce a Sentence of Dissolution upon Things in their own Nature immortal.

And yet these Things are so far from having any thing of Divinity about them, and so unworthy of being ranked in the Number of the Gods, that they may be thought rather to give us a Notion of something as remote from Sense and vital Motion as possible; for we are not to imagine that the Powers, Mind and Soul, can be united with all sorts of Bodies. As there are no Trees in the Sky, no Clouds can be in the deep Sea; nor can Fish live in the Fields; nor can there be Blood in Wood, or Moisture in Stones. There are certain and fixed Abodes, where all Things have a Being, and increase. The Soul therefore cannot come into Being alone, without the Body; nor can she exist separately, without the Nerves and the Blood. If this could be, the Powers of the Soul you would rather feel sometimes in the Head or Shoulders, or even in the very Bottom of the Feet, or in any other Part of the Body, and so you would perceive it diffusing itself through the whole Body: As Water poured into a Vessel first covers one Part, and then spreads over the Whole. Since therefore there is a proper and determinate Place in the Body, for the Mind and Soul to be and increase in, we have the more Reason to deny that they can continue or be born without it, or that the Form of Life can reside in rotten Clods of Earth, or in the Fire of the Sun, or in the Water.
Aut in Aqua durare, aut aliis Ætheris oris.
Haud igitur constant divino prædita sensu,
Quandoquidem nequeint vitaliter esse animata.
Illud item non est ut possis credere, sedes
Effe Deum sanétas in mundi partibus ullis.
Tenuis enim natura Deum, longèque remota
Sensibus à nostris, animi vix mente videtur.

Qua quoniam manuum tactum suffugit, & illum,
Tactile nil nobis quod sit, contingere debet.
Tangere enim non quit, quod tangi non licet ipsum.
Quare etiam sedes quoque nostris sedibus esse
Diffàmiles debent, tenues de corpore eorum.

Quae tibi posteriûs largo sermone probabo.

Dicere porro, Hominum causa voluisse parare
Præclaram mundi naturam, propteræaque
Id laudabile opus Divum laudare decere,
Æternumque putare, atque immortale futurum,
Nec fas esse, Deum quod sit ratione vetusta
Gentibus humanis fundatum perpetuo ævo.
Sollicitare suis ullam de sedibus unquam,
Nec verbis vexare, & ab imo evertere summam:

Cætera
Book V. Of the Nature of Things.

Water, or in the lofty Regions of the Sky. These therefore are so far from being endued with a Divine Understanding, that they are incapable even of being animated with common Life.

Nor are you to believe that the Sacred Mansions of the Gods are placed in any Parts of this World of ours; for the Nature of the Gods is so subtle, and at so remote a Distance from our Senses, that it can scarce be apprehended by the Mind. Since therefore it cannot be touched or felt by our Hands, it can touch nothing that is the Object of our Senses; for nothing has a Power to touch, that is incapable of being touched itself. For this Reason the Abodes of the Gods must be far different from ours; they must be subtle, and answerable to their own Nature. But the Truth of This I shall more fully prove in another Place.

And then, to say that the Gods designed this noble Fabrick of the World for the fake of Man, and therefore we are to speak honourably of this excellent Work, and conceive it to be eternal, and shall remain for ever; and that it is impious to prove, that this Frame of the World, contrived by the Gods to continue for ever for the Use of Man, shall fall to Ruin; or to offer to disturb its Duration by Words and Arguments, and so overturn Things from their very Founda-

4 The Abode of the Gods is not in the Heavens; for the Nature of the Gods is too subtle to touch such thick Bodies as the Heavens. Nor can their Abode be in any Part of the Universe; for whatever abides or is in any Place, both touches and is touched. But the Gods, by reason of the Subtily of their Nature, can do neither.

4 Lucretius impiously endeavours to raise a Dust, and blind Men's Understandings; and to secure his former Opinion, pretends Objections, intermixt with Scoffs, against all those who, upon sober Principles, and a strict Search into the Order and Disposition of Things, were forced to confess this Frame to be the Contrivance of some intelligent Being, and the Product of Wisdom itself.
Cætera de genere hoc adfingere, & addere, Memmi, 165
Desipere'st; quid enim Immortalibus, atque Beatis
Gratia nostra queat largirier emolumenti,
Ut nostra quicquam causâ gerere adgrepliantur?
Quidve novi potuit tanto poßt antè quietos
Incicere, ut cuperent vitam mutare priorem?
Nam gaudere novis rebus debere videtur,
Cui veteres obfunt; sed, cui nil accidit agri
Tempore in anteæto, cùm pulchërè degeret œrum,
Quid potuit novitalis amorem accendere tali?
An, credo, in tenebris vita, ac mærore jacebat, 175
Donec diluxit rerum genitalis origo?
Quidve mali fuerat nobis non esse creatis?
Natus enim debet, quicunque sit, velle manere
In vita donec retinebit blanda voluptas.
Qui nunquam verò vitae gustavit amorem, 180
Nec fuit in numero, quid obèst non esse creatum?
Exemplum porro gignundis rebus, & ipsa
Notities Hominum, Divis unde insita primum?
Quid vellent facere ut seirent, animoque viderent?
Quoœ modo sit unquam vis cognita Principiorum, 185
Quidnam inter sese permutatio ordine poßent,
Si non ipsa dedit specimen Natura creandi?

Namque
BOOK V. Of the Nature of Things.

To pretend and enlarge upon this, and more such stuff, my Memmius, is all madness; for what advantage can any acknowledgments of ours bestow upon divinities happy and immortal, that they should give themselves any trouble upon our account? or what new pleasure could prevail upon the gods, who lived at rest for so many ages before, to desire to change their former state of ease and tranquility? those generally rejoice in a new condition, who have been unhappy in the last; but the man who has felt no misfortunes in his former state, but has lived pleasantly and undisturbed, what could excite the love of novelty in such a one as this? was the life of the gods spent in darkness and melancholy, till the structure of the world shone out and cheared their spirits? or what evil had we suffered if we had never been created? indeed, when we are once born, we should strive (whoever we be) to preserve our life, so long as we find an engaging pleasure in our being; but he who never tasted the love of life, nor was inrolled among the living, what harm could he complain of if he had never been?

Besides, what model had the gods to work by, when they set about the creation of the world? from whence had they any previous knowledge of man, to inform them, and give their mind an idea of what they proposed to make? how could they come acquainted with the powers and force of the atoms, and with what they were able to effect by the change of their site and order, if nature herself had not afforded them first a specimen of creation? for the seeds of bodies were

It was the opinion of Epicurus, that the world was made by nature, or rather by a fortuitous concourse of atoms. They met without any premeditation, and mutually cleaved to one another; and thus made all compound things, just as it happened, without any pre-conceived design.
Namque ita multa modis multis Primordia rerum
Ex infinìto jam tempore percita plagis,
Ponderibusque suis consuerunt concita ferri,
Omnimodisque coire, atque omnia pertentare,
Quæcunque inter se possint congressa creare,
Ut non sit mirum si in taleis dispositions
Deciderunt quoque, & in taleis venere meatus,
Qualibus haec rerum geniturb nuncSumma novando.

Quod si jam rerum ignorem Primordia quæ sint,
Hoc tamen ex ipsis Cæli rationibus ausim
Confirmare, aliisque ex rebus reddere multis,
Nequaquam nobis divinitus esse paratam
Naturam rerum, tanta flat prædita culpa.

Principiò, quantum Cæli tegit impetus ingens,
Inde avidam partem Monteis, Sylvæque ferarum
Possedere, tenent Rupes, vaßæque Paludes,
Et Mare, quod latè Terrarum distinct oras.
Inde duas porro prope parteis fervidus Ardor,
Assiduusque Cæli casus mortalibus ausert.

Quod superest arvi, tamen id Natura sua vi
Sentibus obducat, ni vis Humana resistat,
Vitæ causa valido consuetà bidenti
Ingemere, & terram prescis proscindere arâtris.
Si non facundas vertentes voentere glebas,
Terrâque solum subigentes cimus ad Ortus:
Sponte sua nequeant liquidas existere in auras.

Et
from all Eternity so variously agitated by Blows from without, and driven so about by their own Weight, and tried every way to unite, and attempted all sorts of Motion that might end at last in the Formation of Things; that no wonder they at last fell into such Dispositions, and so decent Order, as to produce the Universe, and continually preferve and renew it.

For were I wholly ignorant of the Origin of Things, yet I could prove this Truth from the Heavens, and by many other Reasons, that the Frame of the World was by no means raised by the Gods for the Use of Man; so faulty it is, and contrived so ill.

And first, The Earth, covered over by the violent Whirl of the Heavens; huge Mountains, and Woods, the Harbour of wild Beasts; and Rocks, and vast Lakes; and the Sea, which widely separates the distant Shores, take up a great Part of it; and then the torrid Heat, and continual Cold, rob Mankind almost of two Parts, and make them uninhabitable.

The fruitful Fields that remain, Nature of her self would spread over with Thorns, if the Labour of Man did not prevent it; if he did not, to preserve Life, force the Earth by constant Toil with strong Tools, and cut it through with the Plough; if we did not turn up the fruitful Clods with the crooked Share, and compel the Soil to exert its Strength, of its own accord it would produce nothing.

He says, that the Work of an all-wise Artist ought to be perfect in all Points, not covered with Mountains, Woods and Lakes, dreadful to behold; not with some Parts chilled with perpetual Frost, and others parched with continual Heat. It should produce Fruits of all Sorts, rather than Thorns, Briers, &c. All Things should be easy, beautiful, safe and pleasant. It should be a Work worthy of a wise and bounteous God.
Et tamen interdum magno quaestis labore, 
Cum jam per terras frondent, atque omnia florent ;
Aut nimiiis torret fervoribus ætherius Sol,
Aut subiti perimunt imbres, gelidaque pruinae,
Flabraque ventorum violento turbine vexant.

Præterea genus horriderum Natura Ferarum,
Humane genti infestum, terraque marique,
Cur alit, atque auget ? Cur Anni tempora morbos
Apportant ? Quare Mors immatura vagatur ?

Tum porro Puer, ut sævis proiectus ab undis
Navita, nudus bumi jacet, infans, indigus omni
Vitali auxilio, cum primum in luminis oras

Nixibus ex alvo matris natura profudit :
Vagitique locum lugubri complect, ut æquum fît,
Cur tantum in vita reffet transire malorum.

At variae crescent Pecudes, Armenta, Feræque :
Nec crepitacula eis opus sunt, ne cuiquam adhibendi

Almae nutricis blandae atque infràcita loquela :
Nec varias quærunt Vesteis pro tempore Cæli.
Denique non Armis opus est, non Mænibus altis,
Queis sua tutentur, quando omnibus omnia largè
Tellus ipsa parit, naturaeque dædala rerum.

Principiò,
And yet, when the Fruits are raised with great Labour, when they look green upon the Ground, and all Things flourish; either the Sun's Rays burn every thing up with their fierce Heat; or sudden Showers, or piercing Frosts, destroy our Hopes; or the Blasts of Wind, with terrible Hurricanes, blow them away.

And then, why does Nature nourish and increase the dreadful Race of wild Beasts, by Sea and Land; the professed Enemies to Human kind? Why do the Seasons of the Year bring Diseases with them? Why does untimely Death wander every way abroad?

Besides, h a Child, like a shipwreck'd Mariner cast on Shore by the cruel Tide, lies naked upon the Ground; a wretched Infant, destitute of every Help of Life, as soon as Nature, by the Mother's Pangs, has thrown him from the Womb into Light; and then he fills the Air with mournful Cries, as he has Reason to do, since in the Course of Life he has such a Series of Evils to pass through. But Cattle of every kind, and Herds, and wild Beasts, grow up with Ease: They have no need of Rattles to divert them; they have no Occasion for the kind Nurse, by her fond and broken Words, to keep them in Humour; they require no Difference of Dress for the several Seasons of the Year; they have no need of Arms, nor high Walls, to secure their Property; for the Earth, with curious Contrivance, of herself produces every thing in Abundance, for the whole Variety of Creatures, to feed and support them.

If the Gods (says he) had made the World, the Condition of Man would have been better than that of other Animals, yet we plainly see it is much worse; and to weigh Things rightly, Nature seems a kind Parent to them, and a cross Step-mother to us.
Principio, quoniam Terrai corpus, & Humor, Aurarumque leves animae, calidique Vapores, E quibus hae rerum consiure Summa videtur, Omnia nativo ac mortalibus corpore constant:
Debet tota eadem Mundi natura putari. 240
quippe etenim quorum parteis, & membra videmus Corpore nativo & mortalibus esse figuris;
Hae eadem ferme mortalia cernimus esse, Et nativa simul. Quapropter maxima Mundi Cumb videam membra, ac parteis consumta regigni.
Scire licet, Cali quoque idem Terraeque fuisset 246 Principiale aliquod tempus, clademque futuram.
Illud in his rebus ne me arripuius orearis,
Memmi, quod Terram, atque ignem mortalia sumpsit
esse: neque Humorem dubitavi, Aurarumque perire: 350 Atque eadem gigni, rursusque augescere dixi:
Principiio, pars Terrae nonnulla perusta
Solibus affiduis, multa pulsata pedum vi
Puveris exhalat nebula, nubeisque volantibus,
Quas validi toto dispersunt aere venti: 255 Pars etiam glebarum ad diluvium revocatur
Imbribus, & ripas radentia flumina rodunt.
Pratererca, pro parte sua quodcumque alid auget,
Roditur: & quoniam dubio procul esse videtur
Omniparens, eadem rerum commune sepulcrum: 260
And further, since the Body of the Earth, the Water, the light Breath of the Air, and the hot Fire, of which this Universe of Things consists, had all a Beginning, and are all formed of mortal Seeds, the Nature of the World must be the same, and must die likewise. For a Body, whose Parts and Members we know were born, and were produced from mortal Principles, that Being must be the same in Nature with its Parts; it must have a Beginning, and be equally Mortal. And therefore when I observe the Four Elements (the great Limbs of the World) are continually changing, are wasted away, and then renewed; I conclude, that the whole World, the Earth and the Heavens, had a Time of beginning, and will in Time fall and be destroyed.

But, my Memmius, that you may not think rashly supposed what I should have proved upon this Subject, when I said that the Earth and the Fire were mortal, and made no doubt but the Air and the Water were so too, and that they began to be, and by degrees increased; you are to observe, first, that some Part of the Earth is burnt up by the continual Strokes of the Sun; and much of it, being worn by the continual Treading of the Feet, rises into flying Clouds of Dust, which the fierce Winds scatter through all the Air; and Part of the Earth, by soaking Showers, is turned into Water, and the incroaching Rivers eat away their Banks. Besides, whatever increases another Body with any of its Parts, must lose so much from itself: And since the Earth is certainly the great Parent and common Sepulchre of all Things,

1 The Nature of the Whole is the same with that of its Parts; and since the Parts of the World, the Earth, Sea, Air and Fire, are continually changed, sometimes diminished, sometimes renewed, it must be own'd that the whole Mass is equally and alike Mortal.
T. LUCRETII LIB. V.

Ergo Terra tibi limatur, & austa recrescit.
Quod superest, Humore novo mare, flumina, fonteis
Semper abundare, & latices manare perenneis,
Nil opus est verbis, magnus decursus aquarum
Undique declarat: sed primum quicquid Aquai
Tollitur, in summamque sit, ut nihil Humor abundet,
Partim quod validi verrentes aquaора venti
Deminuunt, radiisque retexens aetherius Sol:
Partim quod subter per terras diditur omneis.
Percolatur enim virus, retroque remanat
Materies Humoris, & ad caput annibus omnis
Convenit; inde super terras fluit agmine dulci,
Qua via secla semel liquido pede detulit undas.
Aëra nuncigitur dicam qui corpore toto
Innumerabiliter privas mutatur in boras.
Semper enim quodcumque fluit de rebus, id omne
Aëris in magnum fertur mare: qui nisi contrà
Corpora retribuat rebus, recreetque fluenta,
Ommia jam resoluta forent, & in Aëra versa.
Haud igitur cessat digni de rebus, & in res

Recidere
it must sometimes be diminished, and then increase and be renewed again.

And then, the Sea, the Rivers, the Fountains, abound always with sweet Water, and flow with everlasting Streams. There is no need of many Words; the prodigious Currents that flow every way into the Sea, prove this effectually. But left the Mass of Waters should grow too great, some of it is continually lick'd up, and wastes away; the strong Winds, brushing over its Surface, take off part of its Flood; and a Part the Sun exhaled and draws up into the Air, and some is divided through the subterraneous Passages of the Earth: There the saline Particles are strained off; and then the Waters flow back, and start up in Fountains, and form themselves into Rivers, which glide sweetly with their collected Strength over the Earth, through those Channels where the Streams first made their liquid Way.

And now, to speak of the Air k, which is changed with its whole Body every Moment, in various Manners not to be numbered; for whatever is continually flowing off from Bodies, is carried into the vast Ocean of the Air; unless the Air therefore restored again those Particles to the Bodies from whence they came, and renewed them as they wasted away, all Things had long since been changed into Air, and wholly dissolvd. The Air therefore is continually produced from

k The Air is changed as well as the Earth and Water, which is proved before. Whatever flows from Bodies is carried into the vast Tract of Air; but minute Corpuscles are continually flowing from all Things, and are conveyed into the Air, where they fly to and fro without wafting. Now unless the Air constantly restored those Corpuscles to the Bodies from whence they came, all Things by this time would have been wafted to nothing, and totally destroyed; therefore Bodies are perpetually changed into Air, and the Air returns again into Bodies.

K 4 Bodies,
Recidere assiduē, quoniam fluere omnia constat.
Largus item liquidi fons luminis, aetherius Sol
Inrigat assiduè calum candore recenti,
Suppeditatque novo confestim lumine lumen.
Nam primum quicquid fulgoris disperit eī, 283
Quòcunque accidit: id licet hinc cognoscere possis,
Quōd simul ac primùm nubes sucedere Solī
Capere, & radios inter quasi rumpere lucis,
Extemplo inferior pars borum disperit omnis;
Terraque inumbratur, qua nimbī cunque seurentur,290
Ut noxēs splendore novo res semper egere,
Et primum fāstum fulgoris quenque perire;
Nec ratione alia res posse in sōle videri,
Perpetuō ni suppeditet lucis caput ipsum.

Quin etiam nocturna tibi, terrestria quae sunt, 295
Lumina, pendentēs Lychni, clārecēque coruscēs
Fulgurībus, pingues multa caligine Ædea,
Consimili properant ratione, ardore ministro,
Suppeditare novum lumen, tremere ignibus instant;
Instant, nec loca lux inter quasi rupta relinquit: 300
Usqueadeo properanter ab omnibus ignibus ejus
Exitium celeri toleratur origine flammeae.
Sic igitur, Solem, Lunam, Stella[s]que putandum
Ex alio, atque alio lucem faētare subortu,
Et primum quicquid flammeā perdere semper: 305

Inviolabilia
Bodies, and continually returns into them again; for Things never remain the same, but are in a perpetual Fluctuation.

The Sun likewise, that large Fountain of liquid Light, constantly bedews the Heavens with a new Brightness, and instantly supplies one Ray by the Succession of another; its first Beams of Light, as soon as they have shone out die away. This you may collect from hence, that as soon as a Cloud interposes between the Sun's Orb and Us, and as it were breaks through the Rays of Light, the lower Part of the Beams immediately perishes, and the Earth, as the Clouds pass over it, is made dark. This proves that Things require a constant Stream of new Rays, and that every first Emission of Light dies; nor could Things otherwise be seen in the Light, unless the Sun (the Fountain of Brightness) continually sent out fresh Supplies.

After the same manner our nightly Lights that we use here below, our hanging Lustres, our Lamps shining with a bright Flame, and fat with oily Smoke, are continually sending out new Streams of Light by the Help of Fire. They press on and discharge their trembling Rays without Interruption; they never cease, nor is the Light ever interrupted, or leaves the Place dark for a Moment; so swiftly is the Destruction of the first Rays repaired from the constant Fire of the Lamps (the Fountains of Light) and a new Beam instantly flies off as the old expires. We conclude therefore that the Sun, the Moon and Stars, are continually throwing off new Supplies of Light, and that the first Rays they emit perish and die away;

He proves that Fire perishes, and is again renewed, by instancing the Sun, whose first Light totally perishes, and a new Light is created in its Place. This we experience when any Mift interposes between the Sun's Orb and Us.
T. Lucretii Lib. V.

Inviolabilia bæc ne credas fortè vigere.

Denique non Lapides quoq; vinci cernis ab ævo?
Non altas Turreis ruere, & putrescere Saxa?
Non delubra Deùm, Simulacraque fessa fatifci?
Nec sanétum numen fati protellere finesis

Possè? Neque adversus naturæ fædera niti?

Denique non Monumenta virum dilapda videmus

Cedere proporro, subitoque fenesère casu?
Non ruere avolloso Silices à montibus altis,
Nec validas ævi vireis perferre, patique

Finiti? Neque enim caderent avolfa repente,
Ex infinito quæ tempore pertoleraissent

Omnia tormenta ætatis privata fragore.

Denique jam tuere Hoc circum, supraque, quod
omnem

Continet amplexu terram; quod procreat ex se

Omnia (quod quidam memorant) recipitque peremtas;
Totum nativum mortalı corpore constat.
Nam quacunque alias ex se res auget, alitque,

Deminui debet, recreari cùm recipit res.

Praetera,
left you should believe these Beams remained perfect and undissolved, and were eternally the same.

Besides, don't we observe how Stones are worn away by Time? that lofty Towers fall to Ruin, and Rocks moulder to Dust? that the Temples and Images of the Gods are tired with standing, and are forced to give way? Nor can the Gods themselves extend the Bounds of Fate, or strive against the Laws of Nature. Don't you see the Monuments of Men burst asunder at last, to grow old, and suddenly break in Pieces? that the Rocks are torn, and tumble from the high Mountains, and are unable to bear or resist the mighty Force even of a finite Time? for they would never have fallen with this sudden Ruin, had they from all Eternity endured the Strokes of Time secure and unshaken.

And then, look up to those surrounding Heavens, that above and below embrace this Body of the Earth; those Heavens which, some say, produce all Things out of themselves, and to which all Things are at last resolved. They surely had a Beginning, are formed of mortal Seeds, and must have an End; for whatever feeds and contributes to the Increase of other Bodies, must lose some of its Parts, and must again be repaired by those Bodies when they are dissolved.

Some imagine that it was the Opinion of the Ancients, that not only Man, and all created Things, as well animate as inanimate Beings, but that even the Gods themselves, were subject to Fate. They held Fate to be unalterable and unavoidable; but in such a manner nevertheless they believed, though it could not be wholly prevented, it might however be somewhat retarded.

He confutes those who held that all Things proceed from Aether, or Heaven, and are resolved again into Heaven, and yet assert that Heaven itself is Immortal and Eternal; for whatever is changed into other Things, and is repaired and renewed by those Things when they are resolved, must be Born and Mortal.
Praeterea, si nulla fuit genitalis origo
Terraï & Caeli, semperque æterna suere:
Cur supera bellum Thebanum, & funera Troja,
Non alias alii quoque res cecidere Poëtæ?
Quò tot facta virūm toties cecinere? Nec usquam
Æternis famæ monumentis instita florent?

Verum (ut opinor) babet novitatem Summa, recensque
Natura'st Mundi, neque pridem exordia cepit.
Quare etiam quædam nunc Artes expoliuntur,
Nunc etiam augefunt; nunc addita Navigiis sunt
Multa: Modò Organici melicos peperere sonores. 335
Denique Natura bæc rerum, Ratioque reperta'st
Nuper, & bæc Primus cum primis Ipsi repertus
Nunc ego sum, in patrias qui possim vertere voces.
Quòd si forte suisse ante bac cadem omnia credis:

Sed
Further, if the Heavens and the Earth had no Beginning, but were from Eternity the same, how comes it that no Poets have sung of any great Events beyond the Theban War and the Destruction of Troy? How came the Exploits of so many Heroes to be buried in Oblivion? That none of their great Actions are recorded in the eternal Monuments of Fame, to live for ever? For no other Reason, I conceive, but that the Universe is of a late Creation, that the Substance of the World is New, and began not long ago. And therefore some Arts are but lately known, others are polished and refined, many new Discoveries are made in Navigation, and the Masters of Musick have but now brought Sound and Harmony to Perfection; and, in the last place, This very Nature of Things, which I now write of, and the Reasons of them, are but lately found out, and I call myself One of the First who have attempted to convey them to Posterity in Latin Verse.

But if you should think that these Things

He afferts the World must be New, because the most ancient of all History reach no farther than the Theban or Trojan Wars; and certainly if the World, far from being Eternal, were much older than we know it to be, we should have had Records of a much older Date: And farther, because all the Arts are but of late Invention, since Mention is made of the Founders of all of them; and if the World had had no Beginning, all Arts, especially those useful to Life, would have existed from all Time.

To these Arguments it is said, that the same Arts flourished heretofore that do now; but sometimes Fire destroyed Mankind, sometimes Deluges swept them away, or Earthquakes swallowed them up; and hence it is that those Arts seem to be New. Lucretius retorts this Answer by observing, that no Man of sound Judgment will pretend that this World, whose Parts are sometimes consumed by Fire, sometimes overwhelmed with Waters, and sometimes shaken and swallowed up by Earthquakes, can be Eternal: For the Occasion why we believe a Man to be Mortal is, because he is subject to and attacked by those Diseases, which having seized upon others with greater Violence, have swept them away.
T. Lucretii Lib. V.

Sed perisse hominum torrenti sæcla vapore, 340
Aut cecidisse urbeis magno vexeamine Mundi,
Aut ex imbrisbus affidavit exisse rapaces
Per terras Amneis, atque oppida cooperuisse:
Tantò quippe magis viéitus sateare nece$$e$$s, 345
Exitium quoque Terraï, Caelique futurum.
Nam cùm res tantis morbis tantisque periclis
Tentarentur, ibi $A$ tristior incubuisset

Causa; darent late cladem, magnasque ruinas:
Nec ratione alia mortales esse videmur
Inter nos, nisi quòd morbis agriscimus ìsìdem, 350
Atque illi, quos à vita natura removit.

Præterea, quæcunque manent æterna, nece$$e$$s, 355
Aut quia sunt solido cum corpore, resquere iátus,
Nec penetrare pati sibi quicquam, quod queá arètas
Diffociare intus partés, ut Materiaï

Corpora sunt, quorum naturam ostendimus antè:
Aut ideo durare atatem possé per omnem.
Plagarum quia sunt expertia, sicut Inane$$s$$,
Quod manet intáctum, neq; ab iétu fungitur bilum:
Aut etiam, quia nulla loci fit copia circúm, 360
Quò quasi res possint dissedere, dissolvique.
Sicut Summarum Summa$$s$$ æterna, neque extra
Quis locus est, quò dissiliant: Neque corpora sunt,
que
Possint incidere, & valida dissolvvere plaga.
At neq; (uti docui) solido cum corpore Mundi 365
Natura$$s$$, quoniam admistum$$s$$ in rebus Inane:
Nec tamen est ut Inane: neq; autem Corpora desunt,
Ex Infinito quæ possint foré coorta
Proruere hanc rerum violento turbine Summam,
Aut aliam quamvis cladem importare perici.
Nec porro natura loci, spatiumque profundi 370
Desicit.
were long before the fame they are now; but that Mankind were destroyed by the Rage of Fire, or Cities were overwhelmed by Earthquakes (the great Terrors of the World) or that the rapid Rivers, by continual Showers, overflowed the Earth, and covered whole Towns; you have still the more Reason to be convinced, and to allow, that the Earth and the Heavens will at last be destroyed: For if Things were liable to feel so great Convulsions, and suffer so great Dangers, it is plain if the Cause of these Ruins had been more violent, they must have perished and been utterly dissolved. Nor have we any other Rule to judge that we ourselves are Mortal, and must die, but that we sicken with the same Diseases as those endured, whom Death has removed from this Life.

Besides, whatever is Eternal must be so, either because it consists of solid Seeds, or it cannot be broken by Blows; nor will it suffer any thing to pierce it, to disunite the close Contexture of its Parts; of this sort are the Seeds of Matter, whose Nature we have shewn before; or Things would remain for ever, because they are out of the Power of Stroke, as a Void is, which is not to be touched, nor can be affected by Force; or because there is no Extent of Space about them, into which their Parts may fall when they are dissolved. For this Reason the Universe, or All, is Eternal: There is no Place beyond, where its scattered Seeds may retire; nor are there any Bodies to beat upon it, and by violent Blows break it to Pieces. But (as I said) the Substance of the World is not formed altogether of solid Seeds, because a Void is mixed with its Parts; nor is it wholly Void; nor are there wanting Bodies, rising to strike and overthrow with mighty Force this World, or to bring it into Danger of Ruin some other way; nor is there any Defect of Place or Space beyond, into which
Deficit, exsperti quo possint mania Mundi,
Aut alia quavis possint vi pulsa perire.
Haud igitur letbi praelusafst janna Calo,
Nec Soli, Terraque, nec altis Aequoris undis:
Sed patet imman, & vasto respeStat biaTu.
Quare etiam Nativa necessum'st confiteare
Hac eadem: neq, enim, mortali corpore quae sunt,
Ex infinTo jum tempore aebuc potuiSsent
InmensA validas evi conlennere vireis.

Denique tanto pere inter se cium maxima Mundi
Pugnent membra, pio nequaquam concita bello;
Nonne vides aliquam longi certaminis ollis
Posse dari finem? Vel cium Sol, & Vapor omnis
Omnibus epotis humoribus exsuperargent,
Quod facere intendunt, neque aebuc conata patrantur:
Tantum suppedant Amnes, altroque minantur
Omnia diluviare ex alto gurgite ponti,
Nequicum quas: Quoniam verrentes aequora venti
Deminuunt, radiisque retexens aetherius Sol;
Et siccare prius confidunt omnia posse,
Quam liquor incapti possit contingere finem.
Tantum spirantes æquo certamine bellum
Magnis de rebus inter se cernere certant:
Cium semel in terra fuerit superantior Ignis,
Et semel (ut famaèf) Humor regnàrit in arvis.

Ignis
which the Walls of the World may tumble down, or they may fall to Pieces by some other Force, and be dissolved. The Gate of Death therefore is not barred against the Heavens, nor the Sun, nor the Earth, nor the deep Waters of the Sea; but stands open, with its wide and gaping Jaws, to receive them all. For these Reasons it must needs be allowed, that these Things had a Beginning; for whatever is formed of mortal Seeds, and must die, could not from Eternity resist the strong Attacks of infinite past Time, and the Power of Age.

Lastly, 9 Since the Elements (the first Principles of the World) are continually fighting, and carrying on an implacable War among themselves; can there be no End, think you, of their long Contests? If the Sun, suppose, or the Fire, by sucking up all the Moisture should get the better, which they strive to do, but have not yet effected their Design; such a Supply of Water do the Rivers pour in, and the Sea from its mighty Deeps rather threatens to drown the World: But in vain; the bruising Winds are continually licking up and lessening its Tide; and the hot Sun, with its Rays, drinks up a Part; and Things seem rather to be in Danger of being dried up, than of perishing by a Flood of Waters. With such equal Success is the War carried on, and their Powers are so disputed with equal Force. Yet Time was when the Rage of Fire once prevailed over the World; and the Water (as they

9 He brings another Argument from the continual Fighting of the Elements, which are the Four chief Parts of the World: For (says he) since Fire engages with Water, and sometimes the Flame, sometimes the Flood, prevails; what should hinder but that this Contention will at last end in the Destruction of the whole World? And that great Conflagrations and Deluges have happened, the Stories of Phaeton and Deucalion, well known, do sufficiently evince.
Ignis enim superavit, & ambens multa perussit,
Avia cum Phaëthonta rapax vis Solis equorum
Æbere raptavít toto, terrasque per omneis,
At pater Omnipotens ira tum percitus acri
Magnanimum Phaëthonta repenti fulminis iœtu
Deturbavit equis in terram; Solque cadenti
Obvius æternam succupit lampada mundi;
Disjectasque redegit equos, junxitque trementeis:
Inde suum per iter recreavit cuncta gubernans.

Scilicet, ut veteres Graiæm cecinere Poetae:
Quod procul à vera est animi ratione repulsam.
Ignis enim superare potest, ubi Material
Ex infinito sunt corpora plura coorta;
Inde cadunt vires aliqua ratione revictae,
Aut pereunt res exusæ torrentibus auris:
Humor item quondam cepit superare coortus,
Ut fama est hominum, multas quando orruit urbes:
Inde ubi vis aliqua ratione averse recestit,
Ex Infinito fuerat quæcunque coorta,
Constiterunt Imbres, & Flumina vim minuerunt.
Sed quibus ille modis conjectus Material
fundarit
fay) once got the Dominion, and drowned the Earth. The Fire had the Victory, and set every thing in a Flame, when the mad Fury of the Horaces of the Sun, flying out of their Course, dragged the wretched Phaeton through the whole Heavens, and over all the Regions of the World; but great Jupiter, in his fierce Rage, suddenly struck the daring Youth with a Thunderbolt, and tumbled him headlong from his Horces to the Earth: And Phabus meeting him as he fell, gathered up the scatter'd Rays of the Sun (the great Luminary of the World) brought back the distracted Horces, and harnessed them trembling to the Chariot again; and driving them in the right Course, recovered Things to their proper Order. This Tale the Grecian Poets sung of old, which is absurd and against all Belief; yet the Fire may get the mastery, if the large Supplies of fiery Seeds are brought from the great Mass of Matter into this World. The Rage of these Seeds must by some Force be weakened and suppressed, or Things by so scorching Heats must perish and be burnt up. The Water likewise prevailed once (as they say) when it overthrew many Cities; but when the Seeds, that were supplied from the Mass of Matter, were turned into some other Channel, the Rains ceased, and the Rivers flowed again within their Banks.

But now I shall explicate in Order, by what Chance the violent Agitation of Matter produced the World began.

It is possible that Fire may destroy all Things, if an immense Quantity of Corpuscles, of a fiery Matter, were brought down upon the Earth out of the Infinite Space; for in that Case, unless the Power and Force of that igneous Matter be weakened, repressed and kept under, by some means or other, all Things will be burnt, and perish with too much Heat.

In explaining how the World began, he excludes the Divine Providence from being concerned in it, and ascribes the Whole...
Fundárit Cælum ac Terram, Pontique profunda,
Solísque & Lunæ cursus, ex ordine ponam.
Nam certè neque consilio Primordia rerum
Ordine se quàque, atque sagaci mente locârun;
Nec quos quàque darent motus pepigere profeñio:
Sed quia multa modis multis Primordia rerum
Ex infinito jam tempore percità plagis,
Ponderibusque suis confuerunt concita ferri,
Omnimodisque coire, atque omnia pertentare,
Quæcunque inter se possent congressa creare;
Propterea fit, uti magnum volgata per ærum
Omnigenos cætus, & motus experiundo,
Tandem ea convenient, quæ ut convenière repente
Magnarum rerum sìant exordia sepe,
Terraï, Maris, & Cæli, generisque Animantum.

Hic neque tum Solis rota cerni lumine largo
Allivolans poterat, neque magni Sidera mundi,
Nec Mare, nec Cælum, nec denique Terra, neque Aër,
Nec similis nostris rebus res ulla videri:  
Sed nova tempestas quaedam, molesque coorta.
Diffugere inde loci partes cepere, paresque
Cum paribus jungi res, & discludere Mundum,
Membræque dividere, & magnas disponere parteis
Omnigenis è Principiis, discordia quorum

Intervalla,
Book V. Of the Nature of Things.

Heaven, and the Earth, and the Deeps of the Sea, and the Courses of the Sun and Moon; or surely the Principles of Things could never all into so regular a Disposition by Counsel or Design, nor could they by Agreement resolve what Motions they should take among themselves. But the Seeds of Things, being from Eternity beaten upon by outward Blows, or used to be driven by the Force of their own Weight, met every way, tried all Motions that might at last, by their uniting, end in the Production of Things; and then having attempted for infinite Time all sorts of Union, and moved every way about, those Seeds at length met and united, and became the Principles of the great Productions that followed, of the Earth, the Sea, the Heavens, and the whole Animal Creation.

But as yet there was no Chariot of the Sun to be seen, driving with his large Stock of Light through the Sky; no Sea, no Heavens, no Air, nothing like any Beings of this World of ours, to be seen; but a strange Confusion, a Mass of rude and undigested Seeds. From this Heap the various Parts retired to their proper Place, and Seeds of like Nature joined together and formed this World. Then were its mighty Parts divided, and disposed in Order, though produced from this confused Mas, and from Seeds of every kind; for the disagreeing Powers of those Seeds to di-

Whole to Matter; from whence proceeded Chaos (a rude and indigested Heap of Particles) which being driven to and fro, at length came together, like with like; and thence arose the Heaven, the Earth, &c. He observes, that so long as the Atoms were jumbled confusedly one among another, neither Earth, nor Heaven, nor Stars, had yet a Being; but when the chief Parts of the World began to disjoin, and get clear from each other, then the Heaven shone with Splendor, the dry Ground appeared, the Waters were gathered into One, &c.
Intervalla, Vias, Connexus, Pondera, Plagas, Concurfus, Motus turbabat, prælia miscens, Propter diffimileis formas variasque figuras; Quòd non omnia sic poterant conjuncta manere, 445 Nec motus inter se æque dare convenienteis: Hoc est à Terris altum secernere Cælum, Et seorsum Mare uti secreto humore pateret, Seorsus item puri, secretique ætheris Ignes.

