



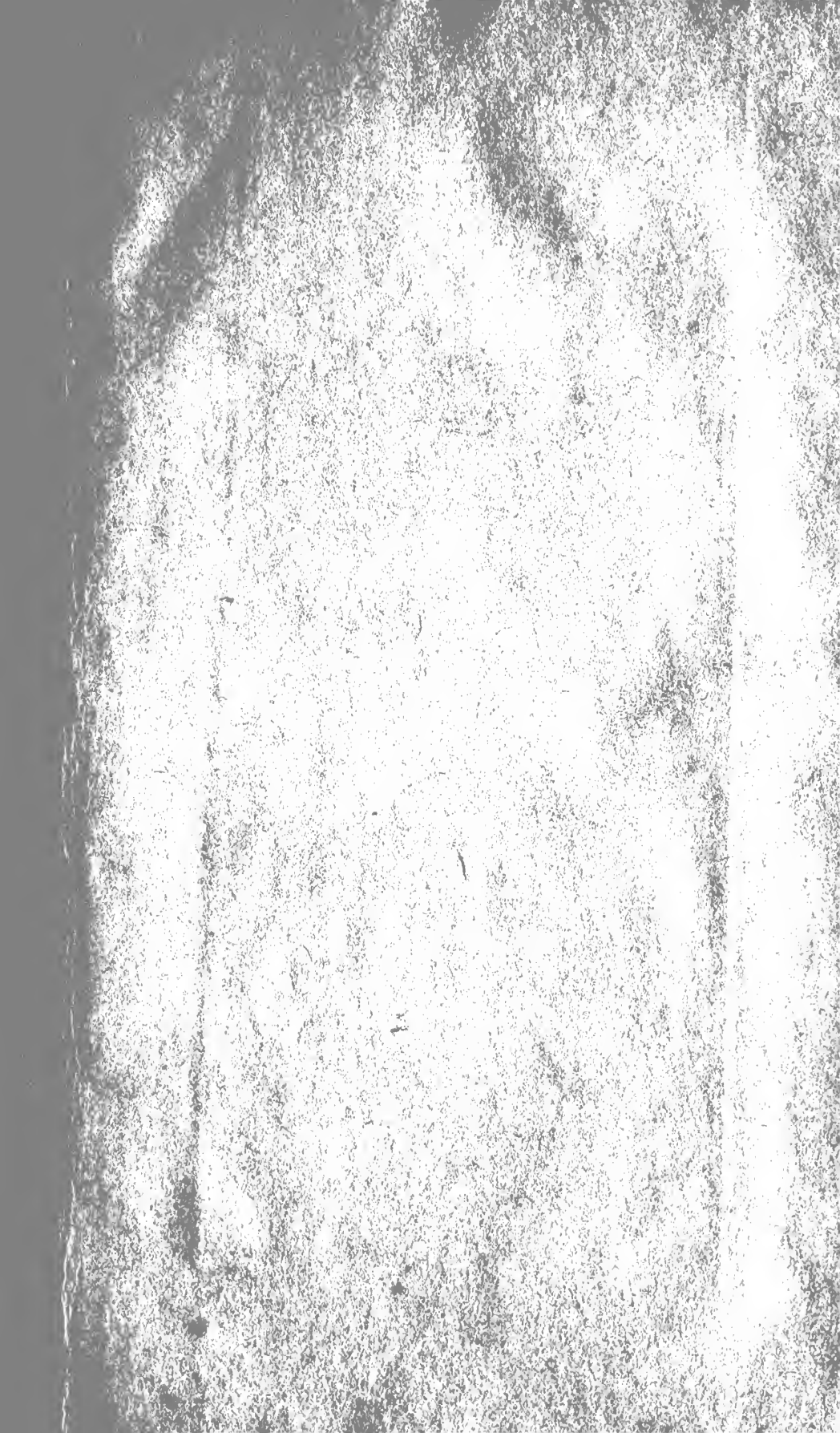
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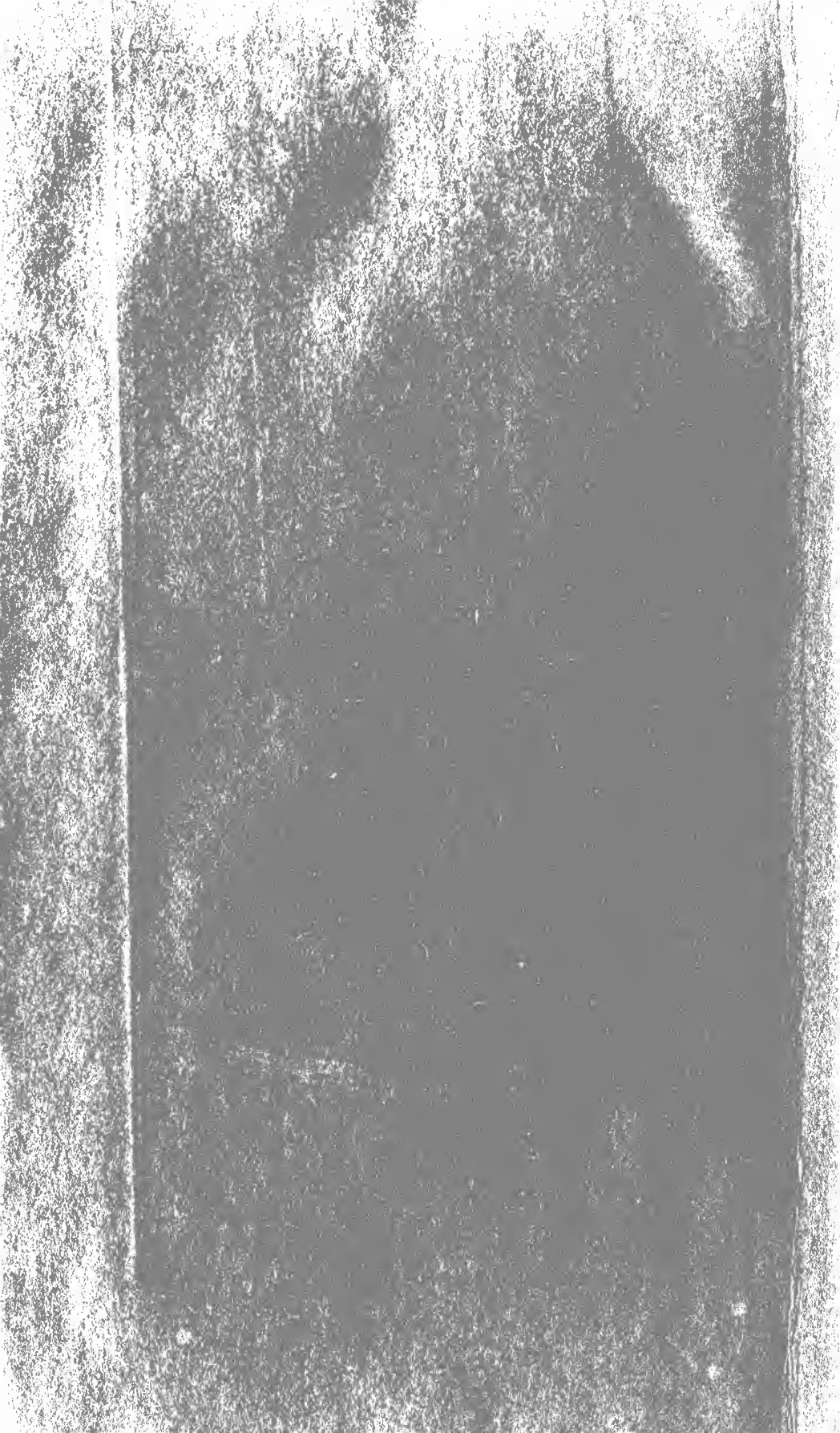


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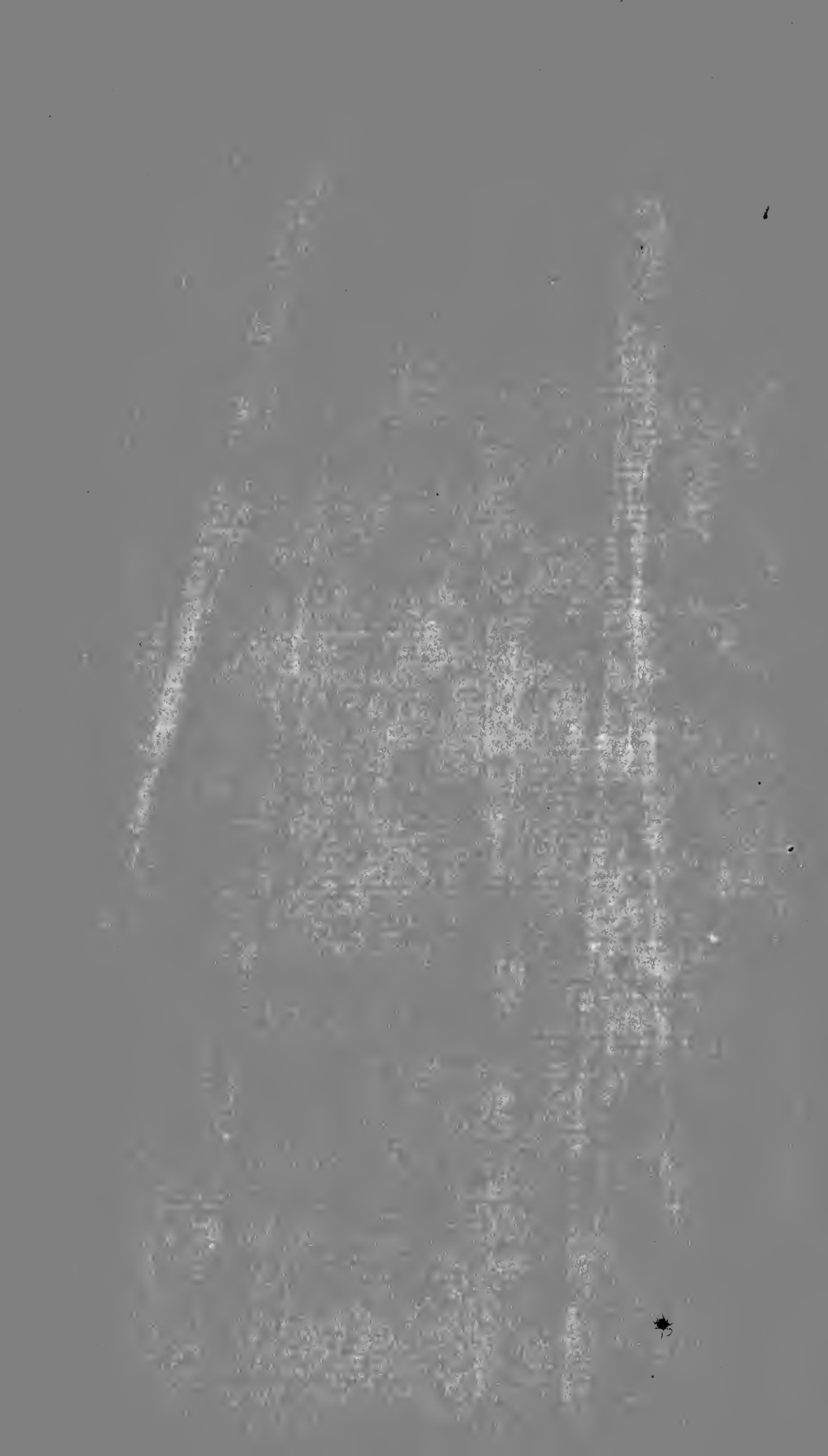


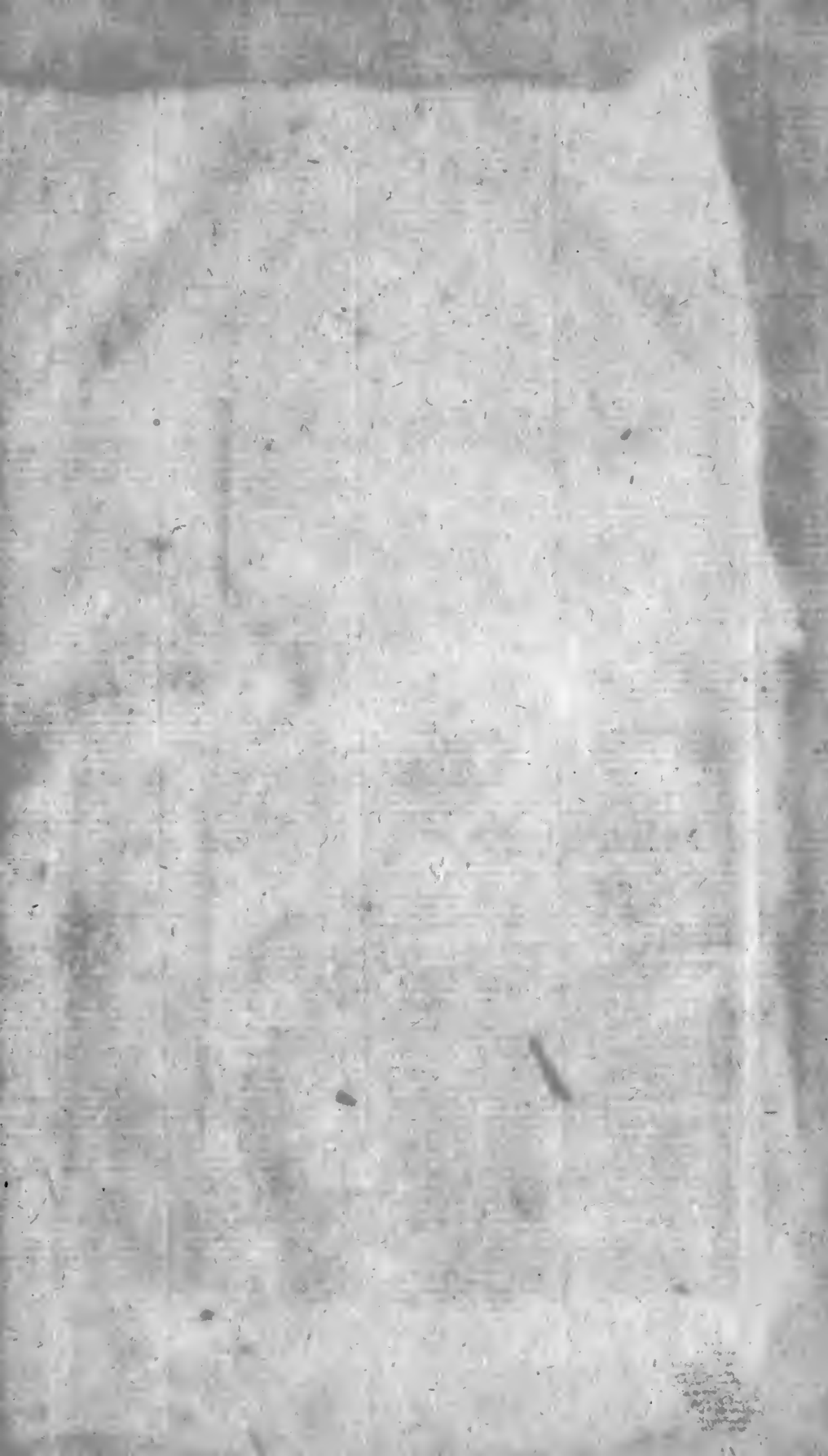
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DE  
NATURA  
RERUM  
LIBRI SEX

T. LUCRETIVS CARVS

OF THE

NATURE of THINGS,

IN SIX BOOKS.

ILLUSTRATED with

Proper and Useful NOTES.

Adorned with COPPER-PLATES,

Curiously ENGRAVED

By GUERNIER, and others.

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*Carminā sublimis tunc sunt peritura Lucreti  
Exitio Terras cum dabit una Dies. OVID.*

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IN TWO VOLUMES.

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LONDON: 2204

Printed for DANIEL BROWNE, at the *Black Swan*  
without *Temple-Bar*.

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T H E

## P R E F A C E.

**T**HE only Translation in English of this Poem was executed many Years ago by Mr. *Creech*: The World was pleas'd with the Performance, and received it with the Applause it deserv'd; 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

A 2                      Reflections,

## The P R E F A C E.

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  
cross'd;*

*When landing, unknown Paths, and hard  
Access*

*Made me despond of pre-conceiv'd Success;*

## 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 oblige 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-

phrase ; in others Mr. *Creech* contracts and curtail 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 intire ; 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 stinted 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 Claffick 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 Corporiety 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

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 Corporality 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

## The P R E F A C E.

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.*  
V I R G.

NOT 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, Cha-  
rity,

stity, and Magnanimity? Infomuch, 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 Continnence, 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 indisputably true, what reason is there that we should contemn *Lucretius*, a most elegant and beautiful Poet, the most polite, and the most ancient of all the *Latin Writers*, 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 various Figuration, of the Void, of the Images, or tenuious Membranes that fly off from the Surface of all Bodies, of the Nature of the Mind and Soul, of the Rising and Setting of the Planets, of the Eclipse of the Sun and Moon, of the Nature of Lightning, 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 Comparisons, in his Examples, in his Disputations against the Fear of Death, concerning the Inconveniencies and the Harms of Love, of Sleep, and of Dreams, he is copious, discreet,

' 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 cor-  
 ' rect 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 ma-  
 ' ny Assertions that are repugnant to our Re-  
 ' ligion, 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 Tranquil-  
 ' lity of Mind? How wittily does he rebuke  
 ' and confute those who affirm that nothing  
 ' can



‘ 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 Mirrours, 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 *Cæsar*,  
 ‘ 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.





T H E  
L I F E  
O F  
*LUCRETIVS.*

**W**E 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,

VOL. I.

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com-

*The Life of* LUCRETIUS.

comprehended under it, the *Tricipetini*, the *Cinnae*, the *Vespillones*, 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 Scævola*, 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 no where 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

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 so 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,

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.

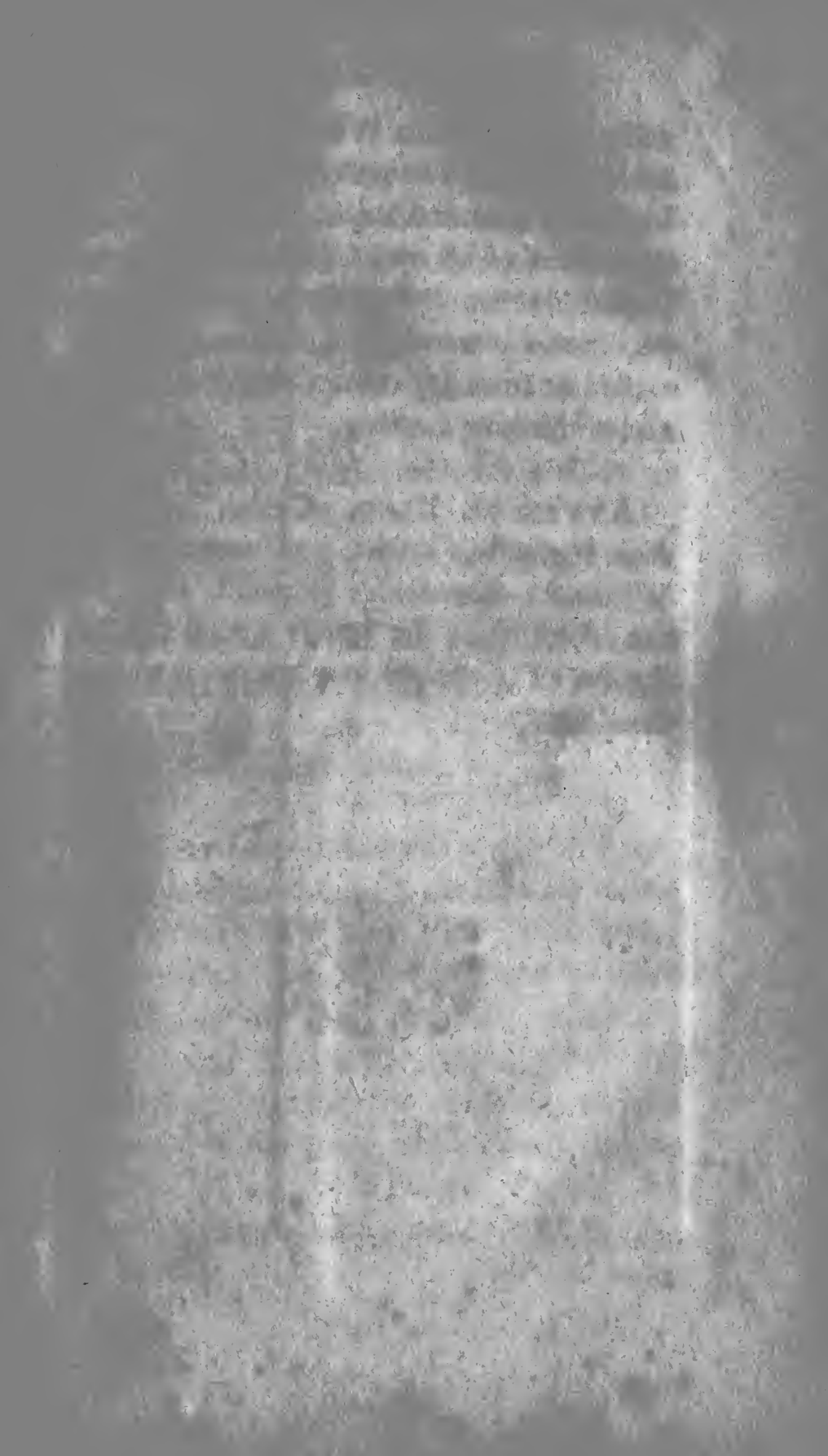
It is wonderful that this admirable Poem of *Lucretius* should be composed in the time of his Distraction. His six Books of his *Epicurean* Philosophy, says *Eusebius*, were written in his lucid Intervals, when the Strength of Nature had thrown off all the disturbing Particles, and his Mind, as it is observed of Madmen, was sprightly and vigorous. Then, in a Poetical Rapture, he could fly with his *Epicurus* beyond the flaming

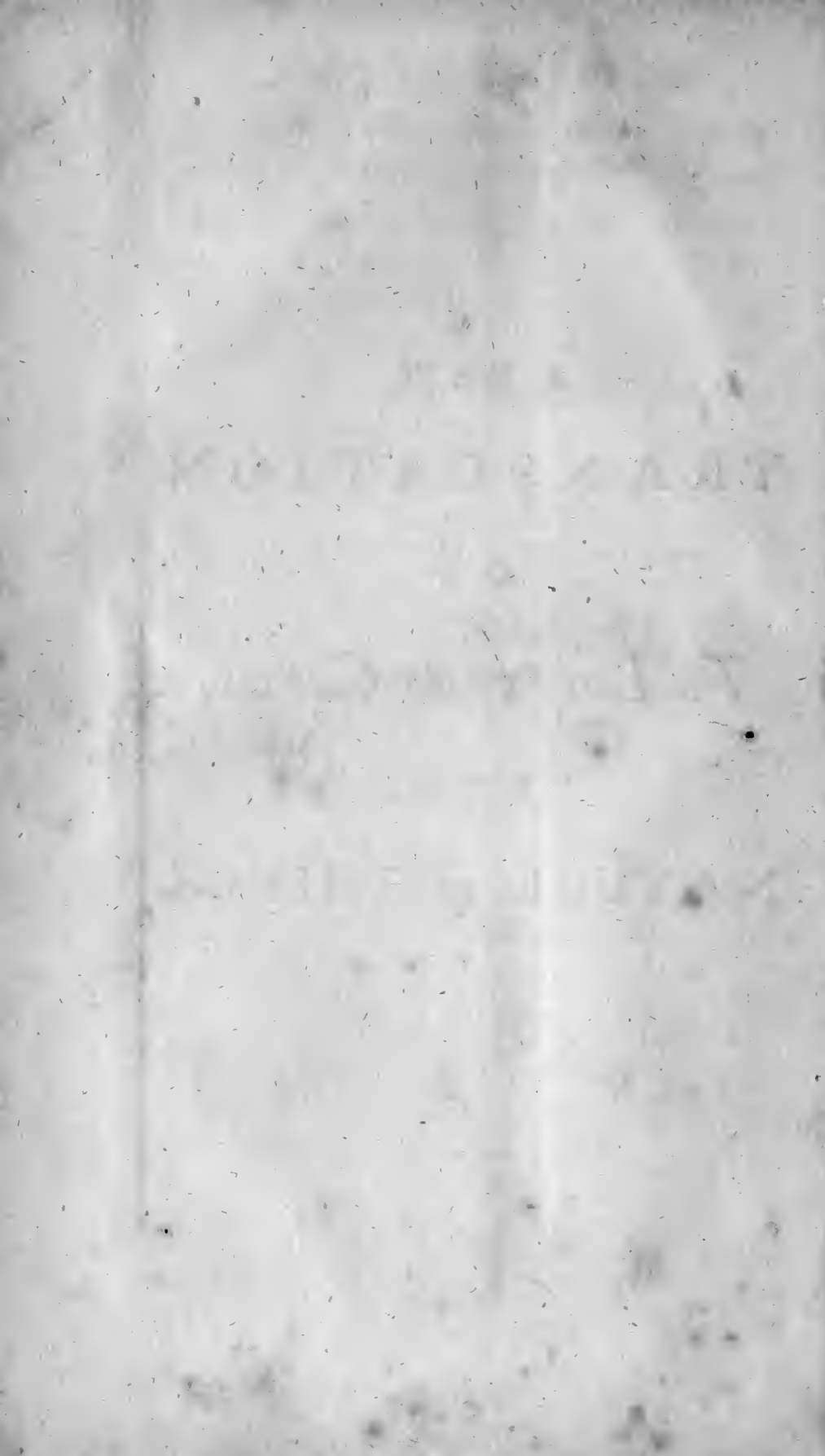
ming Limits of this World, frame and dissolve Seas and Heavens in an instant, and by some unnusual Sallies be the strongest Argument of his own Opinion; for it seems impossible that some Things which he delivers should proceed from Reason and Judgment, or from any other Cause but Chance and unthinking 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.

B



T H E  
A R G U M E N T  
O F T H E  
F I R S T B O O K.

**L**UCRETIVS 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 conceiv'd 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 Conjuncts or Events, Properties or Accidents of Body and Space. That these first Principles are perfectly solid, and by consequence indivisible, they are Leasts (for Body cannot be infinitely divided)

and

## The ARGUMENT.

3

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.

**Æ**NEADUM genitrix, hominum divūmque  
voluptas,  
Alma Venus, cæli subter labentia signa  
Quæ mare navigerum, quæ terras frugiferentis  
Concelebras; per Te quoniam genus omne animantum  
Concipitur, visitque exortum lumina solis: 5  
Te, Dea, te fugiunt venti, te nubila cæli,  
Adventumque tuum; tibi suaveis dædala tellus  
Summittit flores, tibi rident æquora ponti,  
Placatumque nitet diffuso lumine cælum.

be  
ral  
Go

gives her all her Titles; yet, at the same time, throws  
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. Lucretius Carus,*  
 OF THE  
 NATURE *of* THINGS.  
 THE  
 F I R S T B O O K

**M**OTHER of *Rome*, Delight of Men The Invo-  
 and Gods, Sweet *Venus*; who with cation.  
 vital Power dost fill the Sea bearing  
 the Ships, the fruitful Earth, all Things beneath  
 the rolling Signs of Heaven; for 'tis by Thee Crea-  
 tures 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

<sup>a</sup> *Lucretius* as a Poet conforms to the Rule of his Art, and  
 begins with an Invocation to *Venus*, that is the common natu-  
 ral 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*.

*Nam simul ac species patefacta 'st verna diei, 10*  
*Et referata viget genitalis aura Favoni;*  
*Aëriæ primum volucres te, Diva, tuumque*  
*Significant initum percussæ corda tua vi :*  
*Inde feræ pecudes persultant pabula læta,*  
*Et rapidos tranant amneis ; ita capta lepore, 15*  
*Illecebrisque tuis omnis natura animantum*  
*Te sequitur cupide, quo quamque inducere pergis :*  
*Denique per maria, ac monteis, fluviosque rapaceis,*  
*Frundiferasque domos avium, camposque virenteis,*  
*Omnibus incutiens blandum per pectore amorem, 20*  
*Efficis, ut cupide generatim sæcla propagent.*  
*Quæ quoniam rerum Naturam sola gubernas,*  
*Nec sine Te quicquam dias in luminis oras*  
*Exoritur, neque fit lætum, nec amabile quicquam ;*  
*Te sociam studeo scribundis versibus esse, 25*  
*Quos ego de RERUM NATURA pangere conor*  
*Memmiadæ nostro : quem tu, Dea, tempore in omni*  
*Omnibus ornatum voluisti excellere rebus.*  
*Quo magis æternum da dictis, Diva, leporem :*  
*Effice ut interea fera mœnera militiai 30*

# BOOK I. *Of the Nature of Things.*

7

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 Goddess, and express thy Power; thy active Flame strikes through their very Souls. And then the savage Beasts, with wanton Play, frisk o'er the chearful Fields, and swim the rapid Streams. So pleas'd 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 Forests, 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<sup>b</sup> *Memmius*, whom Thou art ever pleas'd, sweet Goddess, 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<sup>c</sup> War by

<sup>b</sup> 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 *Memmii*, who claimed their Extraction from the *Trojans*. He arrived at the Dignity of *Prætor*, and obtained *Bitynia* for his Province, but was soon recalled, being accused by *Cæsar* 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 stood Candidate for the Consulship; of which he not only failed, but being accused of Bribery, was, tho' *Cicero* plead-ed in his Defence, convicted of it, and banished into *Greece*, where he died in Exile.

<sup>c</sup> 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 omneis sopita quiescant.*  
*Nam Tu sola potes tranquilla pace juvare*  
*Mortaleis, quoniam bella fera mœnera Mavors*  
*Armipotens regit, in gremium qui sæpe tuum se*  
*Rejicit, æterno devinctus vulnere amoris ;* 35  
*Atque ita suspiciens tereti cervice repõsta*  
*Pascit amore avidos inhians in te, Dea, visus :*  
*Eque tuo pendet resupini spiritus ore.*  
*Hunc tu, Diva, tuo recubantem corpore sancto*  
*Circumfusa super, suaveis ex ore loquelas* 40  
*Funde, petens placidam Romanis Incluta, pacem.*

*Nam neque Nos agere hoc patriai tempore iniqua*  
*Possumus æquo animo : neque Memmi clara propago*  
*Talibus in rebus communi de'sse saluti.*

*Quod superest, vacuas aureis mihi Memmiada, & te*  
*Semotum à curis adhibe veram ad rationem,* 46

*Nec mea dona tibi studio dispõsta fidei,*  
*Intellecta prius quam sint, contempta relinquant.*  
*Nam tibi de summa Cœli ratione, Deumque,*  
*Differere incipiam, & rerum primordia pandam ;* 50

*Unde omneis Natura creet res, auget, alatque :*  
*Quove eadem rursus Natura perempta resolvat :*  
*Quæ nos Materiem, & Genitalia Corpora rebus*  
*Reddunda in ratione vocare, & Semina rerum*  
*Appellare suemus, & hæc eadem usurpare* 55  
*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 rests his very Soul hangs on thy Lips; this God dissolv'd in Ease, in the soft Moments when thy heavenly Limbs cling round him, with melting Eloquence caress, great Goddess, and implore a Peace for *Rome*.

FOR neither can I write with chearful Strains, in Times so sad, nor can the noble House of *Memmius* desert the common Good in such Distress of Things. The Hours you spare apply with close Attention to my Verse, and free from Care receive true Reason'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 rise, and into what, by the same Nature's Laws, those 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.