Quippe etenim primum Terræ corpore quæque, 450 Propteræ quod erant graviora, & perplexa coibant,
Book V. Of the Nature of Things.

turbed their several Courses, Intervals, Conceptions, Weights, Strokes, Unions and Motions, and kept them so continually at War, that they could never all unite, nor agree upon any regular Motions among themselves. Thus the Heavens separated, and raised their Bodies on high above the Earth; and the Sea, with its vast Extent of collected Waters, retired apart; and the pure and bright Fires of the Sky flew upwards, and divided from the rest.

And first, The Particles of the Earth, being heavy and entangled, met and sunk downwards towards the Earth.

It was the Opinion of Epicurus, that the Atoms, being emboiled and confused in a Heap together, did by their innate Motion roll and tumble up and down among one another, till at length all the more dense Atoms jumbled towards the Middle, and all the more Rare, being extruded and squeezed away by the Thicker, flew towards the Circumference: That of the thicker Atoms the Body of the Earth was compacted, and that it contained within its Bulk some Seeds of Water, which had not been able to disentangle themselves and get away at the same time with the others; but that some of those that had disentangled themselves, did by reason of their various Degrees of Tenuity retire to several Distances; thus some of them stopt not far from the Mafs of Earth, and made the Air; that others mounted yet more aloft, and composed the Sky; and that the fiery Corpuscles that were extruded with the rest, getting clear of all of them, combined into those Bodies that shine in the Sky, and are called Stars: Lastly, That the lesser, round, smooth Corpuscles, were so determined, limited, and confined to that Motion towards the Circumference that was made by Elision (or, by Expression, from the more dense Corpuscles) that forasmuch as they went not out of the Mafs by parallel Ways, they did in the very Progression variably encounter one another, and mutually repelled the Violence they received; which Violence at length ceasing, those that were got farthest or most remote from the Center, became entangled one with another, and mutually compressing each other, and holding fast together, did by that means create a certain Species of the Walls of the World; and whatever Corpuscles came to them there, were turned back and repressed from them in such a manner, that still new Supplies coming up, the whole ethereal or celestial Region...
In medioque imas capiebant omnia sedes:
Quæ quantò magis inter se perplexa coibant,
Tam magis expressere ea, quæ Mare, Sidera, Solem,
Lunamque efficerent, & magni mania Mundi. 455
Omnia enim magis hæc è laevibus atque rotundis
Seminibus, mulòque minoribiu sunt Elementis,
Quàm Tellus: ideo per rara foramina terræ
Partibus erumpens primus se sustulit Æther
Signifer, & multos secum levis abstulit Ignis: 460
Non alia longè ratione, ac fæpe videmus,
Aurea cum primum gemmanteis rore per herbas
Matutina rubent radiati lunina Solis,
Exhalantque Lacus nebulam, Fluviique perennes:
Ipsa quoque interdum Tellus fumare videtur: 465
Omnia quæ sursum cum conciliantur in alto,
Corpore concreto subtexunt nubila Cælum:
Sic igitur tum se levis, ac diffusulis Æther
Corpore concreto circumdatus undique sepfit,
Et late diffusus in omnis undique parteis,
Omnia sic avido complexu cateria sepfit.
Hunc exordia sunt Solis Lunæque secuta:
Inter utrosque globi quorum vertuntur in auris:
towards the middle Place of the Mass; and the more closely twined the Parts of it were, the more they squeezed out those Seeds that composed the Sea, the Stars, the Sun; and that formed the Moon, and the Heavens (the Walls of this great World): For These consist of Seeds much more smooth and round, and of much less Principles than the Earth; and therefore the Heavens (the Abode of the Stars) first got free through the subtle Pores of the Earth, and ascended upwards; and being light, drew many Seeds of Fire along with them; much in the same manner with what we frequently observe, when the golden Rays of the bright Morning Sun first shine upon the Grains decked with pearly Dew, and the standing Lakes and running Rivers exhale a Mist into the Air, and the Earth sometimes seems to smoke. These Vapours, when they are raised upwards and united, become Clouds, and with their condened Bodies darken the whole Sky; and so the light and spreading Ether, being condened, stretches widely over every Place; and being diffused on all Sides abroad, embraces every thing with its large Circumference, and incloses it about.

The Beginnings of the "Sun and Moon follow next, whole Orbs are rolled in the Air between..."
Qua neque Terra sibi adscivit neque maximus Ἐθερ: Quod nec tam fuerint gravia, ut depressa sederent: 475 Nec levia, ut possent per summam labier oras: Et tamen inter utrosque ita sunt, ut corpora viva Versent, & partes ut Mundi totius extent. Quod genus in nobis quædam licet in statione Membra manere, tamen cum sint ea quæ moveantur. His igitur rebus retraxit, Terra repente, 482 Maxima, quæ nunc se Ponti plagæ cærula tendit, Succidit, & falsō sussudit gurgite fossas: Inque dies quantō circum magis Ἐθερis æstus, Et radii Solis cogebant undique Terram, 485 Verberibus crebris extrema ad limina apertam, In medio ut propulsà suo condensa coiret: Tam magis expressus falsus de corpore Sudor Augebat Mare manando, camposque natanteis: Et tantō magis illa eorūs elapsa volabant 490 Corpora multa Vapori, & Aēris, altaque Cæli Densebant procul à terris fulgentia templā: Sidebant Campi, cresebant Montibus altis Asconsus: neque enim poterant subsidere Saxa, Nec pariter tantundem omnes sufficundere partes. 495 Sic igitur Terræ concreto corpore pondus
the \(\text{\textit{Ether}}\) and the Earth, and whose Principles would unite neither with those of the Earth nor the Sky; they had not Weight enough to sink so low as the one, nor were they sufficiently light to rise so high as the other; yet they are so placed between both, that they constantly turn about their Bodies, and so become Parts of the whole World. As in these Bodies of Ours, some Members are continually at Rest, when others are always in Motion.

These Things being separated, *a great Part of the Earth sunk suddenly, and made a Channel where the Tides of the Sea now flow, and formed a Cavern for the salt Waters: And the more the Heat of the Sky, and the Beams of the Sun, pressed every way with frequent Strokes upon the Earth, full of Pores on the Outside (that so its Particles, being driven towards the Middle, might be more firm and condensed) the more the salt Water like Sweat was squeezed out, and by flowing inlarged the Surface of the Sea, and spread wider abroad; and the more the many Corpuscles of Fire and Air disentangled themselves, and flew off from the Earth, and formed themselves above, at a great Distance, into the shining Frame of the Heavens. The Valleys subsided, the Mountains raised their lofty Heads; nor could the Rocks sink down, nor all Parts of the Earth fall equally low. And thus the Weight of the Earth, with its

*That feculent Mafs that sunk together to the Bottom, being pressed on all Sides by the Beams of the Sun and the Heat of the Sky, contrac\(t\)ed itself; thence exhaled the Sea like Sweat; but the lighter Particles mounting higher, composed the Elements of Fire and Air; and some of the Particles of this Mafs, being more hard and stiff than the others, they did not all subs\(\text{ide alike}\); and hence came the hollow Places to receive the Sea, and the Channels for the Rivers; and hence too the Level of the Plains, and the Turgidness of the Mountains.
Constitit, atque omnis Mundi quasi Limus in imum
Confluxit gravis, & subjedit funditus, ut Fæx.

Inde Mare, inde Äër, inde Äther ignifer ipse.

Corporibus liquidis sunt omnia pura relieta;
Et leviorsa aliis alia: & liquidissimus Äther,
Atque levisissimus Äërias super influit auras;
Nec liquidum corpus turbantibus Äëris aëris
Commiscet: finit hac violentis omnia verti

Turbinibus: finit incertis turbare procellis:
Ipse suos Igeis certo fert impete labens.
Nam modicè fluere, atque uno posse Äthera nisi,
Significat Ponti Mare, certo quod fluit aestu,
Unum labendi conservans usque tenorem.

Motibus Astrorum nunc quæ sit causa, canamus.
Principiò, magnus Cæli si vertitur orbis:
Ex utraque Polum parti premere Äëra nobis
Dicendum'st, extraque tenere, & claudere utrinque;
Inde Alium supera fluere, atque intendere eodem,
heavy Body, stood firm; and its whole Mass, like thick Mud, fell to the Bottom, and funk the lowest, as the Dregs of all.

And thus were produced the Sea, the Air, and the Sky (or the Ether) spangled with Stars. All the finer Seeds went to the Formation of these fluid Bodies, but some were more light than others; and the most light and liquid Ether mounted higher, and spread over the Body of the Air; but its liquid Parts never mix with the turbulent Blasts of the Air below it. The airy Region is tormented by violent Whirlwinds, and disturbed by uncertain Storms; while the Ether calmly glides, and bears along its Fires in a fixed Course; and that the Ether may flow thus gently, and in a regular Motion, we have an Instance in the Euxine Sea, that runs with one certain Tide, and preserves one constant Stream in the Current of its Waters.

Now let us shew from what Cause proceeds the Motion of the Stars: And first, If the whole Orb of the Heavens be moved, then we must allow, that the Air bounds and incloses the outward Surface of the Heavens, and both the Poles; the upper Part of this Air presses above, and drives the Skies down to the West, the Course in which the resplendent and liquid Ether, having mounted higher than the inconstant and turbulent Air, is wholly undisturbed by Storms, and rolls in a constant and like Motion; which Motion of the Ether is not in the least incredible, since the Euxine Sea does the like, and is continually flowing into the Propontick, without changing its Course.

If the whole Orb be moved, then there may be two Airs; one that may press from above, and drive it down to the West, and another that may be said to bear and lift it up from beneath. If the Orb be without Motion, then some rapid Particles of the Sky, struggling to get into the empty Space, and not able to force their way and break through the strong Walls of the World, are whirled about, and drag the Stars with them, &c.
Quo volvenda micant aeterni Sidera mundi:

Ast Alium subter, contrà qui subvehat Orbem:
Ut fluviós versare Rutas, atque Hassília videmus.

Est etiam quoque, uti posít Cælum omne manere
In statione, tamen cùm lucida signa serantur:
Sive quod inclusi rapidi sunt Aetheris æstus, 
Quarentesque viam circumversantur, & Ignes
Passim per Cæli vocant se immanía templá:
Sive aliunde fluens alicunde extrífecus Aér
Versát agens igneis: sive Ipsí serpere possunt,
Quo cujusque cibus vocat, atque invítat eunteís;
Flammæa per Cæli pascenteís corpora passim.
Nam quid in hoc Mundo sit eorum, ponere certum
Diffícilést; sed quid posít, fiatque per Omne
In variís Mundis varia ratióne creatís,
Id docéo: plurísque sequor disponere causás
Motibus astrorum, quæ possint esse per Omne.
E quibus una tamen sit & hac quoque causa necessest,
Quae vegeat motum signis: sed quæ sit earum
Præcipere, baud quáquam st pedetentim progredientis,
Terraq; ut in media Mundi regione quiescat,
Evanesçere paullatim, & decrescere pondus
Convent: utque aliam naturam subter habere
Ex ineunte ævo conjunctam, atque uníter aptam
-partibus Aëriis Mundi, quibus insita fidit.
the Stars (the great Lights of the World) are to move; the under Part flows below, and lifts up this Orb from beneath, and makes it rise, as we see the Wheels of a Mill, or Buckets, are turned about by a running Stream.

Or perhaps the whole Body of the Heavens may remain fixed, and yet the Stars may execute their Motions; either because some rapid Particles of the Sky are shut up, and struggling to find a Way into the empty Space, are whirled about, and drag the Stars along with them; or some external Air, rushing in from some other Place, may turn them about; or they may move severally forward of themselves through the Sky, where proper Nourishment invites them to feed and keep alive their Fires. But it is hard to resolve for certain, what is the particular Cause of these Motions in this World of ours. I rather propose Reasons in general for what may be done through the Universe, in the Multitude of Worlds contained in the Great All, and formed after various Manners; and I offer many Causes that may account for the Whole, yet One only can be the True One that produced these Effects; but to pronounce which it is, no wary Philosopher will take upon him to do.

But that the Earth should rest in the middle Region of the World, it is necessary that its Weight should in some Degree lessen and be laid aside; and for this End it was fit that another Substance should be placed under it, to which from the very Beginning it should be united closely by natural and a congenial Ties, and upon which it

a Though the Air only is circumfused around the Earth, yet because both Air and Earth are bound by natural and kindred Ties, and from their very Beginning are Parts of the same Whole, the Earth is no Burden to the Air; but having in a manner laid aside all its Weight and Compression, it only sticks fast and cleaves naturally to it.
Lucretii Lib. V.

Propterea non est oneri, neque deprimit auras:

Et sua cuique Homini nullo sunt pondere Membra:

Nec Caput est oneri Collo, nec denique totum

Corporis in Pedibus pondus sentimus inesse.

At quaeunque foris veniunt impositaque nobis

Pondera sunt, ladeunt permulto sepe minora:

Usqueadeo magni refert, cui qua adjaceat res.

Sic igitur Tellus non est aliena repente

Adlata, atque auris aliunde objeta alienis:

Sed pariter prima concepta ab origine Mundi:

Certaque pars ejus, quasi nobis Membra videtur.

Præterea grandi tonitu concussa repente

Terra, supra se quæ sunt, concutit omnia motu:

Quod facere baud ulla posset ratione, nisi esset

Pariibus æriis mundi, celoque revinæta.

Nam communibus inter se radicibus hærent

Ex ineunte ævo conjuncta, atque uniter apta.

Nonne vides etiam, quàm magno pondere nobis

Susineat corpus tenuissima vis Animaæ,

Propterea quia tam conjuncta, atque uniter apta sì?

Denique jam saltu pernici tollere Corpus

Quis potis est, nisi vis Animaæ, quæ membra gubernat?

Jamne vides quantum tenuis naturæ valere

Possit, ubi est conjuncta gravi cum corpore, ut Aër

Conjunctus terris, & nobis est Animi vis?

Nec
should be said. This Substance being the surrounding Air, which is a Part of the same Whole, and as it were of a Piece with the Earth, the Earth therefore hangs suspended in the Middle, and is no Weight or Pressure to the Air at all; and so the Limbs are no Load to the Body of a Man, nor is the Head a Burden to the Neck, nor do we perceive the Weight of the whole Body to press heavy upon the Feet; but whatever Weight is laid upon us from without, and is no Part of us, is a Pain to us, though it be ever so small. Of so great Concern it is to what every Being is severally united. For the Earth was not brought from any other Place, and then thrust into the strange Embrace of a different Air, but was formed together with it, and became a regular Part of the World; as our Limbs were produced with the Body, and are essential Parts of it.

Besides, the Earth, when it is shaken of a sudden by a violent Thunder, makes every thing that is upon it to tremble; which it could by no means do, unless it was closely joined to the airy Parts of the World, and to the Heavens above; for they all stick closely together by common Bonds, and kindly unite from the very Beginning. Don't you observe how the most subtle Power of the Soul supports the Body with all its Weight, because it is so strictly connected and so closely joined to it? And what is it but the Force of the Soul which actuates the Limbs that raises the Body, and makes it leap nimbly from the Ground? Don't you perceive now what a Substance of the most subtle Nature is able to do, when united with a heavy Body; such as the Air when it is joined to the Earth, and as the Soul to this Body of ours?
Nec nimio Solis major rota, nec minor ardor
Esse potest, nostris quæm sensibus esse videtur.
Nam quibus è spatiis cunque Ignes lumina possunt
Adhicere, & calidum membris adflare vaporem,
Illa ipsa intervalia nihil de corpore limant
Flammarum, nihil ad speciem fæ contraëtior Ignis.
Proinde calor quoniam Solis, lumenque profusum
Perveniant nostris ad sensus, & loca tingunt:
Forma quoque binc Solis debet filumque videri,
Nil adeo ut possis plus, aut minus addere verè.
Lunaque seve notho fertur loca lumine lustriæ,
Sive suam proprio jaëtat de corpore lucem,
Quicquid id est, nihilò fertur majore figura,
Quam, nostris oculis quam cornimus, esse videtur.
Nam priùs omnia, quæ longè remmota tuemur
Aëra per multum specie confusa videntur,
Quam minimum filum: quapropter Luna necessit,
Quandoquidem claram speciem, certamque figuram
Præbet, ut est oris extremis cunque notata,
Quanta hæc cunctæ sunt, tanta binc videatur in alto.
Postremò, quocunque vides binc ætheris Igneis,
Quandoquidem, quocunque in terris cernimus igneis.
Dum tremor est clarus, dum cernitur ardor eorum;
Perparvum
But further; the Orb of the Sun is not much larger, nor is its Heat much greater, than what our Senses discover to us; for at whatever Distance the Fire can send out its Rays of Light, and warm us with its Heat, that Distance takes away nothing from the Bigness of the Flame, nor does the Fire appear less contracted to the Eye. And therefore, since the Heat of the Sun, and his diffused Light, do reach our Senses, and shine upon the Earth, you are to conclude, that his Form and Magnitude are no greater nor less than they appear to be.

And the Moon, whether she views the World with borrowed Light, or whether she shoots out her Beams from her own Body; however it be, she is of no greater Size than to our Senses she appears: For all Objects we look upon at a great Distance, and through a long Tract of Air, they first irregular and confused, before we discover their utmost Figure and Proportion. And therefore, since the Moon at once presents to us the certain Form, and the complete Appearance of her whole Orb, she shews to us above as great as she really is.

Besides, since all our Fires here below, when they are seen at a great Distance, so long as their Light is clear, and their Brightness shines out to

The Magnitude of the Sun, Moon and Stars, is the same as it appears to be; For (says he) as we retire from any Fire, so long as we are within such a Distance of it that we can perceive its Light and Heat, the Fire seems no less than it does when we are near it; but we feel the Heat, and perceive the Light of the Sun; therefore the Sun is of the same Magnitude it seems to be. And then, we distinctly see the utmost Verge and Face of the Moon; yet we should see it but confusedly, if we were so far off that its Distance took away any of its Magnitude. And, lastly, the Stars are much of the same Magnitude they appear; for even the Fires that we see here below, at a Distance from one another, either by Day or by Night, present to our Eyes the like Variety of Sizes.
Perparvum quiddam interdum mutare videntur
Alterutram in partem filum, cum longius absint,
Scire licet, perquæm pauxillo posse minores
Esse, vel exigua maiores parte, brevique.

Ilud item non est mirandum, qua ratione
Tantulus ille queat tantum Sol mittere lumen,
Quod maris, ac terras omnes caelumque rigando
Compleat, & calido perfundat cuneta vapore.

Nam licet hinc Mundi pateraetum totius unum
Largissimum fontem scatere, atque crumpe re flumen
Ex omni Mundo, quod sic Elementa vaporis
Undique conveniunt, & sic congressus eorum
Consuet, ex uno capite hie ut profuat ardo r;

Nome vides etiam, quan latè parvus aquai
Prata riget Fons interdum, campisque redundet?

Es etiam quoque, uti non magno Solis ab igni
Aëra perciptiat calidis fervoribus ar dor.

Opportunus igitur est forte, & idoneus Aër,
Ut queat accendi parvis ardoribus idibus:
Quod genus interdum segetes stipulamque videmus
Acciper ac una scintilla incendia passim,
Forstan & rosea Sol altè lampade lucens
Passideat multum caedis fervoribus ignem

Cirrum se, nullo qui sit fulgore notatus,
Ætiferum ut tantum radiorum exaugeat idum.

Nec ratio Solis simplic, nec certa patecit,
us, do seem to change a little, and shew more or less contracted; we may conclude, that the Stars we view in the Heavens, are very little either greater or less than they appear.

Nor are we to wonder how it comes to pass, that so small a Body as the Sun, is able to emit so much Light as to spread over the Seas, the whole Earth and the Heavens, and to cherish all Things with its kindly Heat: For you may imagine, that from the Sun one large Fountain of Light breaks out, and flows abundantly, like a River, over the whole World; and that the Seeds of Fire from all Parts of the Universe meet in the Body of the Sun, and are there collected as into a Spring, from whence the Heat of the whole World is diffused abroad. Don’t you observe how widely a small Fountain of Water spreads its Stream over the Meadows, and overflows the Fields?

Or perhaps the Heat flowing from the small Body of the Sun, may inflame the adjacent Air, if the Air be properly tempered and disposed to catch the Fire from the feeble Strokes of Heat; as we sometimes see the Corn and the Stubble to be set all in a Blaze from one small Spark falling upon it; or it may be the Sun, shining above with rosy Light, has many dark and unseen Stores of Fire about it, which, though distinguished by no outward Brightness, may yet increase the Heat of its Rays, and make their Strokes the more inflamed.

Nor can one certain Reason be assigned, why the Sun declines from its Summer Height, and bends

Perhaps the Air near the Sun is set on Fire by its Beams, and that many fiery Particles, invisible to us, are hovering about his Orb; and thence may proceed so great a Profusion of Light and Heat.

He proposes the Opinion of Democritus, who taught that the lower Spheres are rolled and whirled around by the highest Orb,
Quo paedo estivis est partibus Ægocerotis
Brumaleis adeat flexus, atque inde revertens
Canceris ut vertat metas se ad Solsticialis:
Lunaque mensibus id spatium videatur obire,
Annua Sol in quo consumit tempora cursu:
Non, inquam, simplex his rebus reddita causa\'st.
Nam fieri vel cum primis id posse videtur,
Democriti quod sancta viri sententia ponit:
Quant\'que qu\'que magis sint terram Sidera propter,
Tant\'que posse min\'us cum celi turbine ferri.
Evanescere enim rapidas illius, & acreis
Imminui subter vireis, ideoque reliqui
Paulatim Solem cum posterioribus Signis,
Inferior mult\'o qu\'od sit, quam servida Signa:
Et magis hoc Lunam: & quant\'o demissior ejus
Cursus abest procul a Caelo, terrisque propinquat,
Tant\'o posse min\'us cum Signis tendere cursum.
Flaccidioctiam quant\'o jam turbine fertur
Inferior quam Sol, tant\'o magis omnia Signa.
Hanc adipiscuntur, circum, præterque feruntur.
Propertia fit, ut Hæc ad Signum quodque reverti
Mobilius videatur, ad Hanc quia Signa revisunt.
Fit quoque ut \'e mundi transversis partibus Aër
Alternis certo fluere alter tempore pos\'st.
bends his Winter Course towards the Tropic of Capricorn, and then returning, reaches the Tropic of Cancer, and makes the Summer Solstice; and that the Moon in every Month finishes the same Course through the Twelve Signs, as the Sun takes up a whole Year in running through: I say, one certain Reason cannot be assigned for these Events; for perhaps the Cause may be what the venerable Opinion of that Great Man Democritus has laid down, that the nearer the Stars are to the Earth, they are carried more slowly about by the general Motion of the Heavens. For the rapid Force and Celerity of the upper Sky, are much lessened before they reach the inferior Orbs; and therefore the Sun, with the lower Signs that follow it, is in some measure left, because it is much lower than the high Region of the Stars: And the Moon is much lower still; and the greater Distance from the Heavens she observes in her Course, and the nearer she approaches the Earth, the less is she capable of keeping Pace with the Motions of the Signs, and the slower she is in her Motion than the Sun as she moves below him; and the Signs may the more easily overtake her, and pass about and beyond her the oftener: And therefore the Moon seems the sooner to run through all the Signs, when in reality the Signs return to her.

Or perhaps two several Airs may at certain Seasons blow from the opposite Parts of the World by Orb, called the Primum Mobile, either swifter or more slow, according to the Distance of each Sphere from that highest Orb. Thus the Sun moves swifter than the Moon, because the Sun is higher, and therefore the Signs more seldom overtake and pass by him than they do by her; nor is it then strange, that the Moon runs through all the Signs in one Month, which the Sun goes through but in twelve.

He introduces two several Airs waiting on the Sun and Moon; by one of which they are shoved down from Cancer to
Qui queat æstivis Solem detrudere Signis
Brumaleis usque ad flexus, gelidumque rigorem:
Et qui rejiciat gelidis à Frigoris umbris
Æstiferas usque in parteis, & fervida Signa.
Et ratione pari Lunam, Stellaisque putandum'st,
Quæ volvunt magnos in magnis orbibus annos,
Aëribus posse alternis à partibus ire.
Nonne vides etiam diversis nubila ventis
Diversas ire in parteis, inferna supernis?
Quæ minus illa queant per magnos ætheris orbeis
Æstibus inter se diversis Sidera ferri?
At nox obruit ingenti caligine terras,
Aut ubi de longo curfu Sol extima cali
Impulit, atque suos efflavit languidus igneis
Concussos itere, & labesactos aëre multo:
Aut quia sub terras cursum convertere cogit
Vis eadem, supera terras quà pertulit orbem.
Tempore item certo roseam Matuta per oras
Ætheris Auroram defeats, & lumina pandit,
Aut quia Sol idem sub terras ille revertens
by turns; the one may drive the Sun down from the Summer Signs into his Winter Course, and the Extremity of Cold; the other may raise it from the cold Winter Signs into the Summer Solstice. And for the same Reason the Moon and the Stars, which fulfil their Periods and Revolutions in their long Courses, may be forced upwards and downwards in the Heavens, by two several Streams of Air likewise. Don't you observe the Clouds, driven by contrary Winds, move different Ways, the lower opposite to those above? What then should hinder that the Stars should not be carried on, by contrary Blasts of Air, through the great Circles of the Sky?

And the Night, we imagine, covers the Earth with thick Darkness, either because the Sun in his long Course has reached the Extremity of the Heavens, and being tired, has blown out his Fire scattered by the Swiftness of his Motion, and decayed by the Tract of Air he passed through; or the same Force that raised his Orb, and drove it round above, compels him to change his Course, and roll beneath the Earth.

And Matuta, the Goddess of the Morning, at a fixed Time leads Aurora blushing through the Regions of the Sky, and opens the Day, either because the Sun, returning from under the Earth, to Capricorn, and by the other heaved up again from Capricorn to Cancer, and this at fixed and certain Times: And that it may not seem incredible, he bids us look on the different Racks of Clouds which the Winds drive several Ways.

The Night (he says) succeeds the Day, either because the Sun, being fatigued with the Length of his Journey, is extinguished; or because he is whirled with the same Force beneath the Earth by Night, as above the Earth by Day.

The Splendor which we call the Morning, and which before the Rising of the Sun adorns the Heavens, is occasioned because the Sun, returning from West to East, pours forth his Rays before he appears himself, or because the Seeds of Fire, &c.
Anticipat colum radiis accendere tentans: Aut quia conveniunt ignes, & femina multa
Conflueret ardis confluerunt tempore certo, Quae faciunt Solis nova semper lumina gigni.
Quod genus Idaeis fama'st è montibus altis
Dispersos ignes orienti lumine cerni:
Hinde coire globum quasi in unum, & conficere orbem.

Nec tamen illud in bis rebus mirabile debet 665
Effe, quod hae Ignis tam certo tempore possint
Semina confluerer, & Solis reparare nitorem.
Multa videmus enim, certo qua tempore fiunt
Omnibus in rebus, florescunt tempore certo
Arbusta, & certo dimittunt tempore florem.

Nec minus in certo denteis cadere imperat etas
Tempore, & impubem molli pubescere vestes,
Et pariter mollem malis demittere barbam.
Fulmina postremo, Nix, Imbres, Nubila, Venti,
Non nimis incertis fiunt in partibus anni.

Namque ubi sic fuerunt causarum exordia prima,
Atque uti res mundi cecidere ab origine prima,
Consequa natura'st jam rerum ex ordiné certo.

Crescere itemq; Dies licet, & tabescere Noûeis,
Et minus Luces, cùm fumant augmenta Noûes: 680
attempts to inlighten the World with his Rays, before he appears himself; or because the Seeds of Fire that were dispersed abroad in his Journey the Day before, flow together in the Eastern Sky, and illustrate the Earth with a faint Light, before they have kindled up anew the Globe of the Sun. This (they say) is easily discovered from the Top of Mount Ida; where, upon the Rising of the Sun, we first discover his scattered Rays, which are afterwards contracted into one Orb, and make up one Ball of Light.

Nor are you to wonder that these Seeds of Fire should flow together constantly every Day, and repair the Splendor of the Sun; for we observe many Things in Nature that act regularly, and at a fixed Time. The Trees look green at a certain Season, and at a certain Season cast their Leaves; Children at a certain Time shed their Teeth; and the Boy grows ripe at a certain Time, and shews the soft Down upon his Cheeks. And lastly, The Thunder, the Snow, the Rains, the Clouds, the Winds, are no less certain, and fall out in fixed Seasons of the Year; for the Course which Things observed from the Beginning of the World, they perfue the same, and continue still to act in the same certain Order.

The Days likewise increase, and the Nights grow shorter; and the Nights increase, and the Days

It is impossible in this Place to explain the whole System of the celestial Globe. The Meaning of the Words æquator, æquinox, Tropicks, Zodiack, &c. is to be found in every Dictionary. It may be proper only to observe here, that the Poet offers three Reasons for the Length and Shortness of the Days and Nights: The first, because the Sun makes his Rounds above and below the Earth more swiftly at some Times than at others; and here he describes the unequal Segments of the diurnal and nocturnal Circles in the oblique Position of the Sphere; but from this Rule he excepts the æquator, which in every Obliquity is divided from the
Aut quia Sol idem, sub terras, atque superfine,
Imparibus currens anfractibus ætheris oras
Partit: Et in parteis non æquas dividit orbem:
Et quod ad alterutra detraxit parte, reponit
Æjus in adversa tantò plus parte relatus,
Donicum ad id signum cali pervénit, ubi anni
Nodus nocturnas exæquat lucibus umbras.
Nam medio cursu flatus Aquilonis, & Austri,
Distinctæ quato caelum discrimine metas,
Propter Signiferi posituram totius orbis;
Annua Sol in quo contundit tempora serpens,
Days shorten; either because the Sun, in his Course above and below the Earth, moves obliquely in unequal Lines, and divides the Heavens into unequal Parts; and what he takes off from one Part of the Heavens, he adds so much to the opposite Part again, till he arrives at that Sign in the Heavens, where he cuts the 1st Equinoctial Line, and makes equal Day and Night; for this Line is equally distant from the two Tropicks, which are the Bounds of the Sun’s Motion towards the North and South; and this is owing to the Obliquity of the 1st Zodiack, through which the Sun

Horizon into two equal Parts. And this is the Reason that the Sun, being twice within the Year placed in the Equator, makes two Equinoxes in all Countries whatever: This is the true Reason; for the Inequality of the Days and Nights proceeds from the oblique Position and Site of the Zodiack; whence it comes to pass that they who have a perpetual Equinox, that is, those that live under the Equator, never have the least Inequality, but a constant Equality, of Days and Nights, because they inhabit under a straight and direct Sphere; but those that live towards either of the Poles, have their Days and Nights longer or shorter, according as they are more remote from the Pole, or nearer advanced to it; but such as live in the most oblique Sphere, that is, under either of the Poles, have six Months of continual Light, and by turns as many of continual Night and Darkness.

1 This is one of the greatest Circles of the Sphere; its Poles are the same with the Poles of the World, from either of which it is equally distant, and divides the celestial Globe into the northern and southern Hemisphere.

k The Tropicks of Cancer and Capricorn are the utmost Bounds of the Sun’s Revolution. They are called Tropicks from the Greek Tropo, which signifies Conversion or Turning; because the Sun, when he comes at those Circles, turns back again towards the Equator, nor ever goes beyond those Bounds, either towards the North or South.

1 The Zodiack is a Circle, or Zone, obliquely passing from East to West, before the Equinoctial and Solstitial Points, and parted in the midst by the Ecliptick, which divides it into two Parts; the one Northern, the other Southern. It is said to be oblique, because it is not an equal Distance from each Pole; but being carried cross the Torrid Zone, it reaches both
Obliqua terras, & cæolum lumine lustrans:
Ut ratio declarat Eorum, qui loca cæli
Omnia dispositis signis ornata notārunt:

Aut quia cressior est certis in partibus Àër,
Sub terris ideo tremulum jubat hæsitat ignis,
Nec penetrare potest facile atque emergere ad ortus.
Propterea notītes hiberno tempore longae
Cessant, dum veniat radiatum insigne diei:

Aut etiam, quia sic alternis partibus anni
Tardiús & citiis consuerunt confluere ignes,
Qui faciant Solem certa de surgere parte.

Luna potest Soliis radiis percussa nitere,
Inque dies majus lumen convertere nobis
Ad speciem, quantum Solis fecedit ab orbe,
Donicum eum contra pleno bene lumine fulsit,
Atque oriens obitus ejus super edita vidit:
Book V. Of the Nature of Things.

Sun finishes his annual Revolution, and shines upon the Earth and the Heavens with an oblique Light. Such is the Opinion of those who have mark'd out all the Regions of the Heavens, and adorned them with the twelve Constellations.

Or it may be, because the Air in some Parts is thicker; and therefore the trembling Rays stick longer in their Passage under the Earth, and cannot so easily pierce through and discharge themselves, and so bring on the Day. For this Reason the Nights in the Winter continue longer, till the Sun rises, and scatters the Darkness with his Rays of Light.

Or because, at certain Seasons of the Year, the Seeds of Light which repair the decayed Splendor of the Sun, flow together sooner or later, and so occasion his Rising in different Parts of the Heavens.

The Moon may shine with Rays borrowed from the Sun, and appear to us every Day with greater Light, as she retires further from the Sun's Orb; till being directly opposite to him, she shines out with full Beams, and climbing up the East, views him from above setting in the West;

both the Tropicks, and divides the Circle of the Æquator. In the first Degree of Cancer it touches the North Tropick, which is thence called the Tropick of Cancer. It touches the South Tropick in the first Degree of Capricorn, whence that Tropick has the Name of the Tropick of Capricorn. When the Sun comes to the Tropick of Cancer, about the Tenth of June, then is our Height of Summer, or Summer Solstice; when about the Tenth of December he reaches the Tropick of Capricorn, then is our Depth of Winter, or the Winter Solstice.

These two Reasons are trifling.

If the Moon receive her Light from the Sun, if she be a globous Body, and, lastly, if she make her Rounds below the Sun, then they explain aright her various and manifold Phases, who say, that the Moon changes her Face according to the different Light she receives from the Sun, as she approaches nearer to him, or retires farther from him.
Inde minutatim retrò quasi condere lumen
Debet item, quantò propius jam Solis ad ignem
Labitur ex alia Signorum parte per orbem:
Ut faciunt, Lunam qui fingunt esse pilai
Consimilem, currusque viam sub Sole tenere:
Propterea sit uti videantur dicere verum.

Est etiam quoque uti proprio cum lumine possit
Volviæ, & varias splendoris reddere formas.
Corpus enim licet esse alius, quod fertur, & una
Labitur omnimodis occurfans officiensque,
Nec potis est cerni, quia cajjum lumine fertur.

Versarique potest, globus ut, si forte, pilai
Dimidia ex parti caudenti lumine tintus:
Versandoque globum varianteis edere formas,
Donicum eam partem, quaeque, est ignibus austra,
Ad speciem vertit nobis, osculosque patenteis:
Inde minutatim retrò contorquet, & ausert
Luciferam partem giomeraminis, atque pilai:
Ut Babylonica Chaldaæm doctrina refutans
Astronomorum artem contrà convincere tendit:
Proinde quasi fieri nequeat quod pugnat uteque,
Aut minius hoc illo sit cur amplectiier ausis.

Denique,
and then she goes backwards as it were, and hides her Light gradually, as she passes through the different Signs in her nearer Approaches to the Sun. Thus They explain her Phases, who conclude her round like a Ball, and that she moves below the Sun; and they seem to be right in their Opinion, and speak the Truth.

But the Moon, possibly, may steer her Course by her own Light, and shew different Phases and Forms of Brightness; for another Body may move below her, and attending all her Motions, may interpose and hinder her Light from being seen; but this Body, being thick and dark, cannot be discovered by the Eye.

And perhaps the Moon may roll round her Axis like a Ball, whose one Half only is bright. This Ball, as it moves round its Center, will express the different Appearances of Light, till it turns the whole bright Side to us, and shines full upon the open Eye; and then by degrees it turns backward, and takes away its bright Side as it rolls, and we see no more of it. This was the Doctrine of the Chaldeans, who followed the Hypothesis of Berosus, and attempted to overthrow the vulgar Astrology of the Greeks; as if the Schemes of both could not be true, or you had less Reason to embrace the one than the other.

When the Moon is at Full, she goes as it were backwards under the Earth towards the Sun, and comes up to him; whence it is that she decreases by degrees, till being in Conjunction with him, she become invisible to us.

If the Moon shines with unborrowed Light, then we must imagine that another Body, which is opaques and totally dark, always moves with the Moon, and obstructs and turns away her Beams.

He proposes the Opinion of those, who held one Half of the Moon’s Orb to be light, the other Half dark. If this Opinion (says he) be true, imagine such an Orb to be turned round on its Axle, and it will present the different Phases we behold in the Moon.
Denique, cur nequeat semper nova Luna creari.

Ordine formarum certo, certisque figuris:
Inque dies privos abolescere quaeque creada,
Atque alia illius reparari in parte, locoque,
Difficilest ratione docere, & vincere verbis:
Ordine cum videas tam certo multa creari.