*The Subject  
of the  
Poem.*

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

<sup>d</sup> Here *Lucretius* begins his Impiety; had he contented himself only with deriding the superstitious Devotion of the Age he lived in, and not proposed Principles of Irreligion, drawn from the Happiness of the Deity, which he places in supine Idleness and Ease, he might have been read with much Satisfaction, as an excellent Satirist against the Heathen Worship; for he severely swings the mad Zeal of Men-sacrificers, tho' perhaps he has not produced a true Instance in *Iphigenia*; yet History

*Semota ab nostris rebus, sejunctaque longe ;  
 Nam privata dolore omni, privata periclis, 60  
 Ipsa suis pollens opibus, nihil indiga nostri,  
 Nec bene promeritis capitur, nec tangitur ira.*

*One would  
 think this  
 Man, & indeed  
 Philosophus.*

*Humana ante oculos fœdè cum vita jaceret  
 In terris oppressa gravi sub Religione,  
 Quæ caput à cæli regionibus ostendebat, 65  
 Horribili super aspectu mortalibus instans ;*

*Primum GRAÏUS homo mortaleis tollere contra  
 Est oculos ausus, primusque obsistere contra :  
 Quem nec fama Deum, nec fulmina, nec minitanti  
 Murmure compressit Cælum, sed eo magis acrem 70*

*Virtutem irritât animi, confringere ut arcta  
 Naturæ primus portarum claustra cupiret.*

*Ergo vivida vis animi pervicit, & extra  
 Processit longe flammantia mœnia Mundi ;  
 Atque omne immensum peragravit mente animoque :  
 Unde refert nobis victor quid possit oriri, 76*

*Quid nequeat ; finita potestas denique quoique  
 Quanam sit ratione, atque alte terminus hærens.*

*Quare Relligio pedibus subiecta vicissim  
 Obteritur, nos exæquat victoria Cælo. 80*

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 vereor, ne forte rearis  
 Impia te rationis inire elementa, viamque  
 Endogredi sceleris: Quod contra, sæpius olim  
 Relligio peperit scelerosa atque impia facta,  
 Aulide quo pacto Triviai virginis aram 85  
 Iphianassai turpârunt sanguine fœde  
 Duçtores Danaûm, delecti, prima virorum.  
 Cui simul infula virgineos circumdata comptus  
 Ex utraque pari malarum parte profusa 'st,  
 Et mæstum simul ante aras adstare parentem 90  
 Sensit, & hunc propter ferrum celare ministros;  
 Aspectuque suo lacrymas effundere civeis:  
 Muta metu terram genibus summissa petebat:  
 Nec miseræ prodesse in tali tempore quibat,  
 Quod Patrio princeps donârat nomine Regem. 95  
 Nam sublata virûm manibus tremabundaque ad aras  
 Deducta 'st, non ut, solenni more sacrorum  
 Perfecto, posset claro comitari Hymenæo:  
 Sed casta inceste nubendi tempore in ipso  
 Hostia concideret mæstato mæsta parentis, 100  
 Exitus ut classi felix, faustusque daretur  
 Tantum Relligio potuit suadere malorum.

Tutemet à nobis jam quovis tempore Vatun  
 Terriloquis victus dictis desciscere quæres?  
 Quippe etenim quam multa tibi jam fingere possum  
 somnia, quæ vitæ rationes vetere possint, 106  
 Fortunasque tuas omneis turbare timore.  
 Et merito: nam si certam finem esse viderent



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 sad flagitious Deeds Religion has produced; by her inspired the *Grecian* Chiefs, the First of Men, at <sup>f</sup> *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 o'erflowed 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 she 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

<sup>f</sup> 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 *Bæotia* on the River *Euripus*, her own Father assisting at the Sacrifice.

*Ærumnarum homines, aliqua ratione valerent  
Relligionibus, atque minis obsistere Vatum :* 110

*Nunc ratio nulla est restandi, nulla facultas,  
Æternas quoniam pœnas in morte timendum.*

*Ignoratur enim quæ sit natura animæ,  
Nata sit, an, contra, nascentibus insinuetur,  
Et simul intereat nobiscum morte dirempta,* 115

*An tenebras Orci visat, vastasque lacunas,  
An pecudes alias divinitus insinuet se,  
ENNIUS ut noster cecinit, qui primus amœno  
Detulit ex Helicone perenni fronde coronam,  
Per genteis Italas hominum quæ clara clueret,* 120

*Etsi præterea tamen esse Acherusia templa  
Ennius æternis exponit versibus, edens :  
Quo neque permanent animæ, neque corpora nostra ;  
Sed quædam simulacra modis pallentia miris :  
Unde sibi exortam semper-florentis Homeri* 125

*Commemorat speciem, lacrimas & fundere salsas  
Cæpisse, & rerum naturam expandere dictis.*

*Quapropter bene, cum, Superis de rebus habenda  
Nobis est ratio, Solis Lunæque meatus  
Qua fiant ratione ; & qua vi quæque genantur* 130

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 <sup>s</sup> *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 <sup>h</sup> *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

<sup>s</sup> 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.

<sup>h</sup> *Ennius* used to say, that *Homer's* Ghost appear'd to him from Hell, and bitterly weeping, discover'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 quæ res nobis vigilantibus obvia menteis  
 Terrificet, morbo affectis, somnæque sepultis,  
 Cernere uti videamur eos, audireque coram, 135  
 Morte obita quorum tellus amplectitur ossa.*

*Nec me animi fallit, GRAÏORUM obscura reperta  
 Difficile inlustrare LATINIS versibus esse,  
 (Multa novis verbis præsertim cum sit agendum,)  
 Propter egestatem linguæ, & rerum novitatem; 140  
 Sed tua me Virtus tamen, & sperata voluptas  
 Suavis Amicitia, quemvis perferre laborem  
 Suadet, & inducit nocteis vigilare serenas,  
 Quærentem dictis quibus, & quo carmine demum  
 Clara tuæ possim præpandere lumina menti, 145  
 Res quibus occultas penitus convisere possis.*

*Hunc igitur terrorem animi, tenebrasque neces-  
 se est  
 Non radii Solis, neque lucida tela Diei  
 Discussant, sed Naturæ species, Ratioque :  
 Principium hinc cujus nobis exordia sumet, 150  
 NULLAM REM E NIHILO GIGNI DIVINITUS  
 UNQUAM.*

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 oppress'd; 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 Diff- the dark and mystic Notions of the *Greeks*, culty of the (for I have Things to say require new Words) Work. 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: <sup>i</sup> *Nothing was by the Gods* Nothing *of Nothing made.* For hence it is that Fear made out of *Nothing.*

<sup>i</sup> 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, Cæloque tuentur,  
 Quorum operum causas nulla ratione videre  
 Possunt, ac fieri divino Numine rentur. 155

Quas ob res, ubi viderimus, nil posse creari  
 De nihilo, tum, quod sequimur, jam rectius inde  
 Perspiciemus, & unde queat res quæque creari,  
 Et quo quæque modo fiant opera sine Divum.

Nam si de Nihilo fierent, ex omnibu' rebus 160  
 Omne genus nasci posset ; nil Semine egeret :  
 E mare primum homines, è terra posset oriri  
 Squammigerum genus, & volucres ; erumpere cælo  
 Armenta, atque aliæ pecudes : genus omne ferarum  
 Incerto partu culta, ac deserta teneret : 165

Nec fructus iidem arboribus constare solerent,  
 Sed mutarentur : ferre omnes omnia posset.  
 Quippe, ubi non essent genitalia Corpora quoique,  
 Quî posset mater rebus consistere certa ?

At nunc Seminibus quia certis quidque creatur, 170  
 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, 175  
 Viteis Autumno fundi sudante videmus :  
 Si non, certa suo quia tempore Semina rerum  
 Cum confluxerunt, patefit, quodcunque creatur,  
 Dum tempestates adsunt, & vivida tellus  
 Tuto res teneras effert in luminis oras ? 180

Quod si de Nihilo fierent, subito exorerentur  
 Incerto spatio, atque alienis partibus anni :

Quippe

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 Fish 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, pressing 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

*Quippe ubi nulla forent primordia, quæ genitali  
Concilio possent arceri tempore iniquo.*

*Nec porro Augendis rebus Spatio foret usus 185  
Seminis ad coïtum, è Nibilo si crescere possent.*

*Nam fierent juvenes subito ex infantibus parvis :  
E terraque exorta repente arbuta salirent.*

*Quorum nil fieri manifestum 'st, omnia quando  
Paullatim crescunt (ut par est) Semine certo : 190*

*Crescendoque genus servant ; ut noscere possis  
Quæque sua de Materia grandescere, alique.*

*Huc accedit uti sine certis imbribus anni  
Lætificos nequeat fœtus summittere tellus :  
Nec porro secreta cibo natura animantum 195*

*Propagare genus possit, vitamque tueri :  
Ut potius multis communia corpora rebus*

*Multa putes esse, ut verbis Elementa videmus,  
Quam sine Principiis ullam rem existere posse.*

*Denique cur Homines tantos natura parare 200  
Non potuit, pedibus qui pontum per vada possent*

*Transire, & magnos manibus divellere monteis,  
Multaque vivendo vitalia vincere sæcla :*

*Si non Materies quia rebus reddita certa 'st  
Gignundis è qua constat quid possit oriri ? 205*

*NIL igitur fieri de NILO posse fatendum 'st :  
Semine quando opus est rebus, quo quæque creatæ  
Aëris in teneras possint proferrier auras.*

*Postremo quoniam Incultis præstare videmus  
Culta, loca, & manibus meliores reddere fœtus : 210*

*Esse videlicet in terris Primordia rerum,  
Quæ nos, fœcundas vertentes vomere glebas,  
Terraïque solum subigentes, cimus ad ortus.*



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 shew 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 sine quæque labore  
Sponte sua multo fieri meliora videres.* 215

*Huc accedit, uti quicque in sua Corpora rursus  
Dissolvat Natura, neque ad Nihilum interimat res.*

*Nam, si quid mortale è cunctis partibus esset,  
Ex oculis res quæque repente erepta periret;  
Nulla vi foret usus enim, quæ partibus ejus 220  
Discidium parere, & nexus exsolvere posset.*

*At nunc, aeterno quia constant Semine quæque,  
Donec vis obiit, quæ res diverberet ictu,  
Aut intus penetret per inania, dissolvatque,  
Nullius exitium patitur Natura videri.* 225

*Præterea, quæcunque vetustate amovet ætas,  
Si penitus perimit consumens Materiem omnem,  
Unde animale genus generatim in lumina vitæ  
Redducit Venus? aut reductum dædala tellus  
Unde alit, atque auget, generatim pabula præbens?  
Unde mare ingenui fontes, externaque longè 231  
Flumina suppeditant? unde æther sidera pascit?*

but then, if no such Seeds lay there, <sup>k</sup> the Fruits, without our Labour, would of their own accord improve, and of themselves prevent our Care.

ADD here, that Nature does dissolve all Bodies into their Principles again; nor can reduce Things into Nothing. *No Annihilation.*

<sup>1</sup> 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? <sup>m</sup> The Air

<sup>k</sup> 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?

<sup>1</sup> 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 likewise every Thing would perish, not by a Dissolution of its Parts, but withdrawing from our Eyes, would vanish away in a moment, and thus resolve into Nothing; for the Reason why Force is requisite to dissolve every Thing, is because it consists of Seeds that remain after its Dissolution.

<sup>m</sup> 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 quæ sunt,  
Infinita ætas consumse, anteaacta diesque.*

*Quod si in eo spatium, atque anteaacta ætate fuere, 235*

*E quibus hæc Rerum consistit Summa refecta:*

*Immortali sunt naturâ prædita certè.*

*Haud igitur possunt ad Nilum quæque reverti.*

*Denique res omneis eadem vis causaque volgò*

*Conficeret, nisi Materies æterna teneret 240*

*Inter se nexas minus aut magis endopedite.*

*Tactus enim lethi satis esset causa profecto:*

*Quippe, ubi nulla forent æterno Corpore, eorum*

*Contextum vis deberet dissolvere quæque.*

*At nunc, inter se quia nexus principiorum 245*

*Dissimiles constant, æternaque materies est,*

*Incolumi remanent res corpore, dum satis acris*

*Vis obeat pro textura cujusque reperta.*

*Haud igitur redit ad Nihilum res ulla, sed omnes*

*Discidio redeunt in corpora materiai. 250*

*Postremo pereunt imbres, ubi eos pater Æther*

*In gremium matris Terrai præcipitavit.*

*At nitidæ surgunt fruges, ramique virescunt*

*Arboribus; crescunt ipsæ, fœtuque gravantur:*

*Hinc alitur porro nostrum genus, atque ferarum:*

*Hinc lætas urbeis pueris florere videmus, 256*

*Frundiferasque novis avibus canere undique sylvas,*

*Hinc fessæ pecudes pingues per pabula læta*

*Corpora deponunt, & candens lacteus humor*

*Uberibus manat distentis; hinc nova proles 260*

*Artibus infirmis teneras lascivaper herbas*

*Ludit, lacte mero 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 every where 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 *Æther* pours into the Womb of Mother Earth do seem to perish there, but strait 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, chearing their little Hearts with the pure Milk;  
and

*Haud igitur penitus pereunt quæcunque videntur :  
 Quando aliud ex alio reficit Natura, nec ullam  
 Rem gigni patitur, nisi morte adjunctam aliena. 265*

*Nunc age, res quoniam docui non posse creari  
 De Nihilo, neque item genitas ad Nil revocari ;  
 Ne qua forte tamen cœptes diffidere dictis,  
 Quod nequeunt oculis rerum Primordia cerqui ;  
 Accipe præterea, quæ Corpora Tute necesse est 270  
 Confiteare esse in rebus, nec posse videri.*

*Principio, VENTI vis verberat incita pontum,  
 Ingenteisque ruit naveis, & nubila differt ;  
 Interdum rapido percurrens turbine campos  
 Arboribus magnis sternit, monteisque supremos 275  
 Silvifragis vexat flabris : ita perfurit acri  
 Cum fremitu, sævitque minaci murmure pontus.  
 Sunt igitur VENTI nimirum corpora cæca,  
 Quæ mare, quæ terras, quæ denique nubila cæli  
 Verrunt, ac subito vexantia turbine raptant. 280  
 Nec ratione fluunt alia, stragemque propagant,  
 Ac cum mollis aquæ fertur natura repente  
 Flumine abundantanti, quod largis imbribus auget  
 Montibus ex altis magnus decursus aquarum :  
 Fragmina conjiciens sylvarum, arbustaque tota ;*

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 dissol-  
 ved before.

AND now, since I have taught that Nothing  
 can proceed from Nothing, nor can Things once  
 form'd to Nothing be reduced, ° lest 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 fu-  
 rious 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 tor-  
 mented, with their Blasts. They act the same,  
 and spread Destruction round as a still Stream,  
 increased by sudden Rain, and swell'd by Tor-  
 rents pouring from the Hills, the Effect of driv-  
 ing Showers, is born along, rending the Limbs  
 of Trees, and then whole Woods: Nor can the

° He concludes that Nothing returns to Nothing, since Na-  
 ture 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.

° Lest *Memmius* should distrust the Validity of the Argu-  
 ments he has produced to establish his Atoms, because the first  
 Principles of Things are, by reason of their Exility, imper-  
 ceptible to the Sense, he brings several Instances of corporeal  
 Substances, to which no Man denies an Existence, tho' they  
 are invisible to the Eye.

strongest

*Nec validi possunt pontes venientes aquai* 286  
*Vim subitam tolerare : ita magno turbidus imbri*  
*Molibus incurrens validis cum viribus annis,*  
*Dat sonitu magno stragem ; volvitque sub undis*  
*Grandia saxa, ruit quæ quidquid fluctibus obstat.*

*Sic igitur debent VENTI quoque flamina ferri :*  
*Quæ, veluti validum flumen, cum procubuere*  
*Quamlibet in partem, trudent res ante, ruuntque*  
*Impetibus crebris ; interdum vertice torto*  
*Corripiunt, rapidoque rotantia turbine portant.* 295  
*Quare etiam atque etiam sunt VENTI Corpora cæca :*  
*Quandoquidem factis ac moribus, æmula magnis*  
*Annibus inveniuntur, aperto Corpore qui sunt.*

*Tum porro varios rerum sentimus ODORES,*  
*Nec tamen ad nareis venienteis cernimus unquam :*  
*Nec calidos ÆSTUS tuimur, nec FRIGORA qui-*  
*mus* 301

*Usurpare oculis, nec VOCES cernere suemus ;*  
*Quæ tamen omnia Corporea constare necesse 'st*  
*Natura : quoniam sensus impellere possunt.*

**TANGERE ENIM ET TANGI, NISI CORPUS,**  
**NULLA POTEST RES.** 305

*Denique fluctifrago suspensæ in littore Vestes*  
*Uvescunt, eadem dispansæ in Sole ferescunt ;*  
*At neque quo pacto persederit humor aquai*  
*Visu 'st nec rursus quo pacto fugerit æstu ;*  
*In parvas igitur parteis dispergitur Humor,* 310  
*Quas oculi nulla possunt ratione videre.*

*Quin etiam multis Solis redeuntibus annis*  
*Annulus in digito subtertenuatur habendo :*  
*StillicidI casus lapidem cavat : uncus aratri*  
*Ferreus occultè decrescit Vomer in arvis :* 315  
*Strataque jam volgi pedibus detrita viarum*  
*Saxea conspiciamus : tum portas propter abena*



strongest Bridges bear the Force, so sudden, of the rushing Flood; the Stream, made mad by hasty Rains, beats on the Damms with Force impetuous, swells through the Breach with horrid Noise, and rolls the massy Stones under its Waves, and breaks what stops its Tide. Just so 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, wastes in the Fields insensibly by Use; we see the Streets, paved with hard Stones, worn out by frequent Tread of Passengers; <sup>p</sup> the

<sup>p</sup> 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 ominis causâ*, for good Luck's sake.  
brazen

Signa manus dextras ostendunt attenuari  
 Sæpe salutantum tactu, præterque meantum :  
 Hæc igitur minui, cum sint detrita videmus ; 320  
 Sed quæ Corpora decedant in tempore quoque,  
 Invida præclusit speciem Natura videndi.

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

Nec tamen undique Corporea stipata tenentur 330  
 Omnia natura, namque est in rebus INANE.  
 Quod tibi cognosse in multis erit utile rebus :  
 Nec sinet errantem dubitare, & quærere semper  
 De Summa rerum, & nostris diffidere dictis ;

Quapropter locus est intactus, INANE, vacansque.  
 Quod si non esset, nulla ratione moveri 336  
 Res possent ; namque officium, quod Corporis extat,  
 Officere, atque obstare, id in omni tempore adesset  
 Omnibus : Haud igitur quidquam procedere posset,  
 Principium quoniam cedendi nulla daret res. 340

At nunc per maria, ac terras, sublimaque cæli,  
 Multa modis multis varia ratione moveri  
 Cernimus ante oculos ; quæ, si non esset INANE,  
 Non tam sollicito motu privata carerent ;  
 Quàm genita omnino nulla ratione fuissent : 345  
 Undique Materies quoniam stipata quiesset.

brazen Statues nigh the Gates shew their Right Hands made less by many a Kiss of those who worship, or who pass along. These Things we see shew less and less, 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 believ'd.

*There must  
be a Void.*

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 croud'd close on every side had ever been at rest.

<sup>a</sup> If there were no *Void* interspersed in Things, all Things would be croud'd to such a degree, that not only nothing in the whole Universe could be moved from its Place, but it would be even impossible 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.

BESIDES,

Præterea quamvis Sólidæ res esse putentur,  
 Hinc tamen esse licet Raro cum corpore cernas :  
 In saxis, ac speluncis permanat Aquarum  
 Liquidus humor, & uberibus flent omnia guttis : 350  
 Dissipat in corpus sese Cibus omne animantum :  
 Crescunt Arbusta, & fætus in tempore fundunt,  
 Quod Cibus in totas usque ab radicibus imis  
 Per truncos, ac per ramos diffunditur omneis :  
 Inter septa meant Voces, & clausa domorum 355  
 Transvolitant : rigidum permanat Frigus ad ossa.  
 Quod, nisi INANIA sint, qua possent Corpora quæque  
 Transire, haud ulla fieri ratione videres.

Denique cur alias aliis præstare videmus  
 Pondere res rebus, nihilo majore figura? 360  
 Nam, si tantundem 'st in Lanæ glomere, quantum  
 Corporis in Plumbo 'st, tantundem pendere par est ;  
 Corporis officium est quoniam premere omnia deorsum :  
 Contra autem natura manet sine pondere INANIS.  
 Ergo quod Magnum 'st æque, Leviusque videtur,  
 Nimirum plus esse sibi declarat INANIS : 366  
 At contra Gravius plus in se CORPORIS esse  
 Dedicat, & multò VACUI minus intus habere.  
 Est igitur nimirum id, quod ratione sagaci  
 Quærimus, admistum rebus quod Inane vocamus.

BESIDES <sup>r</sup> though Things appear of solid Parts compos'd, yet you will find them, in some measure, form'd of Bodies that are rare; the liquid Moisture 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 increase 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, <sup>s</sup> 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 same; for the Quality of Body is to press 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*.

<sup>r</sup> 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.

<sup>s</sup> 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, præcurrere cogor ;  
 Cedere Squamigeris latices nitentibus aiunt,  
 Et liquidas aperire vias ; quia post loca Pisces  
 Linqunt, quo possint cedentes confluere undæ ; 375  
 Sic alias quoque res inter se posse moveri,  
 Et mutare locum ; quamvis sint omnia plena :  
 Scilicet id falsa totum ratione receptum 'st.  
 Nam quò Squamigeri poterunt procedere tandem,  
 Ni spatium dederint latices ? concedere porro 380  
 Quò poterunt undæ, cum pisces ire nequibunt ?  
 Aut igitur motu privandum 'st corpora quæque ;  
 Aut esse admistum dicendum 'st rebus INANE ;  
 Unde initium primum capiat res quæque movendi.  
 Postremo duo de concursu Corpora lata, 385  
 Si cita dissiliant, nempe aër omne necesse 'st,  
 Inter corpora quod fuvat, possidat INANE.  
 Is porro, quamvis circum celerantibus auris  
 Confluat, haud poterit tamen uno tempore totum  
 Complere spatium : Nam primum quemque necesse 'st  
 Occupet ille locum, deinde omnia possideantur. 391  
 Quòd si forte aliquis, cùm Corpora dissiluerè,  
 Tum putat id fieri, quia se condenseat aër,  
 Errat ; nam VACUUM tum fit, quod non fuit ante ;  
 Et repletur item, VACUUM quod constitit ante : 395

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 ope 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<sup>u</sup>, 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 condens'd, 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.

<sup>u</sup> 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.

Nec tali ratione potest denserier aër,  
 Nec, si jam posset, sine 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 possum commemorando  
 Argumenta, fidem dictis, conradere nostris ;  
 Verum animo satis hæc vestigia parva sagaci  
 Sunt, per quæ possis cognoscere cætera Tute :  
 Namque Canes ut montivagæ persæpe feraï 405  
 Naribus inveniunt inteetas frunde quietes,  
 Cum semel institerunt vestigia certa viaï :  
 Sic alid ex alio per te Tute ipse videre  
 Talibus in rebus poteris, cæcasque latebras  
 Insinuare omneis, & Verum protrahere inde : 410

Quod si pigrâris, paullumve abscesseris ab re,  
 Hoc tibi de plano possum promittere, MEMMI :  
 Usque adeo largos haustus de fontibus magnis  
 Lingua meo suavis diti de pectore fundet,  
 Ut verear, ne tarda prius per membra Senectus 415  
 Serpat, & in Nobis Vitaï claustra resolvat,  
 Quàm tibi de quavis una re versibus omnis  
 Argumentorum sit copia missa per aureis.  
 Sed nunc jam repetam cæptum pertexere dictis :

Omnis, ut est, igitur, per se, Natura, duabus 420  
 Consistit rebus ; nam CORPORA sunt, & INANE,  
 Hæc in quo sita sunt, & quæ diversa moventur :  
 Corpus enim per se communis deliquat esse  
 Sensus ; quo nisi prima fides fundata valebit,  
 Haud erit occultis de rebus quo referentes 425  
 Confirmare animi quicquam ratione queamus.  
 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



Case, the Air can't be condens'd ; and if it could, it can't without a *Void* contract itself, and so 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 rouse 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 Verse 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.

*There is nothing besides Body and Void.*

*Præterea nihil est, quod possis dicere ab omni  
CORPORE sejunctum, secretumque esse ab INANI :*

*Quod quasi tertia sit rerum natura reperta.*

*Nam quodcunque erit, esse aliquid debet id ipsum  
Augmine vel grandi, vel parvo denique dum sit ; 435*

*Cui si Tactus erit quamvis levis, exiguusque,  
Corporum augebit numerum, summamque sequetur ;*

*Sin Intactile erit, nulla de parte quod ullam  
Rem prohibere queat per se transire meantem ;*

*Scilicet hoc id erit Vacuum, quod Inane vocamus. 440*

*Præterea per se quodcunque erit, aut faciet quid,  
Aut aliis fungi debet agentibus ipsum ;*

*Aut erit ut possint in eo res esse, gerique :*

*At facere & fungi sine CORPORE nulla potest res :*

*Nec præbere locum porro, nisi Inane, Vacansque 445*

*Ergo præter INANE, & CORPORA, tertia per se  
Nulla potest rerum in numero natura relinqui ;*

*Nec, quæ sub sensus cadat ullo tempore nostros,*

*Nec, ratione animi quam quisquam possit apisci.*

*Nam quæcunque cluent, aut his CONJUNCTA dua-  
bus 450*

*Rebus ea invenies ; aut horum EVENTA videbis.*

*Conjunctum est id, quod nunquam sine perniciali*

*Discidio potis est sejungi, seque gregari :*

*Pondus uti saxi, Calor ignibu', Liquor aquai,*

*Tactus Corporibus cunetis, Intactus Inani. 455*

*Servitium contra, Libertas, Divitiæque,*

*Paupertas, Bellum, Concordia, cætera, quorum*

*Adventu manet incolumis natura, abituque,*

*Hæc soliti sumus, ut par est, EVENTA vocare.*

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 somewhat 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.

Tempus item per se non est, sed Rebus ab ipsis 460  
 Consequitur sensus, transactum quid sit in ævo,  
 Tum quæ Res instet; quid porro deinde sequatur:  
 Nec per se quemquam TEMPUS sentire fatendu 'st  
 Semotum ab rerum motu, placidaque quiete.

Denique Tyndaridem raptam, belloque subactas 465  
 Trojugenas genteis cum dicunt esse, videndu 'st,  
 Ne forte hæc per se, cogant nos, esse fateri:  
 Quando ea sæcla hominum, quorum hæc eventa fuere  
 Irrevocabilis abstulerit jam præterita ætas.  
 Namque aliud Rebus, aliud regionibus ipsis 470  
 EVENTUM dici poterit, quodcunque erit actum.

Denique Materies si rerum nulla fuisset,  
 Nec Locus, ac Spatium, res in quo quæque geruntur;  
 Nunquam Tyndaridis formæ conflatus amore  
 Ignis Alexandri Phrygio sub pectore gliscens 475  
 Clara, accendisset sævi certamina belli:  
 Nec clam durateus Trojanis Pergama partu  
 Inflammasset equus nocturno Grajugenarum;  
 Perspicere ut possis Res Gestas funditus omneis,  
 Non ita, uti CORPUS, per se constare nec esse: 480  
 Nec ratione cluere eadem, qua constat INANE;

<sup>y</sup> 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 <sup>z</sup> *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's* 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

<sup>y</sup> *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 Con-junct 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.

<sup>z</sup> 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 meritò 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 reperiri corpore posse ;*

*Transit enim Fulmen cæli per septa domorum, 490*

*Clamor ut, ac Voces : Ferrum candescit in igne :*

*Dissiliuntque fero ferventia Saxa vapore :*

*Conlabefactatus rigor Auri solvitur æstu :*

*Tum glacies Æris flamma devieta liquescit :*

*Permanat calor Argentum, penetræque frigus 495*

*Quando utrumque, manu retinentes pocula ritè,*

*Sensimus infuso lympharum rore supernè :*

*Usque 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 constant,*

*Semina quæ rerum, Primordiaque esse docemus :*

*Unde omnis Rerum nunc constet Summa creata.*

*Principio quoniam duplex natura duarum*

*Dissimilis rerum longe constare reperta 'st 505*

*Corporis atque Loci, res in quo quæque geruntur ;*

*Esse utramque sibi per se, puramque necesse 'st :*

*Nam quâcunque vacat Spatium, quod Inane vocamus ;*

*CORPUS eâ non est : quâ porro cunque tenet se*

*Corpus, eâ vacuum nequaquam constat Inane. 510*

*Sunt igitur Solida, ac sine Inani Corpora prima.*

*Præterea*

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. <sup>a</sup>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 loos'd 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 *The Seeds* Things unlike in Nature, in themselves distinct, *are Solid.* *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*.

<sup>a</sup> 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.

Præterea quoniam genitis in rebus Inane est,  
 Materiem circum Solidam constare necesse est :  
 Nec res ulla potest vera ratione probari  
 Corpore Inane suo celare atque intus habere ; 515  
 Si non, quod cohibet, Solidum constare relinquas.  
 Id porro nihil esse potest, nisi Materiai  
 Concilium, quod Inane queat rerum cohibere.  
 Materies igitur Solido quæ corpore constat,  
 Esse æterna potest, cum cætera dissolvantur. 520  
 Tum porro si nil esset, quod 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 525  
 Distinctu est, quoniam nec Plenum naviter extat ;  
 Nec porro Vacuum : sunt ergo corpora cæca,  
 Quæ Spatium Pleno possint distinguere Inane.  
 Hæc neque dissolvi plagis extrinsecus ieta  
 Possunt : nec porro penitus penetrata retexi ; 530  
 Nec ratione queunt alia tentata labare :  
 Id quod jam supera tibi paullo ostendimus antè.  
 Nam neque conlidi sine Inani posse videtur  
 Quicquam, nec frangi, nec findi in bina secando :  
 Nec capere humorem, neque item manabile frigus,  
 Nec penetralem ignem, quibus omnia conficiuntur.  
 Et quàm quæque magis cohibet res intus Inane, 537  
 Tam magis his rebus penitus tentata labascit.  
 Ergo, si Solida, ac sine Inani Corpora prima  
 Sunt, ita uti docui, sint hæc Æterna necesse est. 540  
 Præterea, nisi Materies Æterna fuisset,



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 dissolved, 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<sup>b</sup>; therefore, if these first Seeds are solid, free from *Void*, they, as I said, must be eternal, and from Death secure.

*The Seeds  
are Eter-  
nal.*

AGAIN, if Matter had not been eternal, <sup>c</sup> long before

<sup>b</sup> 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.

<sup>c</sup> If the first Seeds of Things were dissolved, they would fall into Nothing ; for there are no Principles, prior to the first,  
into

*Antebac ad Nihilum penitus res quæque redissent ;  
 De Nibiloque renata forent quæcunque videmus.  
 At quoniam supera docui NIL posse creari  
 De Nihilo, neque quod genitu'st ad Nil revocari : 545  
 Esse immortalia Primordia corpore debent,  
 Dissolvi quo quæque supremo tempore possint ;  
 Materies ut suppeditet rebus reparandis.  
 Sunt igitur Solida Primordia simplicitate,  
 Nec ratione queunt alia servata per ævum 550  
 Ex infinito jam tempore res reparare.  
 Denique, si nullam finem Natura parâisset  
 Frangendis rebus, jam Corpora materiai  
 Usque redacta forent, ævo frangente priore,  
 Ut nihil ex illis à certo tempore posset 555  
 Conceptum, summum ætatis pervadere florem :  
 Nam quidvis citius dissolvi posse videmus,  
 Quam rursus refici. Quapropter longa diei  
 Infinitæ ætas anteaacti temporis omnis  
 Quod fregisset adhuc, disturbans, dissolvensque, 560  
 Id nunquam reliquo reparari tempore posset :  
 At nunc nimirum 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, <sup>a</sup> 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.

<sup>a</sup> 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 Mass.

*Huc accedit, uti Solidissima materiai  
 Corpora cum constant, possint tamen omnia reddi  
 Mollia, quæ fiant, Aër, Aqua, Terra, Vapores,  
 Quo pacto fiant, & qua vi cunque genantur,  
 Admixtum quoniam simul est in rebus Inane. 570  
 At contra, si Mollia sint Primordia rerum,  
 Unde queant validi silices, ferrumque creari,  
 Non poterit ratio reddi. Nam funditus omnis  
 Principio fundamenti Natura carebit.  
 Sunt igitur Solida pollentia simplicitate, 575  
 Quorum condensa magis omnia conciliatu  
 Arctari possunt, validasque ostendere vireis.  
 Denique jam quoniam generatim reddita finis  
 Crescendi rebus constat, vitamque tuendi,  
 Et quid quæque queant per fœdera Naturai, 580  
 Quid porro nequeant sancitum quandoquidem exstat :  
 Nec commutatur quicquam, quin omnia constant,  
 Usque adeo, variæ volucres ut in ordine cunctorum  
 Ostendant maculas generaleis corpori inesse :  
 Immutabile materiae quoque corpus habere 585  
 Debent nimirum. Nam si Primordia rerum  
 Commutari aliqua possent ratione revicta,  
 Incertum quoque jam constet, quid possit oriri,  
 Quid nequeat ; finita potestas denique quoique  
 Quanam sit ratione, atque altè terminus hæreat ; 590*

AND yet, <sup>e</sup> though the first Seeds of Things *Whence* are solid, all Beings that are compounded, such as *proceeds* Air and Water, Earth and Fire, may be soft, *Softness.* (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, <sup>f</sup> 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

<sup>e</sup> 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.

<sup>f</sup> 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.

*Nec toties possent generatim sæcla referre  
Naturam, motus, vitum, moresque parentum.*

*Tum porro, quoniam extremum cujusque cacumen;  
Corporis est aliquod, nostri quod cernere sensus  
Jam nequeunt, id nimirum sine partibus exstat, 595  
Et Minima constat natura; nec fuit unquam  
Per se secretum, neque posthac esse valebit;  
Alterius quoniam est ipsum pars, primaque, & ima:  
Inde aliæ, atque aliæ similes ex ordine partes  
Agmine condensa naturam Corporis explent. 600*

*Quæ quoniam per se nequeunt constare necesse est  
Hære, ut nequeant ulla ratione revelli.  
Sunt igitur Solida Primordia simplicitate;  
Quæ minimis stipata cohærent partibus artè.  
Non ex ullorum conventu conciliata, 605  
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; 610  
Quippe ubi dimidiæ partis pars semper habebit  
Dimidiam partem, nec res perfiniet ulla:  
Ergò rerum inter summam, minimamque qui escit?*

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

BESIDES, <sup>g</sup> 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, <sup>h</sup> 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-

<sup>g</sup> 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 disjoin, because no Art or Strength can reduce into Nothing; for Nothing goes into Nothing.

<sup>h</sup> 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 *Leasts* 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.

*Non erit ut distent: nam quamvis funditus omnis  
 Summa sit Infinita, tamen Parvissima quæ sunt, 615  
 Ex Infinitis constabunt partibus æquæ,  
 Quoi quoniam ratio reclamatione vera, negatque  
 Credere posse animum, victus fateare necesse 'st,  
 Esse ea quæ nullis jam prædita partibus existunt,  
 Et Minima constant natura. Quæ quoniam sunt, 620  
 Illa quoque esse tibi Solida, atque Æterna fatendum.*

*Denique ni Minimas in parteis cuncta resolvit  
 Cogere consuisset rerum Natura creatrix,  
 Jam nihil ex illis eadem reparare valeret:  
 Propterea quia, quæ multis sunt partibus aueta, 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 reddita finis  
 Corporibus, tamen ex æterno tempore quædam 630  
 Nunc etiam superare necesse 'st Corpora rebus,  
 Quæ nondum clueant ullo tentata periclo:  
 At quoniam fragili natura prædita constant,  
 Discrepat æternum tempus potuisse manere  
 Innumerabilibus plagis vexata per ævum. 635*

*Quapropter, qui Materiem rerum esse putarunt  
 Ignem, atque ex igni Summam consistere solo*



dies? None in the least; for though the whole be intirely 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, <sup>i</sup> 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, <sup>k</sup> 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

<sup>i</sup> 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.

<sup>k</sup> If there were no Solids which could not be dissolved, 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 exposed to infinite Strokes and Blows, must of necessity have been dissolved.

*Magnopere à vera lapsi ratione videntur.*

HERACTITUS inquit quorum dux prælia primus,  
 Clarus ob obscuram linguam magis inter inaneis, 640  
 Quàmde graveis inter Graios, qui vera requirunt.  
 Omnia enim Stolidi magis admirantur, amantque  
 Inversis quæ sub verbis latitantia cernunt :  
 Veraque constituunt, quæ bellè tangere possunt  
 Aureis, & levido quæ sunt fucata sonore. 645

Nam cur tam variæ res possent esse, requiro,  
 Ex vero si sunt Igni, puroque creatæ ?  
 Nil prodesset enim calidum denserier Ignem,  
 Nec rarefieri, si partes Ignis eandem  
 Naturam, quam totus habet super Ignis, haberent.  
 Acrior Ardor enim conductis partibus esset : 651  
 Languidior porro disjectis, disque supatis.  
 Amplius hoc fieri nihil est, quod posse rearis  
 Talibus in causis, nedum variantia rerum  
 Tanta queat densis rarisque ex Ignibus esse. 655

Atque Hi si faciant, admistum rebus Inane ;  
 Denferi poterunt Ignes, rarique relinqui :  
 Sed, quia multa sibi cernunt contraria, mussant,  
 Et fugitant in rebus Inane relinquere purum, &  
 Ardua dum metuunt, amittunt vera viâ : 660  
 Nec rursus cernunt exempto rebus Inani,  
 Omnia denseri, fierique ex omnibus unum

err from the true Rule of Reason. The Cham- Against  
 pion of these, <sup>1</sup> *Heraclitus*, enters first the Lists, Heracli-  
 more famed for dark Expression among empty tus.  
*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'er affects by witty Jing-  
 ling of the Sound.

FOR how such various Beings could arise, I ask,  
 if form'd from pure and real Fire? To say, <sup>m</sup> that  
 the hot Fire is now condens'd, and sometimes rari-  
 fied, 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, condensed 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 al-  
 lowing there is in Things a *Void*, all Bodies  
 would be dense, and out of all one only would be

<sup>1</sup> He taught, that all Things are made of Fire, and re-  
 solv'd again into Fire; and tho' the Poet singles out this Phi-  
 losopher, he takes it for granted, that his Arguments conclude  
 as strongly against others; since whatever opposes this Doc-  
 trine of Fire, will equally hold good against the Air, or any  
 other of the Elements.

<sup>m</sup> *Heraclitus* asserted, that Fire, by being condensed, grows  
 moist, and so becomes Air; and the Air, by Compression, be-  
 comes Water; which Water, by Condensation, is turned into  
 Earth: But this is not proved; for the more the Fire is condensed,  
 the more it is Fire, and the Rarification is nothing to the pur-  
 pose; 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 jácit, atque vaporem :  
 Ut videas non è stipatis partibus esse. 665

Quod si fortè ulla credunt ratione potesse  
 Igneis in cœtu stingui, mutareque corpus ;  
 Scilicet ex ulla facere id si parte reparcent,  
 Occidet ad Nihilum nimirum funditus Ardor  
 Omnis, & ex Nibilo fient quæcunque creantur. 670  
 Nam quodcunque suis mutatum finibus exit,  
 Continuò hoc mors est illius, quod fuit ante ;  
 Proinde aliquid superare necesse 'st incolume olli,  
 Ne tibi res redeant ad Nilum funditus omnes,  
 De Nibiloque renata 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 sese ;  
 Scire licet non esse hæc Ignea corpora rerum. 680  
 Nil referret enim quædam decedere, abire,  
 Atque alia attribui, mutarique ordine quædam,  
 Si tamen Ardoris naturam cuncta tenerent.  
 Ignis enim foret omnimodis, quodcunque crearent.  
 Verùm, ut opinor, ita 'st: Sunt quædam Corpora,  
 quorum 685

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 <sup>n</sup> Fire in all its Parts may be extinguish'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 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, lest Things to Nothing should perfectly return; and then revive, and should 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 <sup>o</sup> 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

<sup>n</sup> 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.

<sup>o</sup> 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 Corpufcles, 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.

Concurfus, Motus, Ordo, Pofitura, Figuræ,  
 Efficiunt Ignes, mutatoque ordine mutant  
 Naturam; neque funt Igni fimulata, neque ullæ  
 Præterea reii, quæ corpora mittere poffit  
 Sensibus, & nostros adjectu tangere tactus. 690

Dicere porro Ignem res omneis effe, neque ullam  
 Rem veram in numero rerum conftare, nifi Ignem,  
 Quod facit Hic IDEM, perdelirum effe videtur.  
 Nam contra Sensus ab Sensibus ipse repugnat:

Et labefactat eos, unde omnia credita pendent: 695  
 Unde hic cognitus est ipfi, quem nominat Ignem.

Credit enim Sensus Ignem cognoscere verè,  
 Cætera non credit, nibilo quæ clara minus funt:  
 Quod mihi cum vanum, tum delirum effe videtur.  
 Quo referemus enim? Quid nobis certius ipsis 700  
 Sensibus effe potest, quo vera ac falsa notemus?

Præterea, quare quisquam magis Omnia tollat,  
 Et velit Ardoris naturam linquere solam,  
 Quam neget effe Ignis, Summam tamen effe relin-  
 quat?

Æqua videtur enim dementia dicere utrumque. 705

Quapropter qui Materiem rerum effe putârunt  
 Ignem, atque ex Igni Summam confistere poffe:  
 Et qui principium gignundis Aëra rebus  
 Conftituère: aut Humorem quincunque putârunt  
 Fingere res ipsum per fe: Terramve creare 710

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 these 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.

<sup>P</sup> AND now to say that every Thing is Fire, that no true Thing in Nature does exist but Fire, as this Man does, is Madness 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 Madness to believe.

WHEREFORE, <sup>Q</sup> 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

<sup>P</sup> *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.

<sup>Q</sup> *Heraclitus* held, that Fire, *Anaximenes Milesius*, that Air, *Thales Milesius*, that Water, and *Pherecydes*, that Earth was the first Principle of all Things.

*Omnia, & in rerum naturas vertier omneis :  
Magnoperè à vero longéque errâsse videntur.*

*Adde etiam qui conducunt primordia rerum,  
Aëra jungentes Igni, Terramque Liquori :  
Et qui Quatuor ex rebus posse omnia rentur, 715  
Ex Igni, Terra, atque Anima procrefcere, & Im-  
bri :*

*Quorum Acragantinus cum primis EMPEDOCLES  
est :*

*Insula quem Triquetris terrarum gessit in oris :  
Quam fluitans circum magnis amfractibus æquor  
Ionium glaucis aspergit virus ab undis : 720  
Angustoque fretu rapidum mare dividit undis  
Italiæ terrâ oras à finibus ejus :  
Hic est vasta Charybdis, & hîc Ætnæa minantur  
Murmura flammaram rursus se conligere iras,  
Faucibus eruptos iterum ut vis evomat igneis : 725  
Ad cælumque ferat flammâ fulgura rursus :  
Quæ cum magna modis multis miranda videtur  
Gentibus humanis regio, visendaque fertur,  
Rebus opima bonis, multa munita virûm vi :  
Nil tamen hoc habuisse Viro præclarius in se, 730  
Nec sanctum magis, & mirum, carumque videtur.  
Carmina quin etiam divini pectoris ejus  
Vociferantur, & exponunt præclara reperta ;  
Ut vix humana videatur stirpe creatus.*

*Hic tamen, & supera, quos diximus, inferiores  
Partibus egregiè multis, multoque minores, 736  
Quanquam multa benè, ac divinitus invenièntes*



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.

*Things are not made of four Elements.*

THE Chief of these we rank <sup>r</sup> *Empedocles* of *Empedocles* *Agrigentum*, 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 *Ætna* 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 Verse, 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

<sup>r</sup> 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.

inspired,

*Ex adyto tanquam cordis responsa dedere  
 Sanctiùs, & multò certa ratione magis, quam  
 Pythia, quæ tripode ex Phæbi, lauroque profatur ;  
 Principiis tamen in rerum fecere ruinas, 741  
 Et graviter Magni magno cecidere ibi casu :*

*Primum, quod motus, exempto rebus Inani,  
 Constituunt, & res molleis, rarasque relinquunt,  
 Aëra, Solem, Ignem, Terras, Animalia, Fruges : 745  
 Nec tamen admiscent in eorum corpus Inane.*

*Deinde quod omnino finem non esse secandis  
 Corporibus faciunt, neque pausam stare fragori ;  
 Nec prorsum in rebus Minimum consistere quicquam :  
 Cum videamus id extremum cujusque cacumen 750  
 Esse quod ad sensus nostros Minimum esse videtur :*

*Conjicere*

inspired, and have pronounced their Oracles (from the most close Reccesses 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 *Least* 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 Least of all; and thence conclude, that ut-

' 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 Brats.

most

*Conjicere ut possis ex hoc, quod cernere non quis,  
Extremum quod habent, Minimum consistere rebus.*

*Huc accedit item, quod jam primordia rerum  
Mollia constituunt, quæ nos nativa videmus 755  
Esse, & mortali cum corpore funditus; atqui  
Debeat ad Nihilum 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  
Ipsa sibi inter se: Quare aut congressa peribunt, 761  
Aut ita diffugient, ut tempestate coorta,  
Fulmina diffugere, atque Imbreis Ventosque videmus.*

*Denique Quatuor ex rebus si cuncta creantur,  
Atque in eas rursus res omnia dissolvuntur, 765  
Quæ magis illa queunt rerum Primordia dici,  
Quam contra res illorum, retroque putari?  
Alternis gignuntur enim, mutantque colorem,  
Et totam inter se naturam tempore ab omni:  
Sin ita fortè putas, Ignis, Terræque coire 770  
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 775  
Naturam ostendet, mistusque videbitur Aër  
Cum Terra simul, atque Ardor cum Rore manere:  
At Primordia gignundis in rebus oportet  
Naturam Clandestinam, cæcamque adhibere,  
Emineat nequid, quod contra pugnet & obstet, 780  
Quò minùs esse queat propriè, quodcunque creatur.*

most Point is that same *Least* in Things too small to be discover'd by the Sight.

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

AND then such Seeds are many times at war among themselves, and Poison to each other, and so will perish in the Attack, or fly scatter'd, as in a Tempest we observe the Thunder, and the Showers and Wind disperse.

LASTLY, if all Things from four Elements are form'd, and into them are finally dissolv'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 joined, 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 display its proper Nature still; you'd see 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 consist of Parts dissimilar, confused and void.

Quin etiam repetunt à cælo, atque ignibus ejus  
 Et primum faciunt Ignem se vertere in Auras  
 Aëris: hinc Imbrem gigni, Terramque creari  
 Ex Imbri, retroque à Terra cuncta reverti, 785  
 Humorem primum, post Aëra, deinde Calorem:  
 Nec cessare hæc inter se mutare, meare  
 De Cælo ad Terram, de Terra ad Sidera Mundi:  
 Quod facere haud ullo debent primordia pacto.  
 Immutabile enim quiddam superare necesse 'st; 790  
 Ne res ad Nihilum redigantur funditus omnes.  
 Nam quodcunque suis mutatum finibus exit,  
 Continuò hoc mors est illius, quod fuit antè,  
 Quapropter, quoniam quæ paullo diximus antè,  
 In commutatum veniunt, constare necesse 'st 795  
 Ex aliis ea, quæ nequeant convertier unquam:  
 Ne tibi res redeant ad Nihilum funditus omnes.  
 Quin potiùs tali natura prædita quædam  
 Corpora constituas, Ignem si forte creârint,  
 Posse eadem demptis paucis, paucisque tributis, 800  
 Ordine mutato, & motu, facere Aëris auras:  
 Sic alias aliis rebus mutarier omneis.  
 At manifesta palam res indicat, inquis, in auras  
 Aëris è Terra res omnes crescere, alique;

BESIDES<sup>t</sup>, 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, lest 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, lest 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.

<sup>u</sup> BUT you say, that common Fact does clearly shew, that all Things grow, and rise into the  
Air,

<sup>c</sup> *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.

<sup>u</sup> 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

*Et nisi tempestas indulget tempore fausto, 805*  
*Imbribus, & tabe nimborum arbusta vacillant.*

*Solque sua pro parte fovet, tribuitque calorem :*  
*Crescere non possunt Fruges, Arbusta, Animantes.*  
*Scilicet : & nisi nos Cibus aridus, & tener Humor*  
*Adjuvet, amisso jam corpore, vita quoque omnis 810*  
*Omnibus è nervis atque ossibus exsolvatur :*

*Adjutamur enim dubio procul, atque alimur nos*  
*Certis ab rebus, certis aliæ atque aliæ res.*  
*Nimirum quia multa modis communia multis*  
*Multarum rerum in rebus Primordia mista 815*  
*Sunt, ideo variis variæ res rebus aluntur.*

*Atque eadem magni refert Primordia sæpe*  
*Cum quibus, & quali positura contineantur :*  
*Et quos inter se dent motus, accipiantque.*  
*Namque eadem Cælum, Mare, Terras, Flumina,*  
*Solem 820*

*Constituunt ; eadem Fruges, Arbusta, Animanteis :*  
*Verùm aliis, alioque modo commista moventur.*

*Quin etiam passim nostris in Versibus ipsis*  
*Multa Elementa vides multis communia verbis :*  
*Cum tamen inter se Versus, ac verba necesse est 825*  
*Consteare & re, & sonitu distare sonanti :*  
*Tantum Elementa queunt permutato ordine solo :*  
*At rerum quæ sunt Primordia, plura adhibere*  
*Possunt, unde queant variæ res quæque creari.*

*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 staid 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.

Nunc & ANAXAGORÆ scrutemur Homœome-  
riam, 830

Quam Græci memorant, nec nostra dicere lingua  
Concedit nobis patrii sermonis egestas:  
Sed tamen ipsam rem facile 'st exponere verbis,  
Principium rerum quam dicit Homœomeriam:  
Ossa videlicet è paucillis atque minutis 835  
Ossibu': sic & de paucillis atque minutis  
Visceribus Viscus gigni: Sanguenque creari,  
Sanguinis inter se multis coëuntibu' guttis:  
Ex Aurique putat micis consistere posse  
Aurum: & de Terris Terram concreescere parvis:  
Ignibus ex Ignem: Humorem ex Humoribus esse: 841  
Cætera consimili fingit ratione, putatque.

Nec tamen esse ulla parte IDEM in rebus Inane  
Concedit, neque corporibus finem esse secandis:  
Quare in utraque mihi pariter ratione videtur, 845  
Errare, atque ILLI, supera quos diximus ante.

Adde quod imbecilla nimis Primordia fingit,  
Si Primordia sunt, simili quæ prædita constant  
Natura, atque ipsæ res sunt; æquèque laborant,  
Et pereunt, neque ab exitio res ulla refrænât: 850  
Nam quid in oppressis valido durabit eorum,

Now, let us inquire into the <sup>x</sup> *Homœomery* of *Against A-*  
*Anaxagoras*, the *Greeks* so call it, but the Po-<sup>naxagoras.</sup>  
 erty 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 *Homœome-*  
*ry*, and makes the Principle of Bodies. For in-  
 stance, 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 Causes such as  
 These arise.

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

BESIDES <sup>z</sup>, 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 a-  
 gainst the fierce Jaws of Death; and so escape

<sup>x</sup> *Homœomery* signifies a Likeness of Parts; we call *Homœo-*  
*meries* those Things whose minutest Parts have the Name of  
 the Whole, as Stones, Gold, Blood, &c.

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

<sup>z</sup> If like Things consist of like, and the Principles are ex-  
 actly 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.

*Ut mortem effugiat lethi sub dentibus ipsis ?  
 Ignis ? an Humor ? an Aura ? quid horum ? San-  
 guen ? an Ossa ?  
 Nil, ut opinor, ubi ex æquo res funditus omnis  
 Tam mortalis erit, quàm quæ manifesta videmus 855  
 Ex oculis nostris aliqua vi victa perire.  
 At neque recidere ad Nihilum res posse, neque autem  
 Crescere de Nihilo, testor res ante probatas.*

*Præterea quoniam Cibus auget corpus alitque :  
 Scire licet, nobis Venas, & Sanguen, & Ossa, 860  
 Et Nervos alienigenis ex partibus esse :  
 Sive Cibus omneis commisto corpore dicent  
 Esse, & habere in se Nervorum corpora parva,  
 Ossaque, & omnino Venas, parteisque Cruoris ;  
 Fiet, uti Cibus omnis & aridus, & Liquor ipse, 865  
 Ex alienigenis rebus constare putetur,  
 Ossibus, & Nervis, Venisque, & Sanguine misto.*

*Præterea quæcunque è Terra corpora crescunt ;  
 Si sunt in Terris, Terras constare necesse 'st  
 Ex alienigenis, quæ Terris exoriuntur. 870  
 Transfer item, totidem verbis utare licebit :  
 In Lignis si flamma latet, fumusque, cinisque :  
 Ex alienigenis consistant Ligna necesse 'st.*

*Linquntur hic tenuis latitandi copia quædam :  
 Id quod ANAXAGORAS sibi sumit, ut omnibus omneis  
 Res putet immistas rebus latitare : sed illud 876  
 Apparere unum, cujus sint pluria mista,*

Deſtruction, 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, <sup>a</sup> 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 Eviſion 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

<sup>a</sup> 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 *Homœomery* imagined by *Anaxagoras*.

Et magis in promptu, primaque in fronte locata :  
 Quod tamen à vera longe ratione repulsum est.  
 Conveniebat enim Fruges quoque sæpe minutas, 880  
 Robore cum saxi franguntur, mittere signum  
 Sanguinis, aut aliùm nostro quæ corpore aluntur :  
 Cum lapidi lapidem terimus, manare cruorem,  
 Consimili ratione Herbas quoque sæpe decebat,  
 Et laticis dulcis guttas, similique sapore 885  
 Mittere, lanigeræ quali sunt ubera lactis :  
 Scilicet & Glebis terrarum sæpe friatis  
 Herbarum genera, & fruges, frondeisque videri,  
 Dispertita, atque in Terris latitare minutè :  
 Postremo, in Lignis cinerem fumumque videri, 890  
 Cum præfracta forent, igneisque latere minutos.  
 Quorum nil fieri quoniam manifesta docet res,  
 Scire licet non esse in rebus res ita mistas :  
 Verum semina multimodis immista latere  
 Multarum rerum in rebus communia debent. 895  
 At sæpe in magnis fit montibus, inquis, ut altis  
 Arboribus vicina cacumina summa terantur  
 Inter se, validis facere id cogentibus Austris,  
 Donec fulserunt flammæ fulgore coörto :  
 Scilicet : & non est lignis tamen insitus Ignis, 900  
 Verùm Semina sunt Ardoris multa, terendo  
 Quæ cum confluxere, creant incendia sylvis.  
 Quòd si tanta foret sylvis abscondita flamma,  
 Non possent ullum tempus celarier Ignes :  
 Conficerent volgò sylvas, Arbusta cremarent. 905

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, <sup>b</sup> 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 intirely, and burnt its Root Branches to the ground.

<sup>b</sup> He says, there is not any Fire in the Tree itself, but that the Seeds of Fire, or the *Moleculæ* of the Atoms, being disposed 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.

You

*Jamne vides igitur, paullo quod diximus ante,  
 Permagni referre eadem Primordia sæpe  
 Cum quibus, & quali positura contineantur,  
 Et quos inter se dent motus, accipiantque ;  
 Atque eadem paullo inter se mutata creare 910  
 Igneis è Lignis, quo pacto 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 915  
 Corpora consimili natura prædita fingas,  
 Hac ratione tibi pereunt Primordia rerum :  
 Fiet uti risu tremulo concussa caccinnet,  
 Et lacrymis salsis humentent ora, genasque*

*Nunc age, quod superest, cognosce, & clarius audi.  
 Nec me animi fallit quam sint obscura, sed acri 921  
 Percussit thyrsò Laudis spes magna Meum cor,  
 Et simul incussit suavem mî in pectus amorem  
 Musarum : quo nunc instinctus, mente vigenti  
 Avia Pieridum peragro loca, nullius ante 925  
 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, & arctis 930  
 RELIGIONUM animos nodis exsolvere pergo :  
 Deinde quod obscura de re tam lucida pango  
 Carmina, Musæo contingens cuncta 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 compos'd 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 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

Some late Philosophers seem at least to favour this opinion of *Anaxagoras*, when they assert, that these Affections do indeed, in some sort, præexist 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 pocula circum  
 Contingunt mellis dulci flavoque liquore,  
 Ut Puerorum ætas improvida ludificetur  
 Labrorum tenus, interea perpotet amarum  
 Absinthii laticem, deceptaque non capiatur, 940  
 Sed potius tali factò recreata valescat :  
 Sic ego nunc, quoniam hæc Ratio plerumque videtur  
 Tristior esse, quibus non est tractata, retroque  
 Volgus abhorret ab hac, volui tibi suaviloquenti  
 Carmine Pierio Rationem exponere nostram, 945  
 Et quasi Musæo dulci contingere melle,  
 Si tibi fortè animum tali ratione tenere  
 Versibus in nostris possem, dum perspicis omnem  
 Naturam rerum, qua constet compta figura.  
 Sed quoniam docui, Solidissima Materiai 950  
 Corpora perpetuò volitare invicta per ævum  
 Nunc age Summæ ecquænam sit finis eorum,  
 Necne sit, evolvoamus: item, quod Inane repertum 'st  
 Seu locus, ac spatium, res in quo quæque genantur,  
 Pervideamus utrum finitum funditus OMNE 955  
 Constet, an Immensum pateat vel ad usque profundum?  
 OMNE quod est, igitur, nulla regione viarum  
 Finitum 'st: namque Extremum debebat habere.  
 Extremum porro nullius posse videtur  
 Esse, nisi ultra fit quod finiat, ut videatur, 960  
 Quò non longiùs hæc sensus natura sequatur.

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 harmlessly betrayed, but not abus'd, they have their Health restor'd: 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 <sup>a</sup> *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,

<sup>a</sup> 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 'st,  
 Non habet Extremum: caret ergo fine, modoque:  
 Nec refert quibus assistas regionibus ejus,  
 Usque adeo quem quisque locum possidit, in omneis 965  
 Tantundem parteis infinitum Omne relinquit.*

*Præterea, si jam finitum constituatur  
 Omne quod est spatium, si quis procurrat ad oras  
 Ultimas extremas, jaciatque volatile telum,  
 Id validis utrùm contortum viribus ire 970  
 Quò fuerit missum mavis, longèque volare,  
 An prohibere aliquid censes, obstareque posse?  
 Alterutrum fatearis enim, summasque necesse 'st,  
 Quorum utrumque tibi effugium præcludit, & Omne  
 Cogit ut exempta concedas sine patere. 975  
 Nam sive est aliquid, quod prohibeat, officiatque  
 Quò minu' quo missum 'st veniat, finique locet se,  
 Sive foras fertur, non est ea fini' profecto.  
 Hoc pacto sequar, atque oras ubicunque locaris  
 Extremas, quæram quid Telo denique fiat. 980  
 Fiet uti nusquam possit consistere finis:  
 Effugiumque fugæ prolatet copia semper.  
 Præterea spatium Summâ totius omne  
 Undique si inclusum certis consisteret oris,*

*Finitumque*

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<sup>e</sup> 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 whereſoe'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 Paſſage to its Flight.

BESIDES, were this *All's* extended Space ſhut up by certain Bounds on every Side, and was by

<sup>e</sup> 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.

Finitumque foret, jam copia Materiäi 985  
 Undique ponderibus solidis conflüxet ad Imum ;  
 Nec res ulla geni sub cæli tegmine possset :  
 Nec foret omnino Cælum, neque lumina Solis :  
 Quippe ubi materies omnis cumulata jaceret  
 Ex infinito jam tempore subsidendo 990  
 At nunc nimirum requies data Principiorum  
 Corporibus nulla est : quia nil est funditus Imum,  
 Quò quasi confluere, & sedes ubi ponere possint ;  
 Semper & assiduo motu res quæque genuntur  
 Partibus in cunctis, æternaque suppeditantur 995  
 Ex Infinito cita corpora Materiäi.

Postremò ante oculos rem res finire videtur,  
 Aër dissepit Colleis, atque Aëra Montes ;  
 Terra Mare, & contra Mare Terras terminat om-  
 neis.

OMNE quidem verò nihil est quod finiat extra : 1000  
 Est igitur natura loci, spatiumque profundi,  
 Quod neque clara suo percurrere flumina cursu  
 Perpetuo possint ævi labentia tractu :  
 Nec prorsum facere, ut restet minus ire, meando :  
 Usque adeo passim patet ingens copia rebus, 1005  
 Finibus exemptis in cunctas undique parteis.

Nature finite, then this <sup>r</sup> 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<sup>s</sup>, we see one Thing bounds in another; the Air bounds in the Hills, the Hills the Air, the Earth shuts 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 less 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 universal 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 est, finire 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 templa,  
 Nec Mortale genus, nec Divûm corpora sancta  
 Exiguum possent horâ sistere tempus.* 1015

*Nam dispulsa suo de cœtu Materiai  
 Copia ferretur magnum per Inane soluta.  
 Sive adeo potiùs nunquam concreta creâsset  
 Ullam rem, quoniam cogi disjecta nequisset.*

*Nam certè neque consilio primordia rerum 1020  
 Ordine se quæque, atque sagaci mente locârunt ;*



BESIDES<sup>h</sup>, 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 disunited 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<sup>i</sup> the Principles of Things could never range themselves in Form or Order, by Counsel, or by Wisdom of the Mind, nor any

<sup>h</sup> 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 needs 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.

<sup>i</sup> The *Stoicks* held the World to be a rational Creature, and to consist 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 derides 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 Universe. This is the System of *Epicurus* concerning the first Beginning of Things, which common Sense sufficiently overthrows.