It Vero, & Venus, & Veneris præmuntius antè
Pinnatus graditur Zephyrus vestigia propter:
Flora quibus mater præspergens ante viaï
Cuncta coloribus egregiis, & odoribus opplet.

Inde loci sequitur Calor aridus, & comes una,
Pulverulentà Ceres, & Etaæa flabra Aquilonum.

Inde Autumnus adit: Graditur simul Eius Euan:
Inde alie tempestaties, ventique sequuntur,
Altitonans Vulturnus, & Auster fulmine pollens:
Tandem Bruma niveis adsert, pigrumque rigorem

Reddit, Hyems sequitur, crepitans ac dentibus Algus.

Quod minus est mirum, si certo tempore Luna
Gignitur, & certo deletur tempore rursus:
Cum fieri possint tam certo tempore multa.

Solis item quoque defectus, Luneq; latebras,

Pluribus è causis fieri tibi posse putandum est.

Nam
Lastly, Why may not a Moon be created new every Day, and be distinguished by regular Phases, and certain Forms of Light? and this new Orb die, and be succeeded the next Day by another, that should supply its Place in the same Part and Quarter of the Heavens? It is difficult to assign a Reason, and to prove the contrary, especially since we observe so many Things are formed, and succeed one another in a regular Order. And first the Spring begins, and Venus enters, with her Harbingers (the winged Zephyrs) marching by her Side; then Mother Flora spreads the Way before with Flowers of richest Dye, and fills the Air with sweetest Odours; and next advance the scorching Summer, and her Companion the Dusty Harvest, and the Eteolian Blasts of Northern Winds; and then comes Autumn, and jolly Bacchus steps along; now follow ruffling Storms and boisterous Winds, the roaring South-East, and the sultry South full fraught with Thunder; at last the Cold brings on the Snow and chilling Froth, and then creeps Winter, all benumb’d, and chattering with his Teeth. It is the less Wonder then, that the Moon should be formed anew at certain Times, and at fixed Seasons again expire, since so many Things are so regularly produced, and succeed one another.

The Eclipses of the Sun and Moon may proceed, you may suppose, from many Causes; for

The Sun (he says) is eclipsed when the Moon, or any opacious Body below his Glebe, interposes between that and the Earth, and thus intercepts his Beams, and hinders those Rays of Light from coming forward to the Earth. The Moon is eclipsed when she happens to be in the Shadow of the Earth, or any other opacious Body that is interposed between her Orb and the Sun. Besides, why may not the Sun and Moon grow faint and sicken, nay, as it were fall into a Swoon, when they chance to go through any Places of the Heavens that are infectious to them, and destructive of their Fires and Light?
Nam cur Luna quæat Terram secludere Solis
Lumine, & a terris altum caput observare eij,
Objiciens cæcum radii ardentibus orbem:
Tempore eodem alius facere id non posse putetur
Corpus, quod caffum labatūr lumine semper?
Solque suos etiam dimittere languidus ignis
Tempore cur certo nequeat, recreareque lumen,
Cum loca præteriit flammas insæta per auras:
Quæ faciunt ignes interstingui atque perire?
Et cur Terra quæat Lunam spoliare vicissim
Lumine, & oppressum Solem super ipsa tenere,
Manstrua dum rigidas Coni perlabitur umbras:
Tempore eodem alius nequeat succurrere Luna
Corpus, vel supera Solis perlabier orbem,
Quod radios interrumpat, lumenque profusum?
Et tamen ipsa suo si fulgit Luna nitore,
Cur nequeat certa mundi languescere parte,
Dum loca luminibus propriis inimica pererrat?

Quod superest, quoniam magni per cœrula Mundi
Qua fieri quicquid posset ratione, resolvi:
Solis uti varios cursus, Lunæque meatus
Noscere possemus, quæ vis, & causa cieret:
Quove modo soleant offeito lumine obire,
Et nec opinanteis tenebris obducere terras:
Cium quasi communet, & aperto lumine rursum
Omnia conviv sunt clara loca candida luce.
Nunc redeo ad Mundi novitatem, & mollia terræ
Arva, novo factu quid primùm in luminis oras
Tollere, & incertis tentārit credere ventis.

Principio, genus Herbarum, viridemque-nitorem
Terra dedit circum colleis; camposque per omnes
Florida fulserunt viridantis prata colore:
why should the Moon deprive the Earth of the Sun's Light, and as she shines above oppose her Body to him, and stop his burning Rays by thrusting her dark Orb between; and not another Body, wholly dark, be thought to interpose at such a Time, and produce the same Effect? And why may not the Sun grow faint, and deaden his Light at a certain Time, and renew it again when he has passed certain Regions of the Air, that are Enemies to his Beams, and destroy and extinguish his Fires? And then again, while the Moon in her monthly Course passes by the rigid Shadow of the Earth, which is of a Conic Figure, why should the Earth rob the Moon of Light, and being above the Sun, hold his Rays shut in; and why may not another Body at the same Time move below the Moon, and pass above the Body of the Sun, that may intercept his Rays, and stop his spreading Fires? And yet, if the Moon be allowed to shine with her own Beams, why may not her Brightness decay in certain Parts of the World, as she passes through Places that are Enemies to her Light?

And now, since I have explained from what Causes proceed the Motions of all the celestial Bodies, and given you a Rule to know what Force, what Power, drives on the various Courses of the Sun, and the Wandring of the Moon; in what manner their several Rays are intercepted, and the Earth is covered over with surprising Darkness, as if they wink'd; and how again they spread open their Beams, and visit the World with shining Light: I now return to the new-form'd Earth, and her tender Soil, to find what kind of Beings she first raised into Light, what Offspring she first ventured to commit to the faithless Winds.

And first the Earth produced the Herbs, and spread a gay Verdure over all the Hills, and the gaudy Fields shone all around with Green;
Arboribusque datum est variis exinde per auras
Crescendi magnum immissis certamen habenis.

Ut Pluma atque Pili primum Setæque creantur
Quadrapedum in membris, & corpore pennipotentum:
Sic nova tum Tellus herbas virgultaque primum
Sustulit: inde loci Mortalia sæcla creavit
Multa modis multis varia ratione coorta.

Nam neque de Cælo cecidisse Animalia possunt,
Nec terrestria de falsis exisse lacunis.
Liquitur ut merito maternum nomen aepis
terra sit, è terra quoniam sunt candida creata.
Multaque nunc etiam existunt animalia Terris,
Imbribus, & calido Solis concreta vapore.
Quò minus est mirum, si tum sunt plura coorta,
Et majora nova Tellure, atque Æthere adulto.

Principiō, genus Alituum, variaeque Volucres
Ova reliequebant exclusae tempore verno:

Folliculos ut nunc teretes æstate Cicadæ
Linquunt, sponte sua vicium, vitamque petentes.
Tum tibi Terra dedit primum Mortalia sæcla:
Multus enim Calor, atque Humor superabat in arvis.
Hinc ubi quæque loci regio opportuna dabatur,
Cresceabant Uteri terræ radicibus apti;
Quos ubi tempore maturo patefecerat ætas

Infantum
Book V. Of the Nature of Things.

and Nature gave the several Trees a Power to raise themselves, and grow up with their spreading Branches into the Air. As Feathers, and Hair, and Britles, were at first produced from the Limbs of Beasts and the Bodies of Birds, so the new Earth first bore the Herbs and the Trees, and then she formed the many kinds of living Creatures, for various Ends, and after a different Manner: For the Race of Animals did not originally fall down from the Skies, nor could terrestrial Beings rise out of the salt Sea; and therefore we say that the Earth justly obtained the Name of Mother, because out of Her all Things were formed. Even now many Animals rise from the Earth, and are produced by Moisture and the Heat of the Sun; and therefore the Wonder is the les, that many more should have been created in the Beginning of the World, and of a larger Size, when the Earth was fresh as a young Bride, and her Husband Ether in the Flower of his Age.

Of all the Animal Creation, the feather'd Kind, Birds the firft Animals, and various Breed of Birds, first broke through the Prison of the Egg in Time of Spring; as Grasshoppers in the Summer now burst their curious little Bags, and of themselves know how to seek their Food and preserve Life. And the Earth next produced the Race of Men and Beasts, for then there was abundance of vital Heat and Moisture in the Soil; and where the Place was proper, a sort of Wombs grew up, fixed and sticking in the Earth by their Roots. These the Infants ripe for Birth

* After Birds were hatch'd from Eggs in the Spring, then other Animals and Men burst forth from certain little Bags or Bladders, which he calls Wombs, that stuck to the Earth. For their Nourishment, a proper Liquor, like Milk, flowed from the Veins of Mother Earth into their infant Mouths; for the Earth, it seems, when she brought forth her Young, had Milk in those Days, no les than Women now, when they bring forth Children.
Infantum fugiens humorem, aurasisque petissens,
Convertebat ibi Natura foramina terræ,
Et succum venis cogebat sündere apertis

Consimilis: lactis: sicut nunc Fœmina quæque
Cùm peperit, dulci repletur Laete, quod omnis
Impetus in mammas convertitur ille alimenti.
Terra cibum Pueris, veśtem Vapor, Herba cubile
Præbebat multa & mollis lanugine abundans.

At novitas Mundi nec frigora dura ciebat,
Nec nimios æstus, nec magnis viribus auras.
Omnia enim pariter crescunt, & robora famunt.
Quære etiam atque etiam maternum nomen adepta
Terra tenet meridium, quoniam genus ipsa creavit

Humanum, atque Animal prope certo tempore fudit
Omne, quod in magnis bacchatur monibus passim,
Ærisæque simul Volucreis variantibus formis.

Sed quia finem aliquam pariendi debet habere,
Defstitit, ut Mulier spatìo defœssè vetustò,
Mutat enim mundi naturam totius ætas,
Ex alioque alius status excipere omnia debet,
Nec manet silla sui similis res: omnia migrant,
Omnia commutat Natura, & vertere cogit.
Namque altud putrescit, & ævo debile languet:
Porro alind concrecit, & è contentibus exit.
Sic igitur Mundi naturam totius ætas
Mutat, & ex alio Terram status excipit alter,
Quod potuit, nequeat: possum, quod non tulit ante.

Multaque tum Tellus etiam portenta creare
Conata est, mira facie, membrisque coorta;

(Andro-
Broke through; they left their moist Inclosure, and sprung out into the Air. In those Places Nature prepared the Pores of the Earth, and forced her to pour from her open Veins a Liquor like Milk; as a Woman after Delivery is full of sweet Milk, because the principal Juices of her Food fly into her Breasts. The Earth gives Nourishment to the Infant, the Warmth of the Sun is instead of Clothes, and the Grass abounding with Plenty of soft Down affords the Bed.

But this new World produced no chilling Cold, nor too much Heat, nor Force of rushing Winds; for Things increased and grew violent by degrees: And therefore, by the strictest Laws of Justice, does the Earth claim the Name of Mother, because in this Manner, for some Time, she herself produced Mankind, and formed every savage Beast that wildly roars upon the Mountain Tops, and the great Variety of Birds, distinguished by the Beauty of their Feathers. And that the Earth might have some Release, and not be always in Labour, she at length left off, as a Woman worn out and past her Prime; for Time changes the Nature of the whole World; one Body continually rises from another; no Being remains long like itself; Things are in a perpetual Flux; Nature changes and forces every thing about; one Thing decays and grows weak by Time, another becomes vigorous and flourishes in its Strength. Thus Time alters the Face of the whole World; and the Earth passes from one State to another. She can no more produce the Creatures she once did, and now she bears what she could not do before.

The Earth, it may be supposed, was at first delivered of many monstrous Births, of a wonderful Shape, and of an uncommon Size (and some between
(Androgynum inter utrum, nec utrumque & utrinque remotum)

Orba pedum partim, manuum viduata vicissim,
Multa sine ore etiam, sine voltu caca reperta,
Vindicatque membrorum per totum corpus adhaesu: 840
Nec facere ut possent quicquam; nec cedere quoquam,
Nec vitare malum, nec fumere quod foret usus.
Cetera de genere hoc monstrata, ac portenta creabant:
Nequicquam: quoniam Natura absterruit eodem:
Nec potuere cupitum etatis tangere florem, 845
Nec reperire cibum, nec jungi per Vencris res.
Multa videmus enim rebus concurrere debere,
Ut propagando possint producere saeclum.

Pabula primum ut sint, genitalia deinde per artus
Semina quae possint membris manare remissis: 850
Feminaque ut maribus conjungi possit, babendum
Mutua queis nee tant inter se gaudea, utrisque.

Multaque tum interiisse Animantium saeclum necessarum.
Nec potuisses propagando procudere problem.
Nam quaeunque vides vesce vitalibus auris, 855
Aut Dolus, aut Virtus, aut denique Mobilitas est.
Ex incunete aevum genus id tutata reservans.

Multaque sunt, nobis ex Utilitate sua que
Commendata manent tutela tradita nostra,
Principio, genus acre Leorum, saevo saecla: 860
Tutatam Virtus, Vulpeis Dolus, & Fuga Cervos.
At levifomna Canum fido cum pedore corda,
Et genus omne, quod est Veterino semine partum,
Langeraque simile pecudes, & Bucera saeclarum,
Omnia sunt Hominum tutela tradita, Memmi. 865
Nam cupidè fugere Feras, pacemque secuta
Sunt, & larga suo fine pabula parta labore:

Quae
between the two Sexes, not properly of both, yet not far removed from either) some without Feet, and others without Hands; many without a Mouth and Eyes; some had their Limbs growing and sticking together over all their Bodies, that they could do no Office of Life, nor move from their Place, nor fly what was hurtful, nor receive Food to preserve their Beings. Many other Monsters, and strange Productions of this kind, were at first formed; but in vain! For Nature was shock'd, and would not suffer them to increase; they could not arrive to any Maturity of Age, nor could they find their Food, nor taste the Pleasures of Love; for many Circumstances, we observe, must kindly agree, that Creatures might be able to propagate their Kind. First of all there must be proper Food, and then fit Organs for the genial Seed to flow through from all the Limbs; and that the Male and Female may be closely joined, they must be furnished with those Parts that may promote the mutual Delights of both.

And therefore many kind of Animals must needs be extinct, nor could they all by Propagation continue their Species; for almost every Race of Creatures we now see living, either their Cunning, or their Courage, or their Swiftness, have secured and preserved them from the very Beginning. And there are many that, from their Usefulness to Mankind, have recommended themselves to our Defence. And first, the fierce Breed of Lions, and their savage Race, their Courage have protected; Craft secures the Fox, and Swiftness the Stag. But the watchful and faithful Race of Dogs, all Beasts of Burden, the Flocks and Herds, all These, my Memmius, are committed to the Care of Man. These fly swiftly from the Rage of wild Beasts; they love a quiet Life; and depend upon us for their Fill of Provision, without any Labour.
Quae damus Utilitatis eorum præmia causa.  
At, quæs nil borum tribuit Natura, nec ipsa  
Spontes sua possent ut vivere, nec dare nobis  
Utilitatem alicuam, quare pateremur eorum  
Præsidio nostro pæci genus, essèque tutam ?  
Scilicet haec aliis prædæ, lucroque jacebant  
Indupedita suis fatalibus omnia vincilis,  
Donicum ad interitum genus id natura redigit.  

Sed neque Centauri fuerunt, neque tempore in ullo  
Essè queat duplici natura, & corpore bino  
Ex alienigenis membris compaetæ potefiæs,  
Hinc illinc par vis ut non sic esse potis sit.  
Id licet hinc quamvis bebeti cognoscere corde.  

Principio, circum tribus ætis impiger annis  
Floret Equus, Puer haudquaquam: quin sæpe etiam num  
Ubera mammærum in somnis laetantia querit.  
Post ubi Equum validæ vires atate Seneclà,  
Membraque deficiunt fugienti languida vita:  
Tum demum Pueris ævo florentè juventas  
Occipit, & molvi vestit lanugine malas:  

Ne forte ex Homine, & Veterinò femine equorum  
Consisti credas Centauros posse, nec esse:  
Auè rapidis canibus succinètas semimarinis  
Corporibus Scyllas, & cetera de genere borum,  
Inter se quorum discordia membra videmus:  
Quæ neque florescunt pariter, neque robora sumunt  
Corporibus, neque projiciunt atate Seneclà:  
Nec sìmili Venere ardeascunt, nec moribus unis  
Conveniunt, nec sunt eadem jucunda per artus.  
Quiâpe vide re licet pinguescere sæpe Cicuta  
Barbigeras pecudes, Homini quæ st acre Venenum.  

Flamma
Labour of their own, which we allow them plentifully, as a Reward for the Benefits we receive from them. But those Creatures on whom Nature has bestowed no such Qualities, that cannot support themselves, nor afford us any Advantage, why should we suffer such a Race to be fed by our Care, or defended by our Protection? These, by the unhappy Laws of their Nature being destitute of all Things, became an easy Prey to others, till their whole Species was at last destroyed.

But never have there been any such Things as Centaurs; nor could a Creature at any Time be formed from a doubtful Nature, from two Bodies, and out of Members so different and disagreeable. The Limbs and Faculties of a Man and Horse, could never act uniformly together, with all their Power; and this is obvious to a very mean Apprehension: For a Horse at three Years old is strong and active; a Child is far from being so, at that Age he is commonly feeling for the Mother’s Breast in his Sleep; and when the Horse’s Strength decays by old Age, and his feeble Limbs fail him at the End of Life, then the Boy flourishes in the Prime of Youth, and the Beginnings of a Beard appear upon his Cheeks. Never think therefore, that there is or ever can be such a Creature as a Centaur, made up of a human Nature, and the servile Seed of a Horse; or that there are any such Things as Scylla’s, having their Loins surrounded with the ravenous Bodies of half Sea-Dogs. Believe nothing of other Monsters like these, whose Members we observe so opposite and disagreeing; which neither live to the same Age, nor grow strong or decay together; which neither are inflamed with the same sort of Love, nor have the same Dispositions, nor preserve their Bodies by the same Food; for Goats, we see, often grow fat with Hemlock, which to Men is sharp Poison. And since Fire

No Centaurs nor Chimæra’s.
Flamma quidem verò cum corpora fulva leonum
Tam solet torrere, atque urere, quàm genus omne 900
Visceris, in terris quodcunque & sanguinis extet:
Qui fieri potuit, triplici cum corpore ut una
Prima Leo, postrema Draco, media ipsi Chimara
Ore foras aem et effaret de corpore flammam?

Quare etiam Tellure nova, Caloque recenti 905
telia qui singit potuisse animalia gigni,
Nixus in hoc uno novitatis nomine inani;
Multa licet similis ratione effutiat ore: 910
Aurea tum dicit per terras Flumina volgò
Fluxisse, & Gemmis florere Arbustia suesse:

Aut Hominem tanto membrorum esse impete natum,
Trans maria alta pedum nifs us ut ponere posset;
Et manibus totum circîm se vertere calum.
Nam quod multa füere in terris semina rerum,
Tempore quod primum Tellus Animalia fudit: 915
Nil tamen est signi, mistas potuisse creari
Inter se pecudes, compaflaque membra animantium:
Properea quia qua de terris nunc quoque abundant
Herbarum generla, ac Fruges, Arbuslaque lata,
Non tamen inter se possint complexa creari.

Res sic quæque suo ritu procedit, & omnes
Fœdere naturæ certo discrimina servant.

Et genus humanum multò fuit illud in arvis
Durius, ut decuit, Tellus quod dura creasset:
Et majoribus & solidis magis effibus intus 925
Fundatum, & validis aptum per visera nervis;
Nec facilè ex aestu, nec frigore quod caperetur:
Nec novitate cibi nec labi corporis ultra.

Multaque per calum Solis volventia luflra
Volgivago vitam tradabant more ferarum.

Nec robustus erat curvi Moderator aratri

Quisquam
Fire will scorch and burn the yellow Body of a Lion, as well as the Bowels of any other Creature living with Blood in its Veins, how could a Chimera, with his Body of three Kinds, with a Lion’s Head, a Dragon’s Tail, and the Middle like a Goat, blow abroad a fierce Flame out of his Body?

And therefore Those who pretend that this new Earth and vigorous Ether could produce such Creatures as These, and support their Fictions only upon the empty Argument of their being New, may with the same Reason put upon Us with other Fables; they may as well tell us that golden Rivers flow through the Earth, that Trees blossom with Diamonds, that Men were made with such mighty Strength and Bulk of Limbs, that they could stride with their Feet over wide Seas, and whirl about the Body of the Heavens with their Hands; for though there were many Seeds of Things in the Womb of the Earth, when the first began the Production of living Creatures, this is no Rule that Animals could be formed of a mixed Nature, and compounded of different Bodies. The various Products of the Earth, which are in great Abundance, the Herbs, the Fruits and pleasant Trees, never blended in such Confusion together; every thing proceeds in its own proper Order, and preserves its distinct Kind by the established Laws of Nature.

And the first Race of Men were much hardier The State upon the Earth, as ’twas fit they should, for the hard Earth bore them. They were built within upon larger and more solid Bones, and their Limbs were trained with stronger Nerves; nor did they easily feel the Inclemency of Heat or Cold, or were affected with the Strangeness of their Food, or any Weakness of Body. They led a long Life of many rolling Years, and wander’d about like wild Beasts. There was no lusty Husbandman to guide the
Quisquam, nec scibat ferro molirier arva;
Nec nova defodere in terram virgulta, nec altis
Arboribus veteres decidere salcibus ramos.
Quod Sol, atque Imbres dederant, quod Terra crearet
Sponte sua, satis id placabat pœtora donum;
Glandiferas inter curabat corpora quercus
Plerumque, & quæ nunc hiberno tempore cernis
Arbuta Pæniceo fieri matura color,
Plurima tum Tellus etiam majora ferebat:
Multaque præterea novitas tum floridea mundi
Pabula dia tuit, miseris mortalibus ampla.
At sedare stiim Fluvii Fontesque vocabant:
Ut nunc montibus è magnis decurfus aquæ
Claricitat latè sitientia facla Ferarum.
Denique notivagi silvœstria templà tenebant
Nympharum, quibus exibant humore fluenta
Lubrica, prolucie larga lavere humida saxa,
Humida saxa super viridi stillantia musco:
Et partim plano sectare atque erumpere campo.
Needum res Igni scibant traditare, nec uti
Pellibus, & Spolis corpus vestire ferebant:
Sed Nemora, atque cavos Monteis, Sylvæsque celebant,
Et frutices inter condebat squalida membra,
Verbera ventorum vitare imbreisque coætì.
Nec commune bonum poterant spectare, nec ullis
Moribus inter se scibant, nec legibus uti.
Quod cuique obtulerat prædæ fortuna, ferebat,
Sponte sua sibi quisque valère & vivere dœlus.
Et Venus in silvis jungebat corpora amantum.
Conciliabat enim vel mutua quamque cupidó,
Vel violenta Viri vis, atque impensa libido:
the Plough, or that knew how to cultivate the Fields; none to plant young Stocks in the Ground, or with Pruning-Hooks to lop the old Branches from the high Trees. What the Sun, the Rain, and the Earth voluntarily produced, that Bounty satisfied their grateful Hearts. They commonly refreshed their Bodies with Acorns among the Oaks, and with those wild Apples which you see ripen in Winter, of a red Colour, which the Earth then bore in Abundance, and of a larger Size. Many other excellent Fruits the new Earth, fresh and in her Prime, produced in great Plenty for her wretched Offspring.

But the Rivers and the Springs invited them to cool their Thirst, as the Fall of Waters from the high Hills call now upon the thirsty Race of Beasts; and wandering in the Night, they rested in hollow Caves, the *Sylvan* Temples of the Nymphs; whence flowed a running Stream, that washed the slippery Stones with its large Current; among the slippery Stones, cover'd with mossy Green, it found its Way, and some of its little Tide broke out and spread into the Plain below.

As yet they knew nothing of Fire to dress their Food, nor the Use of Skins, or how to cover their Bodies with the Spoils of Beasts; but inhabited the Groves, the hollow Mountains and the Woods, and hid their naked Bodies among the Shrubs; this they did to avoid the Rains and the Blasts of Wind. They had no Regard to the common Good; they had no Order among them, or the Use of Laws; every Man seized for his own what Fortune gave into his Power; every one consulted his own Safety, and took care of himself. Their Amours were consummated in the Woods; either the Ladies were urged on by mutual Heat, or they were overcome by the superior Force and raging Fire of their Gallants, or

Vol. II.
Vel pretium, Glandes, atque Arbuta, vel Pira lexia.

Et manuum mira reti virtute, pedumque,
Conspectabantur sylvestria sacra Ferarum
Mifilibus saxis, & magno pondere clavae,
Multaque vincebant, vitabant paucia latebris :
Setigerisque pares Suibus sylvestria membra
Nuda dabant terrae nocturno tempore capti,
Circum se folis ac frondibus involventes.

Nec plangore diem magno, Sollemque per agros
Querebant pavidu, palantes noctis in umbris :
Sed taciti respectabant, somnoque sepuli,
Dum rosea face Sol inferret lumina caelo.

A parvis quod enim consuerant cernere semper
Alterno tenebras, & lucem tempore gigni,
Non erat, ut fieri posset, mirarier unquam,
Nec diffidere, ne Terras aeterna teneret
Nox, in perpetuum detraelo lumine Solis.

Sed magis illud erat curae, quod sacra Ferarum
Insestam miseris faciebant saxe quietem :
Ejeftique domo fugiebant saxe teata
Setigeri Suis adventu, validique Leonis,
Atque intempefta cedebant nocte paventes
Hospitibus famis instrata cubilia fronde.

Nec nimio tum plus, quam nunc, mortalia sacra
Dulcia linquebant labentis lumina vitae.

Unus enim tum quisque magis deprensus eorum
Pabula viva feris praebebat dentibus haustus :
Et nemore ac monteis gemitu, sylvestrique replebat,
Viva videns vivo sepeliri viscera lusto.

At quos effugium servarent, corpore adeo,

Posterius
were softned by Presents, a Difh of Acorns, of Apples, or of choice Pears.

These unpolifhed Mortals, relying on the mighty Strength of their Arms, and the Swiftness of their Feet, persued the wild Beasts through the Woods, with missive Stones and heavy Clubs. Many they hunted down; some secured themselves in the thick Brakes; when Night over-took them, like briskly Hogs, they threw their rough Bodies naked upon the Ground, and rolled themselves up in Leaves and Grass; nor did they run howling about the Fields, frighten’d that the Day was gone and the Sun was set, or wander’d about in the Darkness of the Night; but they waited without Complaint, and lay buried in soft Sleep, till the Sun with his rosy Beams should again spread Light over the Heavens. For, from their very Infancy, they had been ufed to observe, that there was a regular Succedion of Light and Darkness; and therefore they did not think it poifible, they never feared or distrufed, that an Eternal Night fhould cover the Earth, or that the Light of the Sun would never more return.

But what disturb’d them moft was, that the wild Beasts often furprifed and deftroyed them when they were asleep: They were forced to quit their Haunts, and fly out of the Caverns of the Rocks, at the Approach of the rough Boar or the ftrong Lion; and trembling, in the dead of Night, to give up their Beds of Leaves to their cruel Guests.

And yet, in thofe Times, fewer died than do now; for then the One unhappy Wretch that was feized, was fure to be devoured alive between their cruel Teeth; and therefore he filled the Groves, the Mountains and the Woods with his Cries, as he faw his reeking Bowels buried in a living Grave: But thofe who faved themselves by Flight,
Posterius tremulas super ulcera terra tenentes
Palmas, horriferis accibant vocibus Orcum,
Donicum eos vita privârunt Vermina sæva,
Expertis opis, ignaros quid volnera vellent.
At non multa Virium sub signis militia ducta
Una dies dabat exitium: nec turbida ponti
Æquora laedebant naves ad saxa, virosque.
Sed temerè, incassîum Mare fluëbît sæpe coortis
Sævibat, leviterque minas ponebat inaneis,
Nec poterat quemquam placidi pellacia Ponti
Subdola pellicere in fraudem ridentibus undis.
Improbâ navis ratio tum cæca jaceaebat.
Tum Pœnuria deinde cibi, languentia letho
Membra dabat: contra nunc rerum copia merfat.
Illi imprudentes ipsi sibi sæpe Venenum
Vergebant: nunc dant altis solertiûs ipsi.
Inde Cæfas paulhum, ac Pelleis, Igmemque pararunt,
Et Mulier conjuncta Viro concessit in unum:
Castaque privatae Veneris connubia lleta
Cognita sunt, Prolomque ex se videre creatam:
Tum genus Humanum primum mollescere coepit.
Ignis enim curavit, utalsa corpora frigus
Non ita jam possent calî sub tegmine ferre:
Et Venus imminit vireis, Puerique parentum
Blanditiis facilè ingenium fregère superbum.
Tunc & amicitiam cæperunt jungere babentes
Finitima inter se nec ladeir, nec violare:
Et pueros commendârunt, muliebreque seclum
Vocibus, & gestu, cùm balbè significarent,
Imbecillorum esse aquam miserieriem omnium.
Non tamen omnimodis poterat concordia gigni:
Flight, with their Bodies torn, and covering their Smarting Wounds with trembling Hands, call'd upon Death in dreadful Accents, till gnawing Worms put an End to their Life; for they were unskilled in Medicine, and ignorant what to apply to their gaping Sores.

But then many Thousands did not fall in Battle in one Day; no boisterous Waves dashed Ships and Men against the Rocks. The Sea then, and its swelling Tides, raged in vain, and to no purpose, and laid aside its empty Threats, and grew calm again; nor could the deceitful Flattery of its smooth Waters cheat any one into the Deceit, or tempt him to venture upon the smiling Surface. The dangerous Art of Sailing was then unknown. Many then languished and died wretchedly for want of Food; but now Plenty is the Destruction of Mankind. Some then, through Ignorance, would mix Poison for themselves; now they study the Art, and give it to others.

But when they began to build Huts, and provided themselves with Skins and Fire; when One to One was joined for Life together, and the chaste sweet Delights of constant Love were now first felt, and they saw a lovely Train of Children of their own; then this hardy Race first began to soften; for being used to Fire, their tender Bodies could not bear so well the Cold of the open Air; and Love impaired their Strength, and the Children, by their little Arts of Fondness, easily softened the haughty Temper of their Parents: Then those who lived near together began to cultivate a Friendship, and agreed not to hurt or injure one another. They undertook the Protection of Children and Women, and declared, by Signs and broken Words, that the Weaker should be underfoot as proper Objects of Compassion. This mutual Amity, though it did not prevail among them
Sed bona, magnaque pars servabant fædera cañi:

Aut genus Humanum jam tum foret omne peremptum,

Nec potuisset adhuc perducere sæcla propago. 1026

At varios linguae Sonitus Natura subegit

Mittere, & Utilitas expressit nomina rerum:

Non alia longè ratione, atque ipsa videtur

Protrabere ad gestum Pueros infantia lingua, 1029

Cum facit, ut digito, quæ sint praecentia, monstrat.

Sentit enim vim quisque suam, quam posset abuti,

Cornua nata prius vitulo quam frontibus extent,

Illis iratus petit, atque insensus inurget.

At catuli Pantherarum, scymnique Leonum 1035

Unguibus, ac pedibus jam tum, morfuque repugnant,

Vixdum cum ipsis sunt dentes unguesque creati.

Alituum porro genus alis omne videmus

Fidere, & à pennis tremulum petere auxiliatum.

Proinde
them all, yet the greater and better Part kept their Faith, and lived peaceably together; otherwise the whole Race of Men had been soon destroyed, and the Species could never have been preserved to this Time.

Nature compelled them to use the various Sounds of the Tongue, and Convenience taught them to express the Names of Things; like Children, before they can well speak, are forced to make use of Signs, and are obliged to point with their Finger to the Objects that lie before them; for every Creature is sensible what Faculties it has, and how it is to use them. So Calves, before the Horns appear upon their Foreheads, will butt fiercely, and push with them, when they are enraged; and the Whelps of Panthers and Lions will defend themselves with their Claws, and Feet, and Teeth, when their Claws and Teeth are scarce to be seen; and all kind of Birds, we observe, trust to their Wings, and rely upon the fluttering Support of their Pinions.

It may be reasonably asked, how Leagues could be made, and Societies establisht, among Men, who perhaps indeed could think, but had not yet learnt to utter their Thoughts? Lucretius answers, that the first Men were conscious to themselves of their own Powers and natural Faculties; and that they uttered several Sounds, as each Object that they saw, or as any thing that they felt, causeth in them either Fear, Joy, Pain, Grief, &c. for Nature herself compelled them to this; and therefore Horses, Dogs, Birds, in short, all Animals that have Breath, do the like. And thus Man too, at first, stammered only imperfect and inarticulate Sounds; but no Commerce was yet established, they had no mutual Communication with one another; nor indeed could any such Thing be, till Names were given to Things. Every Man therefore perceived that it would be useful to him and others, to agree upon a certain Name for each Thing. Thus all who were enter'd into one Society, agreed among themselves upon the same Names of Things; and thus the Usefulness of calling Things by Names, gave occasion for the Invention of Words: But for any to pretend that one Man gave Names to all Things, is wretchedly absurd and foolish.
Proinde putare. Aliquem tum nomina distribuisses 1040
Rebus, & inde Homines didicisses vocabula prima,
Desipere'st: nam cur Hic posssetcumstia notare
Vocibus, & varios sonitus emitteret linguæ,
Tempore eodem Alii facere id non quisse potentur?

Præterea, si non Alii quoque vocibus usi 1045
Inter se fuerant: unde insita notities est
Utilitatis, & unde data'st Huic prima potestas,
Quid vellet facere, ut seirent, animoque viderent?
Cogere item plureis Unus, victosque domare
Non poterat, rerum ut perdiscere nomina veillent:
Nec ratione docere ulla, suadereque surdis,
Quid satis esset opus, faciles neq; enim paterentur,
Nec ratione ulla sibi serrent ampliis aureis
Vocis inauditos sonitus obtundere frustra.

Postremò, quid in hac mirabile tantopere est re, 1055
Si genus Humanum, cui vox, & lingua vigeret,
Pro vario sensu varias res voce notaret,
Cum Pécudes mutæ, cum denique sæcla Ferarum
Diffimileis soleant voces variasque ciere,
Cum Metus, aut Dolor est, & cum jam Gaudia gliscunt?
Quippe etenim id licet è rebus cognoscere apertis.

Inritata canum cùm primum magna Molossidm
Molliœ risœa fremunt duros nudantia dénteis: 1061
Longè alio sonitu rabie distraœta minantur:
Et cùm jam latrant, & vocibus omnia complent,
At catulos blandè cùm lingua lambere tentant,
Aut ubi eos jactant pedibus, morsuque petentes,
Suspensis teneros imitantur dentibus haustus:

Longè
But to think that one Man gave Names to all Things, and that Men from thence learnt the first Elements of Speech, is absurd and ridiculous; for why should one Man distinguish every thing by a Name, and use the various Accents of the Tongue, and at the same time another not be as capable of doing this as He?

Besides, if others had not the Use of Words among them as soon, how could they be made acquainted with the Use of them? or by what Art would this one Man make them know and understand what he designed? One alone could not compel the rest, and by Force make them learn the Catalogue of his Names. He could not prevail by Reason, or persuade Men so unfit to hear, to do as he directed; nor would they bear with Patience, or by any means endure, to have the strange Sounds of unintelligible Words any longer rattling in their Ears to no purpose.

And then, what is there so very wonderful in this, that Men, to whom Nature has given a Voice and a Tongue, should, according to the various Knowledge they had conceived of the great Variety of Things, distinguish each of them by a proper Name; when mute Cattle, and the several Kinds of wild Beasts, express their Passions by different Voices and Sounds, when their Fear, their Grief, or their Joys are strong upon them? And that they do so, you may observe from evident Examples.

For when fierce Maftiffs are at first provoked, they snarl, and grin, and shew their hard white Teeth, and threaten, in their Rage, with lower Sounds than those they rend the Air with when they bark and roar aloud; but when they gently lick their Whelps with their soft Tongue, or toss them with their Feet, or seem to bite, and fondly gape as if to eat them up, but never touch them with
Longē alio passo gannitu vocis adulant:

Et cum deserti bauabantur in adibus, aut cum Plorantes fugiunt summisso corpore plagas.

Denique non Hinnitus item differre videtur, Inter equas ubi Equus florenti ætate juvencus Pinnigeri saevid calcaribus ıştus Amoris ;

Et fremitum patulis sub naribus edit ad arma: Ac cum sis aliis concussis artibus binnit ?

Postremo, genus Alituum, variaque volucres, Accipitres, atque Offfragaæ, Mergique marinis Fluëtibus in salsis viætum vitamque petentes, Longē alias alio jaciunt in tempore voces, Et cum de viætu certant, prædaque repugnant : Et partim mutant cum tempesstabis unà Raucifonos cantus, Cornicium ut saecla vetusta, Corvorunque greges, ubi aquam dicuntur & imbreis Poscere, & interdum ventos aurisque vocare. Ergo, si varii sensus Animalia cogunt,

Muta tamen cum sint, varias emittere voces : Quantò mortaleis magis æquam șt tum potuisse Diffimileis alia, atque alia res voce notare ?