*Nec quos quæque darent motus pepigere profecto :  
 Sed quia multimodis, multis, mutata, per Omne  
 Ex infinito vexantur percita plagis,  
 Omne genus motus, & cætus experiundo, 1025  
 Tandem deveniunt in taleis disposituras,  
 Quolibus hæc rebus consistit Summa creata :  
 Et multos etiam magnos servata per annos,  
 Ut semel in motus conjecta 'st convenienteis,  
 Efficit, ut largis avidum Mare fluminis undis 1030  
 Integrent Amnes, & Solis Terra vapore  
 Fota novet fætus, summissaque gens animantum  
 Floreat, & vivant labentes Ætheris ignes.  
 Quod nullo facerent pacto, nisi Materiai  
 Ex Infinito suboriri copia possset, 1035  
 Unde amissa solent reparari in tempore quoque.  
 Nam veluti privata cibo Natura animantum  
 Diffluit amittens corpus, sic omnia debent  
 Dissolvi, simul ac defecit suppeditare  
 Materies recta regione aversa viai. 1040  
 Nec Plagæ possent extrinsecus undique Summam  
 Conservare omnem, quæcunque 'st conciliata.  
 Cudere enim crebrò possunt, partemque morari,  
 Dum veniant aliæ, 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 so disposed, to frame those Bodies of which this Universe of Things consists. And <sup>k</sup> 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 Mass 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 dissolv'd 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.

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

<sup>1</sup> 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 1045*  
*Principiis rerum spatium, tempusque fugæ*  
*Largiri, ut possint à cætu libera ferri.*

*Quare etiam atque etiam suboriri multa necesse est.*  
*Et tamen ut Plagæ quoque possint suppetere ipsæ,*  
*Infinita opus est vis undique Materiai. 1050*

*Illud in his rebus longe fuge credere, Memmi,*  
*In medium Summæ (quod dicunt) omnia niti,*  
*Atque ideo Mundi naturam stare sine ullis*  
*Ætibus externis, neque quòquam posse resolvi*  
*Summa atque Ina, quod in Medium sint omnia nixa,*  
*(Ipsam si quicquam posse in se sistere credis: 1055*

*Et quæ pondera sunt sub Terris omnia sursum*  
*Nitier, in Terraque retrò requiescere pôsta:*  
*Ut per aquas quæ nunc rerum simulacra videmus:)*

*Et simili ratione Animalia subtu' vagari 1060*  
*Contendant, neque posse è Terris in loca Cæli*  
*Recidere inferiora magis, quam corpora nostra*  
*Sponte sua possint in Cæli templa volare:*

*Illî cum videant Solem, nos Sidera noctis*  
*Cernere, & alternis nobiscum tempora Cæli 1065*  
*Dividere, & noctes parileis agitare, diesque.*

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 *Memmius*<sup>m</sup>, 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.

<sup>m</sup> 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.

BUT

*Sed vanus Stolidis hæc omnia finxerit error,  
 Amplexi quod habent perversè prima viâ.  
 Nam Medium nihil esse potest, ubi Inane, locusque  
 Infinita: neque omnino, si jam Medium sit, 1070  
 Possit ibi quicquam hac potiùs 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 quâcunque feruntur. 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.  
 Haud igitur possunt tali ratione teneri 1080  
 Res in concilio, Medii cuppedine victæ:  
 Præterea quoque jam non omnia corpora fingunt  
 In Medium niti, sed Terrarum, atque Liqueorum,  
 Humorem ponti, magnisque è montibus Undas,  
 Et quasi Terreno quæ corpore contineantur: 1085  
 At contrâ tenues exponunt Aëris auras,  
 Et calidos simul à Medio differriier Igneis,*

Atque

BUT vain Mistake hath form'd this Scheme for Fools, who judge perversly 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 soe'er 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 compos'd of <sup>n</sup> earthy 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

<sup>n</sup> 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 stopt, they would immediately fly through the immense *Void*, and the Heavens and the Earth would be dissolv'd, and fall to pieces; for where any Part of the World begins to fail, the Whole will soon be dissolv'd. 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 cærule pasci,  
 Quod calor à Medio fugiens ibi colligat igneis. 1090  
 (Quippe etiam vesci è Terra mortalia sæcla :  
 Nec prorsum arboribus summos frundescere ramos  
 Posse, nisi à terris paullatim cuique cibatum  
 Terra det) at suprâ circum tegere omnia Cælum  
 Ne volucrum ritu flammaram, mœnia Mundi 1095  
 Diffugiant subito magnum per Inane soluta,  
 Et ne cætera consimili ratione sequantur :  
 Neve ruant cæli tonitralia templa supernè,  
 Terraque se pedibus raptim subducat, & omnes  
 Inter permistas terræ, cælique ruinas 1100  
 Corpora solventes, abeant per Inane profundum,  
 Temporis ut puncto nihil exstet relliquiarum,  
 Desertum præter Spatium, & Primordia cæca.  
 Nam quacunque prius de parti corpora cêsse  
 Constitues, hæc rebus erit parsjanua lethi : 1105  
 Hac se turba foras dabit omnis Materiai.  
 Hæc si pernosces, parva perfunetus opella,  
 (Namque alid ex alio clarescet) non tibi cæca  
 Nox iter eripiet, quin ultima Naturai  
 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; lest the ° World's Walls, their Parts being all dissolv'd, should instantly be scatter'd through the *Void*, like swiftest Flames, and all Things be o'erwhelm'd in this great Ruin; lest 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 desert 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 press with mighty Force.

If This you thoroughly 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 surround the World.

*The* END of the FIRST BOOK.



THE  
A R G U M E N T  
O F T H E  
S E C O N D B O O K.

**O**UR 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 Wise. 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 Bodies, 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 compound 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' coloured, ſavory, hot, cold, and ſenſible Things are compoſed of them. Laſtly, that theſe infinite Seeds flying up and down through the infinite Void, compoſe infinite Worlds, and that theſe Worlds are ſometimes 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 away from them into the infinite Space likewise; in the ſame Manner as Plants and Animals are born, increaſe in Growth, wax old, and at length die.

T. Lucretii



*T. Lucretii Cari*

DE

RERUM NATURA

LIBER SECUNDUS.

**S**UAVE, mari magno turbantibus æquora ven-  
tis

*Et terra magnum alterius spectare laborem;*

*Non quia vexari quemquam 'st jucunda voluptas,*

*Sed, quibus ipse malis careas, quia cernere suave 'st.*

*Suave etiam belli certamina magna tueri* 5

*Per campos instructa, Tua sine parte pericli*

*Sed nil dulcius est, benè quàm munita tenere*

*Edita doct̃rina Sapientum templa 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 Distress 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<sup>a</sup> Philosophy, well fortified with Learning of the *Wise*, and thence look down on others,

<sup>a</sup> 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 Wise*.

Despicere unde queas Alios, passimque videre  
 Errare, atque viam palanteis quærere vitæ, 10  
 Certare ingenio, contendere nobilitate,  
 Nocteis atque dies niti præstante labore  
 Ad summas emergere opes, rerumque potiri:

O miseræ hominum menteis! ô pectora cæca!

Qualibus in tenebris vitæ, quantisque periculis 15  
 Degitur hoc ævi, quòdcunque 'st! nonne videre  
 Nil aliud sibi Naturam latrare, nisi ut, cum  
 Corpore sejunctus dolor absit, mente fruatur  
 Jucundo sensu, cura semota, metuque!

Ergo corpoream ad naturam pauca videmus 20  
 Esse opus omninò, quæ demant quemque dolorem,  
 Delicias quoque uti multas substernere possint,  
 Gratius interdum neque Natura ipsa requirit.  
 Si non aurea sunt juvenum simulacra per ædeis  
 Lampadas igniferas manibus retinentia dextris, 25  
 Lumina nocturnis epulis ut suppeditentur,  
 Nec domus argento fulget, auroque renidet;  
 Nec citharis reboant laqueata aurataque templa:  
 Attamen inter se prostrati in gramine molli  
 Propter aquæ rivum, sub ramis arboris altæ, 30  
 Non magnis opibus jucundè Corpora curant:  
 Præsertim cum tempestas arridet, & anni  
 Tempora conspergunt viridanteis floribus herbas,  
 Nec calidæ citiùs decedunt corpore febres,  
 Textilibus si in picturis, ostroque rubenti 35  
 Jactaris, quam si plebeia in veste cubandu' st:

Quapropter quoniam nil nostro in corpore Gaze



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 chearful, 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 <sup>b</sup> 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 Musick? Yet we find Men sweetly indulge their Bodies, as they lie together on the soft and tender 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. 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-

*The Vanity of all sublunary Things..*

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

Proficiunt, neque Nobilitas, neque Gloria regni :  
 Quod superest, animo quoque nil prodesse putandum :  
 Si non forte tuas Legiones per loca campi 40  
 Fervere cum videas belli simulacra cienteis :  
 Fervere cum videas Classem, latèque vagari,  
 His tibi tum rebus timefactæ Relligiones  
 Effugiunt animo pavidæ, mortisque timores :  
 Tum Vacuum pectus linqunt, curaque solutum. 45  
 Quod si ridicula hæc, ludibriaque esse videmus,  
 Re veraque Metus hominum, Curæque sequaces,  
 Nec metuunt sonitus armorum, nec fera tela :  
 Audacterque inter Reges, rerumque Potenteis  
 Versantur, neque fulgorem reverentur ab auro, 50  
 Nec clarum vestis splendorem purpureæi :  
 Quid dubitas, quin omne sit hoc rationis egestas,  
 Omnis cum in tenebris præsertim vita laboret ?  
 Nam veluti Pueri trepidant, atque omnia cæcis  
 In Tenebris metuunt : sic nos in Luce timemus 55  
 Interdum nibilo quæ sunt metuenda magis, quàm  
 Quæ Pueri in Tenebris pavitant, finguntque futura.  
 Hunc igitur terrorem animi, tenebrasque necesse 'st  
 Non Radium solis, neque lucida tela diei  
 Discussant, sed Naturæ species, Ratioque. 60  
 Nunc age, quo motu GENITALIA Materiai  
 CORPORA res varias gignant, genitasque resolvant,  
 Et qua vi facere id cogantur, quæve sit ollis

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 stand 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 groping in the dark?

FOR as <sup>c</sup> 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 Darknes 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

<sup>c</sup> 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 diētis præbere memento. 65*

*Nam certè non inter se stipata cohæret  
Materies, quoniam minui rem quamque videmus,  
Et quasi longinquo fluere omnia cernimus ævo ;  
Ex oculisque vetustatem subducere nostris :  
Cùm tamen incolumis videatur Summa manere, 70  
Propterea quia, quæ decedunt Corpora cuique,  
Unde abeunt, minuunt : quo venere, augmine donant :  
Illa senescere, at hæc contra florescere cogunt.*

*Nec remorantur ibi : sic rerum Summa novatur  
Semper, & inter se mortales mutua vivunt. 75  
Augescunt aliæ gentes, aliæ minnuntur :  
Inque brevi spatium mutantur sæcla animantium :  
Et, quasi Cursores, vitæ lampada tradunt.*

*Si cessare putas rerum Primordia posse,  
Cessandoque novos rerum progignere Motus : 80  
Avis à verâ longe ratione vagaris.*

*Nam,*

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

FOR certain it is, that no <sup>d</sup> Seeds of Matter stick close and unmov'd 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 <sup>e</sup> Racers, delivers the Lamp of Life to those that are behind.

*The Motion of the Seeds.*

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

<sup>d</sup> 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.

<sup>e</sup> 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 necesse 'st  
 Aut Gravitate sua ferri Primordia rerum,  
 Aut ictu forte alterius : nam cita supernè  
 Obvia cum flixere, fit, ut diversa repente 85  
 Dissiliant: neque enim mirum, Durissima que sint,  
 Ponderibus solidis, neque quicquam à tergis obstet.*

*Et quo jactari magis omnia Materiæ  
 Corpora pervideas, reminiscere Totius inum  
 Nil esse in Summa: neque habere ubi Corpora  
 prima 90*

*Consistant: quoniam Spatium sine fine, modoque 'st:  
 Immensumque patere in cunctas undique parteis,  
 Pluribus ostendi, & certa ratione probatu 'st.*

*Quod quoniam constat, nimirum nulla quies est  
 Reddita Corporibus primis per Inane profundum: 95  
 Sed magis assiduo, varioque exercita motu,  
 Partim intervallis magnis conflicta resultant:  
 Pars etiam brevibus spatiis nexantur ab Ictu.  
 Et quæcunque magis condenso conciliant,  
 Exiguus intervallis connexa resultant. 100*

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 <sup>f</sup>; 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 <sup>g</sup>, 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

<sup>f</sup> The Seeds being solid are therefore heavy, and heavy Things tend downwards, and in their Descent 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.

<sup>g</sup> 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.

by

*Indupedita suis perplexis ipsa figuris ;  
 Hæc validas Saxi radices, & fera Ferri  
 Corpora constituunt, & cætera de genere horum  
 Paucula : Quæ porro magnum per Inane vagantur,  
 Et cita diffiliunt longe, longèque recursant 105  
 In magnis intervallis : hæc Aëra rarum  
 Sufficiunt nobis, & splendida lumina Solis.*

*Multaque prætereà magnum per Inane vagantur,  
 Conciliis rerum quæ sunt rejecta, nec usquam  
 Consociare etiam motus potuere recepta : 110  
 Cujus, uti memoro, rei simulacrum, & imago  
 Ante oculos semper nobis versatur, & instat.  
 Contemplator enim, cum Solis lumina cunque  
 Infertim fundunt radios per opaca domorum :  
 Multa minuta modis multis per Inane videbis : 115  
 Corpora misceri radiorum lumine in ipso :  
 Et velut æterno certamine prælia, pugnasque  
 Edere turmatim certantia : nec dare pausam,  
 Conciliis, & discidiis exercita crebris :  
 Conjicere ut possis ex hoc, Primordia rerum, 120  
 Quale sit, in magno jaçtari semper Inani,  
 Duntaxat rerum magnarum parva potest res  
 Exemplare dare, & vestigia notitiæ.*

*Hoc etiam magis hæc animum te advertere par est  
 Corpora, quæ in Solis radiis turbare videntur : 125  
 Quod tales turbæ motus quoque Materiæ  
 Significant clandestinos, cæcosque subesse.  
 Multa videbis enim plagis ibi percita cæcis  
 Commutare viam, retròque repulsa reverti  
 Nunc huc, nunc illuc, in cunctas denique parteis. 130*

*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 moventur enim per se Primordia rerum  
Inde ea, quæ parvo sunt Corpora conciliatu,  
Et quasi proxima sunt ad vireis Principiorum,  
Istibus illorum cæcis impulsa cientur :* 135

*Ipsaque, quæ porro paullo majora, laceſſunt.  
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 apparet apertè.* 140

*Nunc, quæ Mobilitas sit reddita Materiã  
Corporibus, paucis licet hinc cognoscere, MEMMI.  
Primum Aurora novo cum spargit lumine terras,  
Et variæ volucres nemora avia pervolitantes,  
Aëra per tenerum liquidis loca vocibus opplent : 145  
Quam subitò soleat Sol ortus tempore tali  
Convestire sua perfundens omnia luce,  
Omnibus in promptu, manifestumque esse videmus.  
At Vapor is, quem Sol mittit, lumenque serenum,  
Non per Inane meat vacuum, quò tardiùs ire 150  
Cogitur, aërias quasi cum diverberet undas :*

certainly in the<sup>n</sup> 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, *The Swift-* from the following Instance, collect how rapid is *ness of the* the Motion of the first Seeds; for when the *Seeds.* 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 meer empty<sup>i</sup> Space, and therefore is forced to move slower, as it has the resisting Air to part and divide as it goes; nor

<sup>n</sup> 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.

<sup>i</sup> 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 Swiftnes of their Motion.

*Nec singillatim corpuscula quæque Vaporis,  
Sed complexa meant inter se, conque globata.  
Quapropter simul inter se retrabuntur, & extra  
Officiuntur, uti cogantur tardiùs ire.* 155

*At, quæ sunt solida Primordia simplicitate,  
Cum per Inane meant Vacuum, nec res remoratur  
Ulla foris, atque ipsa suis è partibus unum,  
Unum in quem cæpere locum connixa feruntur :  
Debent nimirum præcellere Mobilitate,* 160

*Et multò citiùs 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, qua quidque geratur cum ratione.*

*At quidam contra hæc, IGNARI Materiæ  
Naturam non posse Deùm sine numine rentur  
Tantopere humanis rationibus, ac moderatis  
Tempora mutare annorum, frugesque creare:* 170

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 slower.

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 <sup>k</sup> simple Matter cannot of it self, without the Assistance of the Gods, act so agreeably to the Advantage and Convenience of Mankind, as to change the Seasons of the Year,

<sup>k</sup> 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 contrived, that it would be a Scandal to the Gods to charge them with the Creation of it.

*Nec jam cætera, mortaleis quæ suadet adire,  
 Ipsaque deducit dux vitæ DIA VOLUPTAS,  
 Ut res per Veneris blanditum sæcla propagent,  
 Ne genus occidat Humanum: Quorum omnia causa  
 Constituisse Deos fingunt, sed in omnibus rebus 175  
 Magnopere à vera lapsi ratione videntur.*

*Nam quamvis rerum ignorem Primordia quæ sint,  
 Hoc tamen ex ipsis Cæli rationibus ausim  
 Confirmare, aliisque ex rebus reddere multis,  
 Nequaquam nobis Divinitus esse creatam 180  
 Naturam mundi, quæ tanta est prædita culpa:  
 Quæ tibi posterius, MEMMI, faciemus aperta;  
 Nunc id quod superest de Motibus expediemus.*

*Nunc locus est (ut opinor) in his illud quoque rebus  
 Confirmare Tibi, nullam rem posse sua vi 185  
 Corpoream sursum ferri, sursumque meare.*

*Ne tibi dent in eo Flammæ corpora fraudem:  
 Sursus enim vorsus gignuntur, & augmina sumunt:  
 Et sursum nitidæ Fruges, Arbustaque crescunt,  
 Pondera quantum in se est, cum deorsum cuncta fe-  
 rantur. 190*

*Nec cum subsiliunt Ignes ad tecta domorum,  
 Et celeri flamma degustant tigna, trabeisque,  
 Sponte sua facere id, sine vi subigente, putandum est:  
 Quod genus, è nostro cum missus corpore Sanguis*

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<sup>k</sup> Being can be carried upwards, or ascend by any innate Virtue of its own, lest 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

*All Things naturally descend.*

<sup>k</sup> 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 it self.

*Emicat exsultans altè, spargitque cruorem. 195*  
*Nonne vides etiam, quanta vi Tigna Trabeisque*  
*Respuat humor Aquæ? nam quam magi' mersimus*  
*altum*

*Directa, & magna vi multi pressimus ægrè ;*  
*Tam cupidè sursum revomit magis, atque remittit,*  
*Plus ut parte foras emergant, exsiliantque. 200*  
*Nec tamen hæc, quantum est in se, dubitamus, opinor,*  
*Quin vacuum per Inane deorsum cuncta ferantur.*  
*Sic igitur debent Flammæ quoque posse per aurâs*  
*Aëris expressæ sursum succedere ; quanquam*  
*Pondera, quantum in se est, deorsum deducere pug-*  
*nent : 205*

*Nocturnasque faces Cæli sublime volanteis*  
*Nonne vides longos flammaram ducere tractus,*  
*In quâscunque dedit parteis Natura meatum ?*  
*Non cadere in terram Stellas, & Sidera cernis ?*  
*Sol etiam summo de vertice dissipat omneis 210*  
*Ardorem in parteis, & lumine conserit arva :*  
*In terras igitur quoque Solis vergitur ardor.*  
*Transversosque volare per imbres Fulmina cernis :*  
*Nunc hinc, nunc illinc abrupti nubibus Ignes*  
*Concursant, cadit in terras vis Flammea volgò. 215*  
*Illud in his quoque Te rebus cognoscere avemus :*  
*Corpora cum deorsum rectum 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 soever Nature yields a Passage? Don't you see also the <sup>1</sup> 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 strait 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-

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

*Incertisque locis spatio decedere paullum:  
Tantum quod Momen mutatum dicere possis.* 220

*Quod nisi Declinare solerent, omnia deorsum,  
Imbris uti guttæ, caderent per Inane profundum:  
Nec foret Offensus natus, nec Plaga creata  
Principiis: ita nil unquam Natura creasset.*

*Quod si forte aliquis credit Graviora potesse 225  
Corpora, quò citiùs rectum per Inane feruntur,  
Incidere è supero Levioribus, atque ita Plagas  
Gignere, quæ possint genitaleis reddere motus:  
A vius à vera longè ratione recedit.*

*Nam per Aquas quæcunque cadunt, atque Aëra de-  
orsum:* 230

*Hæc pro ponderibus casus celerare necesse est,*

*Propterea,*

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-

¶ If the Seeds descended through the Void in a direct Line, and with equal Swiftnefs, they could never meet nor overtake one another; and therefore he insists upon this Declination of Motion, otherwise his Atoms could never have met, and consequently there could have been no Generation whatever; and from this Declaration proceed the Conjunctions, Unions, and Adhesions of the Atoms to one another and among themselves, by which the World was made, and all Things contained in it.

¶ He says, that all Seeds are hurried through the Void with equal Swiftnefs; 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 Swiftnefs.

Propterea, quia corpus Aquæ, naturaque tenuis  
 Aëris haud possunt æquè rem quamque morari:  
 Sed citiùs cedunt Gravioribus exsuperata.

At contra nulli de nulla parte, neque ullo 235

Tempore Inane potest Vacuum subsistere reii,  
 Quin, sua quod natura petit, concedere pergat.

Omnia quapropter debent per Inane quietum

Æquè ponderibus non æquis concita ferri.

Haud igitur poterunt Levioribus incidere unquam 240

Ex supero Graviora, neque Ictus gignere per se,

Qui variant motus, per quos Natura genat res.

Quare etiam atque etiam paullum clinare ne-  
 cesse 'st

Corpora, nec plùs quàm minimùm, ne fingere motus

Obliquos videamur, & id res vera refutet. 245

Namque hoc in promptu, manifestumque esse videmus:

Pondera, quantum in se 'st, non posse Obliqua meari,

Ex supero cum præcipitant, quod cernere possis.

Sed nihil omnino recta regione viai

Declinare, quis est, qui possit cernere, sese? 250

Denique si semper motus connectitur omnis,

Et vetere exoritur semper novus ordine certo,

Nec Declinando faciunt Primordia motus

Principium quoddam, quod Fati fœdera rumpat,

Ex infinito ne causam causa sequatur:

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 soonest 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, lest 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 so little from a direct Line, who is so sharp-sighted as to distinguish ?

BESIDES, were all Motion of the Seeds uniform, and in a strait 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 Suc-

*Libera per terras unde hæc animantibus extat,  
 Unde est hæc (inquam) fatis avolsa Voluntas,  
 Per quam progredimur, quo ducit quemque voluptas?  
 Declinamus item môtus, nec tempore certo,  
 Nec regione loci certa, sed ubi ipsa tulit Mens. 260  
 Nam dubio procul his 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 desubito, quàm Mens avet ipsa?  
 Omnis enim totum per Corpus materiai 266  
 Copia conquiri debet, concita per artus  
 Omneis, ut studium Mentis connexa sequatur:  
 Ut videas initum motus à Corde creari,  
 Ex Animique voluntate id procedere primum: 270  
 Inde dari porro per totum Corpus, & artus:  
 Nec simile est, ut cum impulsus procedimus ictu,  
 Viribus alterius magnis, magnoque coactu,*

cession of Causes, which destroy all<sup>o</sup> 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 soever 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 Lists 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 stirr'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

<sup>o</sup> 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 list, 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  
 Domicum eam refrænavit per membra Voluntas.  
 Jamne vides igitur, quamquam vis externa multos  
 Pellit, Et invitos cogit procedere sæpe,  
 Præcipiteisque rapit, tamen esse in pectore nostro  
 Quiddam, quod contra pugnare, obstareque possit, 280  
 Cujus ad arbitrium quoque copia materiai  
 Cogitur interdum flecti per membra, per artus,  
 Et projecta refrænatur, retroque residit.*

*Quare in Seminibus quoque idem fateare necesse est,  
 Esse aliam præter Plagas, Et Pondera causam 285  
 Motibus, unde hæc est nobis innata potestas:  
 De Nibilo quoniam fieri Nil posse videmus.  
 Ponderus enim prohibet, ne Plagis omnia fiant,  
 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 <sup>P</sup>, 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 lest the Mind should seem to act by some necessary Impulse within itself, (that is, by Motion that proceeds from Weight) and overpower'd, 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.

<sup>P</sup> 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 porrò majoribus intervallis.* 295

*Nam neque adaugefcit quicquam, neque deperit inde.*

*Quapropter quo nunc in motu Principiorum  
Corpora sunt, in eodem anteaſta etate fuere,*

*Et poſthac ſemper ſimili ratione ferentur ;*

*Et quæ conſuerunt gigni, gignentur eadem* 300

*Conditione : & erunt, & crescent, inque valebunt,*

*Quantum cuique datum 'ſt per fœdera Naturai,*

*Nec rerum Summam commutare ulla poteſt vis.*

*Nam neque quo poſſit genus ullum Materiai*

*Effugere ex Omni, quicquam 'ſt, neque ruruſus, in*

*Omne* 305

*Unde coërta queat nova vis irrupere, & Omnem*

*Naturam rerum mutare, & vertere motus.*

*Illud in his rebus, non eſt mirabile, quare*

*Omnia cum rerum Primordia ſint in motu,*

*SUMMA tamen ſumma videatur ſtare quiete,* 310

*Præterquam ſi quid proprio dat corpore motus.*

*Omnis enim longè noſtris ab ſenſibus infra*

*PRIMORUM natura jacet : quapropter ubi illa*

*Cernere jam nequeas, motus quoque ſurpere debent :*

*Præſertim*

NOR was <sup>a</sup> 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 hitherto 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;

<sup>a</sup> 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.

<sup>r</sup> 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,

*Præsertim cum, quæ possimus cernere, celent* 315  
*Sæpe tamen motus spatia diducta locorum.*

*Nam sæpe in colli tondentes pabula læta*  
*Lanigeræ reptant Pecudes, quo quamque vocantes*  
*Invitant herbæ gemmantes rore recenti :*

*Et satiati Agni ludunt, blandèque coniscant :* 320

*Omnia quæ nobis longè confusa videntur,*  
*Et veluti in viridi candor consistere colli.*

*Præterea magnæ Legiones cum loca cursu*  
*Camporum complent, belli simulacra cientes :*

*Et circumvolitant Equites, mediosque repente* 325

*Tramittunt valido quatientes impetè campos :*

*Fulgur ibi ad Cælum se tollit, totaque circum.*

*Ære renidescit Tellus, subterque virum vi*  
*Excitur pedibus sonitus, clamoreque Montes*

*Isti rejètant voces ad Sidera mundi :* 330

*Et tamen est quidam locus altis montibus, unde*  
*Stare videtur, & in campis consistere Fulgur.*

*Nunc age jam deinceps cunctarum exordia rerum;*

*Qualia sint, & quam longè distantia formis,*

*Percipe, multigenis quàm sint variata FIGURIS :* 335

*Non quòd multa parum simili sint prædita forma,*

*Sed quia non volgò paria omnibus omnia constant.*

especially, as we observe many Things are discover'd to us by our Sight, whose Motions we cannot perceive, by being placed at a remote Distance from us. For oft the woolly Flock upon a Hill wander about, and crop the tender Grass, where-e'er the sweet Herbs crowned with pearly Dew invite; the Lambs, their Bellies full, wantonly 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 Horse scour o'er the Field, and wheel at once, and in the Centre charge, and shake the Ground with mighty Force; the Blaze of Arms darts up to Heaven, all the Earth around glitters with brazen Shields, and groans beneath the Feet of Men enraged; the neighbouring Hills, struck with the Noise, rebound it to the Skies; yet place yourself upon a Mountain-top, to view this wild Confusion, 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 Figure their Frame consists; for tho' many are endowed with a Form not much unlike, yet all are far from being of the same Figure. And no

\* He makes his Atoms of different Figures, not that their Shape is discernible by the Eye, any more than their Magnitude; 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 nimiram non omnibus omnia prorsum 340  
 Esse pari filo, similique affecta Figura.*

*Præterea genus Humanum, mutæque natantes  
 Squammigerum Pecudes, & læta Arbusta, Feræque,  
 Et variæ Volucres, lætantia quæ loca aquarum  
 Concelebrant circum ripas, fonteisque, lacusque: 345  
 Et quæ pervolgant nemora avia pervolitantes:  
 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, 350  
 Nec minus atque homines inter se nota cluere.*

*Nam sæpe ante Deum vitulus delubra decora  
 Turicremas propter mactatus concidit aras,  
 Sanguinis exspirans calidum de pectore flumen,  
 At Mater virideis saltus orbata peragrans, 355*

*Linqvit humi pedibus vestigia pressa bisulcis,  
 Omnia convulsens oculis loca, si queat usquam  
 Conspicere amissum Fætum: completque querelis  
 Frundiferum nemus adsistens; & crebra revisit  
 Ad stabulum, desiderio perfixa Juvenci: 360*

*Nec teneræ salices, atque herbæ rore vigentes,  
 Fluminaque ulla queunt summis labentia ripis,  
 Oblectare animum, subitamque avertere curam:  
 Nec Vitulorum aliæ species per pabula læta  
 Derivare queunt aliò, curaque levare: 365*

*Usque adeo quiddam proprium, notumque requirit.*

*Præterea teneri tremulis cum vocibus Hædi  
 Cornigeras nôrunt Matres, Agnique petulci*

*Balantum*

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 Grass, 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 Grass, 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 reposcit,  
Ad sua quisque fere decurrunt ubera lactis.* 370

*Postremo quodvis Frumentum, non tamen omne  
Quodque suo in genere inter se simile esse videbis,  
Quin intercurrat quædam distantia formis,  
Concharumque genus parili ratione videmus  
Pingere telluris gremium, qua mollibus undis* 375

*Littoris incurvi bibulam pavit Æquor arenam.  
Quare etiam atque etiam simili ratione necesse 'st,  
Natura quoniam constant, neque facta manu sunt,  
Unius ad certam formam Primordia rerum,  
Dissimili inter se quædam volitare Figura.* 380

*Perfacile 'st jam animi ratione exsolvere nobis,  
Quare Fulmineus multò penetratior ignis,  
Quam noster fluat è Tedis terrestribus ortus.  
Dicere enim possis cælestem FULMINIS ignem  
Subtilem magis è parvis constare figuris:* 385

*Atque ideo transire foramina, quæ nequit ignis  
Noster hic è Lignis ortus, Tedaque creatus.  
Præterea Lumen per cornu transit : at Imber  
Respuitur : Quare? Nisi Luminis illa minora  
Corpora sunt, quàm de quibus est liquor Almus  
Aquarum :* 390

*Et quamvis subito per colum Vina videmus  
Perfluere, at contrà tardum cunctatur Olivum ;  
Aut quia nimirum majoribus est Elementis,  
Aut magis hamatis inter se, perque plicatis.  
Atque ideo fit uti non tam dedueta repente* 395

*Inter se possint Primordia singula quæque  
Singula per cujusque foramina permanare.  
Huc accedit, uti Mellis Lactisque liquores  
Fucundo sensu lingue tractentur in ore ;  
At contrà tetra Absinthii natura, ferique* 400

*Centauri fædo pertorquent ora sapore :*



so the sporting Lambs know their own Flocks, and, as by Nature taught, each hastes 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 facilè agnoscas è lævibus, atque rotundis  
 Esse ea, quæ sensus jucundè tangere possunt :  
 At contrà quæ amara, atque aspera cunque videntur,  
 Hæc magis hamatis inter se nexa teneri ; 405  
 Proptereaque solere vias rescindere nostris  
 Sensibus, introituque suo perrumpere corpus.

Omnia postremo Bona sensibus, & Mala tactu,  
 Dissimili inter se pugnant perfecta Figura :  
 Ne tu forte putes Serræ stridentis acerbum 410  
 Horrorem constare elementis lævibus æquè  
 Ac Musæa mele, per chordas Organici quæ  
 Mobilibus digitis expergefæcta figurant :

Neu simili penetrare putes Primordia forma  
 In nareis hominum, cum tetra Cadavera torrent, 415

Et cum Scena croco Cilici perfusa recens est,  
 Araque Panchæos exhalat propter odores :

Neve bonos rerum simili constare Colores  
 Semine constituas, oculos qui pascere possunt,  
 Et qui compungunt aciem, lacrymareque cogunt : 420  
 Aut fæda specie tetri, turpesque videntur.

Omnis enim sensus quæ mulcet causa, juvatque,  
 Haud sine Principiali aliquo lævore creata 'st :  
 At contra, quæcunque molesta, atque aspera constat,  
 Non aliquo sine Materiæ squalore reperta 'st. 425

Sunt etiam quæ jam nec Lævia jure putantur  
 Esse, neque omnino flexis mucronibus Unca :  
 Sed magis Angululis paullum prostantibus, & 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 closer twined; 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 unpleasant 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 Lædere possunt :  
 Fæcula jam quo de genere 'st, Inulæque saporis. 430  
 Denique jam calidos Igneis, gelidamque Pruinam,  
 Dissimili dentata modo compungere sensus  
 Corporis, indicio nobis est Tactus uterque.*

*TACTUS enim, Tactus (pro Divûm numina sancta !)*

*Corporis est sensus, vel cùm res Extera sese 435*

*Insinuat, vel cùm lædit, quæ in corpore nata 'st,*

*Aut juvat egrediens genitaleis per Veneris res :*

*Aut ex Offensu cùm 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 distare necesse 'st,*

*Principiis, varios quæ possint edere sensus.*

*Denique, quæ nobis Durata ac Spissa videntur,*

*Hæc magis hamatis inter sese esse necesse 'st, 445*

*Et quasi ramosis altè compacta teneri.*

*In quo jam genere in primis Adamantina saxa,*

*Prima acie constant, ictus contemnere sueta,*

*Et validi Silices, ac duri robora Ferri,*

*Æraque, quæ claustris restantia vociferantur. 450*

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 *what it is.* 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 *Fæcula* 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 Trigonical or Pyramidal Figure, that is, their Figure consisted of four triangular Faces.

*Illæ autem debent ex Lævibus atque Rotundis  
Esse magis, fluido quæ corpore Liquida constant :  
Nec retinentur enim inter se glomeramina quæque,  
Et procurfus item in proclive volubilis extat.*

*Omnia postremò quæ puncto tempore cernis 455  
Diffugere, ut Fumum, Nebulas, Flammæque neces-  
se 'st,*

*Si minùs omnibu' sunt è Lævibus atque Rotundis,  
At non esse tamen perplexis indupedita,  
Pungere uti possint corpus, penetrareque saxa :  
Nec tamen hæerere inter se, quod quisque videmus 460  
Sentibus esse datum : Facile ut cognoscere possis  
Non è Perplexis, sed Acutis esse Elementis.*

*Sed quod Amara vides eadem quæ fluvida constant,  
Sudor uti Maris est, minimè id mirabile habendum.  
Nam quod fluvidum est, è Lævibus atque Rotundis  
Est, at Lævibus, atque Rotundis mista doloris 466  
Corpora; nec tamen hæc retineri Hamata necesse 'st :  
Scilicet esse globosa, tamen cum Squalida constant,  
Provolveri simul ut possint, & lædere sensus.*

*Et quò mista putes magis aspera lævibus esse 470  
Principiis, unde 'st Neptuni corpus acerbum :  
Est ratio secernendi, seorsumque videndi.  
Humor dulcit ubi per terras crebriùs idem  
Percolatur, ut in foveam fluat, ac mansuescat.  
Liquit enim suprà tetri Primordia viri 475*

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 instantly 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

*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, rursus jam Semina quædam 480  
Esse infinito debebunt corporis auctu.*

*Namque in eadem una cujuscujus brevitato  
Corporis, inter se multum variare Figuræ  
Non possunt: Fac enim minimis è partibus esse  
Corpora prima tribus, vel paullo pluribus auge; 485  
Nempe ubi eas parteis unius Corporis omneis,  
Summa atque ima locans, transmutans dextera lævis,  
Omnimodis expertus eris, quam quisque det ordo  
Formæ speciem totius Corporis ejus:*

*Quod superest, si forte voles variare figuras, 490  
Addendum parteis alias erit: inde sequetur  
Adsimili ratione alias, ut postulet ordo,  
Si tu forte voles etiam variare figuras.  
Ergo formæ novitatem corporis augmen*

*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 *Variety of* Observation, which justly derives its Credit from *Figures finite.* 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 † 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 asserts, 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 transpose 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.

† The Parts of any finite Magnitude may be transposed to many ways, that no new Way shall remain to change the Position from what it had been in before; otherwise 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.

cannot

*Subsequitur : quare non est ut credere possis, 495*  
*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 tinctâ colore, &*  
*Aurea Pavonum ridenti imbuta lepore, 501*

*Sæcla novo rerum superata colore jacerent :*  
*Et contemptus odor Myrrhæ, Mellisque saporis,*  
*Et Cycnea mele, Phæbæaque dædala chordis*  
*Carmina consimili ratione oppressa silerent. 505*

*Namque aliis aliud præstantius 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 saporis. 510*

*Quæ quoniam non sunt in rebus reddita, certa &*  
*Finis utrinque tenet Summam: Fateare necesse 'st*  
*Materiam quoque finitis differre Figuris.*

*Denique, ab Ignibus, ad gelidas hiemisque Pruinas*  
*Finitu 'st, retroque pari ratione remensu 'st. 515*  
*Finit enim Calor, ac Frigus, mediique Tepores*

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; <sup>z</sup> the embroider'd Vests of *Asia*, the bright <sup>a</sup> *Melibæan* Purple, dipt in the Blood of the *Thessalian* Shell-fish, and the golden Brood of Peacocks, glistering 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 intense: For Heat and Cold are the Extremes, the middle Warmth lies between

<sup>z</sup> 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.

<sup>a</sup> *Melibæa* was a City of *Thessaly*, famous for Purple.

both,

*Inter utrumque jacent, explentes ordine Summam.  
Ergo finita distant ratione creata,  
Ancipiti quoniam mucrone utrinque notantur,  
Hinc Flammiss, illinc rigidis infessa Pruinis. 520*

*Quod quoniam docui, pergam connectere rem, quæ  
Ex hoc apta fidem ducit: Primordia rerum,  
Inter se Simili quæ sunt perfecta figura,  
Infinita cluere: etenim distantia cum fit  
Formarum finita, necesse est, quæ Similes sint, 525  
Esse Infinitas: aut summam Materiai  
Finitam constare: id quod non esse probavi.*

*Quod quoniam docui, nunc suaviloquis, age, paucis  
Versibus ostendam, corpuscula Materiai  
Ex infinito summam rerum usque tenere, 530  
Undique protelo Plagarum continuato.*

*Namquod rara vides magis esse animalia quædam,  
Fœcundamque minùs Naturam cernis in illis;  
At regione, locoque alio, terrisque remotis  
Multa licet genere esse 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, quarum nos perpauca exempla videmus. 540*

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

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 smarting Cold.

THIS being proved, <sup>b</sup> 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.

*Seeds of every Shape infinite.*

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 Animals are less common, and Nature seems less fruitful in their Production, yet in other Countries, 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 Proboscis like a Snake: How many Thousands of them *India* breeds, which fortify her with a Wall of Ivory impenetrable, not to be forced, tho' we see but few at *Rome*. But grant, if you please, there was only one single Creature of a particular kind in Nature, whose

<sup>b</sup> The different Figures of his Atoms he has proved to be finite, but the Seeds of a like Figure, he contends, are infinite; for if the Atoms contained under each Sort were finite in Number, there could be no Infinity of Atoms in the Universe.

Cui similis toto terrarum non sit in orbe :  
 Infinita tamen nisi erit vis Materiai,  
 Unde ea progigni possit concepta ; creari 545  
 Non poterit : neque quod superest, procreescere, alique.  
 Quippe etenim sumant oculi, finita per Omne  
 Corpora jactari unius genitalia reii ;  
 Unde, ubi, qua vi, & quo pacto congressa coibunt  
 Materie tanto in pelago, turbaque aliena? 550  
 Non (ut opinor) habent rationem conciliandi :  
 Sed quasi naufragiis magnis multisque coortis,  
 Disjectare solet magnum mare transtra, gubernæ,  
 Antennas, proram, malos, tonsasque natanteis,  
 Per terrarum omneis oras fluitantia aplusstra ; 555  
 Ut videantur, & indicium mortalibus edant,  
 Infidi maris insidias, vireisque, dolumque  
 Ut vitare velint, neve ullo tempore credant,  
 Subdola cum ridet placidi pellacia ponti :  
 Sic tibi si finita semel Primordia quædam 560  
 Constitues, ævum debebunt sparsa per omne  
 Disjectare æstus diversi Materiai :  
 Nunquam in concilium ut possint compulsæ coire :  
 Nec remorari in concilio, nec crescere adaucta.  
 Quorum utrumque palam fieri manifesta docet res, 565  
 Et res progigni, & genitas procreescere posse :  
 Esse igitur genere in quovis Primordia rerum  
 Infinita palam est, unde omnia suppeditantur.

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 Auctificique  
Motus perpetuò possunt servare creata.*

*Sic æquo geritur certamine Principiorum  
Ex infinito contractum tempore bellum:*

*Nunc hinc, nunc illinc superant vitalia rerum, 575*

*Et superantur item; miscetur Funere Vagor,*

*Quem pueri tollunt visentes luminis oras:*

*Nec nox ulla diem, neque noctem aurora secuta 'st,*

*Quæ non audierit mistos Vagitibus ægris*

*Ploratus, mortis comites, & funeris atri. 580*

*Illud in his obsignatum quoque rebus habere  
Convenit, & memori mandatum mente tenere:*

*Nil esse, in promptu, quorum natura tenetur,*

*Quod genere ex uno consistat Principiorum:*

*Nec quicquam, quod non permisto Semine constet; 585*

*Et quàm quicque magis multas vis possidet in se,*

*Atque potestates, ita pluria Principiorum*

*In sese genera, ac varias docet esse figuras.*



<sup>d</sup> 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 for ever 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.

<sup>e</sup> 'Tis proper likewise, that in this Place you fix it as an established Truth, and impress it deeply upon your Mind <sup>e</sup>, 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.

<sup>d</sup> 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.

<sup>e</sup> 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.

Principiò, Tellus habet in se Corpora prima,  
 Unde Mare immensum volventes flumina fontes 590  
 Assiduè renovent: habet, Ignes unde oriantur.  
 Nam multis succensa locis ardent sola terræ;  
 Eximiis verò furit ignibus impetus Ætnæ.  
 Tum porrò nitidas Fruges, Arbustaque læta  
 Gentibus humanis habet unde extollere possit. 595  
 Unde etiam fluidas Frondeis, & Pabula læta  
 Montivago generi possit præbere ferarum.

Quare magna Deùm mater, materque ferarum,  
 Et nostræ genetrix Hæc dicta 'st Corporis una.  
 Hanc veteres Graiùm docti cecinere Poëtæ 600  
 Sublimem in curru bijugos agitare leones:  
 Aëris in spatio magnam pendere docentes  
 Tellurem; neque posse in Terra sistere Terram.  
 Adjungere Feras, quia quamvis effera proles  
 Officiis debet molliri victa parentum. 605

Muralique caput summum cinxere Corona:  
 Eximiis munita locis quòd sustinet Urbeis:  
 Quo nunc insigni per magnus prædita terras  
 Horrificè fertur divinæ Matris imago.  
 Hanc variæ gentes antiquo more sacrorum 610  
 Idæam vocitant matrem, Phrygiasque catervas  
 Dant comites, quia primùm ex illis finibus edunt  
 Per terrarum orbem Fruges cœpisse creari.  
 Gallos attribuunt, quia numen qui violarint  
 Matris, & ingrati Genitoribus inventi sint, 615

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 Grass to savage Beasts that wander on the Hills.

THEREFORE, this Earth alone is called <sup>f</sup> 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

<sup>f</sup> 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 tenta tonant palmis, & Cymbala circum  
 Concava, raucisonoque minantur Cornua cantu;  
 Et Phrygio stimulat numero cava Tibia menteis, 629  
 Telaque præportant violenti signa furoris,  
 Ingratos animos, atque impia pectora volgi  
 Conterrere metu quæ possint numine Divæ.

Ergo cum primùm magnas inuenta per urbeis  
 Munificat tacita Mortaleis muta salute: 625  
 Ære atque Argento sternunt iter omne viarum  
 Largifica stipe ditantes, ninguntque 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 leti; &  
 Terrificas capitum quatientes numine cristas,  
 Diætaeos referunt Curetas: Qui Jovis illum  
 Vagitum in Creta quondam occultâsse feruntur,  
 Cum pueri circum puerum pernice chorea 635  
 Armati in numerum pulsarent æribus æra,  
 Ne Saturnus eum malis mandaret adeptus,  
 Æternumque daret Matri sub pectore vulnus;

Propterea

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, <sup>g</sup> 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 impious Hearts of the Vulgar, with a Fear and Reverence of this great Deity.

WHEN therefore she is carried in Procession, through the great Towns, and, dumb as she is, silently bestows <sup>h</sup> 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 Attendants. 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 Goddess, shake their dreadful Crests upon their Heads. They represent the *Disſæan 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, lest *Saturn* should seize upon him, and devour him, and, by that means, wound his Mother to the Heart, with a Grief never to be

<sup>g</sup> The *Phrygian* Musick was a sort of Enthusiastick Harmony that raised the Passions of the Mind, and swelled the Soul to Rage and Fury.

<sup>h</sup> This is a sharp Invective of the Poet's; a rough unpolished Stone, not given to tattle, must needs do a world of Good: She never said a word of the Benefits she bestowed.

*Propterea Magnam armati Matrem comitantur :  
Aut quia significant Divam prædicere, ut armis, 640  
Ac virtute velint Patriam defendere terram :  
Præsidioque parent, decorique Parentibus esse.*

*Quæ benè, & eximiè quamvis dispôsta ferantur,  
Longè sunt tamen à vera ratione repulsa.*

*Omnis enim per se Divûm natura necesse est. 645  
Immortali ævo summa cum pace fruatur,  
Semota à nostris rebus, sejunctaque longè.*

*Nam privata dolore omni, privata periclis,  
Ipsa suis pollens opibus, nihil indiga nostri,  
Nec bene promeritis capitur, nec tangitur ira. 650*

*Terra quidem vero caret omni tempore Sensu :  
Sed quia multarum potitur Primordia rerum,  
Multa modis multis effert in lumina solis.*

*Hic si quis Mare Neptunum, Cereremque vocare  
Constituet Fruges, & Bacchi nomine abuti 655*

*Mavolt, quam Laticis proprium proferre vocamen :  
Concedamus ut hic terrarum dictitet Orbem  
Esse Deûm Matrem, dum re non sit tamen apse.*

*Sæpe itaque ex uno tondentes gramina campo  
Lanigeræ pecudes & equorum duellica proles, 660*

*Buceriæque greges sub eodem tegmine cæli,  
Ex unoque sitim sedantes flumine aquai,  
Dissimili vivunt specie, retinentque parentum  
Naturam, & mores generatim quæque imitantur :*

forgotten : For this Reason, an armed Train accompany the great Mother ; or else the Goddess 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 Happiness 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 *Bacchus*, 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.

<sup>i</sup> 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

<sup>i</sup> Since so many Sorts of Animals are fed by the same 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.

*Tanta 'st in quovis genere Herbæ Materiai 665*  
*Dissimilis ratio: tanta 'st in Flumine quoque.*

*Jam verò quamvis animantem ex omnibus unam*  
*Ossa, Cruor, Venæ, Calor, Humor, Viscera, Nervi*  
*Constituunt, quæ sunt porro distantia longè*  
*Dissimili perfecta figura Principiorum. 670*

*Tum porro quæcunque Igni flammata 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 peragrans, 675*  
*Invenies intus multarum Semina rerum*  
*Corpore celare, & varias cohibere Figuras.*

*Denique multa vides, quibus est Odor, & Sapor una*  
*Reddita sunt cum Odore; imprimis pleraque dona,*  
*Relligione animum turpi cum tangere parto. 680*

*Hæc igitur variis debent constare Figuris:*  
*Nidor enim penetrat, quæ Succus non it in artus:*  
*Succus item seorsum, & rerum Sapor insinuat*  
*Sensibus, ut noscas primis differre figuris.*  
*Dissimiles igitur Formæ glomeramen in unum 685*  
*Conveniunt: Et res permisto Semine constant.*

*Quin etiam passim nostris in versibus ipsis*  
*Multa Elementa vides multis communia verbis;*  
*Cùm tamen inter se Versus, ac Verba necesse 'st*  
*Confiteare 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 <sup>k</sup> 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 Mass, and Things in general are composed of mingled Seeds; for, in these Verses of mine, you may all along observe, that many Letters are common to many Words, and yet you must confess, that some Verses and some Words consist of very different Letters; not because the Number of Let-

<sup>k</sup> 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 dissolv'd: And therefore, in combustible Things, here lie hid those different Kinds of Seeds, of which Fire, Light, Smoke, and Ashes consist.

*Non quòd multa parum communis Littera currat,  
 Aut nulla inter se duo sint ex omnibus isdem :  
 Sed quia non volgò paria omnibus omnia constant.  
 Sic aliis in rebus item communia multa,  
 Multarum rerum cum sint Primordia longè 695  
 Dissimili tamen inter se consistere summa  
 Possunt : ut meritò ex aliis constare ferantur  
 Humanum genus, ac Fruges, Arbustaque læta.*

*Nec tamen omnimodis connecti posse putandu 'st  
 Omnia : nam volgò fieri Portenta videres, 700  
 Semiferas Hominum species existere ; & altos  
 Interdum Ramos egigni corpore vivo :  
 Multaque connecti Terrestria membra Marinis.  
 Tum flammam tetro spiranteis ore Chimæras  
 Pascere Naturam per terras omniparenteis. 705  
 Quorum nil fieri manifestu 'st : omnia quando  
 Seminibus certis certa genetrice creata  
 Conservare genus crescentia posse videmus.*

*Scilicet id certa fieri ratione necesse 'st ;  
 Nam sua cuique Gibis ex omnibus intus in artus 710  
 Corpora discedunt : Connexaque convenienteis  
 Efficiunt motus : At contra aliena videmus  
 Rejicere in terras Naturam : Multaque cæcis  
 Corporibus fugiunt è corpore percita plagis,  
 Quæ neque connecti cuiquam potuere, neque intra 715*

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 same 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 <sup>1</sup> 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 otherwise; 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

<sup>1</sup> 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.

*Vitaleis motus consentire, atque animari.*

*Sed ne fortè putes animalia sola teneri*

*Legibus his : Eadem ratio res terminat omneis.*

*Nam veluti tota natura dissimiles sunt*

*Inter se genitæ res quæque, ita quamque necesse 'st*

*Dissimili constare figura Principiorum ;* 721

*Non quòd multa parum simili sint prædita forma :*

*Sed quia non volgò paria omnibus omnia constant.*

*Semina cùm porro distent, differre necesse 'st*

*Intervalla, Vias, Connexus, Pondera, Plagas, 725*

*Concurfus, Motus : quæ non Animalia solùm*

*Corpora sejungunt, sed Terras, ac Mare totum*

*Secernunt, Cælumque à Terris omne retentant.*

*Nunc age, dicta meo dulci quæsitâ 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 :*

*Neve alium quemvis quæ sunt induta colorem,*

*Propterea gerere hunc credas, quod Materiai*

*Corpora consimili sint ejus tineta colore. 735*

*Nullus enim Color est omnino Materiai*

*Corporibus, neque par rebus, neque denique dispar.*

*In quæ corpora si nullus tibi fortè videtur*

*Posse animi injectus fieri, procul avius erras :*

*Nam cum Cæcigeni, Solis qui lumina nunquam 740*

*Aspexere,*

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

BUT lest 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 my self; lest 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 strained with the same Colour: For the Principles of Matter are<sup>m</sup> 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

<sup>m</sup> He means, that the Atoms have no Colour whatever, like or unlike those that we discover on the Surface of concrete Bodies.

*Aspexere, tamen cognoscant corpora Tactu,  
Ex ineunte ævo nullo continēta colore:*

*Scire licet menti quoque nostræ Corpora posse  
Verti in notitiam nullo circumlita fuco.*

*Denique nos ipsi cæcis quæcunque tenebris 745  
Tangimus, haud ullo sentimus tinēta Colore.*

*Quod quoniam vinco fieri, nunc esse docebo.*

*Omnis enim Color omnino mutatur in omneis:  
Quod facere haud ullo debent Primordia pacto,  
Immutabile enim quiddam superare necesse 'st ; 750*

*Ne res ad Nihilum redigantur funditùs omnes.*

*Nam quodcunque suis mutatum finibus exit,  
Continuò hoc mors est illius, quod fuit antè.*

*Proinde Colore cave contingas Semina rerum :  
Ne tibi res redeant ad Nilum funditùs omnes. 755*

*Præterea, si nulla Coloris Principiis est*

*Reddita natura, at variis sunt prædita Formis ;  
E quibus omnigenos gignunt variantque Colores.*

*(Præterea magni quòd refert Semina quæque  
Cum quibus & quali positura contineantur, 760*

*Et quos inter se dent motus, accipiantque :)*

*Perfacilè extemplò rationem reddere possis,  
Cur ea, quæ Nigro fuerint paullo ante Colore,*

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. <sup>n</sup> 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 bestows no Colour upon Seeds, <sup>o</sup> 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

<sup>n</sup> 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.

<sup>o</sup> 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.

*Marmoreo fieri possint Candore repente :*

*Ut Mare, cum magni commorunt Æquora venti, 765*

*Vertitur in canos candenti marmore fluctus.*

*Dicere enim possis Nigrum, quod sæpe videmus,*

*Materies ubi permista 'st illius, & ordo*

*Principiis mutatus, & addita, demptaque quædam,*

*Continuò id fieri ut Candens videatur, & Album: 770*

*Quòd si Cæruleis constarent Æquora ponti*

*Seminibus, nullo possint Albescere pacto.*

*Nam quocunque modo perturbes, Cærulea quæ sint*

*Nunquam in Marmoreum possunt migrare Colorem.*

*Sin alio, atque alio sunt Semina tincta colore, 775*

*Quæ Maris efficiunt unum purumque Nitorem:*

*Ut sæpe ex aliis Formis, variisque Figuris*

*Efficitur quiddam Quadratum, unæque figuræ:*

*Conveniebat, uti in Quadrato cernimus esse*

*Dissimileis formas; ita cernere in Æquore ponti 780*

*Aut alio in quovis uno puroque Nitore,*

*Dissimileis longè inter se, variosque colores.*

*Præterea, nihil officiunt, obstantque Figuræ*

*Dissimiles, quo Quadratum minùs omne sit extra:*

*At varii rerum impediunt, prohibentque Colores,*

*Quo minùs esse uno possit res tota Nitore. 786*

*Tum porro, quæ ducit & inlicit, ut tribuamus*

*Principiis rerum nonnunquam, causa, Colores,*

*Occidit, ex Albis quoniam non Alba creantur:*



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 Order changed, when some new Seeds are added, and some old ones are removed, the direct Consequence is, that its Colour is changed, and appears white. But if the Water of the Sea consisted essentially of blue Particles, it could by no means change into a white Colour; disturb the Order of the Seeds how you would, the Principles 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 different Colours from which that simple Colour proceeds.

<sup>P</sup> 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

<sup>P</sup> Bodies of a different Figure may unite into another different Figure, as Triangles into a Square; but the same cannot be said of Colours, for different Colours can never compose one simple Colour.

*Necquæ Nigra cluent, de Nigris: sed Variis de.* 790

*Quippe etenim multo proclivius 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*

*Recta aut obliqua percussus Luce refulget?*

*Pluma Columbarum quo pacto in Sole videtur:* 800

*Quæ fita cervices circum, collumque coronat:*

*Namque aliàs fit uti rubro fit clara Pyropo:*

*Interdum quodam sensu fit, uti videatur*

*Inter Cæruleum virideis miscere Smaragos.*

*Caudaque Pavonis, larga cum Luce repleta 'st,* 805

*Consimili mutat ratione obversa Colores.*

*Qui, quoniam quodam gignuntur Luminis iètu,*

*Scilicet id sine eo fieri non posse putandu 'st.*

*Et quoniam plagæ quoddam genus excipit in se*

*Pupula, cùm sentire Colorem dicitur Album,* 810

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, <sup>a</sup> since Colours cannot appear without Light, and since the Seeds of Things cannot appear in the Light, you may thence conclude, that they are cover'd with no Colours at all; for how can any Colour shew it self 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.

<sup>r</sup> AND since the Eye receives within it self one Sort of Stroke when it is said to perceive a white

<sup>a</sup> 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.

<sup>r</sup> 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 aliud porro, Nigrum cum, & cætera, sentit,  
 Nec refert ea, quæ tangis, quo fortè Colore  
 Prædita sint, verùm quali magis apta Figura:  
 Scire licet, nil Principiis opus esse Colores:  
 Sed variis Formis varianteis edere tactus. 815

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? 820  
 Conveniebat enim Corvos quoque sæpe volanteis  
 Ex albis album pennis jactare colorem,  
 Et nigros fieri nigro de semine Cycnos,  
 Aut alio quovis uno, varioque colore. 824

Quinetiam quantò in parteis res quæque minutas  
 Distrabitur magis, hoc magis est ut cernere possis  
 Evanescere paullatim, stinguique Colorem:  
 Ut fit ubi in parvas parteis discerpitur Aurum,  
 Purpura, Pæniceusque color clarissimū multo,  
 Filatim cum distraëtus disperditur omnis: 830  
 Noscre ut hinc possis, prius omnem efflare Colorem  
 Particulas, quàm discedant ad Semina rerum.

Postremo quoniam non omnia Corpora vocem  
 Mittere concedis, neque Odorem: propterea fit,

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 Lustre 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, <sup>s</sup> since you allow that all Bodies do not emit Sound and Smell, and therefore you do

<sup>s</sup> 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 constare orba Colore,  
 Quàm sine Odore ullo quædam, Sonituque remota:  
 Nec minùs hæc animum cognoscere posse sagacem,  
 Quàm quæ sunt aliis rebus privata, notisque. 840

Sed ne forte putes solo spoliata Colore  
 Corpora prima manere: Etiam secreta Teporis  
 Sunt, ac Frigoris omnino, calidique Vaporis:  
 Et sonitu sterila, & Succo jejuna feruntur:  
 Nec jaciunt ullum proprio de corpore Odorem. 845  
 Sicut Amaracini blandum, Staëtæque liquorem,  
 Et Nardi florum, nectâr qui naribus halant,  
 Cum facere instituas: cum primis quærere par est,  
 Quoad licet, ac potis es reperire, inolentis Olivi  
 Naturam, nullam quæ mittat Naribus auram: 850  
 Quàm minimè ut possit mistos in corpore Odores,  
 Concoctosque, suo contactos perdere viro.

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

Cætera, quæ cum ita sunt tandem, ut mortalia constent,  
 Molli Lenta, Fragosa Putri, Cava corpore raro,  
 Omnia sunt à Principiis sejuncta necesse 'st, 860  
 Immortalia si volumus subjungere rebus

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 lest you should conceive the first Seeds <sup>Seeds</sup> are void only of Colour, you must know <sup>that</sup> they are without Warmth, are altogether free <sup>have no</sup> 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

<sup>t</sup> 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.

*Fundamenta, quibus nitatur summa salutis :  
Ne tibi res redeant ad Nilum funditus omnes.*

*Nunc ea, quæ Sentire videmus cunque necesse 'st  
Ex Insensilibus tamen omnia confiteare 865*

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

*Quippe videre licet, vivos existere Vermeis 870  
Stercore de tetro, putrorem cum sibi nata 'st  
Intempestivis ex imbribus humida tellus :*

*Præterea cunctas itidem res vertere sese.  
Vertunt se Fluvii, Frondes, & Pabula læta  
In Pecudes : vertunt Pecudes in Corpora nostra 875*

*Naturam, & nostro de Corpore sæpe Ferarum  
Augescunt vires, & corpora Pennipotentum.*

*Ergo omneis natura cibos in corpora viva  
Vertit, & hinc Sensus animantium procreat omneis :  
Non alia longè ratione, atque arida ligna 880  
Explicat in flammæ, & in igneis omnia versat.*

*Jamne vides igitur, magni Primordia rerum  
Referre in quali sint ordine quæque locata,  
Et commista quibus dent motus, accipiantque ?*

*Tum porrò quid id est, animum quod percutit  
ipsum ? 885*

*Quod movet ? & varios sensus expromere cogit,  
Ex Insensilibus, ne credas Sensile gigni ?*



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

Now farther, <sup>u</sup> those Beings we see indued <sup>*Sensible*</sup> with Sense, you must needs own are produced <sup>*from Seeds*</sup> from insensible Seeds; nor is there any thing we perceive by common Experience, which refutes <sup>*void of*</sup> 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 stinking Dung, when the Earth, moistned by unseasonable Showers, grows putrid and rotten.

BESIDES, Beings of all kinds undergo continual Changes; the Waters, the Leaves, and the sweet Grass turn themselves into Beasts; the Beasts convert their Nature into Human Bodies; and the Bodies of wild Beasts and Birds increase 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 same manner as she quickens dry Wood into Fire, and sets every thing in a blaze. You see now it is of the utmost Importance, in what Order these first 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,

<sup>u</sup> He undertakes to prove, that Things of Sense can spring from senseless Seeds, and that there is no Seed of any superiour Principle to Matter, but a fit Combination of Atoms can *Think, Will, and Remember.* Philosophical Nonsense!