Illud in bis rebus tacitus ne fortè requisas : Fulmen detulit in terras mortalibus Ignem

Primitus : Inde omnis Flammarum diditur ar tor. Multa videmus enim cælestibus incita flammis Fulgere, cum cæli donavit plaga vapores. Et ramosa tamen cum ventis pulsà vacillans Äëstuat in ramos incumbens arboris Arbor, Exprimitur validis extritus viribus Ignis :
with their Teeth, they shew their Pleasure with a
whining Voice; not so, as when they howl, left
by themselves at home; or when they whimper,
with their crouching Bodies, to shun the coming
Blow.

And does not the Horse with different Neigh-
ings fill the Air, when, hot in Blood and in the
Prime of Youth, he is sorely galled with Spurs of
winged Love, and rages in his Luft among the
Mares, and, eager to engage, with open Noftrils
snuffs the Scent? Does not he shake his trem-
bling Limbs, and neigh, for other Reasons, with
far other Sounds?

And then, the Feather'd Race, the various
kind of Birds, the Hawk, the Osprey, and Sea-
Gulls, that live and seek their Food in the salt
Waves, they throw out other Notes at other
times, than when they strive for Food and fight
for Prey; and some will change their hoarse Voice
according to the different Qualities of the Air; as
the long-liv'd Ravens, and the Flocks of Crows,
when they are said to call for Rain and Showers,
and sometimes to cry for Wind and Storms. If
therefore the different Perception of Things will
compel these Creatures, mute as they are, to send
out different Sounds, how much more reasonable
is it, that Men should be able to mark out dif-
ferent Things by different Names?

You may desire, perhaps, to be satisfied in How Fire
other Inquiries. Know then, that Thunder first
began. brought down Fire to the Earth. All the Fire in
this lower World is in a great measure derived
from thence; for many Things, we observe, are
set on Fire by Lightning, when the Vapours fly
out from certain Quarters of the Heavens; and
the Branches of Trees, pressing hard upon one
another, when they are driven backward and for-
ward by the Winds, grow hot, and by the violent
Agitation
Et micat interdum flammati fervidus ardur,
Mutua dum inter se rami flirpesque teruntur:
Quorum utrumque dedisse potest mortalibus Ignem.

Inde Cibum coquere, ac flammæ mollire vapore
Sol docuit, quoniam mitescere multa videbant
Verberibus radiorum, atque estu vitæ per agros.
Inque dies magis bi victum vitamque priorem
Commutare novis monstrabant rebus, & igni.

Ingenio qui praebabant, & corde vigebant.
Condere caperunt urbeis, arcemque locare
Praefidium Reges ipsi sibi, persugiumque:
Et pecudes, & agros divisere, atque dedere
Pro Facie cujusque, & Viribus, Ingenioque.

Nam Facies multum valuit, viresque vigebant:
Posteriis Res inventa'st, Aurumque repertum,
Quod facile & Validis, & Pulchris demsit honorem.

Divitiae enim sedam plerumque sequuntur
Quamlibet & fortes, & pulchro corpore creti.

Quod si quis vera vitam ratione gubernet,
Divitiae grandis homini sunt, Vivere parce
Æquo animo; neque enim sit unquam pænuria Parvi:
At claros se homines voluere esse, atque potenteis,
Ut fundamento stabili fortuna maneret,
Et placidam possent Opulenti degere vitam;
Nequicquam: Quoniam ad summum succedere hon-

Certantes, iter infestum fecère viaî.
Et tamen è summò quasi Fulmen dejicet ets
Invidia interdum contentim in Tartara tetra:

Ut
Agitation burst out into a rapid Flame; and sometimes the Boughs and Bodies of Trees, by rubbing together, will kindle and fly out into a Blaze. And thus Fire might be produced from either Cause.

But the Sun first taught Mankind to dress their Food, and soften it by Heat; for they observed the Fruits in the Fields grew tender and ripe by the Warmth and Power of his Rays. And so those who had more Wit and Sense, taught their Neighbours every Day to leave their old Diet, and their former way of Life, to enter upon a new Course, and use the Benefit of Fire.

And now their Kings began to build Cities, and to raise Castles, as a Defence to themselves, and Refuge in Time of Danger. They divided the Cattle and the Fields, and gave to every one as he excelled in Beauty, in Strength and Understanding; for Beauty and Strength were then in great Repute, and bore away the Prize. At last Riches and Gold were found out, which soon took away the Honour from the Strong and Beautiful; even the Brave and the Beautiful themselves commonly follow the Faction of the Rich.

But if Men would govern their Lives by the Rule of true Reason, to live upon a little with an even Mind, would be the greatest Riches. This Little no Man can fear to want; but Men strive to be renowned and powerful, that their Fortune may stand firm upon a lasting Foundation, and the Wealthy cannot fail to live at Ease. All absurd! for those who labour to reach the highest Honours, make a very unhappy Journey in the End: Envy, like a Thunderbolt, strikes them from the Pinnacle of their Glory, and tumbles them down with Scorn into an Abyss of Misery. So that it

Who that reads these Lines can believe, that Epicurus was an Epicure? He believes that a wise Man cannot be poor, because he lives content with what he has, and thinks it enough, though it be but a little.
Ut satiūs multō jam sit parere quietum,
Quām regere Imperio res velle, & Regna tenere.
Proinde, sīve incassūm deēssē sanguine sēdunt
Angustum per iter lūstantes Ambitionis:
Invōdia quoniam seu Fulmine summa vaporant
Plerumque, & quae sunt aliiis magis edita cunque:
Quandoquidem sапiunt alieno ex ore: petuntque
Res ex auditis potiūs, quàm sensibus ipsis:
Nec magis id nunc est, nec erit max, quàm fuit antē.

Ergo Regibus occisi subversā jacebat
Prīstina majestās soliorum, & sceptra superba;
Et capitis Summi præclarum Insigne cruentum
Sub pedibus Volgi magnum lugebat honorem:
Nam cupidē conculcatūr nīmis antē metutum.

Res itaque ad summam Facem Turbasque redbat,
Imperium sibi cūm, ac summatum quisque petebat.
Inde Magistratum partim docuere creare,
Juraque constituere. ut vellent legibus uti:
Nam genus Humanum deēssēm vi colere òcum,
Ex inimicitiis languēbat; quō magis ipsis
Sponte sūa cecidit sub leges, arātaque jura:
Acriūs ex Ira quōd enim se quisque parabat
Ulcisi, quàm nunc concessum legibus aquis;
Hanc ob rem sīt Homines pertasīm vi colere òcum:
Unde Metus maculat pānarum prae mia vitæ.

Circumretit enim Vis atque Injuria quemque,
Atque, unde exorta's, ad eum plerumque revertit:
Nec facile's placidam ac pacatam degere vitam,
Qui violat fasīs communia fœdera pacis.
is much safer, as a Subject, to obey, than to wish for Empire and to govern Kingdoms. Let those that will tire themselves in vain, and spend their Blood and their Sweat in climbing the narrow Track of Ambition (for the Higheft of them all are blafhed with Envy, as with a Thunderbolt; and the higher they are, they are the more exposed) since they depend wholly upon others for their Wisdom, and try Things more by their Ears than by their Understanding. This is the present Cafe; it always was fo, and ever will be.

Those Kings then being flain, the former Majesty of their Thrones, and their proud Scepters, were laid in the Dust; and the Diadem, the noble Ornament of Kings, all stained with Blood, is now trodden by vulgar Feet, and weeps over its expiring Honours; for we eagerly fpurn at what we too much feared before.

The Government now returned to the Rabble, and the very Dregs of the People; whilst every one reached at Empire, and the Supreme Power for himself. And therefore the Wifest among them taught the rest to settle a Magiftracy, and to eftablifh Laws, by which they would be governed. Men grew weary of living in a State of Force, and were worn out with continual Bickering among themselves, and therefore, of their own accord, more readily fell under the Power of Laws and the Bonds of Justice; for every one, in his Refentment, perfued his Revenge with more Violence than the Equity of the Laws would now allow him, and therefore Men were tired of this hostile way, which foured all their Pleasures of Life with the Fears of Punishment; for Force and Wrong intangle the Man that ufed them, and commonly recoil upon the Head that contrived them. Nor is it easy for that Man to live a fecure and pleafant Life, who by his Conduct breaks through the com-
Et si fallit enim Divum-genus Humanumque, Perpetuò tamen id fore clam diffidere debet: Quipe ubi se multi per Somnia saepe loquentes, Aut Morbo delirantes proráxe serantur, Et celata diu in medium peccata dedisse.

Nunc quae causa Deum per magnas Numina genteis Pervolgávit, & ararum compleverit urbeis, Suscipiendaque curárit solennia sacra,
"Quae nunc in magnis florent sacra rebus locisque:
Unde etiam nunc est Mortalibus insitus Horror,
Qui delubra Deum nova toto suscitat orbi Terrarum, & festis cogit celebrare diebus:
Non ita difficile sf rationem reddere verbis.

Quippe etenim jam tum Divum Mortalia facia Egregias animo facies vigilante videbant,
Et magis in somnis mirando corporis aequo.
His igitur sensum tribuebant, propter quod Membra movere videbantur, voceque superbas Mittere pro facie praeclara, & viribus amplis:
Æternamque dabant vitam, quia semper eorum Suppeditabatur facies, & forma manebat,
(ET manet omnino) & quod tantis viribus auètos Non temere uilla vi convinci pessè putabant.
Fortunisque ideo longè præstare putabant Quod mortis timor haud quemquam vexaret eorum, Et simul in somnis quia multa, & mira videbant Efficere, & nullum capere ipsos inde laborem.
Præterea, Cali rationes ordine certo,
Et varia annorum cernebant tempora verti;

Nec
mon Bonds of Peace: Though he has the Cunning to deceive both Gods and Men, his Heart always trembles for fear of being discover'd; for Men often talk in their Sleep, and are said to reveal Things when they are delirious by a Disease, and to bring to Light their Plots that had been long concealed.

And now I'll shew the Cause that first dispers'd the Notions of the Gods throughout the World, and filled the Towns with Altars, and ordered solemn Rites to be performed, and holy Ceremonies now in Use, when Victims smoke on every sacred Fire; and whence that fixed Horror in the Minds of Men, that builds new Temples to the Gods in every Corner of the Earth, and compels Men to celebrate their Festivals: 'Tis not so hard a Thing to shew the Cause.

For Men, in the Beginning of the World, were used to see divine and glorious Forms, even when awake; and in their Sleep those Images appeared in more majestic State, and raised their Wonder. And these they thought had Sense. They fancy'd that they moved their Limbs, and spoke proud Words, suitable to the grand Appearance they shew'd, and to the Mightiness of their Strength. They ascribed Eternity to them, because a constant Stream of Images incessantly came on, in Form the same (that could not change) and then, they could not die, because no Power, they thought, could crush Beings so strong in Force, so large in Size: And they thought them infinitely happy, because they were never vexed with the Fears of Death; and likewise in their Dreams they saw them do Things strange and wonderful, with Ease, and without Fatigue.

Besides, they observed the Motions of the Heavens were regular and certain, that the various Seasons of the Year came orderly about, but...
Nec poterant quibus id fieret cognoscere causis:
Ergo perfugium sibi habeant omnia Divis
Tradere, & illorum nutu facere omnia fieri.

In Caloque Deum sedes, & templar locarunt,
Per cœlorum volvi quia Sol, & Luna videntur:
Luna, Dies, & Nox, & nostis Signa severa,
Nostra vageque faces cœli, Flammaque volantes,
Nubila, Ros, Imbres, Nix, Venti, Fulmina, Grando,
Et rapidi fremitus, & murmura magna minarum.

O genus infelix humanum! talia Divis
Cum tribuit fael, atque iras adjunxit acerbas:
Quantos tum gemitus Ipsi sibi, quantaque nobis
Volnera; quas lacrymas peperere minoribus nostris!

Nec Pietas alta velatum fepe videri
Vertier ad Lapidem, atq; omnis accedere ad aras;
Nec procumbere humi prostratum, & pandere palmas
Ante Deum delubra, nec aras sanguine multo
Spargere quadrupedum, nec votis neistera vota:
Sed magis pacata posse omnia mente tuere.
Nam cium suscipimus magni celestia mundi
Templa super, fielisque micantibus æthera fixum,
Et venit in mentem Solis, Lunæque viarum,
Tunc alis oppressa mali in pellore cura
Illa quoque expergesitum caput erigere infit,
Equae forte Deum nobis immensa potestas
Sibi vario motu quæ candida sidera verset.
Tentat enim dubiam mentem rationis greclas,
Equanam fuerit Mundi genitalis origo:
could discover nothing of the Causes of these Revolu-
tions, and therefore they had this Refort; they ascribed every thing to the Power of the
Gods, and made every thing depend upon their
Will and Command.

The Habitation and Abode of these Gods they
placed in the Heavens, for there they saw the Sun
and Moon were rolled about; the Moon, I say,
they observed there, and the Day and the Night,
and the Stars serenely bright, and the blazing Me-
teors wandering in the Dark, the flying Light-
ning, the Clouds, the Dew, the Rain, the Snow,
the Thunder, the Hail, the dreadful Noifes, the
Threatnings and loud Roarings of the Sky.

Unhappy Race of Men! to ascribe such E-
vents, to charge the Gods with such distracted
Rage. What Sorrow have they brought upon
themselves? What Miseries upon us? What
Floods of Tears have they intailed upon our Po-
sterity?

Nor can there be any Piety for a Wretch with
his Head veiled, to be ever turning himself about
towards a Stone, to creep to every Altar, to throw
himself flat upon the Ground, to spread his Arms
before the Shrines of the Gods, to sprinkle the Al-
tars abundantly with the Blood of Beasts, and to
heap Vows upon Vows. To look upon Things
with an undisturbed Mind, this is Piety; for
when we behold the celestial Canopy of the great
World, and the Heavens spread over with shining
stars; when we reflect upon the Course of the
Sun and Moon; then Doubts, that before lay quiet
under a Load of other Evils, begin to awake, and
grow strong within us. What! are there Gods en-
ued with so great Power, that can direct the va-
rious Motions of all the bright Luminaries above?
or the Ignorance of Causes gives great Uneasiness
to the doubting Mind of Man. And hence we doubt

P 2
T. Lucretii Lib. V.

Et simul, ecqua fit finis, quod amnia Mundi,
Et tanti motus hunc possint ferre laborem:
An Divinitus æterna donata salutem,
Perpetuo possint ævi labentia trahunt,

Immensus validas ævi contemnere vires.

Præterea, cui non animus formidine Divum
Contrahitur? cui non conrepunt membra pavore,
Fulminis horribili cum plagis torrida Tellus
Contremit, & magnum percurrunt Murmura caelum?
Non Populi, Gentesque tremunt? Regesque superbæ
Conripunt Divum perculsi membra timore,
Ne quod ob admissum fœdæ, dictumque superbæ
Panarum grave sit solvendi tempus adaæicum?
Summa etiam cum vis violenti per mare venti

Induperatorem classis super aqua verrat,
Cum validis pariter Legionibus, etque Elephantis:
Non Divum pacem votis adit? ac prece quaæit
Ventorum pavidus paces, animasque secundas?
Ne quicumque: quoniam violento turbine sepe
Conreptus nibilo fortuir minus ad vada lethi:
Usqueadeo res humanæ Vis abdita quædam
Obterit, & pulchros Facies, javasque Secureis
Proculcare, ac ludibrio sibi habere videtur.

Denique sub pedibus Tellus cum tota vacillat,

Concussaque cadunt urbes, dubiaque minantur:
Quid mirum si se temnunt Mortalia secla?
Atque potestates magnas, mirasque reliquent
In rebus vires Divum, quæ cun[a]a governunt?
whether the World had a Beginning, and shall ever have an End; how long the Heavens (the Walls of this World) shall be able to bear the Fatigue of such mighty Motions, or whether they are made Eternal by the Gods, and so shall for ever roll on, and despite the strong Power of devouring Age.

Besides, what Heart does not faint with a Dread of the Gods? Whose are the Limbs that will not shrink, when the scorched Earth quakes with the horrible Stroke of Lightning, and the roaring Thunder scours over the whole Heavens? Do not the People and the Nations shake? and proud Tyrants, struck with Fear of those avenging Powers, tremble every Limb, lest the dismal Day were come, to punish them for the Baseness of their Crimes, and the Arrogance of their Speeches? And when the raging Force of a violent Storm upon the Sea, tosses the Admiral of a Fleet over the Waves, with all his Elephants and his stout Legions about him, does not He fall to praying to the Gods for Pity? and, trembling upon his Knees, begs a Peace of the Winds, and a prosperous Gale? In vain! for He is often snatched up by the Violence of the Hurricane, and carried with all his Devotion to the Stygian Ferry. With such Contempt does some hidden Power continually trample upon human Greatness; it treads with Scorn upon the gaudy Rods, and the cruel Axes, those Ensigns of Empire, and makes a Sport with them.

And then, when the whole Earth reels under our Feet, and the Cities are shaken, and tumble about us, or at least threaten to fall; what wonder if Men, at such a time, despite their own weak selves, and ascribe infinite Power and irresistible Force to the Gods, by which they direct and govern the World?
Quod superest, \(\text{Æs}\), atque Aurum, Ferrumque reperti\(\text{e}^{\text{E}}\),

Et simul argenti pondus, Plumbique pote\(\text{t}\)fas:

Ignis ubi ingenteis \(\text{silvas}\) ardore cre\(\text{m}\)\(\text{a}\)rat

Montibus in magnis, seu cæli fulmine miss\(\text{o}\),

Sive quod inter se bellum \(\text{silvestre}\) gerentes,

Ho\(\text{\'tibus}\) intulerant ignem formidinis ergo;

Sive quod indu\(\text{t}\)iti Terr\(\text{\'a}\) bonitate, vole\(\text{b}\)ant

Pandere agros pingueis, & pascua reddere rura:

Sive Feras interficere, & difte\(\text{cere}\) pr\(\text{\'e}\)da:

Nam Fovea, atque Igni prius est venarier ortum,

Qu\(\text{\'a}\)m sep\(\text{ire}\) Plagis saltum, Canibus\(\text{que}\) ciere.

Quicum id est, quacunque \(\text{c}\)ausa flammeus ar\(\text{d}\)or

Horribili s\(\text{on}\)itu \(\text{silvas}\) exederat alt\(\text{i}\)

Ab radicibus, \& terram perco\(\text{xerat}\) igni,

Manabat venis ferventibus in loca terre

Concava conveniens Argenti rivus \& Auri,

\(\text{Æris}\) item \& Plumbi; quae cium concre\(\text{ta}\) vide\(\text{bant}\)

Posterius claro in terris splendere colore,

Tolle\(\text{bant}\) nitido capti, levique lepore:

Et simili formata vide\(\text{bant}\) esse figura,

Atque lacunarum fuerant vestigia cuique,

Tum penetrabat eos, posse be\(\text{c}\) lique\(\text{fa}\)\(\text{t}\)a colore,

Quamlibet in formam, \& faciem decurrere rerum,

Et prorsum quamvis in acuta ac tenuia posse

Mucronum duci fa\(\text{\'s}\)tigia procudendo;

Ut sibi tela parent, \(\text{sil\'\text{\'a}}\)\(\text{\'\text{s}}\)que \(\text{excidere}\) possint,

Materiem lavare, dolare, ac radere tigna,

Et terebrare etiam, \ac pertundere, perque forare.

Nec minus Argento facere be\(\text{c}\) Auroque parab\(\text{a}\)nt,

Qu\(\text{\'a}\)m validi pr\(\text{\'i}\)m\(\text{\'u}\)m violentis viribus \(\text{Æris}\):

Ne\(\text{quicquam}\) : Quoniam cedebat \(\text{vis\'a}\) potest\(\text{as}\),

Nec poterat pariter durum sufferre laborem.

Nam fuit in pretio magis \(\text{Æs}\), Aurumque jacebat

Propter
And last of all Brasses, and Gold, and Iron, were discovered; and the Value of Silver, and the Weight of Lead. For when whole Forests upon the high Hills were consumed by Fire, whether it came by Lightning from the Heavens, or Men carried on a War among themselves in the Woods, and set them in a Blaze to terrify their Enemies; or whether, induced by the Goodness of the Soil, they resolved to enlarge their fruitful Fields, and make Pastures for their Cattle; or whether it was to destroy the wild Beasts, and in-rich themselves with their Spoils (for the first way of taking the Game was, by Pit-falls, and Fire before they surrounded the Brakes with Nets, or hunted with Dogs); however it was, or whatever was the Cause of this raging Fire, that burnt up the Woods to the very Roots, with frightful Noise, and set the Earth a boiling with its Heat: Then Streams of Silver and Gold, of Brass and of Lead, flowed out of the burning Veins into hollow Places of the Earth, that were proper for them. And when the Metal grew hard, and Men observed it looking beautifully and shining bright upon the Ground, they were charmed with its gay and sparkling Lustre, and dug it up; and finding it received the exact Shape of the hollow Moulds in which it lay, they concluded, when it was melted by the Heat, it would run into any Form and Figure they pleased, and they might draw it into a sharp Point or a fine Edge, and make themselves Tools to cut down the Woods, to smooth, to square, and to plane Timber, to pierce, to hollow, and to bore. These Instruments they attempted to make of Silver and Gold, no less, than by powerful Blows to form the stronger Brass; but in vain! for the soft Quality of those Metals gave way, and could not bear the Force and Violence of the Stroke; and so Brass was in most Value.
Propter inutilitatem hebeti mucrone retusum,
Nunc jacet Aës, Aurum in summum successit honorem:
Sic volvenda ætas commutat tempora rerum, 1275
Quod fuit in pretio, fit nullo denique honore:
Porro aliud succedit, & è contemtibus exit,
Inque dies magis appetitur, floretque repertum
Laudibus, & miròs mortales inter honore.

Nunc tibi quo pacto Ferri natura reperta 1280
Sit, facilest ipsum per te cognoscere, Memmi,
Arma antiqua, Manus, Ungues, Dentesq; fuerunt,
Et Lapides, & item sylvarum fragmina Rami,
Et Flamma, atque Ignes postquam sunt cognita primum:
Posterius Ferri vis est, Ærisque reperta:
Et prior Æris erat quàm Ferri cognitus usus:
Quò facilis magis est natura, & copia major.
Ære solum terræ transitabant, Æreque belli
Misebant flüus, & voliera vasta ferebant,
Et pecus, atque agros adimebant: Nam facilè ollis
Omnia cedebant armatis nuda & inerma. 1291
Inde minutasim processit Ferreus ensis,
Versaque in opprobrium species est Falcis abenæ,
Et Ferro capere solum proficindere terræ;
Exæquataque sunt creperi certamina belli. 1295
Et prior est repperturn in Equi conjungendere costas,
Et moderarier bunc frànis dextraque vigere;
Quàm Bijugo curru belli tentare pericla:
Et bijugo prius est, quàm bis conjungere Binos,
Et quàm falciferos inventum ascenderre Currus. 1300
Inde boves Lucas turrito corpore tetros

Anguimanos
Value, and Gold was neglected, as a blunt, use-
less Metal, that would not hold an Edge. But
now Brass is in no Esteem, and Gold succeeds
to all its Honours. And thus a Course of flowing
Time changes the Dignity of Things: What was
highly prized is now treated with Contempt, and
what was despised comes into its Place, and is
every Day more eagerly pursued; is cried up with
the greatest Applause, and receives the Respect
and Admiration of Mankind.

And now, my Memmius, you may easily, of
yourself, perceive by what means the Force of Iron
was discovered. The first Weapons were Hands,
and Nails, and Teeth, and Stones, and the broken
Boughs of Trees; and then they learnt to fight
with Fire and Flame; and afterwards was the
Strength of Iron and Brass found out. But the Use
of Brass was known before the Benefit of Iron was
understood; for it was a Metal more easy to work,
and in greater Plenty. With brazen Shares they
ploughed the Ground, with Arms of Brass they
carried on the Rage of War, and dealt deep
Wounds about, and seized upon their Neighbours
Cattle and their Fields; for every thing naked and
unarmed was easily forced to give way. But the
iron Sword came gradually into Use, and Instru-
ments of Brass were laid aside with Contempt. And
now they began to plough with Iron, and with
Weapons of Iron to engage in the doubtful Events
of War.

And Men first learnt to mount the Horse, with
their Left Hand to manage the Reins, and they
fought with their Right, before they tried the Dan-
gers of War in a Chariot drawn by Two. They first
used a Chariot with a Pair, and then they harnessed
Four, before they knew how to engage in Chariots
armed with Scythes. The Carthaginians taught the
Lybian Elephants, with their serpentine Proboscis
and
Anguimanos belli docuerunt volnere Pæni
Sufferre, & magnas Martis turbare catervas.
Sic alid ex alio peperit Discordia tristis,
Horrible humanis quod gentibus esset in armis: 1305
Inque dies belli terroribus addidit augmen.
Tentārunt etiam Tauros in manere belli,
Expertique Sues sævos sunt mittere in hosteis;
Et validos Parthi praef se misere Leones
Cum ductoribus armatis, sævisque magistris, 1310
Qui moderarier bos possent, vinculisque tenere;
Nequicquam: Quoniam permistra cada calentes
Turbabant sævi nullo discriminate turmas,
Terrificas capitum quatientes undique criñas;
Nec poterant Equites fremitu perterrita equorum 1315
Peitora mulcere, & frānis convertere in hosteis.
Inritata Læce jacebant corpora saltu
Undique, & adversum venientibus ora petebant:
Et nec-opinanteis à tergo diripiebant,
Deplexæq; dabant in terram volnere vinētos: 1320
Moribus adfixse validis, atque unguibus uncis.
Jactabanique Sues Tauri, pedibusque terebant;
Et latera, ac ventres bauribant subter equorum
Cornibus, ad terramque minanti mente ruebant.
At validis socios cadaebant dentibus Apri, 1325
"Tela infrâta suo tinguentes sanguine sævi:
"In se fracta suo tinguentes sanguine tela:
Permistaæque dabant equitum peditemque ruinas.
Nam transversa feros exibant dentis adaedus
Jumenta, aut pedibus ventos erebba petebant: 1330
Nequicquam: Quoniam a nervis succisa videres
Concidere, atque gravi terram confernere cæsu.
and Towers upon their Backs, to bear the Smart of Wounds, and to disorder the embattled Ranks of the Enemy. And thus the Rage of Discord found out one Art of Slaughter after another, as the dreadful Scourges of Mankind, and increased the Terrors of War every Day. They tried the Fury of Bulls in their Battles, and drove Boars against their cruel Enemies. The Parthians placed roaring Lions before their Ranks, with their armed Keepers, and fierce Leaders, to govern their Rage and hold them in Chains: In vain! for growing hot with the mixed Blood they had tafted, they broke in their Fury through the Troops of Friends and Enemies without Distinction, shaking their dreadful Manes on every Side. Nor could the Horfemen cool their frightened Horses, distracted with the Roaring of the Beasts, or turn them with the Reins against the Foe. The Lions with Rage sprung out, and threw their Bodies every way, and flew upon the Faces that they met; others they suddenly fell on behind, and clasped within their Paws, and with fore Wounds o'ercome, they flung them to the Ground, and held them down with their strong Teeth, and with their crooked Claws. The Bulls would toss the Boars, and crush them with their Feet, and with their Horns would gore the Sides and Bellies of the Horses, and in their Rage bear them to the Earth. The Bears with their strong Teeth destroyed their Friends (and cruelly stained the Darts unbroken, with their Master's Blood, the Darts that broke upon themselves were stained with their own) and brought confused Ruin upon Man and Horse; for though the Horse, by leaping aside, would strive to fly the cruel Biting of their Teeth, or, rearing up, paw'd with their Feet the yielding Air; yet all in vain! you would see them, hamstrung by the Beasts, fall down, and with their heavy Weight would shake the Ground.
Sic, quos ante domi domitos satis esse putabant,
Efferviscere cernebant in rebus agundis,
Volneribus, clamore, fuga, terrore, tumultu: 1335
Nec poterant ullam partem reducere eorum.
Diffugiebat enim varium genus omne ferarum:
Ut nunc sepe boves Lucae ferro male maëtæ
Diffugiunt, fera faeta suis cim multa dedere.
Sic fuit, ut facerent: Sed vix adducor, ut ante 1340
Non quierint animo praäsentire, atque videre,
Quam commune malum fuerat, sædumq; futurum.
Et magis id possis factum contendere in Omni,
In variis mundis varia ratione creatis,
Quam certò atq; uno terrarum quolibet Orbi. 1345
Sed facere id non tam vincendi spes voluerunt,
Quam dare quod gemerent hostes, ipsique perire,
Qui numero diffidebant, armisque vacabant.

Nexilis ante fuit vestis, quàm Textile tegmen:
Textile post ferrum'est: quia ferro tela parantur: 1350
Nec ratione alia possunt tam laevia gigni
Insilia, ac fusi, & radii, scapique sonantes.
Et facere ante Viros lanam Natura coegit,
Quam Muliebre genus, nam longè præfdat in arte,
Et sollertius est multò genus omne Virile: 1355
Agricolæ donec vitio vertere severi,
Ut Muliebribus id manibus concedere vellent,
Atque ipsi potius durum sufferre laborem:
Atque opere in duro durarent membra, manusque.
Ground. These Creatures therefore that Men saw were tame at home, now brought into the Wars grew mad with Wounds, with Noise, with Flying, with Terror, and the Tumult of the Battle; nor could they by any means be brought back or cool'd again, but every kind flew wildly o'er the Plains; as when a Bull, not rightly struck by the Priest's sacrificing Axe, breaks loose, after much Mischief done to all about him. These were the first Arts of War; yet I cannot believe but the first Inventors must consider and foresee the common Evils and sad Calamities they must occasion. This, it is safer to say, was the Case in general in some of all the Worlds that were created in various Manners, than to be particular and fix it upon One only. But they made Use of Beasts in their Wars, not so much from a Hope of Victory, as to annoy and torment their Enemies; being themselves sure to die, because they distrusted their Numbers, and were unskilled in the Use of Arms.

Their Garments were the Skins of Beasts, pin'd together with Thorns, before they had learned to weave. The Art of Weaving came in after the Discovery of Iron, for their Tools were made of that Metal; nor could the smooth Treadles, the Spindles, the Shittles, and the rattling Beams be formed any other way. But Nature at first compelled the Men to Card and Spin, before the Women undertook the Trade; for Men by far exceed the other Sex in the Invention of Arts, and work with greater Skill. The sturdy Peasants at length reproached these Male Spinsters, and obliged them to give up the Business into the Women's Hands; and then they betook themselves to more laborious Employments, and hardened their Limbs and their Hands with rougher Work.
At specimen Sationis, & Insitionis origo 1360

Ipfa fuit rerum primum Natura creatrix. Arboribus quoniam baccæ, glandesque caducæ Tempéstiva dabant pullorum examina subter. Unde etiam libitum fü stirpeis committere ramis: Et nova desodere in terram virgulia per agros: 1365 Inde aliam, atque aliam culturam dulcis agelli Tentabant, fructusque feros mansuæscere terra Cernebant indulgendo, blandèque colendo. Inque dies magis in montem succedere sylvas Cogebant, infraque locum concedere cultis: 1370

Prata, Lacus, Rivos, Segetes, Vinetaque lata Collibus, & campis ut baberent, atque olearum Caræula disinguens inter plaga currere posset Per tumulos, & convalleis, camposque profusa: Ut nunc esse vides vario distintà lepore 1375 Omnia, que pomis interstita dulcis ornant: Arbustisque tenent felicibus obfita circùm.

At liquidas avium voces imitarier ore Antè fuit multò, quæm laevia carmina Cantu Concelebrare homines possent, aureisque juvare. 1380

Et Zephyri cava per calamorurn sibila primum Agrestis docuere cavas inflare cicutas, Inde minutalem dulcis didicere querelas, Tibia quas fundit digitis pulfata canentum, Avis per nemora, ac sylvas saltusque reperta, 1385 Per loca pastoralum deserta, atque otiâ dia: Sic unum quicquid paulatim protrahit Ætas In medium, Ratioque in luminis eruit oras. Hac animos ollis mulcebant atque juvabant Cum
But Nature herself (the great Mother of all Things) first taught Men to Sow and to Graft; for the Berries and the Acorns that fell from the Trees, they observed, produced young Shoots underneath, in a proper Season of the Year: And hence they began to graft fruitful Slips into the Boughs, and to plant young Stocks over all the Fields. Then they tried every other Art to improve the kindly Soil; and they found the wild Fruits grew sweet and large, by enriching the Earth, and dressing it with greater Care. They employed themselves continually in reducing the Woods to narrower Bounds upon the Hills, and to cultivate the lower Places for Corn and Fruits. Thus they had the Benefit of Meadows, of Lakes, of Rivers, of Corn Fields, and pleasant Vineyards, upon the Side of the Hills, and in the Dales; and of green Rows of Olives, regularly running between upon the rising Grounds, and in the Valleys, and spread over all the Plains: As you see our Country Farms now laid out in all the Variety of Beauty, where the sweet Apples are intermixed, and adorn the Scene, and fruitful Trees are delightfully planted round all the Fields.

And Men attempted to imitate by the Mouth the charming Voice of Birds, before they tried to Sing, or to delight the Ear with tuneful Verse: And the soft Murmurs of the Reeds, moved by a gentle Gale, first taught them how to blow the hollow Reed, and by degrees to learn the tender Notes; such as the Pipe, by nimble Fingers pressed, sends out when sweetly sung to; the Pipe, that now is heard in all the Woods and Groves, and all the Lawns, where Shepherds take their solitary Walks, and spend their Days in Innocence and Ease. Thus Time by degrees draws every thing into Use, and Skill and Ingenuity raise it to Perfection. Thus Musick softned and relieved.
Cum satiate cibi: nam tunc sunt omnia cordi. 1390

Sæpe itaque inter se prostrati in gramine molli
Propter aquæ rivum, sub ramis arboris altae.
Non magnis opibus jucundè corpora babebant:
Presertim cum tempestanas ridebat, & anni
Tempora pingeabant viridanteis floribus herbas, 1395

Tum Joaca, tum Sermo, tum dulces esse Cachinni
Consuerant: agrestis enim tunc Musa vigebat:
Tum caput, atque hunc umeros plexis redimire coronis,
Floribus, & folis lascivia lata monebat:

Atque extra numerum procedere membra moventis
Duriter, & duro terram pede pelere matrem: 1401

Unde oriebantur Risus, dulcesque Cachinni,
Omnia quod nova tunc magis haec, & mira vigebant.

Et vigilantibus binc aderant solatia somni,
Ducere simulmodis voces, & fieffere cantus; 1405

Et supera calamos unco percurrere labro:
Unde etiam vigiles nunc haec accepta tuentur,

Et numerum servare genus didicere; neque hilo
Majorem interea capiunt dulcedini fructum,
Qua Sylvestri genus capiebat Terrigenarum. 1410

Nam quod adest præsto, nisi quid cognovimus ante
Sauavius, in primis placet, & pollere videtur;
Posteriorque ferè melior res illa reperta
Perdit, & immutat sensus ad pristina quæque.

Sic odium capit Glandis: sic illa reliqua 1415

Strata Cubilia sunt herbis, & frondibus aësa.
Pellis item cecidit, vestis contempta Ferina?\(\text{f}\),

Quam reor invidia tali tunc esse repertam;
relieved the Minds of these rude Swains, after their rural Feasts; for then the Heart's at Ease; and then they sweetly indulge their Bodies, as they lie together on the soft Grass, hard by a River's Side, under the Boughs of some high Tree, without a Heap of Wealth. Chiefly when the Spring smiles, and the Season of the Year sprinkles the verdant Herbs with flowery Pride; then Jefts, and smart Conceits, and the loud Laugh went round; and then the rustick Muse sung out, and, gay and jocund in their Sports, they crowned their Heads, and on their Shoulders hung Garlands of Flowers and Leaves, and with unequal Steps they rudely moved their Limbs, and shook their Mother Earth with their hard Feet; and then the Laugh began, and pleasant Grin, at these strange Gambols, never seen before. And thus they kept awake; and, as refreshed by comfortable Sleep, they spent the Night in trolling Country Songs, and making Mouths to many an awkward Tune, and running o'er the Reeds with crooked Lip. These are the Pleasures now our wanton Youth persue, who fit up all the Night; they learn to dance in measure, but receive no more Delight than did that rustick Race of Earth-born Swains so long ago.

For while we know no better, and enjoy a present Good, it wonderfully pleases and delights us above all Things; but when we discover something more agreeable, this destroys and changes the Relish of what went before. So Acorns became odious to the Palate; and the Beds of Grass and Leaves were laid aside; and Skins went out of Use, and that savage sort of Cloathing was despised; and yet, I think, he that first wore it

* Faber says, that the first Garment, though a worthless undressed Skin of a Beast, so pleased these Earth-born Men, that it was the Cause of his Death who first invented and wore it.
Ut leibum insidiis, qui gestit primus, obiret:
Et tandem inter eos disstræatum, sanguine multo dispersisse, neque in fructum convertere quisse.

Tunc igitur Pelles, munc Aurum, & Purpura curis Exercit hominum vitam, belloque fatigant.

Quod magis in nobis (ut opinor) culpa resitit.
Frugis enim nudos fine Pellibus excruciatat

Terrigenas: at nos nil ledit vestre carere

Purpurea, atque Auro, signisque ingentibus apta;

Dum Plebeia tamen sit, quæ defendere posset:

Ergo hominum genus incassum, frustraque laborat,
Semper & in curis consumit inanibus œvum;

Nimirum, quia non cognovit, quæ sit habendi
Finis, & omnino quoad crescat vera voluptas:

Idque minutatim vitam provexit in Altum,

Et belli magnos commovit funditus astus.