*Nimirum, Lapides, & Ligna, & Terra quòd una  
Mista, tamen nequeunt vitalem reddere Sensum.*

*Illud in his igitur fœdus meminisse decebit, 890  
Non ex omnibus omnino, quæcunque creant res,  
Sensilia extemplo, & Sensus me dicere gigni :  
Sed magni referre, ea primum quantula constent,  
Sensile quæ faciunt, & qua sint prædita Forma,  
Motibus, Ordinibus, Posituris denique quæ sint : 895  
Quarum nil rerum in Lignis, Glebisque videmus.  
Et tamen hæc cùm sunt quasi putrefacta per imbreis,  
Vermiculos pariunt, quia Corpora materiæ  
Antiquis ex Ordinibus permota nova re,  
Conciliantur ita, ut debent Animalia gigni. 900*

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

*Sed tamen esto jam posse hæc 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 similia totis Animalibus esse putari.*  
*At nequeant per se Partes sentire, nec esse.*  
*Namque aliū Sensus membrorum respuit omnium :*  
*Nec Manus à nobis potis est secreta, neque ulla 911*  
*Corporis omnino sensum pars sola tenere.*  
*Linquntur, ut totis Animalibus adsimulentur ;*  
*Vitali ut possint consentire undique Sensu.*  
*Qui poterunt igitur rerum primordia dici, 915*  
*Et lethi vitare vias, Animalia cum sint,*  
*Atque Animalibu' sint mortalibus una, eademque ?*  
*Quod tamen ut possint : ab cœtu concilioque,*  
*Nil facient, præter volgum, turbamque Animantum ;*  
*Scilicet ut nequeant Homines, Armenta, Feræque ;*  
*Inter sese ullam rem gignere conveniendo 921*  
*Per Veneris res, extra Homines, Armenta, Ferasque.*  
*Quod si forte suum dimittunt corpore sensum,*  
*Atque alium capiunt : quid opus fuit attribui, quod*  
*Detrahitur ? Tum præterea, (quod fugimus ante,)*  
*Quatinus in Pullos animaleis vertier Ova 926*  
*Cernimus Alituum, Vermeisque effervere, terram*  
*Intempestivos cum putror cepit ob imbreis :*  
*Scire licet gigni posse ex non Sensibu' Sensus.*  
*Quòd si forte aliquis dicet, duntaxat oriri 930*  
*Posse ex non Sensu Sensus, sed mobilitate*  
*Ante aliqua tanquam partum, quàm proditur extra :*

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 assert 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, <sup>*No Sense before the Animal.*</sup> 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 coactō :  
 Nec commutari quicquam sine conciliatu 935  
 Primorum, ut nequeunt ullius corporis esse  
 Sensus ante ipsam genitam naturam Animantis.  
 Nimirum quia Materies disjecta tenetur  
 Aëre, Fluminibus, Terris, Flammaque creatis :  
 Nec congressa modo vitaleis convenienti 940  
 Contulit inter se motus, quibus omnituentes  
 Accensi Sensus animantem quamque tuentur.*

*Præterea quamvis Animantem grandior iētus,  
 Quàm patitur natura, repente adfligit, & omneis  
 Corporis, atque animi pergit confundere Sensus. 945  
 Dissolvuntur enim posituræ Principiorum  
 Et penitus motus vitales impediuntur,  
 Donec Materies omnes concussa per artus,  
 Vitales Animæ nodos è corpore solvit,  
 Dispersamque foras per caulas ejecit omneis. 950  
 Nam quid præterea facere iētum posse reamur  
 Oblatum, nisi discutere, ac dissolvere quæque ?*

*Fit quoque, uti soleant minus oblato acriter iētū  
 Reliquiæ motus vitalis vincere sæpe,  
 Vincere, & ingenteis plagæ sedare tumultus, 955*

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, <sup>a</sup> 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.

<sup>a</sup> 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.

*Inque suos quicquid rursus revocare meatus,  
 Et quasi jam lethi dominantem in corpore motum  
 Discutere, ac pæne amissos accendere Sensus.  
 Nam, quare potius lethi jam limine ab ipso  
 Ad vitam possint conlecta mente reverti, 960  
 Quàm quo decursum prope jam fiet, ire, & abire?*

*Præterea, quoniam dolor est ubi Materiai  
 Corpora vi quadam per viscera viva, per artus  
 Sollicitata suis trepidant in sedibus intus:  
 Inque locum quando remigrant, fit blanda Voluptas:  
 Scire licet, nullo Primordia posse dolore 966  
 Tentari: nullamque Voluptatem capere ex se:  
 Quandoquidem non sunt ex ullis Principiorum  
 Corporibus, quorum Motus novitate laborent:  
 Aut aliquem fructum capiant Dulcedinis atmæ. 970  
 Haud igitur debent esse ullo prædita sensu.*

*Denique, uti possint sentire Animalia quæquæ,  
 Principiis si etiam 'st Sensus tribuendus eorum:  
 Quid? Genus humanum proprium de quibus fa-  
 ctum 'st?*

*Scilicet & risu tremulo concussa cackinnant, 975  
 Et lacrymis spargunt rorantibus ora, genasque,  
 Multaque de rerum mistura dicere callent,  
 Et sibi pro porro quæ sint primordia quærent.*

*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, <sup>b</sup> 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 indued with any Sense at all.

AGAIN, <sup>c</sup> 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;

<sup>b</sup> 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.

<sup>c</sup> 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  
Ipsa quoque ex aliis debent constare elementis ; 980  
Inde alia ex aliis, nusquam consistere ut ausis.*

*Quippe sequar, quodcunque Loqui, Ridereque dices,  
Et Sapere, ex aliis eadem hæc facientibus, ut sit.  
Quòd si delira hæc, furiosaque cernimus esse :  
Et ridere potest ex non ridentibu' factus, 985  
Et sapere, & doctis rationem reddere dictis,  
Non ex Seminibus sapientibus, atque disertis :  
Quí minus esse queant ea, quæ Sentire videmus  
Seminibus permista 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 læta,  
Et genus humanum, & parit omnia sæcla ferarum,  
Pabula cùm præbet, quibus omnes corpora pas-  
cunt, 995*

*Et dulcem ducunt vitam, prolemque propagant.  
Quapropter merito Maternum nomen adepta 'st.  
Cedit item retrò de Terra quod fuit ante,  
In terras : & quod missum 'st ex Ætheris oris,  
Id rursus Cæli rellatum templa receptant : 1000  
Nec sic interimit mors res, ut Materiai  
Corpora conficiat, sed cætum dissipat ollis :*

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, <sup>d</sup> we all spring from Ætherial 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

<sup>d</sup> He recapitulates his former Arguments; the Earth becomes fruitful by the Showers, and produces Corn, Grass, &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 dissolv'd, 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.

*Inde aliis aliud conjungit, & efficit, omnes  
 Res ut convertant formas, mutantque colores,  
 Et capiant Sensus, & puncto tempore reddant : 1005  
 Ut noscas referre, eadem Primordia rerum  
 Cum quibus, & quali positura contineantur.  
 Et quos inter se dent motus, accipiantque :  
 (Neve putes æterna penes residere potesse  
 Corpora prima, quòd in summis fluitare videmus  
 Rebus, & interdum nasci, subitoque perire : ) 1011  
 Quin etiam refert nostris in Versibus ipsis,  
 Cum quibus, & quali sint ordine quæque locata.  
 Namque eadem Cælum, Mare, Terras, Flumina,  
 Solem*

*Significant : eadem Fruges, Arbusta, Animanteis :  
 Si non omnia sint, at multo maxima pars est 1016  
 Consimilis : Verùm positura discrepant hæc.  
 Sic ipsis in rebus item jam Materiaï,  
 Intervalla, Viæ, Connexus, Pondera, Plagæ,  
 Concurfus, Motus, Ordo, Positura, Figura 1020  
 Cum permutantur, mutari Res quoque debent.*

*Nunc animum nobis adhibe veram ad rationem.  
 Nam tibi vehementer nova res molitur ad aureis  
 Accidere, & nova se species ostendere rerum.  
 Sed neque tam facilis res ulla est, 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  
 Lunæque, & solis præclara luce nitorem :*

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 it self 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, *Many Worlds.*

Omnia quæ si nunc primùm mortalibus adsint,  
 Ex improvise ceu sint objecta repente :  
 Quid magis his rebus poterat mirabile dici,  
 Aut minùs ante quod auderent fore credere gentes ?  
 Nil ut opinor, ita hæc species miranda fuisset ; 1036  
 Quom tibi jam nemo fessus satiate videndi  
 Susplicere in cæli dignatur lucida templa :  
 Desine 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 mœnia mundi ;  
 Quid sit ibi porro, quò prospicere usque velit mens,  
 Atque animi jaetus liber quo pervolet ipse. 1046

Principio, nobis in cunctas undique parteis  
 Et latere ex utroque, infra, superaue, per Omne  
 Nulla 'st finis, (uti docui) res ipsaque per se  
 Vociferatur, & elucet natura Profundi. 1050

Nullo jam pacto verisimile esse putandum 'st,  
 Undique cum vorsus 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 hic sit natura factus, & ipsa

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<sup>e</sup> 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 it self 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

<sup>e</sup> *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, incassum, frustra<sup>que</sup>, coacta  
 Tandem cooluerint ea, quæ coniecta repente 1060  
 Magnarum rerum fierent exordia semper,  
 Terrarum, Maris, & Cæli, generisque Animantium.  
 Quare etiam atque etiam taleis fateare necesse 'st  
 Esse alios alibi congressus materiai,  
 Qualis hic est, avido complexu quem tenet æther.

Præterea, cum Materies est multa parata: 1066  
 Cum Locus est præsto: nec res, nec causa moratur  
 Ulla: geni debent nimirum, & consieri res.  
 Nunc & Seminibus si tanta 'st copia, quantam  
 Enumerare ætas animantium non queat omnis: 1070  
 Visque eadem, & natura manet, quæ Semina rerum  
 Conjicere in loca quæque queat, simili ratione,  
 Atque huc sunt coniecta: Necesse 'st confiteare  
 Esse alios aliis Terrarum in partibus orbeis,  
 Et varias Hominum genteis, & Sæcla Ferarum.

Huc accedit, ut in Summa res nulla sit una, 1076  
 Unica quæ gignatur, & unica, solaque crescat:  
 Quin cujusque sient sæcli, permultaque eodem  
 Sint genere: in primis animalibus indice mente.  
 Invenies sic montivagum genus esse Ferarum, 1080  
 Sic Hominum genitam prolem, sic denique mutas  
 Squamigerum pecudes, & corpora cuncta Volantum.

Quapropter



their own accord juffling 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 same 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 same Power, the same Nature remains, that can dispose the Seeds of Things in any other Place, by the same 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. <sup>f</sup>By

<sup>f</sup> 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 'st,  
Terramque, & Solem, Lunam, Mare, cætera, quæ  
sunt,*

*Non esse unica, sed numero magis innumerati, 1085*

*Quandoquidem vitæ depactus terminus altè  
Tam manet his, & tam nativo hæc corpore constant,  
Quàm genus omne, quod his generatim rebus abun-  
dat.*

*Quæ benè cognita si teneas : Natura videtur  
Libera continuò Dominis privata superbis, 1090*

*Ipsa sua per se sponte omnia Diis agere expers.*

*Nam (proh sancta Deùm 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 feraceis ? 1097*

*Omnibus inque locis esse omni tempore præsto ?*

*Nubibus ut tenebras faciat cælique serena*

*Concutiat sonitu ? tum fulmina mittat, & ædeis*

*Sæpe suas disturbet, & in deserta recedens 1101*

*Sæviat exercens telum, quod sæpe nocentis*

*Præterit, exanimatque indignos, inque merentis ?*

*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, <sup>z</sup> 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 Mass? 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,

Multaque post Mundi tempus genitale, diemque  
 Primigenum Maris, & Terræ, Solisque coortum,  
 Addita corpora sunt extrinsecus, addita circum 1106  
 Semina, quæ magnum jaculando contulit OMNE:  
 Unde Mare, & Terræ possent augescere: & unde  
 Adpareret spatium Cæli domus, altaque tecta  
 Tolleret à terris procul; & consurgeret Aër. 1110  
 Nam sua cuique locis ex omnibus omnia plagis  
 Corpora distribuuntur, & ad sua sæcla recedunt:  
 Humor ad Humorem, Terreno corpore Terra  
 Crescit; & Ignem ignes procudunt, Ætheraque Æ-  
 ther:  
 Donicum ad extremum crescendi perfica finem 1115  
 Omnia perduxit rerum Natura creatrix:  
 Ut fit, ubi nihilo jam plus est, quod datur intra  
 Vitaleis venas, quàm quod fluit, atque recedit:  
 Omnibus his ætas debet consistere rebus:  
 His Natura suis refrænat viribus auctum. 1120  
 Nam, quæcunque vides hilaro grandescere ad auctu,  
 Paullatimque gradus ætatis scandere adultæ:  
 Plura sibi adsumunt, quàm de se corpora mittunt,  
 Dum faciliè in venas cibus omnis deditur: & dum  
 Non ita sunt latè dispersa, ut multa remittant: 1125

BESIDES, after this World was formed, and *The World* the Birth-day of the Sea, the Earth, and the Sun *receives* was over, there were many Particles of Matter *new Seeds.* added to them from without, many Seeds were received every way, which the infinite Mass 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 <sup>n</sup> all the Parts of the Universe the proper Seeds are distributed, 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 distributed into the Veins, and there confined, and the Particles are not so widely scatter'd, as in any Proportion to fly off, and so

<sup>n</sup> 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, quàm vescitur ætas,  
Nam certè fluere, ac decedere corpora rebus  
Multa, manus dandum 'st: sed plura accedere de-  
bent,*

*Domicum olescendi summum tetigere cacumen.  
Inde minutatim vireis, & 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 dispergit, & à se corpora mittit:  
Nec facile in venas cibus omnis diditur eij:* 1135

*Nec satis est, pro quàm largos exæstuat æstus,  
Unde queat tantum suboriri ac suppeditare,  
Quantum opus est: & quod satis est, Natura novare.  
Fure igitur pereunt, cum rarefacta fluendo  
Sunt; & cum externis succumbunt omnia plagis:* 1140

*Quandoquidem grandi cibus ævo denique defit:  
Nec tuditantia rem cessant extrinsecùs ullam  
Corpora conficere, & plagis infesta domare.*

*Sic igitur magni quoque circum mœnia mundi  
Expugnata dabunt labem, putreisque ruinas.* 1145

*Omnia debet enim cibus integrare novando:  
Nequicquam; quoniam nec venæ perpetiuntur  
Quod satis est, neque quantum opus est, natura mi-  
nistrat.*

*Famque adeo affecta 'st ætas, effætaque tellus  
Vix animalia parva creat, quæ cuncta creavit* 1150  
*Sæcla, deditque ferarum ingentia corpora partu.*

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

<sup>i</sup> 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.





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 wastes 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 Abundance, in proportion as the Defect and the Loss require. The Animal therefore must necessarily perish, when it is made thin by continual Perspiration, and all Things must at length fall by constant Strokes 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 resisted.

By the same Rule <sup>i</sup> the visible Heavens, the *The World* surrounding Walls of this great World must *grows old.* tumble down by continual Attacks, and fall to Ruins; it is Nourishment that preserves Things in being by constant Supplies, but 'tis all to no purpose: for neither are the Veins capable to receive what is sufficient, nor can Nature afford a proper and needful 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 lusty Race, and brought forth such prodigious Bodies of wild Beasts. For I can-

<sup>i</sup> 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.

*Haud (ut opinor) enim mortalia sæcla superne  
 Aurea de Cælo demisit funus in arva :  
 Nec mare, nec fluctus plangentes saxa creârunt :  
 Sed genuit Tellus eadem, quæ nunc alit ex se, 1155  
 Præterea nitidas fruges, vinetaque læta  
 Sponte sua primum mortalibus ipsa creavit.  
 Ipsa dedit dulcis fœtus, & pabula læta :  
 Quæ nunc vix nostrò grandescunt auêta labore :  
 Conterimusque boves, & vires agricolarum : 1160  
 Conficimus ferrum vix arvis suppeditati :  
 Usque adeo pereunt fœtus, augmentque labores.  
 Jamque caput quassans grandis suspirat arator  
 Crebriùs incassum magnum cecidisse laborem :  
 Et cum tempora temporibus præsentia confert 1165  
 Præteritis, laudât fortunas sæpe parentis :  
 Et crepat, antiquum genus ut pietate repletum  
 Perfacilè angustis tolerârit finibus ævum,  
 Cum minor esset agri multò modus ante viritim :  
 Nec tenet, omnia paullatim tabescere, & ire 1170  
 Ad scopulum spatio ætatis defessa vetusto.*

not think all Species of Creatures descended from the Sky by a <sup>k</sup> 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 Grass, 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 <sup>l</sup>, 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.

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

<sup>l</sup> He scoffingly insinuates, that since the Earth produced of her own accord, Men had nothing to do but to worship the Gods.

*The* END *of the* SECOND BOOK.



THE  
 ARGUMENT  
 OF THE  
 THIRD BOOK.

**T***HIS is that Book of LUCRETIVS 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*

were not made by the Deity, but by a fortuitous Concurrence 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 endeavours 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 asserts, 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 Cari*

DE

RERUM NATURA

LIBER TERTIUS.

**E** TENEBRIS *tantis tam clarum extollere*  
*lumen*

*Qui primus potuisti, illustrans commoda vitæ :*

*Te sequor ó GRAIÆ gentis decus, inque tuis nunc*

*Fixa pedum pono pressis vestigia signis,*

*Non*





*T. Lucretius Carus,*

OF THE

NATURE *of* THINGS.

THE

THIRD BOOK.

O
 EPICURUS, who could first strike so *The Praise*  
 clear a Light from so great Darkness, *of Epicu-*  
 and direct us in the proper Advantages *rus.*  
 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

<sup>a</sup> 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.

from

*Non ita certandi cupidus, quàm propter amorem, 5*  
*Quod te imitari aveau: Quid enim contendat Hi-*  
*rundo*

*Cycnis? aut quidnam tremulis facere artibus Hædi*  
*Consimile in cursu possint, ac fortis Equi vis?*

*Tu Pater, & rerum Inventor: tu patria nobis*  
*Suppeditas præcepta, tuisque ex, Inclute, chartis, 10*

*Floriferis ut apes in saltibus omnia limant,*

*Omnia nos itidem depascimur aurea dicta,*

*Aurea, perpetua semper dignissima vita.*

*Nam simul ac Ratio tua cæpit vociferari,*

*Naturam rerum haud Divina mente coortam, 15*

*Diffugiunt Animi terrores; mœnia mundi*

*Discedunt, totum video per Inane geri res.*

*Apparet Divûm numen, sedesque quietæ:*

*Quas neque concutiunt venti, neque nubila nimbis*

*Adspargunt, 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 in ullo.*

*At contra nusquam apparent Acherusia templa: 25*

*Nec Tellus obstat, quin omnia dispiciantur,*

*Sub pedibus quæcunque infra per Inane geruntur.*

*His tibi me rebus quædam divina Voluptas*

*Percipit, atque Horror, quod sic Natura tua vi*

*Tam manifesta patet ex omni parte relecta. 30*

*Et quoniam docui, cunctorum exordia rerum*

*Qualia sint: & quàm 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 sit eternally to live. For when thy Reason first began to prove, that Nature was not form'd 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 <sup>b</sup> I have taught what are the first Seeds and Principles of Things, how they differ

*The Subject of this Book.*

<sup>b</sup> 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 his 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, quòd sæpe homines morbos magis esse ti-  
 mendos,*

*Infamemque ferunt vitam, quàm Tartara lethi,  
 Et se 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  
 Factari causas quàm quod res ipsa probetur:  
 Extorres iidem patria, longèque fugati  
 Conspectu ex hominum, fœdati crimine turpi,  
 Omnibus ærumnis affecti denique vivunt: 50  
 Et quocunque tamen miseri venere, parentant,  
 Et nigras mactant pecudes, & Manibù' divis*

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, <sup>c</sup> 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 <sup>d</sup> 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 <sup>e</sup> black Cattle, and offer Victims to the infernal

*Fear of  
Death the  
Cause of  
all Evils.*

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

<sup>d</sup> Some were of Opinion, that the Soul was a Suffusion of Blood about the Heart, and consequently, that it is the Blood itself.

<sup>e</sup> The Ancients were used to offer black Victims to the infernal Gods and to the Dead, but white to the Gods above.

Gods;

*Inferias mittunt : Multoque in rebus acerbis  
Acrius advertunt animos ad Relligionem.*

*Quò magis in dubiis hominem spectare periclis 55  
Convenit, adversisque in rebus noscere qui sit.*

*Nam veræ voces tum demum pectore ab imo  
Ejiciuntur, & eripitur Persona, manet Res.*

*Denique Avarities, & Honorum cæca cupido,  
Quæ miseros homines cogunt transcendere fineis 60*

*Furis, & interdum socios scelerum, atque ministros  
Noctæis atque dies niti præstante labore*

*Ad summas emergere opeis : Hæc vulnera vitæ  
Non minimam partem Mortis formidine aluntur.*

*Turpis enim Fama, & Contemptus, & acris Egestas  
Semota ab dulci Vita stabilique videntur : 66*

*Et quasi jam Lethi portas cunctarier ante :*

*Unde homines, dum se falso terrore coacti  
Refugisse volunt longè, longèque recesse :*

*Sanguine civili rem conflant : divitiasque 70  
Conduplicant avidi, cædem cædi accumulantes.*

*Crudeles gaudent in tristi funere Fratris :*

*Et Consanguineum mensas odere, timentque.*

*Consimili ratione ab eodem sæpe timore  
Macerat invidia : ante oculos illum esse potentem, 75*

*Illum aspectari, claroque incedere honore ;*

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.

<sup>f</sup> 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, possessed 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

<sup>f</sup> *Faber* says, the following Lines contain so many excellent Things in them, that they cannot be sufficiently considered and admired.

*Ipsi se in tenebris volvi, cænoque queruntur.  
 Intereunt partim statuarum, & nominis ergo :  
 Et sæpe usque adeo, Mortis formidine, vitæ  
 Percipit humanos odium, lucisque videndæ, 80  
 Ut sibi consciscant mœrenti pectore Lethum,  
 Obliti fontem curarum hunc esse Timorem,  
 Hunc vexare pudorem, Hunc vincula amicitia  
 Rumpere, & in summa pietatem evertere fundo.  
 Nam jam sæpe homines patriam, carosque parentis  
 Prodiderunt, vitare Acherusia templa petentes. 86*

*Nam veluti Pueri trepidant, atque omnia cæcis  
 In tenebris metuunt : Sic Nos in luce timemus  
 Interdum, nihilo quæ sunt metuenda magis, quàm  
 Quæ Pueri in tenebris pavitant, finguntque futura. 90  
 Hunc igitur terrorem animi, tenebrasque necesse est  
 Non radii solis, neque lucida tela dei  
 Discutiant, sed Naturæ species, Fatioque.*

*Primum ANIMUM dico (mentem quem sæpe vo-  
 camus)*

*In quo consilium vitæ, regimenque locatum est, 95  
 Esse hominis Partem nihilo minus, ac Manus, &  
 Pes,*

*Atque Oculi partes animantis totius extant.  
 Quamvis multa quidem Sapientum turba putârunt  
 Sensum animi certa non esse in parte locatum :  
 Verum Habitum quendam vitalem corporis esse, 100  
 Harmoniam Graii quam dicunt, quod faciat nos*



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 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.

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

*The Mind is a Substance.*

\* 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 insists 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.

*Vivere cum sensu, nulla cum in parte fiet Mens:  
 Ut bona sæpe Valetudo cum dicitur esse  
 Corporis, & non est tamen hæc pars ulla Valentis:  
 Sic Animi sensum non certa parte reponunt: 105  
 Magnopere in quo mi diversi errare videntur.*

*Sæpe utique in promptu Corpus, quod cernitur,  
 ægrit,*

*Cum tamen ex alia latamur parte latenti:  
 Et retrò fit, uti contra fit sæpe vicissim,  
 Cum miser ex animo, letatur Corpore toto: 110  
 Non alio pacto, quam si Pes cum dolet ægri,  
 In nullo Caput interea sit forte dolore.*

*Præterea molli somno cum dedita membra,  
 Effusumque jacet sine sensu Corpus onustum:  
 Est aliud tamen in nobis, quod tempore in illo 115  
 Multimodis agitatur, & omneis accipit in se  
 Lætitiæ motus, & curas cordis inaneis.*

*Nunc Animam quoque ut in membris cognoscere  
 possis*

*Esse, neque Harmoniam corpus retinere solere:  
 Principiò fit, uti detractò Corpore multo, 120  
 Sæpe tamen nobis in membris Vita moretur.  
 Atque eadem rursus cum Corpora pauca caloris*

*Diffugere,*

*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.

*Not Harmony.*

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<sup>n</sup>, 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

<sup>n</sup> 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 lost, 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 those Particles of Heat and Vapour.

Diffugere, forasque per os est editus aër :  
 Deserit extemplo venas, atque ossa relinquit :  
 Noscere ut hinc possis, non æquas omnia parteis 125  
 Corpora habere, neque ex æquo fulcire salutem :  
 Sed magis hæc, Venti quæ sunt, calidique Vaporis  
 Semina, curare in membris ut Vita moretur.  
 Est igitur Calor, ac Ventus vitalis in ipso  
 Corpore, qui nobis moribundos deserit artus. 130

Quapropter, quoniam 'st 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 egebat,  
 Quicquid id est, habeant: Tu cætera percipe dicta. 136  
 Nunc Animum, atque Animam dico conjuncta teneri  
 Inter se, atque unam naturam conficere ex se:  
 Sed Caput esse quasi, & dominari in corpore toto  
 Consilium, quod nos Animum, Mentemque vocamus:  
 Idque situm media regione in pectoris hæret. 141  
 Hic exsultat enim Pavor, ac Metus hæc loca circum  
 Lætitiæ mulcent: hinc ergo Mens Animusque 'st.  
 Cætera pars Animæ per totum diffusa corpus  
 Paret: & ad numen Mentis, momenque movetur:

Idque

fly 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 soever 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<sup>1</sup> 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,

*The Mind  
and Soul  
are one.*

<sup>1</sup> 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 gaudet : 146*

*Cum neque res Animam, neque Corpus commovet ulla.*

*Et quasi cum Caput aut Oculus, tentante dolore,*

*Læditur in nobis, non omni concruciamur*

*Corpore : sic Animus nonnunquam læditur ipse, 150*

*Lætitiæque viget, cum cætera pars Animæ*

*Per membra, atque artus nulla novitate cietur.*

*Verum ubi vehementi magis est commota metu Mens,*

*Consentire Animam totam per membra videmus :*

*Sudores itaque & pallorem existere toto 155*

*Corpore, & infringi linguam, vocemque aboriri,*

*Caligare oculos, sonere aureis, succidere artus.*

*Denique concidere ex Animi terrore videmus*

*Sæpe homines, facile ut quivis hinc noscere possit,*

*Esse Animam cum Animo conjunctam ; quæ cum A-*

*nimi vi*

160

*Percussa est, exin corpus propellit, & icit.*

*Hæc eadem ratio naturam Animi, atque Animæ*

*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 tactu posse videmus :*

*Nec tactum porro sine Corpore) nonne fatendum est*

*Corporea natura Animam constare, Animamque ?*

*Præterea pariter fungi cum Corpore : & una*

*Consentire Animum nobis in corpore cernis. 170*

*Si minus offendit vitam vis horrida teli*

*Offibus ac nervis disclusis intus adaucta :*

*Attamen insequitur languor, terræque petitus*

*Suavis, & in terra Mentis qui gignitur æstus,*

*Interdumque quasi exsurgendi incerta voluntas. 175*

This Mind can think of itself alone, and of it self 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 Paleness spread all the Body over, the Tongue falters, 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 Faintness succeeds, and a sort 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

*Ergo corporcam naturam Animi esse necesse 'st :  
Corporeis quoniam telis, iētuque laborat.*

*Is tibi nunc Animus quali sit corpore, & unde  
Constiterit, pergam rationem reddere dictis.  
Principio esse aio persubtilem atque minutis 180  
Perquam Corporibus factum constare : id ita esse,  
Hinc licet advertas animum, ut pernoscere possis,  
Nil adeo fieri celeri ratione videtur,  
Quàm si Mens fieri proponit, & inchoat ipsa.  
Ocius ergo Animus, quàm res se perciet ulla, 185  
Ante oculos quarum in promptu natura videtur.  
At quod mobile tantopere 'st constare rotundis  
Perquam seminibus debet, perquamque minutis :  
Momine uti parvo possint impulsa moveri.  
Namque movetur Aqua, & tantillo momine flutat :  
Quippe volubilibus, parvisque creata figuris. 191  
At contra Mellis constantior est natura,  
Et pigri latices magis, & cunctantior actus.  
Hæret enim inter se magis omnis materiai  
Copia : Nimirum quia non tam levibus extat 195  
Corporibus, neque tam subtilibus atque rotundis :  
Namque Papaverum, aura potest suspensa, levisque  
Cogere, ut ab summo tibi diffluat altus acervus :  
At contra Lapidum coniectum, Spiclorumque  
Nenu potest : igitur parvissima corpora quantò 200  
Et levissima sunt, ita mobilitata feruntur.  
At contra quò quæque magis cum pondere magno,  
Asperaque inveniuntur, eò stabilita magis sunt.  
Nunc igitur, quoniam 'st Animi natura reperta  
Mobilis egregie : Perquam constare necesse 'st 205  
Corporibus parvis & levibus 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 unactive, and its Motion slower; its Principles stick closer among themselves; and for this Reason, 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 gentlest Breath 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 stable they remain.

*The Mind  
composed of  
Seeds small  
and round.*

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

\* 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.

knowing

*Quæ tibi cognita res in multis, O Bone, rebus  
Utilis invenietur, & oportuna cluebit.*

*Hæc quoque res etiam naturam deliquat ejus,  
Quàm tenui constet textura; quàmque loco se 210  
Contineat parvo, si possit conglomerari:*

*Quòd simul atque Hominem lethi secura quies est  
Indepta, atque Animi natura, Animæque recessit:  
Nil ibi limatum de toto Corpore cernas*

*Ad speciem, nil ad pondus: Mors omnia præstat, 215  
Vitalem præter sensum, calidumque vaporem.*

*Ergo Animam totam perparvis esse necesse 'st  
Seminibus, nexam per venas, viscera, nervos:*

*Quatinus omnis ubi è toto jam Corpore cessit,  
Extima membrorum circum-cæsurâ tamen se 220*

*Incolumem præstat: Nec desit ponderis bilum:*

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

*Aut aliquo cum jam Succus de corpore cessit:*

*Nil oculis tamen esse minor res ipsa videtur 225*

*Propterea, neque detractum de pondere quicquam:*

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

*Quare etiam atque etiam Mentis naturam, Animæque  
Scire licet perquam paucillis esse creatam 230*

*Seminibus: Quoniam fugiens nil ponderis aufert.*

*Nec tamen hæc simplex nobis natura putanda 'st.*

*Tenuis enim quædam moribundos deserit Aura*

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 tenuious 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<sup>1</sup> a thin

<sup>1</sup> 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.

*Mista Vapore, Vapor porro trahit Aëra secum ;  
Nec Calor est quisquam, cui non sit mistus & Aër.  
Rara quòd ejus enim constat natura necesse 'st 236  
Aëris inter eum primordia multa cieri.*

*Jam triplex Animi 'st igitur natura reperta.  
Nec tamen hæc sat sunt ad Sensum cunèta creandum :  
Nil horum quoniam recipit mens posse creare 240  
Sensiferos motus, quædam qui mente voluent.  
Quarta quoque his igitur quædam natura necesse 'st  
Attribuatur : (ea 'st omninò nominis expers : )  
Qua neque mobilius quicquam, neque tenuius extat,  
Nec magis è parvis, aut lævibus ex elementis : 245  
Sensiferos motus qui didit prima per artus.  
Prima cietur enim parvis perfectæ figuris,  
Inde Calor motus, & Venti cæca potestas  
Accipit : inde Aër : inde omnia mobilitantur :  
Tum quatitur sanguis, tum viscera persentiscunt 250  
Omnia ; postremò datur ossibus, atque medullis  
Sive voluptas est, sive 'st contrarius ardor.*

*Nec temerè huc dolor usque potest penetrare, ne-  
que acre*

*Permanere malum, quin omnia perturbentur :  
Usque adeo ut vitæ desit locus, atque Animai 255  
Diffugiant partes per caulas Corporis omneis.  
Sed plerumque fit in summo quasi corpore finis  
Motibus, hanc ob rem vitam retinere valemus.*

*Nunc, ea quo pacto inter sese mista, quibusque  
Compta modis vigeant, rationem reddere aventem*

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.

*The Mind consists of four Parts.*

<sup>m</sup> Now, how these four Principles are mixed, and in what manner they subsist, I am very desirous

<sup>m</sup> The *Epicurean* Soul consists of these four Things, Heat, Vapour or Wind, Air, and the fourth, something without a Name.