At vigiles mundi magnum & versatilis templum

Sol & Luna suo lustrantibus lumine circim

Perdocuere homines Annorum tempora verti:

Et certa ratione geri rem, atque ordine certo.

Jam validis septi degebant Turribus œvum,

Et divisa celebatur, discretaque tellus.

Tum Mare velivolum floreat navibus pandis:

Auxilia, & socios jam paeo sedere babebant:

Carminibus cùm res gestas capere Poëae

Tradere: nec multò priù sunt Elementa reperta.

Propterea quid sit prius aetum respicere etas

Nostra nequit, nisi quæ ratio vestigia monstrat.
raifed such Envy to himfelf, that he was treach-
erously flain, he was torn to Pieces, and his lea-
thern Garment ftained with his own Blood, nor
was he fuffer'd to enjoy the Fruit of his own In-
vention.

At that time Men fought for Skins, but now
Gold and Purple employ their Cares, and fet them
together by the Ears: And, I think, we are much
more to blame of the two; for without the Use
of Skins, the Cold would have been very grievous
to thofe Earth-born Wretches; but we suffer no-
thing, if we go without Purple or Cloth of Gold,
embroider'd in the richest Figures, fince a meaner
Drefs would as well secure us againft the Cold.

Wretched therefore, and vain, are the Trou-
bles of Mankind; they fpent their whole Life in
the Pursuit of empty Cares; and no wonder,
fince they fix no Limits to what they poftess, and
know nothing how far the Bounds of true Pleasure
may extend: And this Ignorance carries them by
degrees into a Sea of Evils, and raifes the most
violent Storms of War throughout the World.

But the wakeful Sun and Moon, furveying
with their Light the great and rolling Skies, have
taught Men, that the Seasons of the Year are
turned about, and that Things are carried on by
certain Rules, and in a fixed Order.

And now Mankind inclofed themfelves and
lived in Caffles; the Lands were parted out, and
each enjoyed his own; the Sea was failed o'er by
crooked Ships, and Men joined together for De-
fence, and formed Alliances by certain Bonds.
The Poets then began to celebrate in Verfe the
great Exploits, and Letters were not long before
discover'd. What was tranfacled many Ages paft,
thofe Times knew nothing of, but what their
Reafon darkly traced out.

Q. 2
Navigia, atque Agri culturas, Mania, Leges, Arma, Vias, Vesleis, & cætera de genere borum, Praemia, delicias quoque vitae funditus omnes, Carmina, Picturas, & dædala signa polire, Usus, & impigra simul Experientia mentis Paullatim docuit pedentim progredientes. Sic unum quicquid paullatim protrabit ætas In medium, ratioque in luminis eruit oras. Namque alid ex alio clarescere corde videmus Artibus, ad summum donec venère cacumen.
Use therefore, and the Experience of an enquiring Mind, led Men by degrees into the Knowledge of Navigation, of Agriculture; taught them to build Walls, to make Laws, Arms, Publick Ways, Garments, and other Things of the same nature; made them acquainted with Poetry, Painting, and Statuary. Thus Time gradually produces every thing into Use, and Reason shews it in a clear Light: One Art, we observe, is refined and polished by another, till they arrive at the highest Point of Perfection.

The End of the Fifth Book.
THE ARGUMENT OF THE SIXTH BOOK.

He begins with the Praise of Athens, the City where Epicurus was born, and bestows a great Encomium upon that Philosopher. He gives an Account of the Subject of this Book, in a manner suited to the Principles of an Epicurean. He then explains the Nature of Meteors: And, lest Men should be terrified with the Roaring of Jupiter's Thunder, he tells us, that Thunder is produced either from the Collision, or Corrosion, or Disruption of the Clouds; or by the Fire of Winds, either struggling within the Bowels of the Clouds, or driving them with Violence against each other; or that it arises only from the Hissing of Flames, that fall from a dry Cloud into a wet; or, lastly, that Thunder is but the crushing Noise of Bodies of Hail and Ice, that meeting violently in the Air, are dashed to Pieces. As for the Lightning, which the Latins call Fulgur, he says it is nothing but Fire forced out of Clouds, either by their Collision or other Motion, or the Seeds of Flames that are driven out of Clouds by the Force of Winds. And then, as to the Thunderbolt, that other sort of Lightning, which the Ancients call Fulmen, he teaches, that it consists of a subtle and fiery Nature;
ture; that it is conceived and bred in thick and high-raised Clouds; that being full ripe, it bursts out of the Clouds by the Force of Wind, that either breaks through them, clasps them to Pieces, or beats from without with great Violence against them; that it consists of Atoms so subtle and minute, that it is borne along the Air with wonderful Celerity; and that it is most frequent in the Vernal and Autumnal Seasons. He derides the superstitious Doctrine of the Thufcans and others, who held, that Thunder and Lightning are not the Effects of natural Causes, but proceed merely from the Will of the offended, angry Gods; and that Jupiter himself is the Darter of Thunder: And because a Puff, or fiery Whirlwind, which is indeed a sort of Lightning, and all other Whirlwinds are certain kind of Meteors, he disputes concerning them, and explains the Nature, Causes, Motions, and Differences of them. He then treats of Clouds and of Rain: Clouds, he supposes, are either made of the roughest and most dry Particles of the Air, or of the Steams, Vapours, and Exhalations, that arise from the Earth and Waters: Rain, he says, is generated either by Compression, as they call it, or by Transmutation; by Compression, if the Force of the Winds squeeze the Water out of the Clouds; by Transmutation, if the Clouds themselves are changed, and distill in falling Drops of Water. As to the other Meteors, the Rainbow, Snow, Wind, Hail, and Frost, he only mentions them. He then proceeds to the several sorts of Earthquakes, and the Causes of them; which he ascribes either to hollow Parts of the Earth, which falling in, cause it to tremble; or to the tremulous Motion of the Waters, which he supposes the Earth to swim in; or to subterraneous and other Winds, which either shake the Earth in several Parts, or drive it to and fro. He observes why the Sea does not increase, notwithstanding the immense Quantity of Water flowing into it; and
The Argument. 233

and imputes it either to the Vastness of the Sea itself; or because the Heat of the Sun dries up its Waters; or because the Winds, brushing over them, bear much of them away; or because the Clouds draw much Moisture from them; or, lastly, because of the Dryness of the Earth itself, which sucks in and imbibes the Waters of the Sea. He searches into the Causes of the Burning of Mount Etna; and it proceeds, he says, either from the Violence of the Wind, or to the Exaetnation of the Waters of the Sea, which entering beneath into the Cavities of the Mountain, extrude and force out the Seeds of the Flame that are engender'd and collected there, through the Openings that are on the Top of it. He treats of the annual Increase of the Nile; and ascribes it either to the Eteesian Winds, that blow full against the Stream of that River, and thus hindring its Course, cause the Waters to overflow; or to Heaps of Sand which the Sea drives to the Mouths of it, and thus choaks them up; or to the Rains and Snows that fall, and are melted near the Fountain of the Nile. He then disputes of the Averni, and other Tracts of the Earth, that are noxious, and even deadly to Birds, Men, Deer, Crows, Horses, &c. He teaches why the Water of some Wells and Springs is hot in Winter and cold in Summer; and explains at large the attractive Power and Virtue of the Loadstone. To the End of the Book he discourses briefly of the Cause and Origin of Plagues and Diseafes; and concludes his Poem with an elegant Description, taken from Thucydides, of the Plague that raged in Athens, and almost laid waste the whole Country of Attica, in the Time of the Peloponnesian War.
T. Lucretii Cari

DE

RERUM NATURA.

LIBER SEXTUS.

PRIMÆ frugiferos sætus mortalibus agris Dididerunt quondam præclaro nomine Athenæ: Et recreaverunt vitam, Legesque rogārunt: At primæ dederunt solatia dulcia vita, Cum genuere Virum tali cum corde repertum, Omnia veridico qui quondam ex ore profudit: Cujus & extincti propter divina reperta Divolgata vetus, jam ad cælum Gloria fertur. Nam cùm vidit Hic, ad vièrum quæ flagitat usus, "Et per quæ possent vitam consísere títam, Omnia
T. Lucretius Carus,
OF THE
NATURE of THINGS.
The SIXTH BOOK.

RENOWED a Athens first to wretched Man gave the sweet Fruits, and human Life refreshed, and published Laws; but Comforts nobler far than These she gave, when to the World she shew'd Great Epicurus, formed The Praise with such a Soul; who from his Mouth deliver'd of Epicurus sublime Truths, as from an Oracle; whose Fame for so Divine Discoveries, dispers'd every way abroad, was rais'd after Death above the Skies.

For when He saw how little would suffice for necessary Use, and by what small Provisions Life

a It is the general Opinion of the Ancients, that the Athenians first taught Men, who fed before upon Acorns, to plough the Earth, and to sow Corn; and that they were the first likewise who made Laws, and compelled Men to quit their savage way of Life, and to enter into civil Society.
T. Lucretii Lib. VI.

Omnia jam ferme Mortalibus esse parata:
Divitiis homines, & Honore, & Laude potenteis
Affluere, atque bona Natorum excellere sama:
Nec minùs esse domi cuïquam tamen Auxia corda,
Atque animum insèstis cogì servire querelis:
Intellèxit, ibi vitium Vas efficerè ipsum,
Omniaque illius vitio corrumpier intùs,
Quae conlata foris, & commoda cuñque venirent,
Partim quod fluxum, pertusumque esse videbat,
Ut nulla possèt ratione explerìer unquam:
Partim quod tetro quasi conspurcare sapore
Omnia cernebat quaeunque receperat intùs.
Veridìcis igitur purgavit pestora dictis,
Et finem statuit Cuppedinis atque Timoris,
Exposuiisque Bonum Summum, quò tendimus omnes,
Quid foret, atque viam monstravit tramite prono,
Quà possèmus ad id rectò contendere curfu:
Quidve Mali foret in rebus mortalibu passim,
Quod fluere Natura vi, varièque volaret,
Sea Ca'su, seu Vi, quòd sic Natura parëset:
Et quibus est portis occurri cuique deceret:
Et genus Humanum frustra plerumque probavit
Volvère curarum trîfèis in pestore òustus.

Nam veluti Pueri trepidant, atque omnia caècis
In tenebris metuunt, sic Nos in luce timèmus:
Interdum nibìlo quæ sunt metuenda magis, quàm
Quæ Pueri in tenebris pavìtant, finguntque futura.
Hunc igitur terrorem animi, tenebrasque neccèsìt
Non radii Solis, nec lucida tela dici
Discutìant, sed Natura species, Ratiòque:
Quò magis inceptum pergàm pertexere dictis.
might be preserved; that Nature had prepared every thing ready to support Mankind; that Men abounded with Wealth, and were loaded with Honour and Applause, and happy in their private Concerns, in the good Character of their Children, and yet their Minds were restless at home, complaining and lamenting the Misery of their Condition; He perceived the Vessel itself (the Mind) was the Cause of the Calamity, and by the Corruption of That, every thing, though ever so good, that was poured into it was tainted: It was full of Holes, and run out, and so could never by any means be filled; and whatever it received within, it infected with a stinking Smell. And therefore He purged the Mind by True Philosophy, and set Bounds to our Defires and our Fears. He laid open to us the chief Good, that Point of Happiness we all aim at, in what it consists, and shewed us the direct way that leads to it, and puts us into the straight Road to obtain it. He taught what Misfortunes commonly attend human Life, whether they flow from the Laws of Nature or from Chance, whether from Necessity or by Accident; and by what means we are to oppose those Evils, and strive against them. And He has fully proved, that Mankind torment themselves in vain, and are tossed about in a tempestuous Ocean of Cares to no purpose.

For as Boys tremble and fear every thing in the dark Night, so we in open Day fear Things as vain, and little to be dreaded, as those that Children quake at in the Dark, and fancy advancing towards them. This Terror of the Mind, this Darkness then, not the Sun's Beams, nor the bright Rays of Day can scatter, but the Light of Nature and the Rules of Reason; and therefore I shall the more readily proceed to execute what I have begun.

And
Et quoniam docui, Mundi mortalia templum:
Esses, et nativo consister corpore Caelum:
Et quaeunque in eo fiunt, sientque, necesses
Esses ea dissolvit: Quae restant pereipe porro.
Quandoquidem semel insinuem conscendere currum
Vincendus sper bortata est, atque obvia cursum
Quae fuerant, sunt placato conversa furor.
Catena, quae fieri in Terris, caeloque tuentur
Mortales, pavidis cum pendent mentibus sape
Efficient animos humileis formidine Divum,
Depressusque premunt ad terram, propertia quod
Ignorantia causarum conserre Deorum
Cogit ad imperium res, et concedere regnum:
Quorum operum causas nulla ratione videre
Possunt bac fieri Divino numine renirur.
Nam bene qui didicere Deos securum agere ovum:
Si tamen interea mirantur, qua ratione
Quaeque geri possint, praesertim rebus in illis,
Quae supera caput aetheriis cernuntur in oris,
Rursus in antiquas referuntur Religiones,
Et Dominos acreis ascifunt, omnia posse
Quos miseris credunt, ignari quid queat esse,
Quid nequeat; finita potestas denique cuique
Quanam sit ratione, atque aliè terminus baren.
Quod magis errantes iota regione feruntur.
Quae nisi respues ex animo, longèque remittis,
Diis indigna putando, alienaque pacis eorum,
Delibata Deum ter te tibi numina fanea

Sapé
And since I taught the Fabrick of the World was mortal, and that the Heavens are formed of corruptible Seeds, and whatever they do, or ever will contain, must necessarily be dissolved; attend now to what remains, especially since the Hope of carrying the Prize has encouraged me to ascend the Chariot, and engage in so noble a Race; and since the Difficulties that once attended the Course are removed, and the Roughness of the Way is made favourable and easy.

The various Wonders Men behold in the Earth and in the Heavens, perplex their Minds, trembling and in Suspence, and make them humble with the Fear of the Gods, and press them groveling to the Ground; and being ignorant of the Cause of these Events, they are forced to confess the Sovereignty, and give up every thing to the Command of these Deities: And the Effects they are unable to account for by Reason, they imagine were brought about by the Influence of the Gods; for such as well know that the Gods lead a Life of Tranquility and Ease, if they should still wonder by what Power the World is carried on, especially in the Things they see over their Heads in the Heavens above, they relapse again into their old Superstition; they raise over themselves a Set of cruel Tyrants, who, the Wretches fancy, can do all Things, because they know nothing of what can or what cannot be, or by what means a finite Power is fixed to every Being, and a Boundary immoveable which it cannot pass. Such are more liable to Mistakes, and to be carried widely from the right Way.

Unless you purge your Mind of such Con- ceits, and banish them your Breast, and forbear to think unworthily of the Gods, by charging them with Things that break their Peace, those sacred Deities you will believe are always angry and
T. Lucretii Lib. VI.

Sæpe aderunt; non quod violari summa Deum vis 70
Possit, ut ex ira panas petere imbibat acreis:
Sed quia Tute tibi placida cum pace quietos
Constitues magnos irarum volvere sinistus:
Nec delubra Deum placido cum pectore adibis:
Nec, de corpore quae faneo Simulacra feruntur, 75
In menteis hominum Divinæ nuntia formas,
Suscepere bæc animi tranquilla pace valebis.
Inde videre licet, qualis jam vita sequatur.
Quam quidem ut à nobis Ratio verissima longè
Rejiciat, quanquam sint à me multa profata,
Multa tamen restant, & sunt ornanda politis
Versibus, & ratio Cæli, speciesque tenenda.

Sunt Tempestatæ, & Fulmina clara canenda,
Quid faciant, & quæ de causa quæque serantur,
Ne trepides cæli divisi partibus amens, 85
Unde volans Ignis pervenerit, aut in utram se
Verterit binc partem: quo passio per loca septa
Insinuat, & binc dominatus ut extulerit se:
Quorum operum causas nulla ratione videre
Possunt, ac fieri Divino numine rentur.

Tu mibi supremæ præscripta ad candida calcis
Currenti spatium præmonstra callida Musa,
Calliope, requies Hominum, Divumque voluptas:
Te duce ut insignem capiam cum laude coronam.

Principio,
and offended with you; not that the Supreme Power of the Gods can be so ruffled as to be eager to punish severely in their Resentments, but because you fancy those Beings, who enjoy a State of perfect Peace in themselves, are subject to Anger and the Extravagances of Revenge: And therefore you will no more approach their Shrines with an easy Mind; no more in Tranquility and Peace will you be able to receive the Images, the Representations of their divine Forms, that flow from their pure Bodies, and strike powerfully upon the Minds of Men: From hence you may collect what a wretched Life you are to lead. That the Rules therefore of right Reason may keep these Evils at the greatest Distance from us, though I have offered many Things upon this Subject before, yet much still remains to be observed, which I shall adorn with smoothest Verse: And first, the Nature and Phænomenons of the Heavens must be explained.

And now I sing of Tempefts, and the flaming Blasts of Lightning; how they fly, and from what Cause they dart through all the Air, left, when you view the several Parts of Heaven, you tremble, and, mad with Superstition, ask, whence comes this winged Fire, and to what Quarter of the Heavens does it direct its Course; how does it pierce through Walls of Stone, and having spent its Rage goes out again? The Causes of which Events, since Men cannot assign by the Laws of Reason, they must, they suppose, be effected by the Power of the Gods.

And Thou Calliope, my skilful Muse, the Joy of Men and Pleasure of the Gods, lead on the Course, and guide me to the Goal; that, by thy Conduft, I may gain a Crown, and end the Race with Glory.
Principio, Tonitru quaientur cærula cæli,  
Propertea quia concurrunt sublime volantes  
Ætheriae Nubes contra pugnantibus Ventis. 
Nec fit enim sonitus cæli de parte serena,  
Verum ubique magis densa sunt agmine Nubes,  
Tam magis bine magno fremitus fit murmure sepe.  
Præterea, neque tam condensato corpore Nubes  
Esse quaient, quæm sunt Lapides, ac Tigna: neque 
autem  
Tam tenuæ, quam sunt Nebulæ, Fumique volantes.  
Nam aut cadere abrupto deberent ponderæ presseræ,  
Ut Lapides: aut, ut Fumus, constare nequirent,  
Nec cohibere niveis gelidas, & grandinis imbreis.  
Dant etiam sonitum patuli super æquora mundi,  
Carbasus ut quondam magnis intenta theatris  
Dat crepitum malos inter jaßata, trabesque:  
Interdum perscissa furit petulantibus Euris,  
Et fragileis sonitus chartarum commoditatur,  
Id quoque enim genus in Tonitru cognoscere passis,  
Aut ubi suspensam vestem, chartasve volanteis  
Verberibus venti versant, planguntque per auras.

Fit
First, b The blue Arch of Heaven is shaken with Thunder, because the airy Clouds, flying aloft, are forced by adverse Winds, and strike together; for where the Sky is clear, you hear no Noife; but where the Clouds are thick, and drive in Troops, thence comes the louder Sound and Murmur through the Air.

Besides, the Clouds are not so solid in their Contexture as Stones and Wood, nor so thin as Mists and flying Smoke; for then, depressed by their own Weight, they would either fall abruptly down as Stones, or like Smoke they would disperse, and not be able to keep in the chilling Snow and Showers of Hail.

They c give the Crack through the wide Space of Heaven, as Curtains strained upon the Posts and Beams in lofty Theatres, when ruffled by the boisterous Winds and blown to Pieces, they make a rattling Noife like Paper torn. This Thunder, you observe, will found like Cloaths spread out, or flying Sheets, when tossed by Strokes of Wind they roll and flutter through the Sky.

b The Poet begins his Explanation of Meteors; and first of Thunder, the various Motions and Differences of which he resolves several Ways: He says, first, that the Noife of Thunder is made by the Collision of Clouds that are driven and dashed against one another by adverse Winds; and if it be objected that Clouds are rare and thin Bodies, and therefore very improper and unlikely to make so great a Noife, he answers, that the Clouds do not equal Stones and Wood in Density, nor, on the other hand, are so rare as Mist and Smoke, for then indeed they would vanish away; but they are however of a middle Nature, between both, and dense enough to contain Hail and Snow.

c He observes, that one single Cloud, driven by the Wind, is sometimes rent asunder by the Violence of the Blast, and makes a Noife like the Ruffling of Curtains that are hung at a large Theatre; for the Roman Theatres were uncover'd at Top, and, to keep off the Sun or Rain from the Spectators, Curtains were spread over them.
T. Lucretii Lib. VI.

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\[Fit\] quoque enim interdum, ut non tam concurre\n
Nubes

\[Frontibus adversis possint, quam de latere ire\]

\[Diverso motu radentes corpori\textsuperscript{2} traetum:\]

\[Aridus unde aurcis terget sonus ille dinque\]

\[Ducitur, exierit donec regionibus ar\textsuperscript{e}tis.\]

\[Hoc etiam pacto Tonitru concussa videntur\]

\[Omnia s\textsuperscript{a}pe gravi tremere, & divol\textsuperscript{a}sa repente\]

\[Maxima dissiluisce capacis mania mundi,\]

\[Cium subit\textsuperscript{o} validi Venti conlecta procella\]

\[Nubibus intorsit se\textsuperscript{e}, conclusaque ibidem\]

\[Turbine versanti magis ac magis undique Nubem\]

\[Cogit, uti fiat spissa cana corpore circum.\]

\[Pos\textsuperscript{t} ubi commovit vis ejus & impetus acer,\]

\[Tum perterrricrepo sonitu dat missa fragorem.\]

\[Nec mirum, cium plena anime Vesicula parva\]

\[Se\textsuperscript{a}pe ita dat pariter sonitum displosa repente.\]

\[Est etiam ratio, cium Venti nubila persflant,\]

\[Cur sonitus faciant : etenim ramosa videmus\]

\[Nubila se\textsuperscript{e}pe modis multis, atque aspera ferri.\]

\[Scilicet ut creb\textsuperscript{r}am sylvam cium flamina Cauri\]

\[Persflant, dant sonitum frondes, ramique fragorem.\]

\[Fit quoque, ut interdum validi vis incita venti\]

\[Persecindat nubem perfringens impete re\textsuperscript{o}.\]

\[Nam quid possit ibi flatus, manifesta docet res.\]

\[Hic, ubi lenior est, in terra cium tamen alta\]

\[Arbus\textsuperscript{a} evolvens radicibus haurit ab imis.\]

\[Sunt etiam fl\textsuperscript{a}l\textsuperscript{t}us per nubila, qui quasi murmur\]

\[Dant infringendo graviter : quod item fit in altis\]

\[Fluminibus, magnoque mari, cium frangitur \textsuperscript{e}stu.\]

\[Fit\]
And sometimes the Clouds will not directly meet, and engage Front to Front, but in their different Motions will rudely shock the Sides of one another as they pass. Hence comes that dry clashing Sound we hear, that lasts for some Time, before it breaks its close Prison and roars out.

All Things, you see from hence, will shake and tremble at the dreadful Clap. And the Heavens (the mighty Walls of this wide World) are torn and burst asunder in a Moment, when a collected Force of restless Wind gets suddenly within a Cloud, and there inclosed it rolls furiously about, and stretches the hollow Space, still more and more, until the Sides grow thick and are condensed; and when it summons its whole Strength, and rages to get free, then comes the frightful Break, it flies abroad with horrid Noise; nor is this strange, when a small Bladder full of Wind, will likewise give a mighty Crack when it is suddenly burst.

When the Winds strike violently upon the Clouds, this may produce a Noise; for we see the branched Clouds, with their rough Edges, are driven about in various Manners; as the Blasts of South West Winds, blowing hard upon the thick Woods, the Boughs give a Sound, and the Branches rattle through the Air.

And sometimes the violent Force of a fierce Wind will beat directly, with all its Rage, upon a Cloud, and cut it asunder. That the Winds will shatter the Clouds, is evident by Experience; for here below, where their Power is much weaker, they will overturn the strongest Trees, and tear them up by the Roots.

And then, the Clouds, like Waves, roll about in the wide Ocean of the Air, and cause a roaring Noise by dashing together. The same happens in large Rivers, and in the wide Sea, when it is broken.
T. Lucretii Lib. VI.

Fit quoque, ubi è nube in nubem vis incidit ardens
Fulminis: hæc multo si fortè humore receptit
Ignem, continuò ut magno clamore trucidet:
Ut calidis caudens ferrum è fornicibus olim
Stridit, ubi in gelidum properè demersimus imbrem.
Aridior porro si Nubes accipit ignem,
Uritur ingenti sonitu succensa repente:
Lauricomos ut si per monteis flamma vagetur,
Turbine ventorum comburens impete magno.
Nec res tulla magis, quàm Phæbi Delphica Laurus
Terribili sonitu flamma crepitante crematur.
Denique sæpe Geli multus fragor, atque ruina
Grandinis, in magnis sonitum dat Nubibus altè.
Ventus enim cum confercit, franguntur in arœrum
Concreti montes nimborum, & grandine misi.
Fulgit item, Nubes ignis cùm semina multa
Excussère suo concurrùs, feu Lapidem si
Percutiat Lapis, aut Ferrum, nam tum quoque lumen
Exsilit, & claras scintillas diffupat ignis.
Sed Tonitrum sit uti post auribus accipiamus,
Fulgere quàm cernant oculi, quia semper ad aureis

Tardiús
broken and rages with the Tide. And sometimes
the fiery Force of Lightning falls from one Cloud
into another: If a Cloud full of Moisture receives
this Fire, it extinguishes it with a great Noise;
as a red-hot Iron, just taken out of the glowing
Heat, hisses when we plunge it hastily into cold
Water: But if a dry Cloud receives the Flame, it
takes fire instantaneously, and rattles in the Air; as when
a Fire, raging with mighty Force, is driven by
rushing Winds upon a Hill cover'd with Laurels,
and sets all in a Blaze; for nothing burns with a more
dreadful Noise and crackling Flame, than the
Leaves of the Delphick Laurel, sacred to Apollo. And
lastly, Pieces of Ice and Showers of Hail, inclosed
in mighty Clouds, will often found like Thunder;
these mountainous Clouds, being condensed, will
burst and discharge their Weight of Ice and Hail.

It lightens when the Clouds, by violent Lightning:
Strokes in meeting, beat out many Seeds of Fire,
and strike as Flint and Steel, or Stone and Stone;
for then the Light leaps out, and scatters shining
Sparks of Fire.

But we never hear the Thunderclap till we
have seen the Lightning; for the Images of
Things approach our Ears much sooner than

He says, that Lightning falling from a dry Cloud into
a Wet, hisses like red-hot Iron when plunged into the Smithy.
This was particularly the Opinion of Anaxagoras.

Lightning may be struck out of harden'd Clouds, dash'd
against one another, as Fire is out of Iron, Flint, or Wood;
for we are to suppose, that some Seeds of Fire are lurking
in the Clouds, as well as in those other Things.

The Reason is, because the Materia Subtilis in lumid
Bodies, which is the Medium by which we see, consists of
Particles that are much less, and more solid, than those of
the Air, the Medium by which we hear; and consequently
the Motion of that subtle Matter is more quick than that of
the Air, because more Strength is requisite to overcome the
Resistance of a greater Body than that of a less.
T. LUCRETII. Lib. VI.
Tardiús adveniunt, quàm visum quæ moveant res. 165
Id licet binc etiam cognoscere: cædere sìquem
Ancipiti videas ferro procúl arbóris aúctum,
Antè fit ut cernas iùnum, quàm plága per aúreis
Det fónitum: sìc Fulgorem quóque cernimus antè
Quàm Tonitrum accipimus, pariter qui mittitur igni,
E simili causa, & concursu natus eodem: 171
Hoc etiam passage volucrì loca lumine tingunt
Nubes, & tremulo tempestas impetè fulgit.
Ventus ubi inuásit Núbem, & versátus ibidem
Pecit, ut antè, cavam, docui, spíesse Nubem, 175
Mobilitate sua fervíscit; ut omnia motu
Percalesauta vides ardescere: plumbea verò
Glans etiam longo cursu volvenda liqueíscit.
Ergo fervídus Hic Nubem cum perfsidit atram,
Diffúpat ardóris quæsì per vim expressa repente 180
Seminà, quæ faciunt instantia fulgura flammæ:
Inde Sonus sequitur, qui tardiús adlicit aúreis,
Quàm quæ perveniunt oculos ad lumina nostros.
Scilícet hoc densis fit nubibus, & simul altè
Exstruélis alìis alìas super impete miro.
185
Nec tibi sit fraudì, quòd nos inferne videmus
Quàm sint lata magis, quàm sursum exstruélis quid
extent;
Contemplator enim cùm montibus adsimilata
Nubila portabunt Venti transversa per auras:
Aut ubi per magnos monteis cumulata videbis 190
Insuper esse alìis alia, atque urgere superna
In statione locata sepúltils undique ventis:
Tum poteris magnas moleis cognoscere eorum,
they reach our Eyes. This you prove, when you observe a Fellow at a Distance is cutting down a Tree, you see the Blow before you hear the Stroke: And so we see the Lightning before we hear the Thunder, though the Noise and the Flame fly out together, and proceed from the same Cause, the same Shock and Bursting of the Clouds.

And so the Clouds will blaze with winged Fire, and Tempests will shine bright with trembling Flame, when the Winds get within a Cloud, and roll about, and make it hollow (as I said before) till it grows condensed, and then by Motion kindles and breaks out into a Flame; for Things made hot by Motion, we see, will fall on fire, and leaden Bullets, in a long Course through the Air, have melted as they fled: Therefore this fiery Wind, when it has burst the Sides of this dark Cloud, forces and instantly scatters many Seeds of Fire, which makes the sudden Flash of Lightning all abroad. Then comes the Noise that slowly moves the Ear, and later than the Lightning strikes our Sight. This happens when the Clouds are thick, and roll on Heaps, one Pile above another, with wondrous Swiftness through the Air.

Nor must you think this false, because the Clouds, to us that stand below, seem rather broad than deep, or raised on Heaps; for see how the Winds will whirl along the Air these rolling Clouds, raised Mountain-high; and on the Mountain-Tops the Clouds, observe, are higher some than others, and piled on Heaps; and, when the Winds are still, the higher Row will press the Lower down: Then you may judge of their prodigious Weight, and

As Thunder is caused by the Winds breaking and tearing the Clouds, so Lightning is made by the same Winds, that by the Swiftness of their Motion grow hot, and kindle into Flames, as they are agitated and whirled about in the Bowels of the Clouds.
Speluncaque velut saxis pendentibusc ruéatas
Cornere, quas Venti cum, tempestate coorta, 195
Complerunt, magno indignantur murmure clausi
Nubibus, in caveisque ferarum more minantur:
Nunc hinc, nunc illinc fremitus per Nubila mittunt:
Quaerentesque viam circumversantur, & ignis
Semia convolvunt e Nubibus: atque ita cogunt 200
Multa, rotantque cavis flammas fornicibus intuss,
Donec divolis fulserunt nube coruie.
Hac etiam fit uti de causa mobilis ille
Devolet in terram liquidi color aureus ignis,
Semia quod Nubeis ipsas permulta necefsès:
Igns babere: etenim cum sunt humore sine ullo,
Flammeus est plerumque colos & splendidos ollis.
quippe etenim Solis de lumine multa neccfès:
Concipere, ut meritò rubeaunt, igneisque profundant.
Hasce igitur cum Vents agens contrufit in unum 210
Compressitque locum cogens: expressa profundunt
Semia, quæ faciant flammas fulgere colores.
Fulgit item, cum rarefunt quoque Nubila cæli.
Nam cum Venti eas leviter diducit eunteis,
Dissolvitque, cadant ingratis illa necefsès:
Semia, quæ faciant fulgorem: tum fine tetro 215
Terror, & Sonitu fulgit, nulloque tumultu.
view their hollow Caverns, form'd as it were in hanging Rocks, where in a Tempest the rough Winds are shut, and scorn to be confined, and roar with horrid Noise, like savage Beasts within their dens chain'd down. They grumble here and there, on every Side, within the Clouds, and striving to get free, roll every way about, and as they move collect the fiery Seeds in great Abundance, and in the heated Caverns tos them about, until the Clouds burst, and then they flash in shining Flame.

And for this Reason, perhaps, the Lightning (that swift and golden Stream of purest Fire) flies down upon the Earth, because the Clouds must needs contain within themselves Plenty of fiery Seeds; and such as are without all Moisture, look bright and of a fiery Colour; for they must receive many fiery Particles from the Sun, and therefore cannot but look red, and send out Flame. These, when the Force of Winds have pressed and driven into a narrow Space, the fiery Seeds, being squeezed, fly out, and make that glaring Flame to shine abroad.

Or it lightens, because the Clouds above are rarefied; for when the Winds blow on them as they pass, and gently stretch them out, and wear them thin, the Seeds of Fire that make the Light must needs fall out; but then it shines without much Noise and Terror, and causes no Confusion in the Sky.

He said before, that the Seeds of Fire that are in the Clouds, are driven out by the Strength and Violence of the Wind; but now observes, that if they are not driven out in that manner, yet they must of necessity fall down when the Clouds grow thin, and break and open of themselves: And that from thence proceeds the mild and gentle Lightning, whose Splendor dazzles the Eyes, though no Thunder invade the Ear.

Now
Quod superest, quali natura prædita consent
Fulmina, declarant idus, & inusla vapore
Signa, notæque graveis balantes Sulfuris auras. 220
Ignis enim sunt hac, non Venti signa, neque Imbris.
Præterea, per se accendant quoque testa domorum,
Et celeri flamma dominantur in ædibus ipsis.
Hunc tibi subtilem cum primis ignibus ignem
Constituit natura minutis, mobilibusque 225
Corporibus, cui nil omnino obsfñere possit.
Transit enim validè Fulmen per septa domorum,
Clamor uti, ac Voces: transit per saxa, per aera:
Et liquidum punto facit æs in tempore, & aurum.
Curat item ut vasis integris Vina repente 230
Diffugiant, quia nimirum facilè omnia circum
Conlaxat, rareque facit lateramina vasis,
Adveniens calor ejus ut insinuatur in ipsum: &
Mobilter solvens differt primordia Vini:
Quod Solis vapor ætatem non posse videtur 235
Efficere, usqueadoi pollens servore coruscó:
Tanto mobilior vis, & dominantor hæc est.

Nunc ea quo paedo gignantur, & impete tanto
Fiant, ut possint isti discludere Turreis,
Disturbare domos, avellere tigna, trabesque, 240
Et Monumenta virum demoliri, atque ciere,
Exanimare Homines, Pecudes prostrernere passim:
Cætera de genere hoc qua vi facere omnia possint,
Expediam, neque Te in promissis plura morabor.
Now of what Seeds the 1 Lightning is composed, its Strokes will shew, and Marks of Fire it leaves behind, and Steams of stinking Sulphur in the Air; for these are Signs of Fire, not Wind or Rain; for Lightning will set on fire whole Towns, and with swift Flames consume the Houses to the Ground. Nature has formed this subtle Fire of Seeds of Heat the most minute, and Particles most apt to move, which nothing can resist. It passes forcibly through the Walls, as Voice and Sound. It flies through Stones and Brass, and in a Moment melts both Brass and Gold. It has strange Power to draw the Liquor out, and leave the Vessel whole: This it does by loosening the Contexture of the Cask, and by widening its Pores every way, that so its Heat may more easily find a Passage through; and then, by the Swiftness of its Motion, it dissolves the Body of the Liquor, scatters its Seeds, and forces it out: And this the Heat of the Sun is not able to do in an Age; so much stronger is the Force of this bright Flame, its Motion more swift, and its Power more irresistible.

But how these Fires are formed, and how they rage with so great Force, as by their Strokes to beat down Towers, to overturn Houses, to tear up Posts and Beams, to shake and tumble down Monuments of Stone, to strike Men dead, and kill whole Herds at once; by what Power they cause such Scenes of Ruin, This I shall now explain, as I promised, and keep you no longer in Suspense.

1 Having treated of the Coruscation of Lightning, which the Latins called Fulgur, he is now going to dispute concerning the Fulmen, by which the Ancients meant the Lightning that falls and does Mischief upon the Earth, commonly called the Thunderbolt. The Poet speaks confusedly upon this Occasion, and often uses the one for the other.
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Fulmina gignier è crassis, altèque putandum est 245
Nubibus exsfructis: nam calo nulla sereno,
Nec leviter densis mittuntur nubibus unquam.
Nam dubio procul hoc fieri manifesta docet res,
Quòd tunc per totum concrescunt Æra nubes
Undique, uti tenebras omneis Achernata reamur 250
Liquìse, & magnis cæli compleßè cavernas:
Usque adeo tetra númerum nocte coorta
Impendent atque formidinis ora superne,
Cùm commovìri tempestas Fulmina caçpat.

Præterea, perspecte nigèr quoque per mare Nimbus,
Ut picis è calo demissum flumen, in undas 256
Sic cadit, & fertur tenebris procul, & trahit atram
Fulminibus gravidam tempestatem, atque procellis,
Ignibus, ac ventis cumprimis ipse repletus:
In terra quoque ut horreificant, ac teñela requirant. 260
Sic igitur supera nostrum cæpit esse putandum est
Tempestatem altam: neque enim caligine tanta
Obruerent terras, nisi inadiscata superne
Multa forent multis exemto Nubila sōle:
Nec tanto pessent hæc terras opprimere imbri, 265
Flumina abundare ut facerent, campisque natare,
Si non exstruérís foret altè Nubibus eíher.

His igitur Ventis, atque Ignibus omnia plena
Sunt: ideò passim fremitus, & fulgura sunt:
Quipe etenim superà docui, permulta vaporis 270
Semina habere cavas nubeis: & multa necessìs
Concipere ex Solis radìs, ardoreque eorum.
Hic ubi Ventus cas idem qui cogit in unum
Fortè locum quemvis, expressit multa vaporis
Semina, quaè simul cum eo commiscuit ignii: 275
Insinuatus ibi Vortex versatur in alto,
Et calidis acuit Fulmen fornacibus intùs.

Nam
You are to observe then, that Thunder is produced from thick Clouds, raised high one above another in the Air; for the Thunder never roars in a clear Sky, nor is discharged from Clouds that are not thick and condensed; and this is evident from common Observation. The Clouds thicken every way over all the Heavens, as if the whole Mafs of Darkness had left the Shades of Hell, and filled the spacious Hollows of the Sky; and this dark Heap of Clouds spreads a dreadful Night over our Heads, and makes us tremble here below. These are the Signs when a Tempest is forging Thunder in the Air.

Besides, a black Cloud is often observed at Sea, below the dark Regions of the Clouds, that falls from the Sky like a Stream of flowing Pitch into the Water; and being full of Fire and Wind, draws a black Tempest with it, loaded with Storms and Thunder; so that those at Land tremble, and fly for Shelter to their Houses. Those Clouds then, you must think, are high above our Heads: They could not overwhelm the Earth with so much Darkness, were they not raised on Heaps above, and driven between Us and the Sun's Light; nor could they load the Earth with so great Showers, and make the Rivers swell and drown the Plains, unless the Clouds were raised on Heaps in the upper Regions of the Air.

These Clouds are fully charged with Wind and Fire, and thence the Lightnings flash and Thunders roar; for, as I said above, these hollow Clouds are full of fiery Seeds, and many they receive from the Sun's Rays, and borrow from their Heat: And when the Wind compels them to retreat to closer Room, it drives out many Seeds of Fire, and mingles with the Flame. Then the loud Tempest rolls along the Sky, and in its heated Entrails forms and points the Thunder.
Nam duplici ratione accenditur, Ipse sua nam
Mobilitate calebit, & è contagibus ignis.
Inde ubi percaluit vis Venti, vel gravis Ignis, Impetus incessit: maturum tum quasi Fulmen Perseindit subito Nubem, ferturque coruscis
Omnia luminibus luistrans loca percitus ardor:
Quem gravis insequitur Sonitus, disploa repente
Opprimere ut cæli videantur templo superne. 280
Inde tremor Terras graviter pertentat, & altum
Murmura percurrent cælum: nam tota sere tum
Tempestatas concussa trenit, fremitusque moventur:
Quo de concussu sequitur gravis Imber, & uber,
Omnis uti videatur in Imbrem vertier Aether, 290
Atque ita præcipitans ad diluvium revocare:
Tantus dicidio,nubes, ventique procella,
Mittitur ardenti Sonitus cium provolat iœtu.
Est etiam cium vis extrinsecus incita Venti
Incidit in validam maturō fulmine Nubem: 295
Quam cium perscindit, extemplo cadit igneus ille
Vortex, quod patrio vocitamus nomine Fulmen.
Hoc fit idem in parteis alias, quocunque tulit vis.
Fit quoque ut interdum Venti vis missa sine igni,
Ignescat tamen in spatio, longoque meatu, 300
Dum venit, amittens in cursu corpora quædam
Grandia; quæ nequeunt pariter penetrare per auras:
Atque alta ex ipsa conradens Aëre portat
Parvula, quae faciunt ignem commissa volando:
Non alia longè ratione, ac plumbea sepe 305
Fervida fit Glans in cursu, cium multa rigoris
Corpora dimittens ignem concepit in auris.

Fit
This Wind is set on fire, either by the Rapidity of its own Motion, or catches from the fiery Seeds within the Cloud; and when it is raging hot, and in a Flame, it collects all its Fury, and then the ripen’d Thunder instantly splits and bursts the Cloud. The fiery Tempest blazes all abroad with Darts of flashing Light, followed by frightful Noise, as if the Temples of the Gods above were rent asunder. The Earth below trembles dreadfully at the Shock, and the loud Murmurs scour through all the Heavens; for the whole Tempest shakes, and roars aloud. Then grievous Showers in great Abundance follow the Concussion, as if the Skies were all dissolved in Rain, and poured down Inundations from above. So dreadful is the Clap that flies abroad with red-hot Lightning, when the Clouds burst, and Storms of fiery Wind rage through the Air.

Or else, *k* the Lightning flies when, from without, a furious Wind beats hard upon a Cloud, replete with Thunder ripe for Birth; which, when it bursts the fiery Vortex, falls (we in our Language call it Thunder) and makes its way where the Strokes most prevailed.

Sometimes a furious Wind will burst the Cloud before ’tis set on fire, but kindles as it flies in its long Passage through the Air; for in its Course it throws off the heavy Seeds that lay behind, and could not make their Way; and brushed and carried off other small Seeds from the Air, which join and fall on fire as they fly: Just as a Ball of Lead melts in its Course, and throwing off the cold and stubborn Seeds, takes fire and softens in the Air.

*If the Wind that is pent up in the Cloud cannot break through, it may be assisted by other Winds from without; and by whatever means the Cloud be opened, the Flame that is ripe for Birth will necessarily fall down.*

*Book VI. Of the Nature of Things.*
Fit quoque, ut ipsius Plagae vis excitet ignem,
Frigida cum Venti pepulit vis missa sine igni:
Nimirum quia cum vehementi perculit idem,
Confluerer ex ipso possunt elementa Vaporis:
Et simul ex illa, quae tum res excipit idem.
Ut lapidem ferro cum cadimus, evolat Ignis:
Nec quod frigida vis sit ferri, hoc secus illa
Semina concurrent calidi fulgoris ad idem:
Sic igitur quoque res accendi Fulmine debet,
Opportuna fuit si forte, & idonea flammis.
Nec temerè omnino planè vis frigida Venti
Esse potest, ex quo tanta vi immissa superne est:
Quin prius in cursu si non acceditur igni,
At tepefaëta tamen veniat commissa calore.

Mobilitas autem fit Fulminis, & gravis idem,
Et celeri ferme pergunt sic Fulmina lapsu:
Nubibus ipsa quod omnino prius incita se Vis
Conligit, & magnum conamen sumit eundi.
Inde, ubi non potuit Nubes capere impetis autem,
Exprimitur vis, atque ideo volat impete miro,
Ut validis quae de Tormentis missa feruntur.

Addit quod est parvus, ac levibus est elementis:
Nec facile est tali naturae obsistere quicquam:
Inter enim fugit, ac penetrat per rara viarum.
Non igitur multis offensibus in remorando
Hasitat: banc ob rem celeri volat impete labens.

Deinde,
And the Fury of the Stroke, perhaps, may raise a Fire, when the Force of a cold Wind, unkindled, beats hard with all its Power; for then the Seeds of Fire may flow together upon the Violence of the Stroke, not only from the Wind, but from the Thing it strikes; as when we strike the Flint with Steel, the Fire flies out; and though the Iron be by Nature cold, yet when it feels the Blow the hot Seeds of Fire will spread abroad: And thus, whatever the Lightning falls upon may easily be set on fire, if it be in its Nature fit and disposed to burn. Nor can the Wind be supposed to be perfectly cold, since it is discharged from above with so much Violence; and if it be not inflamed as it drives through the Air, yet it must have some Degree of Heat when it comes to the Earth.

The Swiftnees and heavy Stroke of the Thunder, and the Violence of its Fall, proceed from hence. The Wind, shut up within a Cloud, rages in all its Strength, and struggles hard to get free; and when the Cloud can no longer bear the Fury of its Efforts, it breaks out and flies abroad with mighty Force, as Stones and Darts from mighty Engines thrown.

Besides, the Thunder is formed of small and smooth Seeds, so subtle, that nothing can withstand its Force; it gets between and pierces through the smallest Pores; it meets with nothing that can divert its Passage, and therefore flies abroad with the swiftest Motion.

1 If the Wind beats furiously upon any thing, the Seeds of Fire may flow together upon the Stroke, as well out of the Wind as out of the Thing it strikes; thus the Wind takes fire, and Lightning is made. But that such a Confluxion of the Seeds of Fire may be made in that manner, is evident from the Striking of Flint and Iron. And the Objection of the Winds being cold (though even that can by no means be granted, by reason of the Swiftnees of their Motion) is of no Weight; for the Nature of Iron is full as cold, yet Fire will sparkle out when we strike it.

S 2

AND
Deinde, quod omnino natura Pondera deorsum Omnia nutuntur: cùm plaga fit addita vero,
Mobilitas duplicatur, & impetus ille gravescit:
Ut vehementius, & cùtiùs, quacunque morantur
Oboia, discutiat plagis, itinerque sequatur.

Denique, quod longo venit impete, sumere debet Mobilitatem, atiam atque etiam quae crescit eundo,
Et validas auget vireis, & roborat istum.
Nam facit, ut, quae sint illius Semina cunque,
E regione locum quasi in unum cuncta ferantur,
Omnia conjiciens in eum volventia cursum.

Forsan & ex ipso veniens trahat Aêre quaedam
Corpora, quae plagis intendunt mobilitatem.

Incolumis &que venit per res, atque integra transit Multa, foraminibus liquidis quia trevolat Ignis.
Multiaque perfringit, cùm corpora Fulminis ipsa Corporibus rerum inciderint, quâ texta tenentur.

Dissolvunt porro facilè Àes, Aurumque repente Conservesfacit; è parvis quia falsa minutè Corporibus vis est, & lavibus ex elementis,
Quae facile insinuantur, & insinuata repente Dissolvunt nodos omnes, & vincula relaxant.

Autumnoque magis stellis fulgentibus alta
Concutitur Cäli domus undique, totaque Tellus;
Et cùm tempora se Veris florentia pandunt.
Frigor: enim defunt Ignes, Ventique Calore Defciunt, neque sunt tam denfo corpore Nubes.

Inter utrumque igitur cùm Cäli tempora constant,
Tum variae cause concurrunt Fulminis omnes.

Nam
And then, since all Bodies of Weight naturally descend, when Blows or outward Force is added to their innate Gravity, their Motion doubles, and the Violence of the Strokes drive them downwards with the greater Speed, and consequently they beat through every thing that obstructs their Motion much sooner, and with more Vehemence pursue their Course.

And, lastly, the greater the Distance is from whence a Body descends, its Swiftness in proportion increases; it still gathers Strength as it moves, grows more violent, and the Blow is the heavier when it falls; for all its Seeds are driven down by that Length of Violence to one Point, and unite all their Powers in the same Motion; or perhaps they carry with them other Seeds in their Passage through the Air, which beat them on, and keep them steady in their Descent.

The Lightning makes its Way and passes through Bodies that are Rare, and leaves them safe and unhurt; but other Bodies it rends asunder, because its fiery Seeds strike through their solid Corpuscles which hold them together: And therefore it easily dissolves Brasses and Gold, because it consists of exceeding small and smooth Particles, which work themselves without Difficulty into the very Principles, and in an instant melt the whole Contexture, and loosen the Ties and Bonds by which they were secured.

And in Autumn, and when the flowery Season of the Spring displays its Beauty, then the high Palaces of Heaven with all its shining Stars, and the whole Earth, are shaken most with Thunder; for in the Winter there wants Fire, and in Summer there is no Supply of Wind, nor will the Clouds grow thick in too much Heat: But in the middle Quarters of the Year, all Things concur to make the Thunder roar. Those Seasons are
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Nam fretus ipse anni permiscet Frigus, & Æstum:
Quorum utrumque opus est fabricanda ad Fulmina nobis,
Ut discordia sit rerum, magnoque tumultu Ignibus, & Ventis furibundus fluét Aër.
Prima Caloris enim pars, & postrema Rigoris,
Tempus id est Vernum: quare pugnare necesse 'st
Dissimiles inter se res, turbareque mütas.

Et Calor extremus primo cum Frigore müsus Volvitur, Autumni quod fertur nomine tempus.
Hic quoque confligunt Hiemes Æstatibus acres.
Propeterea sunt bæc Bella anni nominanda:
Nec mirum 'st in eo si tempore plurima sunt
Fulmina, tempestásque cietur turbida cælo,
Antepti quoniam bello turbatur utrinque,
Hinc Flammis, illinc Ventis, Humoreque mülo.

Hoc est igniferi naturam Fulminis ipsam
Perspicere, & qua vi faciat rem quamque videre:
Non Tyrrhena retrò volventem carmina frustra
Indicia occultæ Divum perquirere mentis,
Unde volans Ignis pervenerit, aut in utram se
Vererit hic partem, quo'paño per loca septa
Insinuārit, & binc dominatus ut extulerit se,
Quidve nascere queat de cælo fulminis istus.

Quòd si Jupiter atque alii fulgentia divi
Terrifico quatiunt joniit cælestia templā,
El jaciant igneis, quo cuique 'st cumque voluptas,
Cur, quibus incautum fcelus aversābile cumque 'st,
Non faciant, idē flammæ ut Fulguris balent
Pector perfixo, documentum mortalis acre?
are made up of Heat and Cold blended together; of both these is formed the Thunder; that to these jarring Elements may raise the greater Combustions, and the tormented Air rolls with more Confusion by the Strokes of Wind and Fire; for the End of Winter and the Beginning of Summer make the Spring: And then the Heat and Cold, two Enemies so opposite, must needs engage, and when they meet and mix, raise strange Confusions in the Air: And then the End of Summer and the Beginning of Winter bring on the Autumn; now the retiring Heat and coming Cold engage again. These are the Times, we say, when the Elements go forth to war. Where is the Wonder, if loud Thunders roar in Seasons such as these, and dreadful Tempefts rattle in the Sky, since the Elements rage every way with doubtful War, on one side Fire, on the other furious Winds with mingled Rain?

From hence you must collect the true Principles of Thunder, and discover how it works and sends abroad its Fires; for 'tis in vain to look back into old Tuscan Legends, and from thence inquire into the secret Purposes of the Gods, from what Quarter of the Heavens the Lightning flies, and to what Part it points its forked Beams, and how it pierces through the Walls of Houses, and having spent its Rage it finds a Passage out, and what Evil it portends by flashing from the Sky.

For if Great Jupiter, and the rest of the Gods, delight to shake the shining Battlements of Heaven with horrid Noife, and throw about these Fires as please themselves, why are not those shot through who love to act flagitious Crimes, and why their Hearts not struck with fiery Bolts, as dreadful Monuments

Here the Poet insults the College of Augurs and Soothsayers of Rome, who, from the Tuscan, pretended to teach Divination as if it had been a Science.
Et potius nulla sibi turpis conseuit rei
Volvitur in flammis innocius, inque peditur,
Turbine celesti subito conreptus & igni?

Cur etiam loca sola petunt, frustraque laborant? 395
An con brachia suasictunt, firmantque lacertos;
In terraque Patris cur telum perpetiuntur
Obtundi? cur Ipse finit, neque parcit in hosteis?

Denique, cur nunquam calo jacit undique puro
Jupiter in terras Fulmen, sonitusque profundit? 400
An simul ac Nubes successere, Ipse in eas tum
Descendit, propè ut bine teli determinet istus?

In Mare qua porro mittit ratione? quid undas
Arguit, & liquidam molem, campisque natantes?

Praeterea, si vult caveamus Fulminis istum, 405
Cur dubitat facere, ut posimus cernere missum?
Si nec-opinanteis autem vult opprimere igni,
Cur tonat ex illa parte, ut vitare queamus?

Cur tenebras ante, & fremitus, & murmura concit?

Et simul in multas parteis quæ credere possis 410
Mittere? an hoc ausis nunquam contendere factum,
Ut fierent istus uno sub tempore plures?
At sapes sono facto, fierique necesserit,
Ut pluere in multis regionibus, & cadere Imbreis,
Fulmina sic uno fieri sub tempore multa. 415
to future Times? Why rather are the Good and Innocent scorched with these Blasts, and tortured in the Flames, and caught up in these Whirlwinds of the Air, and in the Fire consumed?

And why do They spend their Shafts on solitary Places, and fatigue themselves in vain? Is it to exercise their Arms, to try their Strength? Or why do they permit their Father's Bolts to be blunted against the bare Earth? Why does He suffer this himself, and not rather reserve his Stores to blast his Enemies? Why does not Jove vouchsafe to roar with Thunder, and smite the Earth with his Bolts in a clear Sky? When the Clouds spread over the Heavens, does he descend within them, in order to be nearer, and to throw his Darts with a swifter Aim? Why does he send his Fires upon the Sea? Why does he chastise the Waves, the wide Ocean, or the Plains cover'd with Water?

Besides, if He would have us avoid the Stroke of his Thunderbolts, why does not He contrive that we may see them as they fly? If He resolves to blast us with his Fire before we are aware, why does he first flash out his Lightning from that Quarter whence his Bolts are to be discharged, that we may avoid them? Why does he give us Notice, by raising Darkness, Noises, and Murmurs in the Air?

And then, how think you he is able to cast so many Darts in many various Places at once? Will you offer to say this is never done, and infest there are never more Darts than One flying about at the same Time? It is certain that Numbers of them are thrown together, and it cannot be otherwise; for as the Rain and the Showers fall upon many Countries at once, so many Strokes of Thunder are discharged at the same Time.
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Postremo, cur saneta Deum delubra, suasque
Discutit infesto praeclaras Fulmine sedes:
Et bene facta Deum frangit simulacra? suisque
Demit imaginibus violento volnere bonorem?
Altaque cur plerumque petit loca? plurimaque bujus
Montibus in summis vestigia cernimus Ignis?

Quod superest, facile st ex bis cognoscere rebus,
Πρωτος Graii quos ab re nominitarunt,
In mare qua missi veniant ratione supernè.
Nam fit, ut interdum tanquam demissa columna
In mare de caelo descendat, quam Fretas circum
Ferviscunt graviter spirantibus incita labris:
Et quaecunque in eo tum sunt depensa tumultu
Navigia, in sumnum veniunt vexata periculum.
Hoc fit, ubi interdum non quit vis incita Venti
Rumpere, quam capit nubem; sed deprimit, ut fit
In mare de caelo tanquam demissa columna.
Paullatim, quasi quid pugno, brachiique supernè
Conjectu trudatur, & extendatur in undas:
Quam cum discidit, binc prorumpitur in mare Venti
Vis, & fervorem mirum concinnat in undis.

Versabundus enim Turbo descendit, & illam
Deducit pariter lento cum corpore nubem.

Quam
In the last place: Why does He with his deadly Thunder beat down the sacred Temples of the other Gods, and the flately Fabricks devoted to Himself? Why does he dash to Pieces the curious Statues of the other Deities, and destroy with furious Strokes the Honours offered to his own Images? Why does he level his Shafts at lofty Places, for we discover many Traces of this Fire upon the Tops of highest Mountains?

It is easy, from what has been observed, to apprehend the Cause of those Whirlwinds (which the Greeks, from the Nature of the Thing, justly call "Praefers") and how they descend from above, and fall into the Sea. They are sometimes seen to descend from the Air into the Water like a Pillar; and the Sea, raging about with violent Blasts of Wind, seems to boil, and is exceedingly tossed; and whatever Ships are caught within the Reach of the Hurricane, are in the utmost Danger of being cast away. This happens when the Force of the Wind, impetuously whirling within the Cloud, is not able to break it, but drives it on, so that it falls like a Column let down into the Sea. This Descent is gradual, as if it was thrust by some Hand or Arm, and spread over the Waters. When the Cloud bursts, the Fury of the Wind breaks out among the Waves, and violently whirling round takes fire, and raises a wonderful Heat and Fermentation in the Waters; for a rolling Whirlwind descends with the Cloud, which being flow in its Motion, it bears along with it through

^n A Praefter (he observes) is a Wind impetuously whirled about, and that takes fire by the Continuance and Vehemence of the Agitation: If this Wind burst out of the Clouds, and move violently in a straight Line, it kindles into Lightning only; but if the Cloud be so tough that it cannot break through, but bears it down into the Sea, and there impetuously whirling round in the Waves at length takes fire, it becomes a Praefter, the sure Destruction of Sailors.
Quam simul ac gravidam detruxit ad aquora Ponti,
Ille in aquam subitò totum se immittit, & omne 440
Excitat ingenti sonitu Mare servere cogens.
   Fit quoque, ut involvat venti se nubibus ipse
Vortex, conradens ex Aère semina nubis,
Et quasi demissum célo Praeféra imitetur.
Hic ubi se in terras demisit, dissolvitque : 445
Turbinis immanem vim promovit, atque procelle.
Sed quia fit rarò omnino, monteique neceßa’est
Officere in Terris : appareat crebrius idem
Prospectu Maris in magno, céloque patenti.

Nubila concrecent, ubi corpora multa volando 450
Hoc super in Cali spatio córè repente
Asperiora, modis quæ possint indupedita
Exiguis, tamen inter se comprensâ teneri.
Hæc faciunt primum parvas consístere Nubëis ;
Inde ea comprehendunt inter se, conque gregantur, 455
Et conjungendo crescent, ventique séruntur
Usqueadeo, donèc Tempestatc sêva córta’est.
   Fit quoque uti Montis vicina cacumina célo
Quaùm sint quæque magis, tantò magis edita fument
Assiduè fulvæ Nubis caligine crafla ; 460
Propérea, quia cúm constíßunt Nubila primum,
the Air; and when it has thrust the heavy Body of the Cloud into the Sea, it plunges furiously with it into the Water, and with a dreadful Noise sets all the Element in a Blaze.

It sometimes happens that a Whirlwind, as it passes through the Air, will scrape off some Seeds from the Bodies of the Clouds; and rolling itself within, will look like a Proster descending from above into the Sea. When this Vortex of Wind falls upon the Earth, it bursts out without being kindled into Flame; it whirls with mighty Force, and raises a Tempest, and bears down everything before it. This sort of Whirlwind is not common at Land; for the high Hills hinder its Descent, and break its Force; but it appears frequently in the wide Sea, and in the open Air.

Now for the Origin of Clouds: These are formed when certain rough and hooked Seeds, as they fly about, at length unite in the higher Region of the Air that is above us; but are held together loosely, and not bound in any close and strict Embrace. Of these the thin and small Clouds are first produced; and many of them meeting together, and pressing close, make the large and heavy Clouds, which the Winds drive every way abroad, till they break out into a raging Storm.

And then, the nearer the Tops of the Mountains approach the Sky, the higher they are, the more they smoke, and appear cover'd with the thick Darkness of a yellow Cloud; because the Mist that arise are so

**Certain rough and hooky Atoms, that are flying to and fro in the Air, meet and join together: These form the thin Clouds first; and these thin Clouds condenling and joining with one another, make the thick and heavy Clouds.**

**Clouds frequently seem to rise from the Tops of high Mountains, because some thin Mist and watery Steams, that are too subtle to be seen, are driven up thither by the Wind; where joining together, and growing thick, they become visible.**
thin and subtle, that before they are discovered by
the Eye, they are carried aloft by the Winds to
the Tops of the highest Hills: And since they
unite there in larger Bodies, and show thick and
condensed, they seem to rise from the Tops of
these Hills into the Air; for when we ascend a
high Mountain, the Thing itself and Sense de-
monstrate, that the Winds tend to the highest
Places, and reign there.

Besides, that Nature raises many Exhalations
from the wide Sea, is plain, by observing, that
Garments expanded upon the Shore will soon be
wet; and therefore, to form such vast Bodies of
Clouds, many Seeds are thrown off and arise from
the Motion of the salt Waters.

And we see that Mists and watery Particles rise
from all the Rivers, and from the Earth itself; which, like a Vapour, are from thence squeezed out
and carried upwards, and cover the whole Heavens
with Darkness; and uniting together by degrees,
are sufficient to produce the Clouds: For the Seeds
that are continually descending from above in a
confused Manner, continually beat these Mists upon
the Back, and by condensing and pressing them
close, form them into Clouds over all the Sky.

It may be, likewise, that Seeds from without,
from the immense Space of the Universe, may
flow hither, and unite in the Production of the
flying Clouds; for I have proved before, that these
Seeds are without Number, and that the Void is
Infinite. I have shewn how suddenly, and with
what Celerity they pass through this boundless Space.
It is no wonder therefore, that Tempests and dark
Clouds are in so short a Time frequently spread
over the whole Heavens, and cover the high
Mountains, the Seas and the Earth, with so quick
a Motion; since, from every Quarter, through
all the Passages of the Air, through all the
Breathing-
Et quasi per magni circūm spiracula mundi
Exitus, introitusque elementis redditus extat.

Nunc age, quo paxio Pluvius concrefcat in alīs
Nubibus humor, & in terras demissus ut Imber 495
Decidat, expediam. Primum jam semina Aquaī
Multa simul vincam confurgere nubibus ipsīs
Omnibus ex rebus, pariterque ita crescere utrasque,
Et Nubeis, & Aquam, quæcumque in nubibus extat,
Ut pariter nobis corpus cum sanguine crescit, 500
Sudor item atque humor quicunque est denique membris.
Concipiant etiam multum quoque sāpe marinum
Humorem, veluti pendentia vellera lance
Cūm supera magnum venti mare nubila portant.

Consimili ratione ex omnibus annibus humor 505
Tollitur in nubeis: quō cūm benē semina aquarum
Multa modis multī convenerunt undique adaeūta:
Confertæ nubes vi venti mittere certant
Dupliciter: nam vi venti contradict, & ipsā
Copīa nimborum, turba majore coorta,
Urget, & e supero premīt, ac facit effluere Imbreis.

Præterea, cūm rarescunt quoque Nubila ventis,
Aut digestaurtur Solis sūper igitur calore:
Mittunt humorem pluvium, stillantque, quasi igni
Cera sūper calido tabescens multa liquefacīt. 515

Sed vehemens imber fit, ubi vehementer utroque
Nubila vi cumulata premuntur, & impete venti.

At retinere diu pluviae, longumque morari
Conferunt, ubi multa fuerunt Semina aquarum;
Atque alīs alīae Nubes, nimbique rigantes 520

Insuper
Breathing-places, I may say, of the Universe, the Seeds can make their Way hither and unite, or withdraw and fly away again.

And now I shall explain in what Manner the Rain. Rain is formed within the Clouds above, and falls down in Showers upon the Earth. I shall first shew, that many Seeds of Rain are raised from every thing, together with the Clouds; and that they increase together, both the Clouds and the Rain contained within, in the same manner as the Blood increases in proportion with our Bodies, or as Sweat or any other Moisture diffused through the Limbs. The Clouds likewise, like hanging Fleeces of Wool, suck up many Particles of salt Water, when the Winds drive them over the open Sea: And by the same Rule a Quantity of Moisture is raised into the Clouds from all the Rivers; and there these many Seeds of Waters meeting from all Parts, and uniting variously together, the Clouds being full, are obliged to discharge their Load of Moisture for two Reasons; either the Force of Winds drives them close; or the Number of them, raised one above another, presses them down from above with their own Weight, and makes the Showers to pour down.

Besides, when the Clouds are made rare and thin by the Winds, or are dissolved by the Heat of the Sun striking upon them, they discharge their rainy Moisture and drop, as Wax dissolves and melts over a hot Fire.

But expect a violent Storm of Rain when these Storms. Clouds, heaped up, are pressed, not only by their own Weight, but driven close by the Stroke of Winds from without.

The Rains used to confine us long at home, Constant and to last for some Time, when there are Seeds Showers, of Moisture in Abundance; when the dropping Clouds are raised on Heaps above, and are driven

Vol. II. T every
Insuper, atque omni volgo de parte feruntur:
Terreaque cum humans humorem tota rebalat.

Hinc ubi Sol radiis tempesteatem inter opacam
Adversa fulsit nimborum aspiragine contra:
Tum color in nigris exsilit nubibus Arqui.

Catera, que sursum crescent, sursumq; creantur:
Et qua crescent in nubibus omnia, prorsum
Omnia, Nix, Venti, Grando, gelideaque Pruinae,
Et vis magna Gela, magnum durament aquaticum:
Et mora, que fluxius passim refranat euntes:

Perfacile's tamen bæc repere, animoque videre,
Omnia qua pacto siant, quareve creantur,
Cùm bene cognōris, elementis reddita que sint.

Nunc age, que ratio Terreæ motibus extet,
Percipe: Et in primis Terram fac ut esse rearis
Subter item, ut supera's 'Ventis, atque undique ple-

nam

Speluncis, multosque lacus, multosque lacunas
In gremio gerere, & rupeis, deuruptaque saxa:
Multaque sub tergo Terreæ fluminæ tecla
Volvere vi fluétus, submersaque saxa putandum'st.

Undique enim similem esse sui, res postulat ipsa.

His igitur rebus subjunctis, suppositisque:
Terre superbem tremit magnis concussa ruinis
Subter, ubi ingentibus speluncas subruit atas,
Quippe cadunt toti montes, magnoque repente

Concussa, latè dierpunt inde tremores:
Et merito, quoniam plaustris concussa tremissunt
Tecla viam propius non magno pondere tota.

Nec minus exsultant, ubi currus fortis equam vis
Ferratos utrinque rotarum succulit orbeis.
every way abroad; and when the Earth, thoroughly soaked, sends back the Vapours into the Air.

And when the Sun, in a dark Storm of Rain, strikes with its Beams directly upon an opposite Cloud, full of Moisture, then you see the Colours of the Rainbow drawn upon the black Clouds.

And all other Appearances which are formed and increase in the upper Region of the Air, and all Meteors that are raised in the Clouds; the Snow, the Winds, the Hail, and chilling Frosts; and the strong Ice, that hardens the Surface of the Waters, and stops and binds up the Current of the Rivers as they flow; it is easy to account for all these, and to apprehend their Causes, and how they are produced, if you consider well the Virtue and Power of the Seeds from whence they spring.

Learn now the Cause of Earthquakes: And first, you are to suppose that the Earth is the same below as it is above, that it is every way full of Winds and Caverns, and that it holds within its Bowels many Lakes, and Pools, and Rocks, and broken Stones. You must believe that many hidden Rivers flow with rapid Waves within, and roll the ragged Rocks along their Tide; for the Laws of Nature require that the Earth within and without should be the same.

This being premised and supposed: The Earth trembles and shakes above with dreadful Ruin, when Age has tumbled in these mighty Caverns; for then whole Mountains sink, and in a Moment, with the horrid Shock, spread frightful Tremblings all abroad: And no wonder, since whole Houses by the Highway-side will quake as Carts, with no great Weight, pass through the Streets; and so they start as Chariots swiftly drive with mettled Horses, they shake at every Jumping of the Wheel.
Fit quoque, ubi magnas in aquæ, vastasque lacunas
Gleba vœctuïate è terra provolvitur ingens,
Ut jacetur aqua, et fluëtu quoque terra vacillet:
Ut vas in terra non quit constare, nisi humor
Defìtit in dubio fluëtu jacctìer intìs.

Præterea, Ventus cum per loca subcava terræ
Conlecitus parti ex una procumbit, et urget
Obnixus magnis speluncas viribus altas;
Incumbit tellus quod Venti prona premit vis:
Tum supera terram quæ sunt exstruèta domorum, 560
Ad cælumque magis quantò sunt edita quæque,
Inclīnata minent in eandem prodita partem:
Prostræque trabes impendunt ire paratae:
Et metuunt magni Naturam credere Mundi
Exitiale aliquod tempus, clademque manere,
Cum videant tantam Terrarum incumbere molem.
Quod nisi respirent Venti, non ulla refrænet
Res, neque ab exitio possit reprendere eunteis:
Nunc quia respirant alternis, inque gravescunt,
Et quasi conlecti redeunt ceduntque repulsi. 570
Sapius banc ob rem minitatùr Terra ruinas,
Quam facit: inclinatur enim, retroque recellit,
Et recipit prolapæa suas se in pondere fedeis:
Hac igitur ratione vacillant omnìa testâ,
Summa magis mediis, media imis, ima peribilum. 575
Est hæc ejusdem quoque magni causa tremoris,
Ventus ubi, atque Animes subîtò vis maxima quodam,
This happens likewise, when great Weights of Earth, loofen'd by Time, plunge down into these deep and mighty Lakes; for then the Waters rage, and the Earth reels and staggers with the Shock; as a Vessel on the Ground cannot stand firm, unless the Liquor ceases to ferment and toss within.

Besides, when Winds, collected in the Caverns of the Earth, direct their Force one Way, and beat with Fury on these hollow Places, the Earth inclines that Way where the Winds point their Stroke; and our Buildings, raised above, nod that Way too; the Highest shake the most; the hanging Beams start from the Wall, and threaten to fly out: And yet Men are afraid to think that Nature has fixed a fatal Time when this great World shall be destroyed, and fall to Ruin, although they see the heavy Mafs of Earth leaning and tumbling to Pieces. And did not the Winds take Time to breathe, nothing could check their Fury, or keep them from destroying every thing before them: But since they cease by turns, then rage again, and storm with double Force, and are again repelled. Hence it is that the Earth oftener threatens us with Ruin than actually effects it: It inclines only, and then falls back; and though moved aside, settles with all its Weight again in its former Place. For this Reason all our Houses tremble and reel; the Highest shake the most, the Middle lefs, the Lowest little or nothing.

The great Tremblings of the Earth may arise yet from another Cause: when Wind or violent Blasts

This Inclination and fluctuating Motion of the Earth, is often attended with a violent Beating and Succession of it; for if the Wind break through the Caverns, and cleave the Earth, then Cities, Islands, &c. with all their Inhabitants, are ingulphed and swallowed up in the hideous Chasm; but if the Wind does not break through, there is then only a Trembling.
Aut extrinsecus, aut ipsa à tellure coorta
In loca se cava Terraei conjecit, ibique
Speluncas inter magnas fremit ante tumultu:
Versabundaque portatur, post incita cium vis
Exagitata foras erumpitur, & simul artam
Diffindens terram magnum concinnat biatum:
In Tyria Sidone quod accidit, & sit ægis
In Peloponneso: Quas exitus hic anima
Disturbat urbeis, & Terrae motus obortus!
Multaque praeterea ceciderunt mania magnis
Motibus in terris, & multæ per mare pessum
Subsedere suis pariter cum civibus urbeis.
Quod nisi prorumpit, tamen impetus ipsæ Animal 590
Et fera vis Venti per crebra foramina terræ
Disperitur, ut Horror; & incutit inde tremorem:
Frigus uti nostris penitus cium venit in artus,
Concutit invitos cogens tremere atque moveri.
Ancipiti trepidant igitur terræ per urbeis:
Tecla superne timent, metuunt inferne, cavernas
Terræ ne dissolvat Natura repente:
Neu dispersa sua latè dispandat biatum:
Idque suis confusa velit complere ruinis.
Proinde licet, quamvis cælum terramque reantur
Incorrupta fore æternae mandata saluti:
Attamen interdum præsens vis ipsa pericli
Subditat bunc stimulum quadam de parte timoris,
Ne pedibus raptim Tellus subtræsta feratur
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Blafts (raised either from without or within the Earth itself) throw themselves furiously into these hollow Caverns, and in these vast Dens roar and toss themselves about; and when they have rolled within, and raged with all their Might, they break abroad at last, and cleave the solid Earth, and make a hideous Chasm. This happened at Sidon, a City of the Tyrians, and at Ægæ in Peloponnesus. What Cities has this Eruption of the Wind destroyed? What Earthquakes has it produced? At Land, the Walls of many Towns have tumbled down by these violent Concussions; and many Cities, with all its Inhabitants, have sunk together into the Sea. But if the Wind does not break through, yet the Fury and raging Force of its Blasts are scattered through the many Pores of the Earth like a shivering Cold, and cause a Shuddering in its Bowels; as the Cold, when it seizes upon our Limbs, makes us shake against our Will, and tremble all over. Then Men stagger with doubtful Fear in all the Cities; they are in dread of their Houses above them, and of the Earth under their Feet; left Nature should instantly break to Pieces the Caverns below; left the divided Earth should open wide its Jaws, and fill them with the utter Desolation of Men and Houses.

Even Those who think the Heavens and the Earth are Eternal, and will be preserved safe for ever, yet the present Dread of impending Danger stagers them, and raises terrible Apprehensions, left the Earth should instantly fail under their Feet, and sink into the great Abyss; left the Difsolution of the Univerfe, from the very Foundation, or as it were a Shuddering of the Earth, which is caused by the chilling Wind that is diffused through all its Pores.
In barathrum, rerumque sequatur prodita Summa 605 Funditus, & fiat Mundi confusa ruina.

Nunc ratio reddunda, augmen cur ne sciat Æquor. Principio, Mare mirantur non reddere majus Naturam, quod tantu' suat decursus aquarum, Omnia quod veniant ex omni Flumina parte. 610 Adde vagos imbreis, tempestatesque volanteis:

Omnia quæ maria, ac terras sparguntque, rigantque. Adde suos fonteis: tamen ad Maris omnia summan Guttai vix insur erunt unus ad augmen: Quod minus est mirum, Mare non augescere magnum.