*Abstrahit invitum patrii sermonis egestas.* 261

*Sed tamen, ut potero summam attingere, tangam.*

*Inter enim cursant Primordia principiorum*

*Motibus inter se, nihil ut secerner unum*

*Possit; nec spatio fieri divisa potestas:* 265

*Sed quasi multæ vis unius corporis extant.*

*Quod genus in quovis Animantium viscere volgò*

*Est Odo, & quidam Calor, & Sapor: Et tamen*

*ex his*

*Omnibus est unum perfectum Corporis augmen.*

*Sic Calor, atque Aër, & Venti cæca potestas* 270

*Mista creant unam naturam, & mobilis illa*

*Vis, initium motus ab se quæ dividit obis,*

*Sensifer unde oritur primùm per viscera motus.*

*Nam penitus prorsum latet Hæc natura, subestque:*

*Nec magis Hac infra quicquam est in corpore nostro:*

*Atque Anima 'st Animæ proporro totius ipsa:* 276

*Quod genus in nostris membris, & corpore toto*

*Mista latens Animi vis est, animæque potestas;*

*Corperibus quia de parvis, paucisque creata 'st:*

*Sic tibi nominis Hæc expers Vis, facta minutis* 280

*Corperibus latet: Atque Animæ totius ipsa*

*Proporro 'st Anima, & dominatur corpore toto.*

*Consimili ratione necesse 'st 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 vigeant commista per artus :  
 Atque aliis aliud subsit magis, emineatque : 285  
 Ut quiddam fieri videatur de omnibus unum :  
 Ne Calor, ac Ventus seorsum, seorsumque potestas  
 Aëris interimant sensum, diductaque solvant.*

*Est etiam Calor ille animo, quem sumit in ira,  
 Cum fervescit, & 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,  
 Pectore tranquillo qui fit, voltuque sereno.*

*Sed Calidi plus est illis, quibus acria corda, 295  
 Iracundaque mens facile effervescit in ira ;*

*Quo genere in primis vis est violenta Leonum :  
 Pectora qui fremitu rumpunt plerumque gementes,  
 Nec capere irarum fluctus in pectore possunt.*

*At Ventosa magis Cervorum frigida mens est, 300  
 Et gelidas citius per viscera concitat auras :*

*Quæ tremulum faciunt membris existere motum,  
 At natura Boum placido magis Aëre vivit,  
 Nec nimis iræi fax unquam subdita percit  
 Fumida suffundens cæcæ caliginis umbras ; 305*

*Nec gelidi torpet telis perfixa pavoris :  
 Inter utrosque sita est, Cervos, sævosque Leones.*

*Sic Hominum genus est. quamvis Doctrina po-  
 litos*

*Constituat*



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; lest 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 Chillness 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.

<sup>n</sup> THE Mind of Man is formed of the same Principles, tho' the Discipline of Philosophy may

<sup>n</sup> 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 relinquit  
Naturæ cujusque Animæ vestigia prima.* 310

*Nec radicitus evelli mala posse putandum 'st,  
Quin proclivius Hic iras decurrat ad acreis ;  
Ille metu citius paullo tentetur : at Ille  
Tertius accipiat quædam clementius æquo.*

*Inque aliis rebus multis differre necesse 'st* 315

*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,* 320

*Usque adeo Naturarum vestigia linqui  
Parvola, quæ nequeat Ratio depellere dictis :  
Ut nihil impediât dignam Diis degere vitam.*

*Hæc igitur Natura tenetur Corpore ab omni,  
Ipsaque corporis est custos, & causa salutis ;* 325

*Nam communibus inter se radicibus hærent :  
Nec sine pernicie divelli posse videntur.*

*Quod genus è Turis glebis evellere Odorem  
Haud facile 'st, quin intereat natura quoque ejus.*

*Sic Animi, atque Animæ naturam corpore toto* 330

*Extrahere haud facile 'st, quin omnia dissolvantur :  
Implexis ita principiis ab origine prima*

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 dissolv'd, the other, and therefore both together, must be dissolved likewise.

*Inter se fiunt consorti prædita vita :*

*Nec sine vi quicquam alterius sibi posse videtur*

*Corporis, atque Animi seorsum sentire potestas: 335*

*Sed communibus inter eos conflatur utrinque*

*Motibus accensus nobis per viscera Sensus.*

*Præterea, Corpus per se nec gignitur unquam,  
Nec crescit, nec post mortem durare videtur.*

*Non enim ut Humor aquæ dimittit sæpe vaporem,*

*Qui datus est, neque ab hac causa convellitur ipse, 341*

*Sed manet incolumis : non, inquam, sic Animæ*

*Discidium possunt artus perferre relictæ :*

*Sed penitus pereunt convulsi, conque putrescunt.*

*Ex ineunte ævo sic Corporis atque Animæ 345*

*Mutua vitaleis discunt contagia motus,*

*Maternis etiam in membris, alvoque repõsta ;*

*Discidium ut nequeat fieri sine peste, maloque :*

*Ut videas, quoniam conjuncta est causa salutis,*

*Conjunctam quoque naturam consistere eorum. 350*

*Quod superest, si quis Corpus sentire renutat :*

*Atque Animam credit permixtam Corpore toto*

*Suscipere hunc motum, quem Sensem nominamus :*

*Vel manifestas res contra, verasque repugnat.*

*Quid sit enim Corpus sentire quis afferet unquam, 355*

*Si non ipsa palam quod res dedit ac docuit nos ?*

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 Natures 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? <sup>p</sup> But it is plain,

<sup>p</sup> 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 est, contra cùm sensus dicat eorum :  
Sensus enim trahit, atque acies detrudit ad ipsa.*

*Fulgida præsertim cùm cernere sæpe nequimus,  
Lumina luminibus quia nobis præpediuntur : 365  
Quod foribus non fit : neque enim, quâ cernimus ipsi,  
Ostia suscipiunt ullum 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 possis,  
Democriti quod sancta viri sententia ponit,  
Corporis atque Animi primordia singula primis  
Adposita alternis variare, ac necere membra.  
Nam cùm multò sunt Anima elementa minora, 375  
Quàm quibus è 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 nothing of themselves, but the Mind looks through them as through Doors laid open, this is ridiculous, 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 Lustre. 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 <sup>a</sup> *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-

<sup>a</sup> 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 Body.

*Diffita sunt, duntaxat ut, hoc promittere possis,  
Quantula prima queant nobis injecta ciere  
Corpora sensiferos motus in Corpore, tanta 380  
Intervalla tenere exordia prima Animai.*

*Nam neque Pulveris interdum sentimus adhaesum  
Corpore, nec membris incussam insidere Cretam,  
Nec Nebulam noctu, nec Aranei tenuia fila  
Obvia sentimus, quando obretimur euntes : 385  
Nec supra caput ejusdem cecidisse vietam.*

*Vestem, nec Plumas avium, Papposque volanteis,  
Qui nimia levitate cadunt plerumque gravatim :  
Nec repentis itum cujusviscunque Animantis  
Sentimus, nec priva pedum vestigia quæque, 390  
Corpore quæ in nostro Culices, & cætera ponunt.*

*Usque adeo prius est in nobis multa ciendum  
Semina, corporibus nostris immista per artus,  
Quàm primordia sentiscant concussa Animai,  
Et quàm intervallis tantis tuditantia possint 395  
Concurfare, coire, & dissultare vicissim.*

*Et magis est Animus vitai claustra coercens,  
Et dominantior ad vitam, quàm vis Animai.  
Nam sine Mente, Animoque nequit residere per artus  
Temporis exiguam partem pars ulla Animai : 400  
Sed comes insequitur facile, & discedit in auras ;  
Et gelidos artus in lethi frigore linquit.*



stant 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-cæsis lacer undique membris:  
Truncus, adempta Anima circum, membrisque re-  
motis,* 405

*Vivit, & ætherias vitaleis succipit auras:  
Si non omnimodis, at magna parte Animæ  
Privatus, tamen in vita cunæatur, & hæret.  
Ut lacerato Oculo circum si Pupula mansit  
Incolumis, stat cernendi vivata potestas;* 410

*Dummodo ne totum corrumpas luminis orbem,  
Sed circumcidas aciem, solumque relinquo:  
Id quoque enim sine pernicie confiet eorum,  
At si tantula pars Oculi media illa peresa est,  
Incolumis quamvis alioqui splendidus orbis,* 415  
*Occidit extemplo lumen, tenebræque sequuntur:  
Hoc Anima atque Animus vincti sunt fœdere semper.*

*Nunc age, nativos animantibus, & mortaleis,  
Esse Animos, Animasque leveis ut noscere possis;  
Conquistita diu, dulcique reperta labore* 420  
*Digna tua pergam disponere carmina vita.*

*Tu fac utrumque uno subjungas nomen eorum,  
Atque Animam, verbi causa, cum dicere pergam,  
Mortalem esse docens; Animum quoque dicere credas:  
Quatinus est unum inter se, conjunctaque res est.*

*Principio, quoniam tenuem constare minutis* 426  
*Corporibus docui, multoque minoribus esse  
Principiis factam, quam liquidus humor Aquæ est.  
Aut Nebula, aut Fumus: Nam longè mobilitate  
Præstat, & à tenui causa magis ista movetur;* 430  
*Quippe ubi Imaginibus Fumi, Nebulæque movetur:  
Quod genus in somnis 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 Darknes 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

*Exhalare vapore altaria, ferreque Fumum :*  
*Nam procul hæc dubio nobis Simulacra geruntur :*  
*Nunc igitur quoniam quassatis undique vasis 435*  
*Diffluere Humorem, & Laticem discedere cernis :*  
*Et Nebula ac Fumus quoniam discedit in auras :*  
*Crede Animam quoque diffundi, multòque perire*  
*Ociùs, & citiùs dissolvi corpora prima,*  
*Cùm semel omnibus è membris ablata recessit. 440*  
*Quippe etenim Corpus, quod vas quasi constitit ejus,*  
*Cùm cohibere nequit conquassatum ex aliqua re,*  
*Ac rarefactum detractò sanguine venis,*  
*Aëre qui credas posse hanc cohiberier ullo ?*  
*Corpore quí nostro rarus magis an cohibessit ? 445*  
*Præterea, gigni pariter cum Corpore, & una*  
*Crescere sentimus, pariterque senescere Mentem.*  
*Nam velut infirmo Pueri, teneroque vagantur*  
*Corpore ; sic Animi sequitur sententia tenuis.*  
*Inde ubi robustis adolevit viribus ætas : 450*  
*Consilium quoque majus, & auctior est Animi vis :*  
*Post ubi jam validis quassatu'st viribus ævi*  
*Corpus ; & obtusis ceciderunt viribus artus :*  
*Claudicat Ingenium, delirat Linguaque, Mensque,*  
*Omnia deficiunt, atque uno tempore defunt. 455*  
*Ergo dissolvi quoque convenit omnem Animã*  
*Naturam, ceu fumus in altis aëris auras :*  
*Quandoquidem gigni pariter, pariterque videmus*  
*Crescere, & (ut docui) simul ævo fessa fatiscit.*

the lofty Altars exhale a Vapour, and fend up Smoke into the Air, the Images of these Things no doubt produce these Phantasms 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<sup>r</sup>, 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 irresistible 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.

<sup>r</sup> 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 460*  
*Suscipere immane morbos, durumque dolorem ;*  
*Sic Animum curas acreis, luctumque, metumque,*  
*Quare participem lethi quoque convenit esse :*

*Quinetiam Morbis in Corporis avius errat*  
*Sæpe animus, dementit enim ; deliraque fatur : 465*  
*Interdumque gravi Letbargo fertur in altum,*  
*Æternumque soporem, oculis, nutuque cadenti :*  
*Unde neque exaudit voces, neque noscere vultus*  
*Illorum potis est, ad vitam qui revocantes*  
*Circumstant lachrymis rorantes ora, genasque. 470*  
*Quare Animum quoque dissolvi fateare necesse est,*  
*Quandoquidem penetrant in eum contagia morbi :*  
*Nam Dolor, ac Morbus lethi fabricator uterque est,*  
*Multorum exitio perdocti quod sumus antè.*

*Denique cur, hominem cum Vini vis penetravit*  
*Acris, & in venas discessit diditus ardor, 476*  
*Consequitur gravitas Membrorum ? præpediuntur*  
*Crura vacillanti ? tardescit Lingua ? madet Mens ?*  
*Nant oculi ? Clamor, Singultus, Jurgia gliscunt ?*  
*Et jam cætera de genere hoc quæcunque sequuntur ?*  
*Cur ea sunt, nisi quod vebemens violentia Vini 481*  
*Conturbare Animam consuevit Corpore in ipso ?*  
*At quæcunque queunt conturbari, inque pediri,*  
*Significant, (paullo si durior insinuârit*  
*Causa) fore ut pereant, ævo privata futuro. 485*

*Quinetiam, subita vi morbi sæpe coactus*  
*Ante oculos aliquis nostros, ut fulminis ictu,*

*Concidit,*

ADD to this, that as the Body is subject to violent Diseases and tormenting Pains, so the Mind is affected by sharp Cares, by Grievs 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 insinuating Heat works in all his Veins, why follows a Heaviness of the Limbs? The Legs no longer support the reeling Body, the Tongue falters, the Mind is drowned, the Eyes swim; Noise, Hiccups, Brawlings deafen your Ears, and many other Evils, the Consequence of such Debauches; how could this be, did not the impetuous Force of the Wine distract the Soul as it lies diffused through the Body? Now whatever 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,  
Desipit, extentat nervos, torquetur, anhelat,  
Inconstanter & in jaetando membra fatigat : 490*

*Nimirum, quia vis Morbi distracta per artus  
Turbat agens Animum, spumans ut in æquore salso  
Ventorum validis servescit viribus Unda.*

*Exprimitur porro Gemitus, quia membra dolore  
Afficiuntur ; & omnino quòd semina vocis 495*

*Ejiciuntur, & ore foras glomerata feruntur,  
Quà quasi consuerunt, & sunt minuta viai.*

*Desipientia fit, quia vis Animi, atque Animai  
Conturbatur, & (ut docui) divisa seorsum*

*Disjeetatur, eodem illo distracta veneno. 500*

*Inde, ubi jam Morbi se flexit causa, reditque*

*In latebras ater corrupti Corporis humor,*

*Tum quasi talipedans primùm consurgit ; & omneis  
Paullatim redit in sensus, animamque receptat.*

*Hæc igitur tantis ubi morbis Corpore in ipso 505*

*Jaetetur, miserisque modis distracta laboret :*

*Cur eandem credis sine Corpore in Aëre aperto*

*Cum validis ventis ætatem degere posse ?*

*Et quoniam Mentem sanari, Corpus ut ægrum,  
Cernimus, & flecti medicina posse videmus ; 510*

*Id quoque præfagit mortalem vivere Mentem :*

*Addere enim parteis, aut ordine trajicere æquum 'st,*

*Aut aliud prorsum de summa detrabere illum,*

*Commutare Animum quicumque adoritur, & insit ;*

*Aut Aliam quamvis naturam flectere quærit : 515*

*At neque transferri sibi parteis, 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 exposed for ever to the raging Fury of all the Winds?

AND since we see the Mind can be made sound, 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

Nam quodcunque suis mutatum finibus exit,  
 Continud hoc mors est illius quod fuit ante.  
 Ergo Animus sive ægrescit, mortalia signa 520  
 Mittit (uti docui) seu flebitur à medicina:  
 Usque adeo falsæ rationi vera videtur  
 Res occurrere, & effugium præcludere eunti:  
 Ancipitique refutatu convincere falsum.

Denique sæpe hominem paullatim cernimus ire,  
 Et membratim vitalem deperdere sensum: 526  
 In pedibus primùm Digtos livescere, & Ungueis,  
 Inde Pedes, & Crura mori: Post inde per artus  
 Ire alios traëtim gelidi vestigia lethi:  
 Scinditur atqui Animæ quoniam natura, nec uno  
 Tempore sincera existit, mortalis habenda 'st. 531  
 Quòd si forte putas ipsam se posse per artus  
 Introrsum trahere, & parteis conducere in unum,  
 Atque ideo cunëtis sensum deducere membris:  
 At locus ille tamen, quò copia tanta Animæ 535  
 Cogitur, in sensu debet majore videri.  
 Qui quoniam nusquam 'st, nimirum, (ut diximus ante)  
 Dilaniata foras dispergitur; interit ergo.  
 Quinetiam, si jam libeat concedere falsum,  
 Et dare, posse Animam glomerari in Corpore eorum,  
 Lumina qui linqunt moribundi particulatim: 541  
 Mortalem tamen esse Animam fateare necesse 'st.

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 crouded 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. \* For

\* 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 contractis in se partibus obbrutescat :*  
*Quando Hominem totum magis, ac magis undique  
 sensus* 545  
*Deficit, & vitæ minus, & minus undique restat.*  
*Et quoniam Mens est Hominis pars una, loquæ  
 Fixa manet certo, velut Aures, atque Oculi sunt,  
 Atque alii sensus, qui vitam cunque gubernant :  
 Et veluti Manus, atque Oculus, Naresve seorsum  
 Secreta à nobis nequeant sentire, neque esse: 551  
 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 eij 555  
 Fingere, quandoquidem connexus corpori adhæret.*  
*Denique Corporis, atque Animi vivata potestas  
 Inter se conjuncta valent, vitæque fruuntur.  
 Nec sine Corpore enim vitæ edere motus  
 Sola potest Animi per se natura, nec autem 560  
 Cassum Anima Corpus durare, & sensibus uti :  
 Scilicet, avulsus radicitus ut nequit ullam  
 Displicere ipse Oculus rem seorsum Corpore toto :  
 Sic Anima atque Animus per se nil posse videntur :  
 Nimirum, quia per venas & viscera mistim 565  
 Per nervos, atque ossa tenentur corpore ab omni.  
 Nec magnis intervallis Primordia possunt  
 Libera dissultare, ideo conclusa moventur  
 Sensiferos motus ; quos extra corpus in auras  
 Aëris haud possunt post mortem ejecta moveri : 570  
 Propterea 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 exercise 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 Re-

Corpus enim atque animans erit Aër, si cohibere,  
 Sese Anima, atque in eo poterit concludere motus,  
 Quos ante in Nervis, & in ipso Corpore agebat.  
 Quare etiam atque etiam resolutio Corporis omni 575  
 Tegmine, & ejectis extra vitalibus auris,  
 Dissolvi sensus Animi fateare necesse est,  
 Atque Animam, quoniam conjuncta est causa duobus.

Denique cum Corpus nequeat perferre Animam  
 Discidium, quin id tetro tabescat odore: 580

Quid dubitas, quin ex imo, penitusque coorta  
 Emanarit, uti Fumus, diffusa Animæ vis?

Atque ideo tanta mutatum putre ruina

Conciderit Corpus penitus, quia mota loco sunt  
 Fundamenta foras animæ; manantque per artus, 585

Perque viarum omnes flexus, in corpore qui sunt,

Atque foramina? Multimodis ut noscere possis

Dispertitam Animæ naturam exisse per artus:

Et prius esse sibi distractam Corpore in ipso,

Quam prolapsa foras enaret in Aëris Auras? 590

Quinetiam, sineis dum vitæ vertitur intra,

Sæpe aliqua tamen è causa labefacta videtur

Ire Anima, & toto solvi de corpore membra:

Et quasi supremo languescere tempore vultus, 594

Molliaque exanguis cadere omnia Corpore membra:

Quod genus est, Animo male factum cum perhibetur,

Aut Animam liquisse, ubi jam trepidatur, & omnes

Extremum cupiunt vires reprendre vinculum.

Conquassatur enim tum Mens, Animæque potestas

Omnis: & hæc ipso cum Corpore conlabefiant: 600

straint 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 exercised 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 stripped 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 diffused through the whole Body, and raised 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 dissolving 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 modo non omnem possit durare per ævum, 604  
Sed minimum quodvis nequeat consistere tempus?*

*Nec sibi enim quisquam moriens sentire videtur  
Ire foras Animam incolumem de Corpore toto,  
Nec prius ad jugulum, & superas succedere fauceis:  
Verùm deficere in certa regione locatam:  
Ut sensus alios in parti quemque sua scit 610  
Dissolvi: Quòd si immortalis nostra foret Mens:  
Non jam se moriens dissolvi conquereretur:  
Sed magis ire foras, vestemque relinquere, ut Anguis,  
Gauderet, prælonga senex aut cornua Cervus.*

*Denique cur Animi nunquam mens consiliumque  
Gignitur in Capite, aut Pedibus, Manibusve; sed  
unis 616*

*Sedibus, & certis regionibus omnis inhæret:  
Si non certa loca ad nascendum reddita cuique  
Sunt: & ubi quicquid possit durare creatum:  
Atque ita multimodis pro totis artibus esse, 620  
Membrorum ut nunquam existat præposterus ordo?  
Usque adeo sequitur res rem, neque Flamma creari in  
Fluminibus solita est, neque in Igni gignier Algor.*

*Præterea,*



a little stronger would drive it to utter Dissolution.

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,

*Præterea, si immortalis natura Animæ 'st,*  
*Et sentire potest secreta à Corpore nostro : 625*  
*Quinque (ut opinor) eam faciendum 'st Sensibus*  
*auctam :*

*Nec ratione alia nosmet proponere nobis*  
*Possumus infernas Animas Acherunte vagare.*  
*Pictores itaque, & Scriptorum sæcla priora*  
*Sic Animas introduxerunt sensibus auctas. 630*  
*At neque seorsum Oculi, neque Nares, nec Manus*  
*ipsa*

*Esse potest Anima, neque seorsum Lingua, nec Aures*  
*Absque anima per se possunt sentire, nec esse.*

*Et quoniam toto sentimus Corpore inesse*  
*Vitalem sensum, & totum esse animale videmus, 635*  
*Si subitò medium celeri præciderit ictu*

*Vis aliqua, ut seorsum partem secernat utramque :*  
*Dispertita proculdubio quoque vis Animæ,*  
*Et discissa simul cum Corpore disjicietur :*

*At quod scinditur, & parteis discedit in ulla, 640*  
*Scilicet æternam sibi naturam abnuvit esse.*

*Falciferos memorant currus abscindere membra*  
*Sæpe ita desubitò permista cæde calenteis,*  
*Ut tremere in terra videatur ab artibus id quod*  
*Decidit abscissum : Cum Mens tamen, atque homi-*  
*nis vis 645*

*Mobilitate mali non quit sentire dolorem :*  
*Et simul in pugnae 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 indued 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 discontinued, 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 dissected Part is a Proof that the Soul is divided likewise.

and

Corpore cum reliquo pugnam, cædeisque petisset :  
 Nec tenet, amissam lævam cum tegmine sæpe  
 Inter equos abstraxe rotas, falceisque rapaceis : 650  
 Nec cecidisse alius dextram, cum scandit, & instat.  
 Inde alius conatur adempto surgere crure,  
 Cum digitos agit propter moribundus humi pes :  
 Et caput abscissum calido, viventeque trunco,  
 Servat humi voltum vitalem, oculosque patenteis,  
 Donec relliquias Animæ reddidit omneis. 656  
 Quin etiam tibi si lingua vibrante minantis  
 Serpentis caudam procero corpore, utrinque  
 Sit libitum in multas parteis discindere ferro ;  
 Omnia jam seorsum cernes amcisa recenti 660  
 Volnere tortari, & terram conspergere tabo,  
 Ipsam seque retrò partem petere ore priorem,  
 Volneris ardenti ut morfu premat ista dolore,  
 Omnibus esse igitur totas dicemus in illis  
 Particulis Animas? At ea ratione sequetur, 665  
 Unam animantem Animas habuisse in Corpore multas.  
 Ergo divisa est ea, quæ fuit una simul cum  
 Corpore, quapropter Mortale utrumque putandum est  
 In multas quoniam parteis discinditur æquè.  
 Præterea, si immortalis natura Animæ 670  
 Constat, & in Corpore nascentibus insinuatur :  
 Cur super anteaetam ætatem meminisse nequimus ?  
 Nec vestigia gestarum rerum ulla tenemus ?  
 Nam si tantopere est Animi mutata potestas,  
 Omnis ut actarum exciderit retinentia rerum : 675

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 lost 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 lost all Remains of the Soul within it. And so, divide with a Sword, if you please, into many Parts, the Tail of a long Snake, threatening, and brandishing his Tongue, you'll see 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

J

*Non (ut opinor) id ab letho jam longiter errat.  
 Quapropter fateare necesse 'st, quæ fuit ante,  
 Interiisse : Et quæ nunc est, nunc esse creatam.*

*Præterea, si jam perfecto corpore nobis  
 Inferri solita 'st Animi vivata potestas, 680  
 Tum cum gignimur, Et vitæ cum limen inimus :  
 Haud ita conveniebat, uti cum Corpore, Et non  
 Cum membris videatur in ipso sanguine crêsse :  
 Sed velut in cavea, per se sibi vivere solam  
 Convenit, ut sensu Corpus tamen affluat Omne. 685  
 Quare etiam atque etiam nec originis esse putan-  
 dum 'st*

*Experteis Animas, nec lethi lege solutas.  
 Nam neque tantopere adnecti potuisse putandum 'st  
 Corporibus nostris extrinsecus insinuatæ :  
 Quod fieri totum contrà manifesta docet res. 690  
 Namque ita connexa 'st per Venas, Viscera, Nervos,  
 Ossaque, uti Dentes quoque sensu participantur :  
 Morbus ut indicat, Et gelidai stringor aquai,  
 Et lapis oppressus sub dente è frugibus asper :  
 Nec tam contextæ cum sint, exire videntur 695  
 Incolumes posse, Et salvas exsolvere sese  
 Omnibus è Nervis, atque Ossibus, Articulisque.  
 Quod si fortè putas extrinsecus insinuatam*

(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 <sup>v</sup>, 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, were it 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.

<sup>z</sup> But if you think the Soul is infused from

<sup>v</sup> 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.

<sup>z</sup> 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 omneis:  
 Ut cibus in membra atque artus cum diditur omneis,  
 Disperit, atque aliam naturam sufficit ex se:  
 Sic Anima atque Animus quamvis integra recens in  
 Corpus eunt, tamen in manando dissolvuntur; 706  
 Dum quasi per caulas omneis diduntur in artus  
 Particulæ, quibus hæc Animi natura creatur:  
 Quæ nunc in nostro dominatur Corpore nata  
 Ex illa, quæ tunc peritat partita per artus. 710  
 Quapropter neque natali privata videtur  
 Esse die natura Animæ, neque funeris expers.*

*Semina præterea linquntur, necne, Animæ  
 Corpore in exanimo? quod si linquntur, & insunt,  
 Haud erit, ut meritò immortalis possit haberi; 715  
 Partibus amissis quoniam libata recessit.  
 Sin ita sinceris membris ablata profugit,  
 Ut nullas parteis in Corpore liquerit ex se:  
 Unde cadavera racenti jam viscere vermeis  
 Expirant? atque unde animantum copia tanta 720  
 Exos, & exsanguis tumidos perfluctuat artus?*

*Quòd si forte Animas extrinsecut insnuari  
 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:  
 Utrùm tandem Animæ venentur semina quæque*

*Vermiculorum,*



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,

*Vermiculorum, ipsæque sibi fabricentur abi sint :  
 An jam corporibus perfectis insinuentur.  
 At neque, cur faciant ipsæ, quareve laborent, 730  
 Dicere suppeditat, neque enim, sine corpore cum sint,  
 Sollicitæ volitant morbis, algoque, fameque.  
 Corpus enim magis his vitiis adfines laborat :  
 Et mala multa Animus contage fungitur ejus.  
 Sed tamen his esto quamvis facere utile Corpus, 735  
 Cum subeant : At qua possint, via nulla videtur.  
 Haud igitur faciunt Animæ sibi corpora, & artus.  
 Nec tamen 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 chooses for it self 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, disintangled 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, <sup>a</sup> 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

*No Transmigration.*

<sup>a</sup> 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 seminioque*

*Vis Animi pariter crescit cum corpore toto?*

*Quòd si immortalis foret, & mutare soleret*

*Corpora, permistis animantes moribus essent:*

*Effugeret Canis Hyrcano de semine sæpe 750*

*Cornigeri incursum Cervi, tremeretque per auras*

*Aëris Accipiter fugiens veniente Columba:*

*Despererent Homines, saperent fera sæcla Ferarum.*

*Illud enim falsa fertur ratione, quod aiunt,*

*Immortalem Animam mutato Corpore flecti: 755*

*Quod mutatur enim, dissolvitur: Interit ergo.*

*Trajiciuntur enim partès, atque ordine migrant.*

*Quare dissolvi quoque debent posse per artus,*

*Denique ut intereant unà cum Corpore cunctæ.*

*Sin Animas hominum dicent in Corpora semper 760*

*Ire humana, tamen 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 semine, seminioque*

*Vis Animi pariter crescit cum Corpore toto. 765*

*Scilicet in tenero tenerascere Corpore Mentem*

*Confugient; quod si jam sit, fateare necesse est,*

*Mortalem esse Animam, quoniam mutata per artus*

*Tantopere amittit vitam, sensumque priorem.*

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 confus'd in their Dispositions and Qualities; the fierce Dog of *Hircanian* Breed would fly the Attack of the horned Stag, 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 transpos'd, 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 always 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.

Quove modo poterit pariter cum Corpore quoque  
 Confirmata cupitum ætatis tangere florem 771

Vis Animi, nisi erit consors in origine prima?

Quidve foras sibi vult membris exire senectis?

An metuit conclusa manere in Corpore putri?

Et domus ætatis spatium ne fessa vetusto 775

Obruat? At non sunt Immortali ulla pericla.

Denique connubia ad Veneris, partusque ferarum  
 Esse Animas præsto, deridiculum esse videtur:

Et spectare immortalis mortalia membra

Innumero numero, certareque præproperanter 780

Inter se quæ prima, potissimaque insinuetur:

Si non fortè ita sunt Animarum fœdera pacta,

Ut, quæ prima volans advenerit, insinuetur

Prima, neque inter se contendant viribus hilum.

Denique in æthere 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 dispositum est, ubi quicquid crescat, &  
 insit:

Sic Animi natura nequit sine Corpore oriri

Sola, neque à nervis, & sanguine longius esse. 790

Hoc si posset enim, multò prius ipsa Animi vis

In Capite, aut Humeris, aut imis Calcibus esse

Posset, & innasci quavis in parte soleret:

Tandem in eodem homine, atque in eodem vase  
 maneret.

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 she fond of flying away out of old decayed Limbs? Is she afraid of being confined a close Prisoner in a rotten Body, and lest 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 Lust, 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 there-

Quod quoniam in nostro quoque constat Corpore  
certum 795

Dispositumque videtur, ubi esse, & crescere possit  
Seorsum Anima, atque Animus: Tanto magis infi-  
ciandum

Totum posse extra Corpus durare, genique.

Quare, corpus ubi interiit, periisse necesse 'st  
Confiteare animam distractam in Corpore toto. 800

Quippe etenim Mortale Æterno jungere, & unâ  
Consentire putare, & fungi mutua posse,  
Desipere 'st: quid enim diversius esse putandum 'st,  
Aut magis inter se disjunctum, discrepansque,  
Quàm, Mortale quod est, Immortali, atque perenni  
Fundum, in concilio sævas tolerare procellas? 806

Præterea, quæcunque manent Æterna, necesse 'st,  
Aut quia sunt Solido cum corpore respuere ictus,  
Nec penetrare pati sibi quicquam, quod queat  
arctas

Dissociare intus parteis; ut Materiai 810

Corpora sunt, quorum naturam ostendimus ante;  
Aut ideo durare ætatem posse per omnem,  
Plagarum quia sunt expertia, sicut Inane 'st;  
Quod manet intactum, neque ab ictu fungitur bilum:  
Aut ideo, quia nulla loci sit copia circum, 815

Quò quasi res possint discedere, dissoluique:  
Sicut Summarum Summa 'st æterna, neque extra  
Quis locus est, quò diffugiat: neque corpora sunt,  
quæ

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 consequently when the Body dies, the Soul diffused through the whole Body must be allowed to die likewise.