Tum porro Venti magnam quoque tollere partem Humoris possunt verrentes æquora ponti: Una noite vias quoniam peræpe videmus 625 Siccari, mollisque lutì concrescere crustas.

Præterea,
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tion, should follow, and the Fabric of the World should fall into Ruin and Confusion.

And now we are to account why the Waters of the Sea are never increased. And first, Men wonder that Nature does not inlarge the Bounds of the Sea, in proportion to the Falls of Water, and the Streams of so many Rivers that from all Parts flow into it; besides the wandering Showers and flying Storms, that pour down and discharge themselves upon the Land and Seas, you may add the Fountains and Springs likewise: But All These, compared to the Vaftness of the Sea, are hardly more than one Drop of Water, and therefore can contribute little to its Increase. No wonder then, that the wide Sea rolls within the same Bounds.

And then, the Sun licks up a great Part of its Water with its Heat; for we see the Sun dries a Garment, dropping wet, with its burning Rays. And the Sea, we know, is widely spread, and exposed to the Influence of his Beams. And though the Sun draws up but a very little Quantity of Moiſture from every Part of the Sea, yet, within fo vaft a Circumference, a great Store of Water must be drawn off.

The Winds likewise, brushing over the Surface of the Sea, carry off a large Part; for we observe the Roads are frequently dried in one Night, and the soft Dirt grows hard.

The Sea does not increase, because the Gulph into which the Rivers difembogue their Streams, is fo vaft, that all their Waters, together with the Rain, Snow, Hail, &c. seem not to add one Drop to the Sea. - The Sun drinks up a great deal of its Moiſture; the Winds brush off and carry away no small Quantity; the Clouds take some away. As the Rivers run into the Sea, so they are re-conveyed from thence, from through the hidden Veins of the Earth, back to their own Springs. Thus the Waters roll in a revolving Courſe, and therefore no wonder the Sea does not increase.

Besides,
Pratera, docui multum quoque tollere Nubeis
Humorem magno conceptum ex æquore ponti:
Et passim toto terrarum spargere in orbe,
Cum pluit in terris, & venti nubila portant. 630

Postremò, quoniam rarò cum corpore Tellus
Est, & conjunctas oras maris undique cingit:
Debet, ut in mare de terris venit humor aquæ,
In terras itidem manare ex æquore salfo;
Percolatur enim virus, retròque remanat
Materies humoris, & ad caput amnibus omnis
Confluit: inde super terras redit aëmine dulci,
Quà via seclà femel liquido pede detulit undas.

Nunc ratio qua sit, per faucis montis ut Ætnæ
Exspirent ignes interdum turbine tanto,
Expediam: neque enim media de clade coorta
Flammae tempestas Siculium dominata per agros
Finitimis ad se convertit gentibus ora,
Fumida cùm cali scintillare omnia temp la
Cernentes pavidà complebant pœstora curà,
Quid moliretur rerum Natura novarum.
Hifice tibi rebus latè sit, altèque videndum,
Et longè cunctas in parteis dispiciendum,
Ut reminiscaris, Summam rerum esse profundam,
Et videas, calum Summaë totius unum
Quàm sit parvula pars, & quàm multesima confet:
Et quota pars Homo Terræ sit totius unus.
Quod bene propositum si planè contueare,
Ac videas planè; mirari multa relinquus.

Nunc
Besides, I have shewn that the Clouds suck up a great deal of Moisture from the wide Sea, and then scatter it down over the whole Earth, when the Rain falls, and the Winds drive the Clouds through the Sky.

Lastly, Since the Earth is of a rare Con-texture, and full of Pores, and every way surrounds the Body of the Sea which joins to it, it follows that, as the Waters flow from the Earth into the Sea, so they must return from thence into the Earth again. In these subterraneous Passages the saline Particles are strained off, and the Waters flow back, and unite together at the Fountain Heads; from whence they glide sweetly, with their collected Strength, over the Earth, through those Channels where the Streams first cut their liquid Way.

Now learn the Cause why Fires break out, with so much Fury, from the Jaws of Mount Ætna; for we are not to suppose, such a Tempest of Fire rages over the Plains of Sicily, and brings such Destruction with it from the Gods, as if it only raised the Admiration of all the neighbouring People, who seeing the whole Heavens sparkling with Fire, and full of Smoke, trembled with anxious Concern, and wonder'd what new Phenomenon Nature was going to produce. The Reason of these Events requires a deeper and a wider Search. You must enter further into all their Parts, and then you will recollect that the Universe of Things is Infinite; and observe how small a Part (scarce one of a Thousand) is one Heaven, in comparison of the Whole, and what a poor Pittance of the whole Earth is one Man. If you consider this well, and observe closely, you will cease wondering at many Things which now raise your Admiration.

For
Num quis enim nostrum miratur, squis in artus 655
Acceptit calido Febrim fervore coortam,
Aut alium quemvis Morbi per membra dolorem?
Obturgescit enim subito Pes, arripit acer
Sæpe dolor Denteis, oculos invadit in ipsos:
Exiit facer Ignis, & urit corpore serpens
Quamcunque arripuit partem, repitque per artus.
Nimirum, quia sunt multarum Semina rerum:
Et satis bæc Tellus nobis Calumque mali fert,
Unde queat vis immensi procreficere morbi.
Sic igitur toti caelo, terraque putandum est 665
Ex infinito satis omnia juxtapitare,
Unde repente queat Tellus concussa moveri,
Perque mare, & terras rapidus percurrere Turbo,
Ignis abundare Ætnaeus, flammescere Calum.
Id quoque enim Ætnaeus, ardente caelestia templar, 670
Ut Tempestates pluviae graviore coortu
Sunt, ubi forte ita se tetulerunt Semina aquarum.
At nimis est ingens Incendi turbidus ardor.
Scilicet, & fluvius, qui non est, maximus eii est
Qui non antè aliquem majorem vidit: & ingens 675
Arbor, Homœque videtur: et omnia de genere omni,
Maxima quae vidit quisque, bæc ingentia fingit:
Cùm tamen omnia cum Caelo, Terraque, Marique
Nil sint ad Sumam Summæ totius omnem:
Nunc tamen, illa modis quibus irritata repetè 680
Flamma foras vaśis Ætnæ fornacibus efflet,

Expediam.
Book VI. Of the Nature of Things.

For where is the Wonder with any of Us, if a Man receives the burning Heat of a Fever within his Veins, or feels the Anguish of any other Disease in his Limbs? For our Foot often swells of a sudden; a sharp Pain frequently seizes upon our Teeth, and attacks our Eyes. There is such a Thing as the Holy Fire, that spreads over the Body, and burns the Part it fixes upon, and creeps over the Limbs. Nothing strange! for the Seeds of Things are in great Abundance, and the Earth and the Heavens afford sufficient Supplies of hurtful Seeds, from whence the sharpest Diseases may be produced in Us: And therefore you must think, that large Store of Seeds may flow from the Infinite Space, and supply the Earth and the whole Heavens. These may cause those sudden and violent Tremblings of the Earth, that rapid Whirlwinds scour along the Land and Sea, and that there is abundant Fuel for the Flames of Etna, and that the Sky is all in a Blaze; for this happens, and the Heavens are on fire, when the Seeds of Flame unite, as the Storms of Rain are the more violent when the Seeds of Water are collected and joined together.

But you will say, the Fire of Etna is too great and impetuous. By the same Rule a River, not very large, appears a mighty Stream to one who never saw a greater; and so a Man or a Tree seems prodigious; and all other Bodies that we see, we imagine are extraordinary; when, alas! all Beings, with the Heavens, the Earth, and the Sea together, are nothing to the vast Universe of All.

And now I shall explain by what Means the raging Flame bursts suddenly abroad from the vast fiery

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5 Commonly called St. Anthony's Fire.
1 The Eruption from Mount Etna is caused by the Force of Wind. The Seeds of that Wind come from the Infinite Universe,
Expediam. Primùm totius subcava mòntis
Efè natura, fèrè silicum suffulta cavernis:
Omnibus èfè porro in speluncis Ventus & Aér.
Ventus enim fit, ubi ès agitando percutus Aér. 685
Hic ubi percaluit, calefecitque omnis circum
Saxa furens, quà contingit, Terramque: & ab ɔllis
Excufit calidum flammis velocibus ignem:
Tollit ʃe, ac reehis ʃta faucibus ejcit altè,
Fundique ardorem longè, longèque favillam 690
Differt, & crassa volvit caligine fumum:
Extruditque simul mirando poudere saxa:
Ne dubites, quin hac Animæi turbida sit vis.

Præterea, magna ex parti Mare montis ad ejus
Radices frangit fluitus, òftunque reforbet. 695
Ex hoc usque füri Speluncae Montis ad altas
Pervenient subter faucet: Hac ira fatendum est,
Æt penetrale mari penitus res cogit aperto:
Atque efflare foras, ideoque extollere flammas,
Saxaque subjeclare, et arenæ tollere nimbos. 700
In summo sunt ventigeni Cratères, ut ipsis
Nominent, Nos quas Faucet perbibemus, & Óra.
Sunt aliquot quoque res, quarum unam dicere causam
Non fatis est, verùm plureis, unde una tamen fit.
fiery Entrails of this Mountain. And first, Nature has formed the whole Mountain hollow within, and supports these Cavities by Arches of Stone. Now all Caverns are filled with Wind and Air; for Air, when it is violently moved, becomes Wind; and this Wind, when it is grown hot, and, furiously whirling about, has inflamed the Stones and the Earth by beating upon them, and from them has struck out Sparks of Fire with rapid Flame, then it raises itself up, and throws itself violently, out of the open Jaws at the Top, into the Air; then it pours the Fire abroad, and spreads the burning Embers all about, and belches dusky Clouds of rolling Smoke, and shoots out Rocks of wondrous Weight. This, no doubt, is done by furious Blast of Wind within.

Besides, the Sea, for a great Way, dashes its Waves against the Roots of this Mountain, and then again forces up its Tide. The Waters press into these Caverns that lie directly under those open Jaws above; this you must allow; and the Flames, yielding to the driving Flood, there force their Passage out, and fly abroad, and cast the Fire on high, and throw out Rocks, and raise whole Clouds of Sand; for on the Summit there are certain Bason, where Wind is generated: The Greeks call them so; we call them Mouths and Jaws.

There are some Things, observe, for which it is not sufficient to assign one Reason, but many;

Universe, and gathering together in the Mountain, drive out either the Flames that lurk within the Bowels of the Mountain, or those they strike and force out from the very Stones of it; or else that Wind rushes in at the Hollows that are at the Foot of the Mountain, and whose Entrances are open, when the ebbing Sea leaves the Shore (for the Sea washes the Foot of the Mountain) and blows out the Flames. He says, at last, that Winds are bred in the very Hollows of the Mountain. And then he gives many Reasons; that, among them, one at least may be true and certain.
Corpus ut exanimum si quod procul ipse jaceere

Conspicias Hominis: fit ut omneis dicere causas

Conveniat letbi, dicatur ut istius una.

Nam neque cum ferro, neque frigore vincere posset

Interiisse, neque à morbo, neque fortè veneno:

Verum aliquid genere esse ex hoc, quod Concio dicat.

Scimus: Item in multis hoc rebus dicere habemus.

Nilus in aestati crescit, campisque redundat

Unicus in terris Aegypti totius annis.

Is rigat Aegyptum medium per sœpe calorem,

Aut quia sunt aëstate Aquilones stitia contra

Anni tempore eo, quo Etesia flabra feruntur:

Et contra fluvium flantes remorantur, & undas

Cogentes sursus replent, coguntque manere.

Nam dubio procul bæc adverso flabra feruntur

Flumine, quæ gelidis & stellis Axis aguntur.

Ille ex aëtisera parti venit annis ab Austro

Inter nigra virum, percoëlaque sæcla calore,

Exoriens penitus media ab regione diei.

Est quaque, uti posset magnus congestus arene

Fluctibus adversis oppilare stitia contra,
of which One only is the True: As when you see the dead Body of a Man, lying at a Distance upon the Ground, you are to recollect all the Causes which possibly might occasion his Death, in order to find out the right; for you cannot directly say, whether he died by the Sword, or by Cold, or by Disease, or perhaps by Poison, though we know it was by one of these, and every one thinks so. The same Method you are to observe in many other Cases.

The Nile, the only River in all Egypt, increases in the Summer, and overflows the Fields. It waters the Country of Egypt about the middle of Summer, either because in Summer the North Winds are opposite to the Mouths of the River, at the Season when the Etefian's blow, and beating hard against the Stream stop the Current, and driving the Waters upwards fill the Channel, and force back the Flood; for without doubt those Northern Winds blow directly against the Tide. The River flows from the warm Climate of the South, and divides the Country of the black *Æthiopians*, that are thoroughly sodden with the Sun's Heat, and rises far in the most Southern Part of the World.

And it may be, that great Heaps of Sand, that are raised against the Stream, choak the

*He assigns natural Causes for the Overflowing of the Nile.* He says, first, that the Etefian or Annual Winds, which blow constantly from the North, at a certain Season of the Year, repel and drive back the Stream of the River that comes from the South, and are the Cause that it fills up its Channel, and overflows its Banks. If it should be objected, that the Etefian Wind (for Winds are light Bodies) is too weak to stop so great a Weight of Waters, he adds, that the Sands which the Sea, being agitated by those Winds, calls into the Mouths of the Nile, choak them up, and thus cause the Inundation. He adds two other Reasons; the Rains that fall at the Sources of the River, and the Melting of the Snows.
Cum Mare permotum ventis ruit intus arenam.
Quo fit uti paaio liber minus exitus amni,
Et proclivus item fiat minus impetus undis.

Fut quoque, uti pluviae forsitan magis ad caput ejus
Tempore eo fiant, quo Etesia flabra Aquilonum
Nubila conjiciunt in eas tunc omnia parteis.
Scilicet ad median regionem ejestia diei
Cum convenerunt, ibi ad altos denique monteis
ContruSae nubes coguntur, vique premuntur.

Forfit & Æthiopum penitus de montibus altis
Crescat, ubi in campos albas descendere ningueis
Tabificis subigit radiis Sol omnia lufrans.

Nunc age, Averna tibi quæ sint loca cumque la-
cusque,

Expeditam, quali natura praedita consent.
Principio, quod Averna vocantur, nomen id ab re
Impostum est, quia sunt Aevibus contraria cunelis,
E regione ea quod loca cum advenere volantes,
Remigii oblitum pennarum veia remittunt,
Præcipitesque cadunt molli service profuse
In terram, si fortè ita fert natura locorum:

Aut in aquam, si fortè lacus substratus Averno est.
Qualis apud Cumas locus est montemque Vescvum,
Oppleti calidis ubi fumant fontibus aureus.
Est & Athenaeis in manibus, arcis in ipso

Vertice,
Of the Nature of Things.

Mouths of the River, when the Sea, by the Violence of the Winds, drives the Sand into the Channel, and stops it up. By this means the Passages of the River are more confined, and the Current of the Water is slower and of less Force.

Or perhaps the Rains are more violent near the Head of the River, at that Season of the Year when the Etesian Winds blow from the North, and drive all the Clouds to the more Southern Parts. When the Clouds meet in that warm Quarter, they are condensed and pressed hard against the high Mountains, and by that Force the Rain is squeezed out.

Or, lastly, the Increase of the River may proceed from the high Mountains of the Ethiopians, when the Sun, that searches all Things with his dissolving Rays, forces the melted Snow to descend into the Plains.

And now the Nature of that Place or Lake we call Avernan, I shall next explain. And first, Averni. It takes its Name from its Effect, because 'tis fatal to the Life of Birds; for when the Feather'd-kind fly to this Place, their Flight is stopped, they flutter in the Air, and fall with hanging Wing and bended Head upon the Earth, if haply it be Earth, or in the Water if it be a Lake. At Cuma there is a Place like This, and on the Mount Vesuvius, which, filled with burning Sulphur, throws out Smoke. Another of the same there is within the Walls of Athens, upon the Top

*One of these Averni is at Cumae, another near Minerva's Temple in Athens, and a Third in Syria. These Places were supposed to be the Entrances to Hell to the Palace of Pluto, and through them the Manes or Souls of the Dead are said to pass to the subterraneous Abodes. They were so called from the Greek "Aon", derived from the Privative Particle α, and κοταδεσα Bird; because the noxious Vapours that exhaled from the Averni were so poisonous, that they struck dead the Birds that flew over them.
Vertice, Palladis ad templum Tritonidos alma, 750
Quò nunquam pennis appellunt corpora raucae,
Cornices, non cum fumant Altaria donis:
Usque adeo fugiunt non iras Palladis acreis
Pervoigili causa, Graiüm ut ecceinere poetæ:
Sed natura loci hoc opus efficit ipsa sua vi. 755

In Syria quoque sertur item locus esse, videri,
Quadruipes quoque quod simul ac vestigia primum
Intulerint, graviter vis cogat concidere ipsa,
Manibus ut si sint Divis maestata repente.
Omnia quæ naturali ratione geruntur, 760
Et quibus causis sint, apparet origo:
Janna ne his Orci potius regionibus esse
Credatur pòsìa, hinc Animas Acheruntis in oras
Ducere fortè deos Maneis infernè resamur:
Naribus aliipes ut Cervi sæpe putantur 765
Ducere de latebris serpensia secla ferarum.
Quod procûl à vera quàm sit ratione repulsam,
Percipe, namque ipsa de re nunc dicer e conor:
Principiò hoc dico, quod dixi sæpe quoque ante,
In Terra cujusque modi rerum esse figuras: 770
Multa homini quæ sunt vitalia: multaque morbos
Incuteò, & Mortem quæ possint accelerare:
Et magis esse aliis alias Animantibus aptas
Res ad vitæ rationem ostendimus ante,
Propter diffimilem naturam, diffimilesque 775
Texturas inter se, primasque figuras:
Multa meant inimica per aureis, multa per ipsas
Insinuant nareis infesta atque aspera odoré:
Nec sunt multa parum taetu vilanda, nec autem
Aspèctu fugienda, saporeque tristia quæ sint. 780
Deinde videre licet quam multæ sint Homini res
Acriter infesto sensu, fœræaque, grævesque.

 Arboribus
Of that high Tower, near which the kind Tritonian Pallas has her Temple: Here the horrid Ravens never steer their Flight, not when the Altars smoke with slaughter'd Victims: They do not shun this Tower to fly the Rage of angry Pallas for their officious Care, as Grecian Poets sing; but 'tis the noxious Nature of the Place that drives them hence.

They say there's such a Place as This in Syria; where Beasts no sooner venture with their Feet, but the pernicious Vapour strikes them dead, as if by sudden Stroke they fell a Sacrifice to the Infernal Gods. All these Things proceed from natural Causes; and what these Causes are will soon appear, by tracing out their Principles; let you should think in Places such as These Hell-Gates are fixed, and fancy that the Gods below draw through these Passages departed Souls into the Infernal Shades; as the swift Deer are said by Smelling to draw out the lurking Serpents from their Holes. But how absurd to Reason are such Thoughts, observe, for now I am going to explain.

And first, I say, as I have often said before, that in the Earth are Seeds of Things of every Shape; many that prolong the Life of Man, and many that inflict Disease and hasten Death. And I have shewn that there are other Seeds peculiarly disposed to serve the Use of other Creatures, and support their Life; because these Seeds are different in their Nature, they vary in their Texture and their Shape. Many hurtful Seeds pass through the Ears, and many sharp and stinking Seeds affect the Nose; some are offensive to the Touch, some to be avoided by the Sight, and others bitter to the Taste. And thus you see how many Things there are deadly, distasteful, odious to the Sense.

This refers to the Story of Coronis in Ovid's Metamorph.
T. Lucretii Lib. VI.

Arboribus primùm certis gravis umbra tributa \( \text{ fists } \),
Usqueadeo, capitis faciunt ut \( \text{ fæpe dolores } \),
Si quis eas subter jacuit prostratus in herbis. 785

Est etiam in magnis Heliconis montibus arbos
Floris odore hominem tetro consueta necare.
Scilicet hæc ideo Terris ex omnia surgunt
Multa modis multis multarum Semina rerum,
Quòd permisla gerit Tellus, discretaque tradit. 790

Nocturnumque recens extinctum Lumen, ubi acri
Nidore offendit nareis consopit ibidem,
Déjicere ut pronos qui morbus \( \text{ fæpe suævit } \).

Castorcoque gravi Mulier sopita recumbit,
Et manibus nitidum teneris opus effuit eij, 795
Tempore eo \( \text{ si odorata } \) quo mensura solvit.

Multaque præterea languentia membra per artus
Solvunt, atque Animam labesæ tant sedibus intus.

Denique, \( \text{ si in calidis etiam cunæere lavacris, } \)
Plenior \& folio in fueris ferventis aquaë: 800
Quam facilè in medio fit uti des \( \text{ fæpe ruinas } \)?

Carbonumque gravis vis, atque odor insuæatur
Quam facilè in cerebrum, nis aquam præcipimus ante?
At cum membra hominis percepit servida febris,
Tum fit odor Vini plagæ maætabilis infar. 805

Nonne vides etiam terra quoque Sulfur in ipsa
Gignier? \& tetro concrecere odore Bitumen?

Denique ubi Argenti venas, Aurique sequuntur,
Terraï penitus scrutantes abdita ferro;

Qualeis
Some trees are so pernicious by their shade, that they affect the head with grievous pain, if one lies on the grass beneath the boughs.

There is a tree that grows on the high hill of Helicon, whose blossoms by their smell give present death; for in the earth are seeds of every kind, variously mixed, which she with curious art separates, and applies to things, as each in its own nature most requires.

A lamp, just extinguished, is by its smell so offensive to the nose, that it stupefies, as if a man were struck down by a fit of an apoplexy.

A woman will fall dead asleep at the nauseous smell of an ointment, made of the testicles of the beaver; her fine work will drop from her tender fingers, especially if she smells it when her fluors are upon her.

Besides, there are many things that entirely dissolve the feeble limbs all over the body, and shake the very soul within out of her place.

If you stay long in a warm bath, and continue in the vessel of hot water when the belly is full, how apt will you be to faint before you get out?

The suffocating power of charcoal, and its stifling smell, how soon do they find a passage into the brain, unless you have drank plentifully of water before?

When a burning fever has seized upon the limbs, the smell of wine is like a stroke that takes away the sense.

Don't you observe likewise, that sulphur and bitumen, with its noxious smell, are generated in the bowels of the earth itself?

And so, when men perseve the veins of gold and silver, and with their tools dig in the very

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*Pliny, lib. xvii. cap. 12. says, that the shade of the walnut-tree offends the head, and that no plants will thrive under it.*

U 4 Entrails
T. Lucretii Lib. VI.

Qualeis exspirat Scaptesula subter odores?
Quidve mali sit ut exhalent Aurata metalia?
Quas Hominum reddunt facies? qualesisque colores?
Nonne vides, audisve perire in tempore parvo
Quiam soleant, & quam vita copia defit,
Quos opere in tali obibet vis magna? necesse est
Hos igitur tellus omnes exasfectavit asfus:
Expiretque foras in aperta, promptaque Cali.
Sic & Averna loca Alitibus summittere debent
Mortiferam vim, de terra quae surgit in auras,
Ut spatium cali quadam de parte venenet:
Quò simul ac primùm pennis delata sit Ales,
Impediatur ibi caeco conrepia veneno,
Ut cadat & regione loci, quà dirigat asfus:
Quò ciam courruit, hæ cadem vis illius asfus:
Reliquias vita membris ex omnibus asfert.
Quippe eterni primùm quasi quendam conciet asfum:
Possevivit igitur, uti ciam jam cecidere veneni
In fontes ipsos, ibi sit quoque Vita somenda,
Propoteca quòd magna mali sit copia circum.

Fit quoque ut interdum vis hæc atque asfus Averni,
Aëra, qui inter omnis cuniculis terramque locatus,
Discuitat, protè uti locus hinc linquatur inanis:
Cujus ubi è regione loci venère volantes,
Claudicat extemplo pennarum nifus inanis:
Eli conamen utrinque alarum proditum omne.

Hic ubi niftari nequeunt, insisteraque alis,
Scilicet in terram delabi pondere cegit
Natura; & vacuum propè jam per inane jacentes
Dispergunt Animas per caulis corporis omnes.

Frigidior porro in puteis Asflate sit Humor,
Rarëficit quà Terra calore, & femina sigra
Fortè vaporis habet, propè dimitit in auras.
Quò magis igitur Tellus affedt a calore:
Hoc sit frigidior, qui in terrà fût abditus, Humor.
Of the Nature of Things.

Entrails of the Earth, what hurtful Vapours do the Mines exhale? What deadly Damps flow from the golden Ore? How wretchedly the Miners look? How wan their Colour? Have you not seen or heard how soon they die, how short their Life is who are condemned to this sad Servitude? The Earth then must needs belch out these poisonous Exhalations, and send them all abroad, and taint the open Air.

The Averni thus throw out these deadly Steams, so fatal to the Birds. They rise out of the Earth into the Air, and to some Distance blast the lower Skies. Here, when the Bird arrives upon the Wing, this latent Poison seizes on his Blood; his Flight is stopp'd, and down he falls: the Force of these Effluvia carries off the small Remains of Life from all his Limbs, and strikes him dead. These Vapours first excite a sort of Boiling in all his Veins; and when he drops into the Fountain whence the Poison springs, he dies; for there the noxious Vapours rage the most.

Or else, sometimes, the Force and rising Blasts of these Averni dispel the Air that lies between the Birds and the Earth, and the intermediate Space becomes a Void. Here, when the Birds are carried by their Flight, immediately they flutter in the Air, they clap their Wings in vain, their Pinions flag, and when they can no longer bear them up, Nature must drive them down upon the Earth with all their Weight; and as they, helpless, in the Vacuum lie, they breathe their Soul abroad through every Pore.

The Water in some Wells, we find, is cold in Summer; because the Earth is rarefied by the Sun's Heat, and by that means the Seeds of Fire it contains within, break swiftly out into the Air: And therefore the more the Earth is affected by the Heat, the colder will the Water be that is inclosed.
Frigore cum premitur porro omnis terra, coitque, 845
Et quasi concrecit: Fit seilicet, ut coëundo
Exprimat in puteos, figuem gerit ipsa, Calorem.

Est apud Ammonis fanum fons luce diurna
Frigidus, at calidus nocturno tempore fertur:
Hunc homines fontem nimis admirantur, & acri 850
Sole putant subter terras servisciere raptim,
Nox ubi terribili terras caligine texit:
Quod nimis a vera'ßt longè ratione remotum:
Quippe ubi Sol nudum contrectans corpus aquai,
Non quierit calidum supera de reddere parte, 855
Cium superum lumen tanto fervore fruatur:
Qui queat hic subter tam craffo corpore terram,
Percoquere bumorem, & calido sociare vapori?
Præfertim cium vix posset per septa domorum
Insinnare suum radiis ardentibus æstum? 860

Quæ ratio est igitur? nimirum terra magis quod
Rara tenet circum bunc Fontem, quæm cætera tellus.
Multaque sunt ignis propè semina corpus aquai.
Hinc, ubi roriferis terram non obruit umbris,
Extemplæ subitus frigescit terra, coitque. 865
Hac ratione fit, ut, tanquam compressa manu fit,
Exprimat in Fontem, quæ Semina cumque habet ignis,
Quæ calidum faciunt laticis taetum atque saporem.
Inde ubi Sol radiis terram dimovit obertos,
Et rareficit calido miscente vapore: 870

Rursus
inclosed within. But when the Earth is contracted with the Cold, when its Surface grows close, and its Pores are stopped, this Restraint hinders the Heat from flying out; it is then squeezed together into the Wells, and the Water becomes hot.

There is a Fountain, near the Temple of Jupiter Ammon, that is cold in the Day, and hot by Night. Men strangely wonder at the Quality of this Spring, and imagine that when the Night has spread her dreadful Darkness o'er the World, the Water is warmed by the violent Heat of the Sun through the Body of the Earth. But this Reason is far from being true; for if the Sun, striking upon the open Body of the Water, is not able to warm even the Surface of it, when it receives the Force of his descending Rays with all their Heat, how can He warm the Water, and infuse his Heat through so thick a Body as the Earth; especially, since he is scarce able, with his scorching Beams, to pierce through the Walls of our Houses?

What then is the Reason? Doubtless this; because the a Earth, near this Fountain, is more rare and spongy than it is in other Places, and contains within it many Seeds of Fire near the Body of the Water itself. Here, when the Night has spread the World with dewy Shades, the Earth below grows instantly cold, and is contracted; by this Means it is compressed, as with your Hand, and squeezes out those Seeds of Fire into the Spring, which make the Water grow hot to Feel and Taste. But when the Sun has driven away the Night with his bright Rays, and with his Heat has rarefied the Earth, and made it loose, these Seeds of

a The Earth being compressed by the Cold of the Night, squeezes out and transmits into the Water those Seeds of Heat, by means of which the Water grows hot; but being loosened by the Heat of the Day, she receives again into her Bowels those very same Seeds; and thus the Water becomes cold.

Fire
Rursus in antiquas redeunt primordia sedeis
Ignis, & in terram cedit calor omnis aquaï:
Frigidus hanc ob rem fit Fons in luce diurna.

Præterea, Solis radiis jactatur aquaï
Humor, & in luci tremulo rarescit ab æstu:
Propter lae fit uti qua semina cunque habet ignis,
Dimittat: quasi sæpe gelum, quod continet in se,
Mittit, & exoluit glaciem, nudesque relaxat.

Frigidus est etiam Fons, supra quem sita sæpe
Stupa jacit flammæ concepto prœtus ignis:
Tedaque confinimis ratione accensa per undas
Conlucet, quocunque natans impellitur auris:
Nimirum quia sunt in Aqua permulta vaporis
Semina, de Terraque neceffe sì funditus ipsa
Ignis corpora per totum consurgere Fontem,

Et simul exspirare foras, exireque in auras,
Non tam viva tamen, calidus queat ut fieri L'ons.

Præterea, dispersa foras erumpere cogit
Vis per Aquam subitò, surfumque ea conciliari:
Quod genus endo mari spirat Fons, dulcis aquaï
Qui scatit, & falsas circum se dimovet undas.

Et multis alius praebet regionibus aquor
Utilitatem opportunam fitientibus Nautis,
Quod dulcisis inter falsas intervomit undas.
Sic igitur per eum possunt erumpere Fontem,

Et scatere illa foras in stupam Semina: quò cùm
Conveniunt, aut cùm tedaï corpori adherent,

Ardescent
Fire return into their former Place, and all the Heat that warm'd the Spring retires within the Earth again; and so the Fountain in the Day is cold.

Besides, the Water in the Day is strongly moved by the Sun's Rays, and by his trembling Streams of Heat grows rare, and so lets out the Seeds of Fire it held by Night; just as by the Heat it shakes off Seeds of Cold, and melts the Ice, and loosens all its Bonds.

There likewise is a cold Spring, over which if you place Tow or Flax, it immediately takes fire, and is all in a Blaze. A Torch, newly extinguish'd, in the same manner, gently drawn over the Surface, is lighted by this Water, and flames out at every Breath of Air. And no wonder; for there are many Seeds of Fire in the Water itself, and many must needs rise out of the Earth, and ascend through all the Fountain, and flow abroad, and make their Way into the Air; but yet they are not so hot as to set the Spring on fire.

Besides, the innate Force of these Seeds, dispersed through the Water, compels them to move upwards, and to unite upon the Surface; as we see sometimes a Fountain of sweet Water bubble up in the Middle of the Sea, and beat off the salt Waves that are about it. The Sea affords many of these Springs, that bring a seasonable Relief to the thirsty Mariners, by throwing out Streams of fresh Water among the salt. The Seeds of Fire may in the same manner break through the Water of this Fountain, and flow out into the Tow. Here, when they unite and stick to the Body of

b The Seeds of Fire rising up to the Surface of the Water, may there be condensed and gather'd together, in such a manner, as to kindle any Combustibles that are apt to take fire, if they are advanced to them.
Arde{cunt facile exemplò: quia multa quoque in se
Semina habent ignis stupæ tedeque tenentes.

Nonne vides etiam, nocturna ad lumina Lychnum
Nuper ubi extinctum admoveas, accendier ante 901
Quàm tetigit flammam? tedamque pari ratione?
Multaque præterea, prius ipso taba vapore
Eminus arde{cunt, quàm coninus imbuat ignis.
Hoc igitur fieri quoq; in illo Fonte putandum\* 905
Quod superest, agere incipiam quo sedere fiat
Nature, Lapis hic ut ferrum ducere posse\at,
Quem Magneta vocant patrio de nomine Graii,
Magnetum quia sit patriis in finibus ortus.
the Torch, they immediately fall into a Flame; for Flax and Tow contain many Seeds of Fire within, which make them easily disposed to burn.

Have not you observed, when you hold a Candle newly extinguished, to another that is lighted, it catches fire before it touches the Flame? A Torch likewise, by that same Rule, will do the same; and many other Things will take fire at a Distance, before the Flame reaches them. And this you may imagine is the Case of the Fountain abovementioned.

And now I shall begin to shew by what Power of the Nature it is that the Stone (which the Greeks Loadstone. call a Magnet, from the Country that produces it, for it is found in the Region of the Magnetes) has the Virtue to attract Iron.

Men

The Poet, in order to explain the attractive Virtue of this Stone, premises four chief Positions, which though he has proved them already, yet he thinks fit to inculcate again in this Place. 1. That certain Corpuscles are continually flowing off from all Things. 2. That no concrete Body is so solid as not to contain some empty little Spaces. 3. That the Corpuscles that are emitted from Things, do not agree with all Things alike, and in the same manner, and produce not the same Effects on them. 4. That the void little Spaces are not alike in all Things, but differ in Size and Figure, and therefore cannot be fit for all Bodies indifferently. This being premised, he proceeds to explain how the Loadstone attracts Iron, or the Iron is conveyed to the Loadstone. Many Particles (he says) flow from the Loadstone, and dissipate the Air all around it; and thus many void little Spaces are made. But when the Iron is placed within the Sphere of that dissipated Air, there being a great deal of empty Space between that and the Loadstone, the Corpuscles of the Iron leap more freely forward into that Void (for the Seeds of all Bodies fly forward on a sudden into the empty Space) and for that Reason are carried towards the Loadstone. Now they cannot tend that Way, without dragging along with them their coherent Seeds (for the Seeds of Iron are most intricately tangled and twined together) and consequently the whole Mais of Iron. But because the Iron moves any way upwards, downwards, across, or in any Obliquity, without the least Distinction, according as it is placed to the Loadstone, he says,
Hunc homines Lapidem mirantur, quiippe catenam
sepe ex annellis reddit pendentibus ex se.
Quinque etenim licet interdum, plurisique videre
Ordine demissos levibus jactariar auris,
Unus ubi ex uno dependet subter adhærent;
Ex alioque alius Lapidis vim, inclaquote noseit:
Usque adeo permananter vis pervaleat ejus.

Hoc genus in rebus firmandum est multa prius, quare
Ipsius reij rationem reddere possis:
Et ninium longis ambagibus est adeundum:
Quo magis attentas aures, animumque repose.

Principi, omnibus à rebus, quaseunque videmus,
Perpetuò fluere, ac mitti, spargique necefe ipsis:
Corpora, que feriant oculos visumque lassiant:
Perpetuòque, fluunt cretis ab rebus odores,
Frigus ut à fluviis, Calor à sole, Aëius ab undis
Æquoris exerit marorum littora propter:
Nec varii cessionem sonitus manare per Aures.

Denique in Os salti venit humor fæpe saporis,
Cùm mare versamur propter, dilutaque contra
Cùm tuimur miseri Ahsintbia tangit Amaror:
Usque adeo omnibus ab rebus res queaque fluenter
Fertur, & in cuntias dimittitur undique partes:
Nec mora, nec requies inter datur uilla fluendi,
Book VI. Of the Nature of Things.

Men are amazed at the Qualities of this Stone; for it will make a Chain of several little Rings of Iron, without a Link between, to hang together entirely from itself; you may sometimes see Five or more hanging straight down, and play in the gentle Air, as they stick close and depend at the Bottom one upon another; the Ring that follows feels the Attraction and Power of the Stone from that above it. So strongly is the Virtue of the Magnet communicated to the several Rings; it acts with so great a Force.

In Inquiries of this Nature many Things are to be first proved, before we can fix upon the true Cause; we must trace the Subject through many long and intricate Difficulties; and therefore I beg you will hear me with a willing Mind, and with the closest Attention.

And first, Certain Seeds must necessarily flow, be sent out, and continually dispersed abroad, from all Things whatever we see, which must strike upon the Eye, and affect the Sight. From some Bodies a Train of Smells are alway flying off. So Cold is emitted from the Rivers; Heat from the Sun; a Salt Vapour from the Water of the Sea, that eats through Walls along the Shore; and various Sounds are always flying through the Air. And as we walk upon the Strand, a briny Taste frequently offends our Mouth; and when we see a Bunch of Wormwood bruised, the Bitterness strikes upon the Palate. So plain it is that something is continually flowing off from all Bodies, and is scattered all about. There is no Intermisssion, the Seeds says, that this could not be, but by reason that the empty Space that is made by Corpuscles that flow from the Magnet, and into which all Bodies, that otherwise tend only downwards, are protruded indiscriminately by the Strokes and Blows of other Bodies. This in general is what he observes concerning the Loadstone.

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T. Lucretii Lib. VI.

Perpetuò quoniam sentimus, & omnia semper
Cernere, Odorari licet, & sentire Sonorem. 935

Nunc omnes repetam quām raro corpore sint res,
Commemorare, quod in primo quoque carmine claret.
Quippe etenim, quamquam multas hoc pertinet ad res
Nousère, cum primis banc ad rem prōtinus ipsam,
Qua de differere aggredior, firmare necesse sit 940
Nil esse in promptu, nisi nūlum Corpus Inani.

Principio fit, ut in speluncis saxa superna
Sudent bunore, & guttis manantibus silVent:
Manat item nobis e toto corpore Sudor,
Creuit barba, pilique per omnia membra, per artus:
Diditus in venas cibus omnes, auget, dilique 946
Corporis extrema quoque partes unguiculosque.
Frugis item transeat per aēs, calidumque vaporem
Sentimus: sentimus item transeat per aurum,
Alque per argentum, cùm pūcula plena tenemus. 950
Denique per disiecta domorum saxea voces
Pervolitant, permanat Odos, Frigusque, Vaposque
Ignis: quin Ferri quoque vin penetrare sūevit,
Undique qua circūm corpus torīca coërcet;
Morbida vis quacunque extrinsēcus insinuator. 955
Et tempēstatis terra caloque coertae
E celo ineptō terraque repente faceSSunt,
Quandoquidem nihil est, non raro corpore nexum. 960
Huc accedit, uti non omnia, quae jacentur
Corpora quacunque ab rebus, eodem prādita sentiē,
Atque eodem pacto rebus sint omnibus apta.
Principiō, Terram, Sol excoquit, & facit aere:
At glaciem diffoluit, & alīs montibus altē
Exstruitas ningueis radiis tabescere cogit,
Denique cera liquefiit in ejus pēsta vapore,
Ignis item liquidum facit aēs, aurumque resolvit: 965
At coria, & carnem trabit, & conducit in unum.

Humor
never cease to flow, because the Sense is continually affected, we still continue to feel, to see, to smell and hear.

Now I shall repeat what I have proved at large in the first Book of this Poem, that no Bodies are perfectly solid; for though it is proper to know this upon many accounts, yet it is of principal use in the Subject I now offer to explain. In this place it is necessary to establish this truth, that there is nothing in Nature but Body mixed with Void.

And first, in the deep Caverns of the Earth, the Rocks above will sweat with moisture, and weep with flowing drops; and sweat will flow from all our Bodies, and through every pore. The beard will grow, and hairs spread o'er our members and our limbs. Nature divides our food through all the veins; it feeds and nourishes the extreme parts, our very nails. We find that cold and heat will pass through brasses, will make their way through gold and silver. We know, by feeling the outside of the cup, whether the juice within be hot or cold. And, lastly, sounds will pierce stone walls of houses; and so will smells, and cold, and heat. The force of fire, thrown from without, will pass through iron, and scorch the soldiers' limbs, though arm'd about with coats of mail. And tempests, rising from the earth or skies, and sent from thence, will strike through every thing before them; for nothing in Nature is without some void.

Besides, all seeds that are thrown off from bodies, are not the same in quantity and shape, nor do therefore they equally agree to things they strike or act upon; for first the sun burns up and dries the earth, but thaws and melts the snows so deep upon the mountain-tops. And wax will drop when placed before the fire, and brass will run, and gold dissolve by heat; but skins and flesh it shrinks and
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Humor aque porro ferrum condurat ab igni,  
At coria, & carmen mollit durata calore:  
Barbigeras oleaster eō juvat usque Capellas,  

Diffusat ambrosia quasi verò, & neñlare tintus:  
At nihil ēst, Homini fronde bac quod amarius extet.  

Denique Amaracinum fugiat Sus & timet omne  
Unguentum; nam, setigeris subus acre venenum  
Quod nos interdum tanquam recreare videtur.  

At contrā Nobis Cænum teterrima cūm  
Sparcités, cadem Subus hæc res munda videtur,  

Infatiabiliter toti ut volvantur ibidem.  

Hoc etiam superœst, ipsa quam dicere de re  
Aggrēdiōr, quod dicendum priùs esse videtur.  

Multa foramina cūm variis sint reddita rebus,  
Diffimili inter se natura prædita debent  

Esse, & habere suam naturam queque, viasque,  
Quippe ētenim variis sensu Animantibus insunt,  

Quorum quisque suam propriè rem percipit in se.  

Nam penetrare alià sonitus, aliàque saporem  
Cernimus è succis, alià Nidoris odores,  

Propter diffimilem naturam, textaque rerum:  

Præterea manare aliud per Saxa videtur:  

Atq; aliud per Ligna: aliud transire per Aurum:  

Argentoque foras aliud, Vitroque meare.  

Nam fluere hæc Species, illàc Color ire videtur:  

Atque aliis aliud citiûs transmittere eàdem.  

Scilicet id fieri cogit Natura viarum,  

Multimodis varians, ut paulò ostendimus ante.  

Quapropter bene ubi hæc confirmata atque locata  
Omnia considerint nobis præposita, parata:  

Quod superœst, facilè bine ratio reddetur, & omnis  
Causa patefset, quæ Ferri pelliciat vim.  

Principio.
and shrivels up. Water will harden Steel, made weak by Fire; but softens Skins and Flesh, made hard by Heat. Leaves of wild Olive please the bearded Goats, as if they flow'd with Juice of Nectar or Ambrosia, when nothing is more bitter than that Leaf to us. The Swine fly every strong Perfume, and fear the Smell of every Ointment; 'tis sharpest Poison to the Briskly Race, but cheers our Spirits with a sweet Delight: And then, to roll in Mud is the most odious Filthines to us, to them a cleanly Pleasure; they are never tired of wallowing in the Mire.

But before I enter fully upon the Subject before us, it is proper first to premise, that since there are many Pores of little Spaces in all Compound Bodies, it is necessary that these Passages should be of different Natures, and should vary severally in their Size and Figure; for all Creatures are formed with different Organs, every one of which has an Object proper and peculiar to itself. Sounds, we perceive, make their Passage one Way, and Taste another, and Smell another, according to the different Nature and Texture of the Things that strike the Sense. One Thing, we find, will make its Way through Stones, another through Wood, another will pierce through Gold, another through Silver, and another will fly through Glass. This the Images flow through, through These the Heat; and some Seeds will sooner pierce through the same Pores than others: This is owing to the different Figures of these Passages, which vary wonderfully in Shape, as we said before. These Things therefore, being fully proved and laid down, and every thing made ready and easy for the Grand Inquiry, we shall easily discover the Reason, and open every Cause that moves and invites the Iron to the Stone.
Principio, fluere è Lapide hoc permulta necesse est Semina, sive Æstum, qui discutit Æra plagis: 1001 Inter qui Lapidem, Ferrumque est cunque locatus. Hoc ubi inaniter spatium, multusque vacevit In medio locus: extemplo primordia Ferri In vacuum prolapsa cadunt conjuncta, fit utque 1005 Annulus ipsè sequatur, catque ita corpore toto. Nec res ulla magis primoribus ex elementis Indupedita suis arêò connexa cohaeret, Quàm validi Ferri naturæ frigidus horror. Quòd minus est mirum, quod paullo diximus ante, 1010 Corpora si nequeunt de Ferro plura coorta In vacuum ferri, quin Annulus ipsè sequatur: Quod facit & sequitur donec pervenit ad ipsum Jam Lapidem, cæcisque in eo compagibus basit. Hoc fit item cunctas in parteis, unde vacevit 1015 Cunque locus, sive ex transverso, sive superne, Corpora continuò in vacuum vicina feruntur. Quippe agitantur enim plagis aliunde, nec ipsa Sponte sua fursum possunt consurgere in auras, Huc accedit item, quare quæat id magis esse: 1020

"Hæc"
Book VI. Of the Nature of Things.

And first, Many Seeds or Effluvia are continually flying off from the Stone, and by their Blows dispers'd and drive away the Air that lies between the Magnet and the Iron: This Space being empty, and a Void made between, the Corpuscles of the Iron rush out suddenly in a Train, all linked together, into this Vacuum; so that the whole Body of the Iron Ring, to which they are joined, immediately follows; for nothing is made up of Seeds more intangled and connected together, than the cold and tough Substance of Iron. And therefore (as we laid before) it is the less to be wonder'd, if the Seeds cannot fly off from the Iron into the Void, but those before must draw on those behind, and the whole Ring follows at last; which it does, and continues to move, till it comes close to the Stone, and, fixed by secret Bonds, sticks to it. And these Effluvia of the Iron, that lie nearest the Stone, rush into the Void every way, upwards or across, wherever the Space is empty; for they are driven by the Force of other Seeds; nor have they any Power to move upwards by their own natural Motion.

You may add another Reason to account for

— He says, that many Corpuscles flow as well from the Loadstone as from the Iron, but the greater Quantity and the more strong from the Magnet. Hence it comes to pass that the Air is always dispersed and driven away to a greater Distance round about the Loadstone, and consequently that fewer empty little Spaces are made around the Iron; and because when the Iron is placed within the Sphere (as they say) of the Air that is removed and driven away, there must be a great deal of void Space between that and the Loadstone: The Corpuscles of the Iron fly the more freely into that empty Space, and therefore necessarily towards the Magnet; but those Corpuscles of the Iron cannot hurry the Way in a great Quantity, without dragging along with them the Particles that adhere to them, and by consequence the whole Mass of Iron.

X 4 this
Hæc quoque res adjumento, motuque juvatur:
Quod simul à fronte est Annelli rarioër Ær
Facies, inanitusque locus magis ac vacuatus.
Continuò fit, uti qui post eft cunque locatus
Ær, à tergo quasi provebat atque propellat.
Semper enim circum positus res verberat Ær.
Sed tali fit uti propellat tempore Ferrum,
Parte quod ex uno spatiun vacat, & capit in se.
Hic, ubi, quem memor, per crebra foramina Ferri trans
Parvas ad partes subtiliter insinuatus:
Trudit & impellit, quasi Navim velaque Ventus.

Denique res omnes debent in corpore habere
Æra, quandoquidem raro sunt corpore, & Ær
Omnibus est rebus circumdatus appositusque.
Hic igitur, penitus qui in Ferrō abditus Ær,
Sollicito motu semper jaclatur, etque
Verberat Annellum dubio procul: & ciet intus
Scilicet: atque eodem sertur, quo præcipitavit
Jam semel, & quamquam in partem conamina sumsit.

Fit quoque ut à Lapide hoc Ferri natura recedat
Interdum, fugere, atque sequi consueta vicissim.
Exsultare etiam Samothracia ferrea vidi:
Et ramenta simul Ferri furere intus abenis
In Scaphis, lapis bic Magnes cum subditus esset:
Usqueadeo fugere à Saxo gestire videtur.
this Experiment, which is, that the Iron is driven forward, and assisted in its Motion from without; for the Air before the Steel being more rare, and the Space between more empty and void than it was, hence it is that the Air that is behind strikes upon the Back of the Ring, and drives and forces it on; for the Air that surrounds all Bodies, beats upon them with continual Blows; but then only it drives on the Iron, when the Space is empty on that Side, and fit to receive it. The Air therefore, which I observe, entering into the many Pores of the Iron, and subtilly conveying itself into the little Passages, thrusts and forces it on, as a Ship is driven by Wind and Sails.

And then, all Things must contain within some Parts of Air; for all Bodies are rare, and full of Pores, and Air surrounds and pierces through every thing. This Air therefore that lies concealed in the Body of the Iron, is always tossed with violent Motion, and beats upon the Ring, and agitates it within; and so the Iron is carried on towards the Void, to which it was moving, and whither all its Force was first directed.

But sometimes the Substance of the Iron will fly from the Magnet; it will withdraw sometimes, as well as press towards it: For I have seen little Samothracian Rings of Iron, and Filings of Steel, put into a brazen Pot; and the Stone being applied to the Bottom of the Vessel, the Iron will leap and dance upwards; so eager is it to be gone, and avoid the Stone. And this great A-

- The Motion of the Iron is assisted by the outward Air, which, since it is always driving forward, and that too with more Force, the more there is of it cannot but push on the Iron into that Place where there is least Air, and consequently most Void, which must be towards the Loadstone. This Motion is likewise assisted by the inward Air, which, by reason of its continual Motion and Agitation, is always driving forward, towards that Place that is most void and empty.
Ære interposito discordia tanta creatur, 
Propterea, quia nimirum prius æstus ubi Æris 
Præcepit, Ferrique vias possedit apertas; 
Posterior Lapidis venit æstus, & omnia plena 
Invenit in Ferro: neque babet quae tranet, ut antè. 1050
Cogit ur offensare igitur pulsareque fluat
Ferrea texta suo; quo partio resquitt ab se,
Atque per Æs agitat, sine eo quæ sœpe resorbet.
Illud in bis rebus mirari mitte, quod æstus
Non valet Æ Lapide boc alias impellere item res: 1055
Pondere enim fretæ partim sint, quod genus Aurum:
Æc partim Raro quia sunt cum corpore, ut æstus
Peroool intastus, nequeunt impellier usquam:
Lignea materies in quo genere esse videtur.
Inter utrafque igitur Ferri natura locata,
Æris ubi accept quædam corpuscula: tum fit,
Impellant ut eam Magnæsem femina saxi.
Nec tamen bæc ita sunt aliarum rerum aliena,
Ut mibi multa parum genere ex boc suppeditentur,
Quæ memorare queam inter se singulariter apta. 1065
Saxa vides primùm sola coelestere Calce:
Glutine materies Taurino ita jungitur una,
Ut vitio vene tabularum sæpius bificant,
Quàm laxare queant compages taurca vincla.
Vitigeni latices in Aquaï fontibus audent 1070
version arises from the Interposition of the Brass; for when the Particles of the Brass have entered and filled up the open Pores of the Iron, then come the Effluvia of the Loadstone; and finding the Passages of the Iron full, and no more open for them to pierce through as before, they beat upon the Bits of Iron, and drive them forward with all their Force. And thus the Particles of the Stone, passing through the Brass, throws the Iron from it, which otherwise it would take to its Embrace.

Do not be surprized to find that the Effluvia of the Stone do not drive away other Bodies from it in the same manner, for some remain unmoved upon the Account of their Weight; Gold is of this Sort: Others because they are rare, and their Pores are wide, so that the Particles that fly off from the Stone pass through without touching, and therefore can have no Power to move them; of this Kind is the Texture of Wood. The Nature of Iron is placed between these Two; and when its Pores are full of those brazen Particles, then it is that the Effluvia of the Magnet beat upon it and drive it off.

Nor is the Friendship between the Loadstone and the Steel so singular a Case; I can produce Instances of many Things, whose Natures are peculiarly fit and suited to each other. And first, You observe that Stones are cemented together only by Lime; and Boards are so joined together by Glue, made of the Ears and Genitals of Bulls, that the solid Wood of a Table will sooner split, than the strong Joints of the Glue will start or fall asunder. Wine will mingle with Spring Water,

\[f\] The Reason why other Bodies do not move in this manner, is because they are too heavy to be moved; or if they are light, they are often too rare; so that the Corpuscles of the Magnet find a free and open Passage through them.
Miseri, cum Pux nequeat gravis, & leve Olivum:
Purpureusque colos Conchyllī mergitur undā
Corpore cum Lanæ, dirimi qui non queat usquam:
Non si Neptuni suōrum renovare operam des:
Non, mare si totum velit eluere omnibus undis.

Denique res Auro Argentum concopulat undā,
Ærique as Plumbo fit uti jungatur ab albo.
Cætera jam quàm multa licet reperire? quid ergo?
Nec tibi tam longis opus est ambagibus usquam,
Nec me tam multam hic operam consumere par est:
Sed breviter paucis restat comprehendere multa.

Quorum ita textura ceciderunt mutua contra,
Ut cava convenient plenis bac illius, illa
Hujusque: inter se junetura borum optima constat.
Est etiam, quasi ut annellis, bamicque plicata

Inter se quædam possint coplata teneri:
Quod magis in Lapide hoc fieri Ferroque videtur.

Nunc, ratio quae fit Morbis, aut unde repente
Mortiferam possit cladem confolare coorta
Morbida vis Hominum generi, Pecudumque catervis,
Expeditiam. Primum multarum femina rerum

Esse supra docui, quae sint vitalia nobis:
Et contrà, quae sint morbo, mortique, necesse est
Multa volare; ea cùm casu sunt fortè coorta,
Et perturbantur calum, fit morbidus Aër.

Atque ea vis omnis Morborum, pestilitasque,
Aut extrinsecus, ut nubes nebulaeque supernē
Per calum veniunt, aut ipsa sāpe coorta.
when heavy Pitch and smooth Oil will not. The purple Colour of the *Murex* incorporates so into the Body of Wooll, that it can never be taken out; no, not if you strive to recover it to its native Whiteness by all the Waves of the Sea, nor if you wash it in all the Water of the Ocean. There is but one Mineral that will foulder Gold and Silver together; and Brass is joined only by white Lead. How many Things of this Nature might be produced? To what Purpose? I would by no means lead you so far out of the Way, nor give myself so much Trouble in such Inquiries. I have many Things yet to explain, but I shall be as short as possible.

Those Things whose Textures so mutually answer to one another, that the Cavities of this Thing agree with the Plenitudes of That, and the Cavities of That with the Plenitudes of This, may be conjoined most easily, and in the strictest Manner. And some Things may be so joined to others, as if they were fastned together by *S* Hooks and Rings; and in this Manner it is that the Loadstone seems to be connected to the Steel.

Now I shall teach from whence Diseases spring, *Plagues*. and whence arise the pestilential Blasts, that spread their deadly Poison, and destroy both Man and Beast. And first (as I have said) The Seeds of many Things are ever flying through the Air; some are Sound and Vital to Mankind, and others bring on Disease and Death: These when they arise and taint the Sky, the Air becomes infected. Now the morbid Force of all Diseases, every Pestilence comes either from without, as Clouds and Mists fall from the Heavens above; or rises from

*S* On the Surface of the *Magnet* there are Hooks, and of the Surface of the Steel little Rings, which the Hooks catch hold of.
De terra surgunt, ubi putroem humida nativit, Intempestivis Pluviisque, & Solibus idia. 1100
Nonne vides etiam caeli novitate, & aquarum Tentari, procul a patria quicunque domoque
Adveniunt? Ideo quia longe discrepat Aër.
Nam quid Britannum caelum differre putamus,
Et quod in Ægypto sit, quia mundi claudicat Axis? 1105
Quidve quod in Ponto sit differre à Gadibus, atque Usque ad nigra virum, percoetaque saeclae calore.
Quæ cum quatuor inter se diversa videmus,
Quatuor à ventis, & caeli partibus esse,
Tum color & facies hominum distare videntur 1110
Largiter, & morbi generatim saeclae tenere.
Est Elephas morbus, qui propter flumina Nili
Gignitur Ægypto in media, neque praeterea usquam. Atthide tentantur Gressus, Oculique in Achaïs
Finibus, inde alius alius locus est inimicus 1115
Partibus, ac membris: Varius concinnat id Aër.
Proinde ubi se Cœlum, quod nobis fortè alienum sit,
Commovet, atque Aër inimicus serpere cæpit:
Ut nebula, ac nubes paullatim repit, & omne Quæ graditur, conturbat, & immutare coæfumat. 1120
Fit quoque, ut in nostrum cum venit deniq; cœlum,
Corrumpat, reddatque sui simile atque alienum.
Hæc igitur subito clades nova, pestilentialique,
Aut in aquas cadit, aut fruges persidit in ipsas,
Aut alios hominum pastus, pecudumq; cibatus: 1125
Aut etiam suspensa manet vis Aëre in ipso:
Et
from the Earth itself, when drenched by fierce unseasonable Showers, and pierced by the Sun's scorching Beams, it sends unwholesome Vapours through the Air. Have you not seen that those who search out foreign Lands, and leave their Country and their native Homes, contract new Pains from the strange Water, and the Air they breathe? The mighty Difference of the Air occasions this; for don't you think the Air of Britain is widely different from the Air of Egypt, where the North Pole is never seen? or that the Air of Pontus differs from that of Gades and Ethiopia, where the black Race of Men are thoroughly fodder with the Sun's Heat? The Four Quarters of the Air, we may suppose, are different in their Temper and their Quality, because they are opposed to the Four Quarters of the Earth, where Men, we find, in every Region widely disagree in Face and Complexion, and are tormented with Diseases peculiar to the Countries where they live.

The Leprosy was known first in Egypt, near the River Nile, and nowhere else. The Athenians are tortured with the Gout, the Achaeans with fore Eyes. So every Country is an Enemy to one Part and Member of the Body or other; and this must be imputed to the Air.

And when the morbid pestilential Air of a Country, remote from us, moves from its first Abode, and the fatal Vapour begins to advance, it creeps first by degrees like a Cloud or Mist, and disturbs and changes every thing as it goes; and when it comes to the Climate where we live, it corrupts every thing, and makes it like itself, and therefore deadly and destructive to Us.

This wasting Plague, these fatal infectious Blasts, fall either in the Water, or fix upon the Fruits or other Food of Men, or on the Proven- der of Cattle; or they may hang suspended in the Air
Et cum spiranteis mistis binc ducimus auras,
ILLA quoque in corpus pariter forbere necesse fuit.
Consimili ratione venit Bubus quoque sepe
Pestilitas, etiam pecubus balantibus agror.
Nec refert utrum nos in loca deveniamus
Nobis adversa, & caeli mutemus amicium:
An oculum nobis ultrò natura cruentum
Deferat, aut aliquid, quo non confuevimus uti.
Quod nos adventu posset tentare recenti.

Hæc ratio quondam morborum, & mortifer aestus
Finibus Cecropis funebros reddidit agros,
Vastavitque vias, exhauit civibus urbem.
Nam penitus veniens Ægypti è finibus ortus,
Aëra permensus multum, camposq.; natanteis,
Incubuit tandem populo Pandionis: omnes
Inde catervatim morbo mortique dabantur.

Principiō, caput incensum fervore gerebant:
Et dupliceis oculos suffusa luce rubenteis.
Sudabant etiam fauces intrinsecus atro
Sanguine, & ulceribus vocis via septa coibat;
Atque animi interpres manabat lingua cruore,
Debilitata malis, motu gravis, aspera tabiti:
Inde, ubi per fauces pestus complerat, & ipsum
Morbida vis in cor maestum confluxerat aegris.
Omnia tum verò vitali clausura lababat.
Spiritus ore foras tetram volvebat odorem,
Rancida quo percolat præferta cadaver a ritu.
Atque animi præsum vires totius, & omne

Languebat
Air above, that when we draw our Breath we needs must suck this Poison, mingled with it, into our Bodies. In the same Manner the Pestilence seizes on the Cattle, and the Contagion infects the Sheep. And the Danger is the same, whether we change our Climate, and travel into a Country where the Air is pernicious to us; or whether Nature of her own accord brings the cruel Infection from abroad, or introduces a Disease we are not used to, which upon its first Approach may prove hurtful to Us.

Once such a Plague as This, such deadly Blasts, poison'd the Coasts of Athens, founded by Cecrops: It raged through every Street, unpeopled all the City; for coming from far (from Egypt, where it first began) and having passed through a long Tract of Air, and o'er the wide Sea, it fixed at last upon the Subjects of King Pandion. Men soon, by Heaps, fell Victims to the Rage of Death and the Disease.

The Head was first attack'd with furious Heats, and then the Eyes turn'd bloodshot and inflamed; the Jaws within sweated with black Bloods; the Throat (the Passage of the Voice) was stopp'd by Ulcers; the Tongue (the Interpreter of the Mind) overflowed with Gore, and, fatter'd with the Disease, felt rough, and scarce could move. And when the Poison, through the Jaws, had filled the Breast, and flowed into the miserable Stomach, then all the Springs of Life began to fail; the Breath sent out a filthy Smell abroad, like the rank Stench of rotten Carcasses; the Powers of all the Soul and all the Body flag

\(^h\) He describes that memorable Plague that broke out in Attica, in the first Year of the Peloponnesian War, and wasted the whole Country, as well as the City of Athens, called Cercopid, from Cecrops who built it. This Plague is no less accurately than elegantly described by Thucydidès, who was himself both a Spectator and Sharer of it.
Languebat corpus, letbi jam limine in ipsa. 1155
Intolerabilibusque malis erat anxius anguor
Affiduè comes, & gemitu commissa querela,
Singultusque frequens nostrum persaèpe, diemque,
Conripere affiduo nervos & membra coaflans,
Dissolvébat eos, desèssos antè, fatigans. 1160
Nec nimio cuquam posse arduo tueri
Corporis in summo sumnum serviscere partem :
Sed potius tepidum manibus proponere taetum,
Et simul ulceribus quasi inusitis omne rubere
Corpus, ut est per membra Sacer cum diditur ignis. 1165
Intima pars homini verò flagravit ad offa :
"Flagravit stomacho flamma, ut fornacibus intius,
Nil adeo posset cuquam leve, tenueque membris
Vertere in utilitatem : ad ventum & frigora semper
In fluxios partim gelidos ardentia morbo 1170
Membra dabant, nudum jacientes corpus in undas.
Multi precipites lymphis putealibus altè
Inciderunt, ipso venientes ore patente.
Insedabiliter fitis arida corpora mersans
Æquabat multum parvis humoribus imbrem. 1175
Nec requies erat ulla mali, desèssa jacebant
Corpora, mufhabat tacito Medicina timore,
Quippe patentia cùm tolas ardentia nostèis
Lumina versarent oculorum expertia somno,
Multaq, præterea mortis tum signa dabantur, 1180
Perturbata Animi mens in mæore, metueque,
Triæe supercilium, furiosus voltus, & acer,
Sollicitae porro plenaèque sonoribus aures,
Creber spiritus, aut ingens, raròque coortus,
Sudorisq; madens per collum splendidos humos, 1185
Tenuia sputa, minuta, croci continuà colore,
Salsaèque per fauceis raucas vix edita tussi :
In manibus verò nervi trabier, tremere artus :
and grow faint, as in the Gates of Death. To these innumerable Evils followed close a sad Diff\-frefs and Sinking of the Mind, loud Sighs with bitter Moans; and frequent Sobbings, all the Day and Night, twitch'd and convulfile the Nerves and every Limb, and loosen'd every Joint, and sorely rack'd the Wretches, tired out with Pains before. Yet you could not perceive, by the Touch, that the Surface of the Body was inflamed with any extraordinary Heat; it felt only warm to the Hand, and looked red all over with burning Puf-\ftules, as when the Sacred Fire spreads o'er the Limbs: But all within was in a Flame, that pierced the very Bones; the Heat raged in the Stomach, as in a Furnace; no Garment, ever so light or thin, could be endured upon their Limbs; they rushed into the Wind and Cold; some plung-\ed their Bodies, scorch'd with the Diseafe, in Rivers, and naked threw themselves in chilling Streams; some ran with open Mouths, and head-\long leap'd into deep Wells; the parching Thirst, infatiable, so burnt their Bodies, it made whole Showers of Water seem no more than a few Drops.

The Pain was without Intermiffion, without End; the Body lay quite spent, stretched out; the burning Eyes wide open, and, without Sleep for many a reftlefs Night, rolled dreadfully about. The Physician mutters to himself in filent Fear, and leaves the Patient in Dreipair, for many Signs of coming Death appeared: The Mind diftr\acted with Dread and Horror; a ftern Brow; a Coun-\tenance fierce and furious; the Ears tormented with a buzzing Noife; the Breath thick, or deep and feldom drawn; a frothy Sweat, flowing in Abundance over the Neck; the Spittle thin and dry, and yellow as Saffron, and the falt Matter could scarce be brought up through the Jaws by coughing; a Contraction of the Nerves in the Hands,
A pedibusque minutatim succedere frigus
Non dubitabat, item ad supremum denique tempus
Compressae nases, nasi primoris acumen
Teneue, cavati oculi, cava tempora, frigida pellis,
Duraque, inborrebat ridum, frons tenia minebat:
Nec nimiò rigida post stirati morte jacebant:
Octavoque ferè candenti lumine solis,
Aut etiam nona reddabant lampade vitam.

Quorum siquis (ut est) vitàrat funera lethi,
Ulceribus tetris, & nigra prolavie alvi;
Postcriis tamem bunc tabes letbumque manebat:
Aut etiam multus capitis cum sepe dolore
Conruptus fanguis plenis ex naribus ibat:
Huc hominis totæ vires corpusque fluebat.
Profluvium porro qui tetri sanguinis acre
Exierat, tamem in nervos hoc morbus & artus
Ibat, & in parteis genitaleis corporis ipfas.
Et graveret partim metuentes limina lethi
Vivebant ferro privati parte virili:
Et manibus sine nonnulli pedibusque manebant
In vita tamem, & perdebant lumina partim:
Usque adeo mortis metus bis inceferat acer.

Atque etiam quosdam cepere oblivia rerum
Cunctarum, neque se possent cognoscere ut ipsi.

Multaque humi cum inbumata jacerent corpora

Corporibus, tamem alituum genus atque ferarum
Aut procul absiliebat, ut acrem exiret odorem:
Aut, ubi gustárat, languebat morte propinqua.
Nec tamem omnino temerè illis folibus ulla
Comparebat avis, nec noxibus saecla ferarum
Exibant sylvis: Languebant pleraque morbo,
Et moriebantur: cum primis fida canum vis
Strata viis animam ponebat in omnibus agram.
Extorquebat enim vitam vis morbida membris.
Hands, and a Trembling over all the Limbs, and a Coldness creeping up gradually from the Feet; the Nostrils pinched in, as at the Point of Death; the Nose sharp; the Eyes sunk; the Temples hollow; the Skin cold and hard; a frightful Distortion of the Mouth, and the Skin of the Forehead stretched and shining. Nor did the Wretches lie long under the cold Hands of Death, for they expired commonly upon the eighth, or at farthest upon the ninth Day.

But if any of the Infected, as some did, escaped with Life, either the filthy Ulcers breaking, or by a most offensive Looseness, they fell at last into a Consumption, and then died; or Streams of corrupted Blood, with grievous Head-ach, flowed from his stuffed Nostrils, and thus his Strength and Life ran out, and the Wretch bled to Death. Such as escaped a sharp Flux of filthy Blood at the Nose, the Poison pierced into their Nerves and Limbs, and seized upon their very Genitals; and some were so terrified at the Approach of Death, that they suffered the Virile Member to be cut off, to preserve Life. Some remained alive without Hands and Feet, and some lost their Eyes; so terrible was the Fear of Death to these miserable Wretches. Some were seized with an intire Forgetfulness of every thing; they did not so much as know themselves.

When Heaps of Bodies lay one upon another, unburied, upon the Ground, yet the Birds of Prey, and the wild Beasts, either kept at a Distance to avoid the noisome Stench, or if they tasted they soon died. At that Time no Birds appeared abroad in the Day, nor did the wild Beasts leave the Woods by Night; many of them were infected with the Disease, and fell down dead; the faithful Dogs especially lay gasping out their infected Breath in every Street, for the Poison drove out
Incomitata rapi certabant funera vasa:
Nec ratio remedi communis certa dabatur:
Nam quod alis dederat vitaleis Æris auras
Volvere in ore licere, et celi templu tueri:
Hoc aliiis erat exitio, lethuimque parabat.

Ille in his rebus miserandum et magnopere unum
Ærumnabile erat, quod ubi se quisque videbat
Implicatum morbo, morti damnatus ut esset,
Deficiens animo mæsto cum corde jacebat
Funera respectans, animam et mittebat ibidem.

Idque vel in primis cunulabat funere funus:
Quippe etenim nullo cessabant tempore apisci
Ex aliiis alios avidi contagia morbi:
Nam quicunque suos fugitant abire ad agris,
Vitæ nimium cupidii, mortisque tinentes,
Panibat paullo post turpi morte malaque
Desertos, opis expetiteis, incuria mæstans,
Lanigeras tanquam pecudes, et bucura sæcla.

Qui fuerant autem præsò, contagibus ibant,
Atque labore, pudor quem tum cogebat obire,
Blandaque laßorum vox misa voce querela.
Optimus hoc lethi genus ergo quisque subibat:
Inque aliiis alium populum sèpelire suorum
Certantes, lacrymis laßi luustique redibant.
Inde bonam partem in leíum mare-re dabantur:
Nec poterat quisquam reperiri, quem neq; morbus,
Nec morti, nec luæus tentaret tempore tali.

Præterea,
out Life from every Limb. The many Funerals of the Dead were hurried away without Order, and unattended. Nor was there any certain Remedy to be applied; for what was of Service to some, and relieved the Patient, and preferred Life, was fatal and brought Death to others.

But the most wretched and deplorable Thing of all, at this Time, was, that when once a Person found himself infected with the Disease, as if the Sentence of Death had passed upon him, his Spirits failed him, he fell into Melancholy and Despair, thought of nothing but Death, and so gave up the Ghost.

And Funerals were heaped one upon another, because the fierce Contagion of the Disease incessantly raged, and carried on the Infection. And if any one, too fond of Life, and fearing to die, avoided to visit the miserable Sick, the same Want of Help was soon his own Punishment; he died in a filthy and deplorable Manner, abandoned, and without Assistance, and perished by Neglect, like the wretched Beasts of the Field.

And Those who were compell’d by Shame, and by the moving Cries and piteous Moans of their Friends, to attend them in their Distress, were seized by the Infection, and died by the Disease and the Fatigue. Indeed the most Pious among them lost their Lives in this manner: And when they had endeavoured to bury the Bodies of whole Families of their Friends, among those of the Friends of others, they returned, wearied with Grief and Weeping, and most of them took to their Beds for Sorrow. And there was not One to be found who, in this calamitous Time, had not grievously suffered, either by the Disease, or by Death, or by the most bitter Pain and Anguish of Mind.
Præterea, jam pastor, & armentarius omnis, 1250
Et robustus item curvi moderator aratri,
Languebant, pentitque cæsis contrusa jacebant
Corpora, paupertate & morbo dedita morti.
Exanimis pueris super examinata parentum
Corpora nonnamquam posse, retroque videre 1255
Matribus, & patribus natos super edere vitam:

Nec minimum partim ex agris egroris in urbe
Confluxit, langueis quem contulit Agricultorum
Copia, conveniens ex omni morbida parti.
Omnia complebant loca testaque quà mage eos tum 1260
Consertos ita acervatim mors accumulabat.
Multa siti prostrata viam per, proque voluta
Corpora filanos ad aquarum strata jacebant,
Interclusa anima nimia ad dulcedine aquaï.
Multaq; per populi passim loca promta, viafqu; 1265
Languida semianimo tum corpore membra videres,
Horrida pædre, & pannis cooperta perire
Corporis in luviæ: Pellis super ossibus una,
Ulceribus tetris.prope jam, fœdique sepulta.
Omnia deniq; sanëta Deum delubra replérat 1270
Corporibus mors examinis, onerataque passim
Cuncta cadaveribus Cælestium templum manebant:
Hospitibus loca quæ complerant Ædituentes.
Nec jam religio Divum, nec Numina magni
Pendebantur: Enim praefens Dolor exsiterabat. 1275
Nec mos ille Sepulturae remanebat in urbe,
Ut prius hic populus semper confuerat humari.
Perturbatus enim totus trepidabat, & atus

Quisque
Besides, the Shepherds and the Herdsmen, and the lofty Ploughman pined away with the Infection; their Bodies lay miserably stretched out in their close narrow Huts, and died of Poverty and the Disease. You might frequently see the dead Parents lying over their dead Children, and again, the Children expiring upon the Bodies of their wretched Mothers and Fathers.

Nor was it a small Addition to this Plague that was brought from the Country to the City; for the infected Peasants flock'd hither in Multitudes from all Parts, and carried the Sickness along with them. They filled all the Houses, and all Places; and as they were pent up close together, Death had the greater Power to slay them on Heaps. Many Bodies lay along in the Streets, gasping for Thirst; and rolling to the publick Conduits, they drank insatiably, and were suffocated with Water: Others you might see in the Highways and common Places, languishing, with their Bodies half dead, horrible with Filth, cover'd with Rags, and rotting with the Corruption of the Limbs; there was nothing but Skin upon the Bones, and that putrefied with eating Ulcers, and buried in Naftiness.

And lastly, Death had filled all the Temples of the Gods with dead Bodies, all the Shrines of the celestial Deities were loaded every where with Carcasses. The Priests furnished these Places with such wretched Guests. Nor was there any Reverence paid to the Gods, their Divinities were no more regarded; for the present Calamity overcame every thing.

Nor did the People any longer observe that Custom of Sepulture they had ever followed, which was, to bury their Dead in the City; they were all distracted and amazed, and every one buried
T. Lucretii Lib. VI.

Quisque suum pro re consortem maestus humabat.
Multaque vis subita, & paupertas borrida suasit.
Namque suos consanguineos aliena rogorum
Insuper instructa ingenti clamore locabant,
Subdebatque faceis, multo cum sanguine saepe
Rixantes potius quam corpora deferentur.
Book VI. Of the Nature of Things.

buried his wretched Friend as the Exigency of Things would permit.

And sudden Rage, and dreadful Poverty, drove Men into many outrageous Actions: They would place their Relations, with violent Outcries, upon the Funeral Piles that were raised for others, and light the Fire; and often quarrel, with much Loss of Blood, rather than forfake the Bodies of their Friends.

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