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

BESIDES, <sup>b</sup> 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, (such are the first Seeds of Matter, as we proved before;) or it is eternal, and lasts 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 Sense 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

<sup>b</sup> Whatever is immortal is so, either by reason of its Solidity 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 dash it to pieces, or into which its dissolved or broken Parts can retire, as the Universe; but the Soul is nothing like any of these; it is composed 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 'st, quoniam admistum 'st in rebus Inane ;  
 Nec tamen est ut Inane : neque autem corpora desunt,  
 Ex infinito quæ possint fortè coorta*

*Proruere hanc Mentis violento turbine molem,  
 Aut aliam quamvis cladem importare pericli : 825*

*Nec porro natura Loci, spatiumque Profundi*

*Deficit, exspergi quòd possit vis Animai,*

*Aut alia quavis possit vi pulsa perire :*

*Haud igitur lethi præclusa 'st janua Menti.*

*Quòd si fortè ideo magis immortalis habenda 'st,*

*Quòd lethalibus ab rebus munita tenetur ; 831*

*Aut quia non veniunt omnino aliena salutis :*

*Aut quia quæ veniunt, aliqua ratione recedunt*

*Pulsa priùs, quàm, quid noceant, sentire queamus :*

*Scilicet à vera longè ratione remotum 'st. 835*

*Præter enim quàm quòd morbis tum Corporis ægrit,*

*Advenit id, quod eam de rebus sæpe futuris*

*Macerat, inque metu malè habet, curisque fatigat :*

*Præteritisque admissa annis peccata remordent.*

*Adde furorem Animi proprium, atque oblivia rerum,*

*Adde quòd in nigras Lethargi mergitur undas. 841*

*Nil igitur Mors est, ad nos neque pertinet hilum,*

*Quandoquidem natura Animi mortalis habetur :*

*Et velut anteacto nil tempore sensimus ægri,*

*Ad configendum venientibus undique Pœnis ; 845*

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 extremest 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 sickens 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

*Against the  
Fear of  
Death.*

<sup>c</sup> 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.

Omnia cum belli trepido concussa tumultu  
 Horrida contremuere sub altis ætheris auris ;  
 In dubioque fuit sub utrorum regna cadendum  
 Omnibus humanis esset, terraque marique :  
 Sic ubi nonerimus, cum Corporis, atque Animæ 850  
 Discidium fuerit, quibus è sumus uniter apti,  
 Scilicet haud Nobis quicquam, qui non erimus tum,  
 Accidere omnino poterit, sensumque movere :  
 Non si terra mari miscebitur, & mare cælo.

Et si jam nostro sentit de Corpore, postquam 855  
 Distracta est Animi natura, Animæque potestas :  
 Nil tamen hoc ad Nos, qui cætu, conjugioque  
 Corporis, atque Animæ consistimus uniter apti.  
 Nec, si materiam nostram conlegerit ætas  
 Post obitum, rursusque redegerit, ut sita nunc est ;  
 Atque iterum Nobis fuerint data lumina vitæ, 861  
 Pertineat 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, 865  
 Quos de materia nostra nova proferet ætas :  
 Nam cum respicias immensi temporis omne  
 Præteritum spatium, tum motus Materiai  
 Multimodi quàm sint ; facile hoc adcedere possis,  
 Semina sæpe in eodem, ut nunc sunt, ordine posta : 870  
 Nec memori tamen id quimus deprendere mente.  
 Inter enim jecta est vitæ pausa, vagæque  
 Deerrârunt passim motus ab Sensibus omnes :

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 scatter'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 transacted; 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 quoi fortè agrèque futurum 'st,  
 Ipse quoque esse in eo tum tempore, cùm malè possit  
 Accidere: At quoniam mors eximit im, prohibetque,  
 Illum, cui possint incommoda conciliari 877  
 Hæc eadem, in quibus & nunc Nos sumus, antè  
 fuisse;

Scire licet Nobis nihil esse in morte timendum:  
 Nec miserum fieri, qui non est, posse: neque hilum  
 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 pôsto;  
 Aut flammis interfiat, malisve ferarum: 885  
 Scire licet, non sincerum sonere, atque subesse  
 Cæcum aliquem cordi stimulum, quamvis neget ipse  
 Credere se quemquam sibi 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 feræque;  
 Ipse Sui miseret: neque enim Se vindicat hilum,  
 Nec removet satis à projecto 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 possit vivus sibi Se lugere peremptum,  
 Stansque jacentem, nec lacerari, urive dolore. 900  
 Nam si in morte malum 'st malis morsuque ferarum

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<sup>d</sup> do not

<sup>d</sup> 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.

*Traçtari, non invenio qui non sit acerbum  
 Ignibus impositum calidis torrescere flammis;  
 Aut in melle situm suffocari, atque rigere  
 Frigore, cum in summo gelidi cubat æquore saxi: 905  
 Urgerive superne obtritum pondere terræ.*

*At jam non domus accipiet te læta, neque uxor  
 Optima, nec dulces occurrent oscula nati  
 Præripere, & tacita pectus dulcedine tangent;  
 Non poteris factis tibi fortibus esse, tuisque 910  
 Præsidio: Miser! ô miser! aiunt, omnia ademit  
 Una dies infesta tibi tot præmia vitæ.*

*Illud in his rebus non addunt, Nec tibi earum  
 Jam desiderium insidet rerum insuper unâ.  
 Quod benè si videant animo, dictisque sequantur: 915  
 Dissolvant animi magno se angore, metuque.*

*Tu quidem ut es letho sopitus, sic eris ævi  
 Quod superest, cunctis privati' doloribus ægris:  
 At nos horrifico cinefactum te propè busto  
 Insatiabiliter deslebimus, æternumque 920  
 Nulla dies nobis mœrorem è pectore demet.*

*Illud ab hoc igitur quærendum 'st, quid sit amari  
 Tantopere, ad somnum si res redit, atque quietem,  
 Cur quisquam æterno possit tabescere luctu?*

*Hoc etiam faciunt, ubi discubuerè, tenentque 925  
 Pocula sæpè homines, & inumbrant ora coronis,*



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 Kiss, 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 <sup>e</sup> Heads

<sup>e</sup> 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.

*Ex animo ut dicant, Brevis hic est fructus homullis :  
Jam fuerit, neque post unquam revocare licebit.*

*Tanquam in morte mali cumprimis hoc sit eorum  
Quòd sitis exurat Miseros, atque arida torreat, 930  
Aut aliæ cujus desiderium insideat rei.*

*Nec sibi enim quisquam tum Se, Vitamque requirit,  
Cum pariter Mens & Corpus sopita quiescunt :*

*(Nam licet æternum per nos sic esse soporem.)*

*Nec desiderium nostri nos adtigit ullum : 935*

*Et tamen haudquaquam nostros tunc illa per artus  
Longè ab sensiferis Primordia motibus errant :*

*Quin correptus homo ex somno se conligit ipse.*

*Multò igitur mortem minùs ad Nos esse putandum,*

*Si minùs esse potest, quàm quod nihil esse videmus.*

*Major enim turbæ disjectus Materiai 941*

*Consequitur letho, nec quisquam expergitus exstat,  
Frigida quem semel est vitai pausa secuta.*

*Denique si vocem rerum Natura repente*

*Mittat, & hoc aliquoi nostrum sic increpet ipsa : 945*

*Quid tibi tantopere 'st, Mortalis, quòd nimis agris  
Luctibus indulges ? quid mortem congemis, ac fles ?*

*Nam si grata fuit tibi vita antea, priorque,*

*Et non omnia pertusum congesta quasi in vas*

*Commoda perfluxere, atque ingrata interiere : 950*

*Cur non, ut plenus vitæ Conviva, recedis ?*

*Æquo animoque capis securam, Stulte, quietem ?*

*Sin ea, quæ fructus cumque es, periere profusa,*

*Vitaque in offensu 'st ; cur amplius addere quæris,*

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: Prythee, 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 chearful 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

*A Proso-  
popœia of  
Nature.*

Rursum quod pereat malè, & ingratum occidat  
omne : 955

Nec potiùs vitæ finem facis, atque laboris ?

Nam tibi præterea quod machiner, inveniamque

Quod placeat, nihil est : eadem sunt omnia semper.

Si tibi non annis Corpus jam marcet, & artus

Confecti languent : eadem tamen omnia restant, 960

Omnia si pergas vivendo vincere sæcla :

Atque etiam potiùs, si nunquam sis moriturus.

Quid respondeamus, nisi justam intendere litem

Naturam ? & veram verbis exponere causam ?

At qui obitum lamentetur miser amplius æquo, 965

Non meritò inclamet magis, & voce increpet acri ?

Aufer ab hinc lacrymas, Barathro, & compeſce  
querelas.

Grandior hic verò si jam, Seniorque queratur :

Omnia perfructus vitæ præmia, marces ?

Sed quia semper aves, quod abest, præsentia temnis,

Imperfecta tibi elapsa 'st, ingrataque vita, 971

Et nec-opinanti Mors ad caput adstitit antè

Quàm satur, ac plenus possis discedere rerum.

Nunc aliena tua tamen ætate omnia mitte,

Æquo animoque, agedum, jam aliis concede : ne-  
cesse 'st. 975

Jure (ut opinor) agat, jure increpet, incilietque,

Cedit enim rerum novitate extrusa vetustas ;

Semper & ex aliis aliud reparare necesse 'st :

Nec quidquam in barathrum, nec tartara decidit atra.

Materies opus est, ut crescant postera sæcla : 980

Quæ tamen omnia Te vita perfunctâ 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 continue 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 beyond 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 less

*Nec minùs ergo ante hæc, quàm nunc, cecidere, ca-  
dentque :*

*Sic aliud ex alio nunquam desistet oriri,  
Vitaque mancupio nulli datur, omnibus usu.*

*Respice item quàm nihil ad Nos anteaeta ve-  
tustas* 985

*Temporis æterni fuerit, quàm nascimur antè.*

*Hoc igitur speculum nobis Natura futuri*

*Temporis exponit post mortem denique nostram :*

*Num quid ibi horribile apparet ? num triste videtur*

*Quicquam ? nonne omni somno securius exstat ?* 990

*Atque ea nimirum, quæcunque Acherunte profundo  
Proditæ sunt esse, in vita sunt omnia nobis.*

*Nec miser impendens magnum timet aère saxum*

*Tantalus, ut fama est, cassa formidine torpens :*

*Sed magis in vita Divùm metus urget inanis* 995

*Mortaleis, casumque timent, quemcunque ferat Fors.*

*Nec Tityon Volucres ineunt Acherunte jacentem,*

*Nec, quod sub magno scrutentur pectore, quidquam*

*Perpetuam ætatem poterunt reperire profecto,*

*Quamlibet immani projectu Corporis exstat,* 1000

*Qui non sola novem dispensis jugera membris*

*Obtineat, sed qui Terræ totius orbem :*

*Non tamen æternum poterit perferre dolorem,*

*Nec præbere cibum proprio de corpore semper :*

pass 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* <sup>f</sup>, 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 cover'd 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

<sup>f</sup> *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 Tityos nobis Hic est, in amore jacentem 1005*  
*Quem volucres lacerant, atque exest anxius angor ;*  
*Aut alia quavis scindunt cuppedine curæ.*

*Sisyphus in vita quoque nobis ante oculos est,*  
*Qui petere à populo fasceis, sævasque secureis*  
*Imbibit ; & semper vitus, tristisque 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 ingratham naturam pascere semper,*  
*Atque explere bonis rebus, satiarique nunquam,*  
*Quod faciunt nobis annorum tempora, circum*  
*Cùm redeunt : fœtusque ferunt, variosque lepores,*  
*Nec tamen explemur Vitæi fructibus unquam ; 1020*  
*Hoc (ut opinor) id est, ævo florente puellas*  
*Quòd memorant, laticem pertusum congerere in vas :*  
*Quod tamen expleri nulla ratione potestur.*

*Cerberus & Furie jam verò, & lucis egenus*  
*Tartarus, horriferos eructans faucibus æstus, 1025*  
*Hæc neque sunt usquam, neque possunt esse profecto.*  
*Sed metus in vita pœnarum pro malefactis*  
*Est insignibus insignis, scelerisque luela*  
*Carcer, & horribilis de saxo factu' 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 <sup>5</sup> 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*.

and

*Quæ tamen & si absunt, at Mens sibi conscia facti  
 Præmetuens, adhibet stimulos, torretque flagellis ;  
 Nec videt interea, qui terminus esse malorum  
 Possit, nec quæ sit pœnarum denique finis :  
 Atque eadem metuit magis hæc ne in morte gra-  
 vescant :*

1035

*Hinc Acherusia fit Stultorum denique vita.*

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

1040

*Ille quoque Ipse, viam qui quondam per mare  
 magnum*

*Stravit, iterque dedit legionibus ire per altum,  
 Ac pedibus salsas docuit super ire lacunas :  
 Et contempsit, aquis insultans, murmura ponti,  
 Lumine adempto, animam moribundæ corpore fudit.*

1045

*Scipiades, belli fulmen, Carthaginis horror,  
 Ossa dedit terræ, proinde ac famul infimus esset.*

*Adde repertores doctrinarum, atque leporum,  
 Adde Heliconiadum comites ; quorum unus Ho-  
 merus*

1050

*Sceptra potitus, eadem aliis sopitu' quiete 'st :*

*Denique Democritum postquam matura vetustas  
 Admonuit memorem motus 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 your self: 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 <sup>n</sup> *Democritus* warning that the Strength of his Mind decayed

<sup>n</sup> 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  
at

*Sponte sua letho caput obuius obtulit ipse.*

*Ipse Epicurus obit decurso lumine vitæ, 1055*  
*Qui genus humanum ingenio superavit, & omneis*  
*Præstinxit, stellas exortus uti ætherius Sol.*

*Tu verò dubitabis, & indignabere obire,*  
*Mortua quòï vita est prope jam vivo, atque videnti?*  
*Qui somno partem majorem conteris ævi? 1060*

*Et vigilans stertis, nec somnia cernere cessas,*  
*Sollicitamque geris cassa formidine mentem?*

*Nec reperire potes, quid sit tibi sæpe mali, cum*  
*Ebrius urgeris multis Miser undique curis,*  
*Atque animi incerto fluitans errore vagaris? 1065*

*Si possent Homines, 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. 1070*

*Quid sibi quisque velit, nescire, & quærere semper,*  
*Commutare locum, quasi onus deponere possit.*

*Exit sæpe foras magnis ex ædibus Ille,*  
*Esse domi quem pertæsum est, subitoque revertit:*  
*Quippe foris nihilo melius qui sentiat esse. 1075*

*Currit agens mannos ad villam Hic præcipitanter,*  
*Auxilium tectis quasi ferre ardentibus instans;*  
*Oscitat extemplo, tetigit, cum limina villæ:*

cayed, he met Death half-way, and chearfully obeyed the Summons.

*Epicurus* himself, who excelled the whole World in Wisdom, and darkened all about him with his superior Lustre, 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 snoorest and art ever dreaming whilst thou art awake, and hast thy Mind always tormented with empty Fear, nor art able to find what is the Malady that troubles thee, when thou reelest about, born down on all sides by the severest Misery, and wandereest 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 ease 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.

*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, ingratis hæret, & angit,  
 Propterea, morbi quia causam non tenet æger :  
 Quam benè si videat : jam, rebus quisque relictis  
 Naturam primum studeat cognoscere rerum, 1085  
 Temporis æterni quoniam, non unius horæ  
 Ambigitur status, in quo fit mortalibus omnis  
 Ætas post mortem, quæ restat, cumque, manenda.*

*Denique tantopere in dubiis trepidare periclis  
 Quæ mala nos subigit vitæ tanta cupido ? 1090  
 Certa quidem finis vitæ mortalibus adstat,  
 Nec devitari lethum pote, quin obeamus.*

*Præterea, versamur ibidem, atque insumus usque:  
 Nec nova vivendo procuditur ulla voluptas.  
 Sed dum abest, quod avemus, id exsuperare vi-  
 detur. 1095*

*Cætera : post aliud, cum contigit illud, avemus ;  
 Et fitis æqua tenet vitæ semper hianteis :  
 Posteraque in dubio est fortunam quam vebat ætas,  
 Quidve ferat nobis casus, quive exitus instet.*

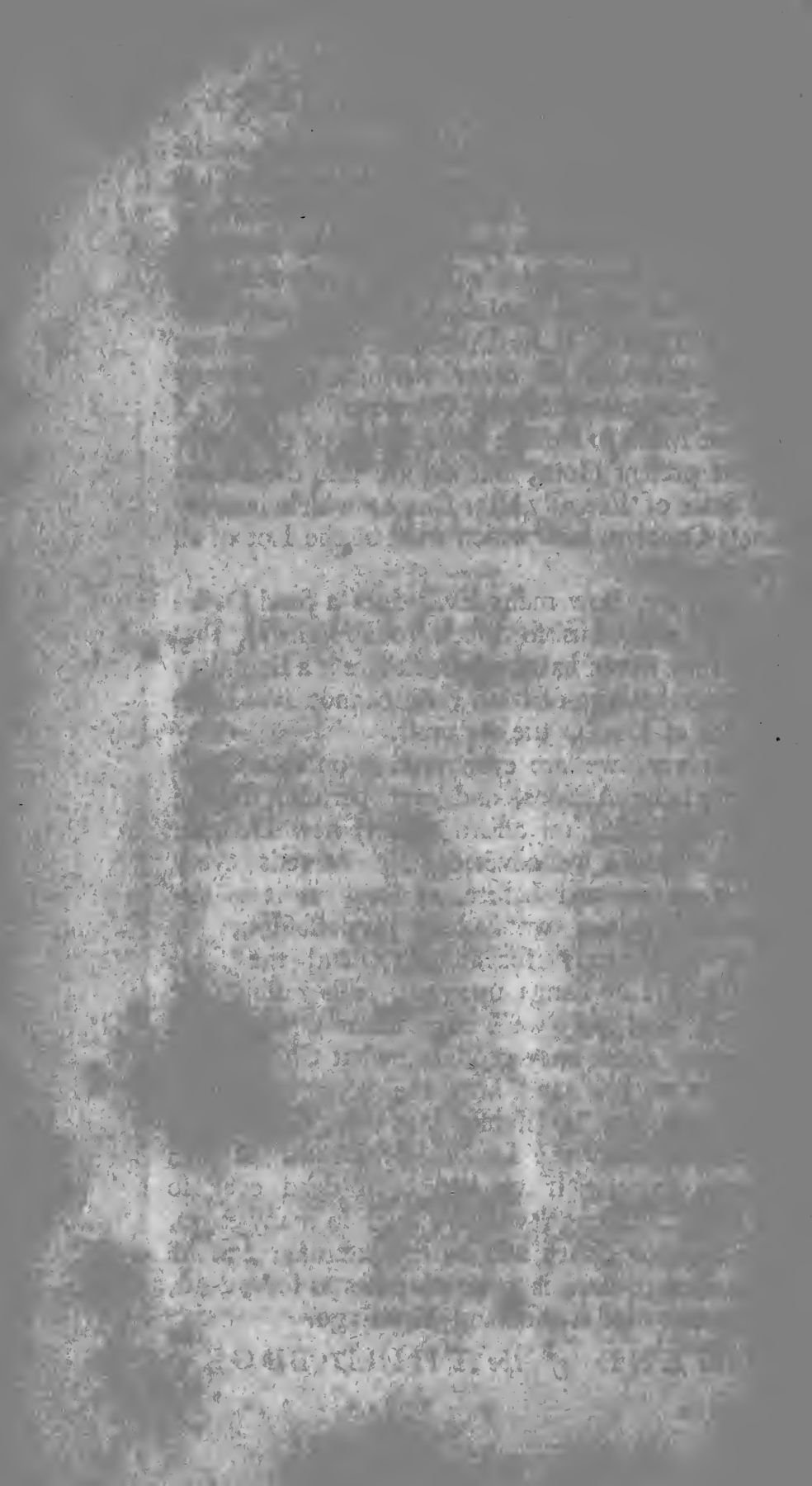
*Nec prorsum, vitam ducendo, deminis hilum 1100  
 Tempore de mortis, nec delibrare valemus,  
 Quo minùs esse diu possimus morte peremti.  
 Proinde licet quot vis vivendo condere sæcla,  
 Mors æterna tamen nihilominùs illa manebit :  
 Nec minùs Ille diu jam non erit, ex hodierno 1105  
 Lumine qui finem vitæ fecit, & ille  
 Mensibus atque annis qui multis occidit ante.*

heavily to sleep, and strives to forget himself, or else posts a 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.

BEIDES, 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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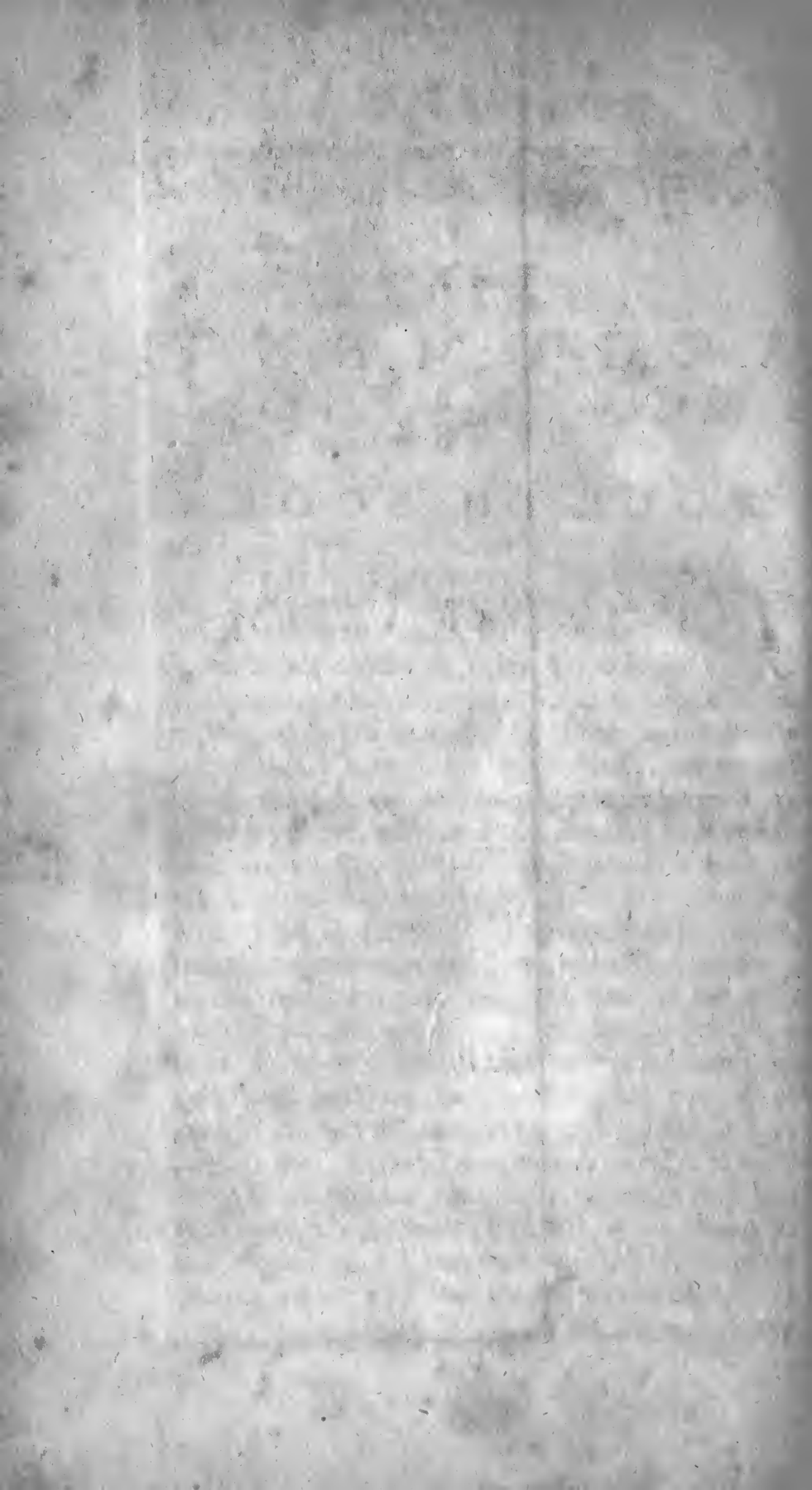
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A NEW  
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OF  
*T. Lucretius Carus,*  
OF THE  
NATURE *of* THINGS.

VOL. II.

B





THE  
 ARGUMENT  
 OF THE  
 FOURTH BOOK.

**T**HIS Book begins with a Repetition of the same Comparison the Author introduced in the First Book, v. 925, to relieve the Mind of his Memnius from the Roughness and Unpleasantness of the Subject upon which he was disputing, and to bespeak the Docility and Attention of his Readers. He then enters upon his Subject, which treats of the Sensation of Animals, as well when they are awake, as when they are sleeping; that is, to use the Expression of Lucretius, he explains the Senses of the Mind, as well as those of the Body; he begins with the Images of Things, and insists strenuously, that all Sensation is made by them. He says, that certain most tenuious and subtil Images are continually flowing from the Surface of all Bodies, that they fly about in the Air, but nevertheless are invisible, unless they be reflected upon the Sight from Mirrours or Water. Then he describes the extreme Tenuity of such Images, and from thence takes occasion to confirm the Doctrine he taught in the first Book concerning the Exiguity of his Atoms. He lays down two Sorts of Images, one that of their own Accord are bred in the Clouds, which represent the Images of Giants, or of Mountains,

tains, 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 *Exuviæ Rerum*, and then teaches that these *Exuviæ* 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 Swiftnes. The Sight being the principal of the Senses, he begins with that, and teaches that it proceeds from the Incurfion 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 *Eccho* 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.

*A* Via Pieridum perago loca nullius antè  
 Trita solo, juvat integros accedere fonteis ;  
 Atq; haurire : juvatq; novos decerpere flores,  
 Insignemque Meo capiti petere inde coronam,  
 Unde prius Nulli velârint tempora Musæ. 5  
 Primùm quòd magnis doceo de rebus, & artis  
 Religionum animos nodis exsolvere pergo ;  
 Deinde, quòd obscura de re tam lucida pango  
 Carmina, musæo contingens cuncta lepore :  
 Id quoque enim non ab nulla ratione videtur. 10  
 Nam veluti Pueris absynthia tetra Medentes,

Cùm



*T. Lucretius Carus,*  
 OF THE  
 NATURE *of* THINGS.  
 THE  
 FOURTH BOOK.

<sup>a</sup> **I**NSPIR'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 Rea-  
 son justifies the Method ; for as Physicians when

<sup>a</sup> 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.

Cùm dare conantur, prius oras pocula circum  
 Contingunt mellis dulci, flavoque liquore,  
 Ut Puerorum ætas improvida ludifceitur  
 Labrorum tenuis, interea perpotet amarum 15  
 Absynthi laticem, deceptaque non capiatur ;  
 Sed potiùs tali tactu recreata valescat.  
 Sic Ego nunc, quoniam hæc Ratio plerumq; videtur  
 Tristior esse, quibus non est tractata, retroque  
 Volgus abhorret ab Hac ; volui tibi suaviloquenti 20  
 Carmine Pierio rationem exponere nostram,  
 Et quasi Museo dulci contingere melle ;  
 Si tibi forte animum tali ratione tenere  
 Versibus in nostris possem, dum perspicis omnem  
 Naturam rerum ; ac persentis utilitatem. 25  
 Sed quoniam docui, cunctorum Exordia rerum  
 Qualia sint, & quam variis distantia formis  
 Sponte sua volitent æterno percita motu :  
 Quoque modo possint res ex his quæque creari :  
 Atque Animi quoniam docui natura quid esset, 30  
 Et quibus è rebus cum Corpore compta vigeret ;  
 Quoque modo distracta rediret in Ordia prima :  
 Nunc agere incipiam tibi, quod vehementer ad has res  
 Attinet, esse ea, quæ rerum Simulacra vocamus :  
 Quæ quasi Membranzæ summo de corpore rerum 35  
 Dereptæ volitant ultro citroque per auras :

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 so the Children's unsuspecting Age, at least their Lips, may be deceived, and take the bitter Juice ; thus harmlesly 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.

<sup>b</sup> 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

<sup>b</sup> 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 Phantasms of Centaurs, and the like Monsters, and sometimes too the Spectres of the Dead ; for the Soul, we are told, dies with the Body.

awake,

*Atque eadem nobis vigilantibus obvia mentis  
 Terrificant, atque in somnis, cum sæpe figuras  
 Continuum miras simulacraque luce carentum ;  
 Quæ nos horrificè languentis sæpe sopore 40  
 Excierunt : Ne forte Animas Acherunte reamur  
 Effugere, aut Umbras inter vivos volitare :  
 Neve aliquid nostri post mortem posse relinqui,  
 Cum Corpus simul, atque Animi natura peremta,  
 In sua discessum dederunt Primordia quæque. 45*

*Dico igitur, rerum Effigias, tenuisque figuras  
 Mittier ab rebus summo de corpore earum ;  
 Quæ quasi Membrana, vel Cortex nominanda 'st,  
 Quod speciem, ac formam similem gerit ejus Imago,  
 Quojuſcunque cluet de corpore fuſa vagari. 50*

*Id licet hinc quamvis hebeti cognoscere corde ;  
 Principio, quoniam mittunt in rebus apertis  
 Corpora res multæ, partim diffusa solutæ,  
 Robora seu Fumum mittunt, ignesque Vaporem :  
 Et partim contexta magis, condensaq; ut olim 55  
 Cum veteres ponunt tunicas æstate Cicadæ ;  
 Et Vituli cum membranas de corpore summo  
 Nascentes mittunt, Et item cum lubrica Serpens  
 Exiit in spinis vestem : Nam sæpe videmus  
 Illorum spoliis vepreis volitantibus auctas. 60*

*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, hiscendi 'st nulla potestas.  
 Præsertim cum sint in summis corpora rebus 65  
 Multa minuta, jaci quæ possint ordine eodem  
 Quo fuerint, veterem Et formæ servare figuram ;*

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 tenuious 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 <sup>c</sup> old Form and Figure; and

<sup>c</sup> 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 citiùs, quantò minùs endopediri  
 Pauca queunt, & sunt in prima fronte locata.*

*Nam certè iaci, atque emergere multa videmus, 70  
 Non solùm ex alto, penitusque, ut diximus ante,  
 Verùm de summo is ipsum quoque sæpe colorem :*

*Et volgò faciunt id lutea, ruffaque Vela,  
 Et ferrugina, cùm magnis intenta Theatris  
 Per malos volgata, trabeisque tremantia flutant : 75*

*Namque ibi confessum Caveã subter, & omnem  
 Scenã speciem, Patrum, Matrumque, Deorumque,  
 Inficiunt, cogantque suo fluitare colore :*

*Et quantò circum mage sunt inclusa Theatri  
 Mœnia, tam magis hæc intus perfusa lepore 80  
 Omnia conrident correpta luce diei.*

*Ergo Lintea de summo cùm corpore fucum  
 Mittunt, Effigias quoque debent mittere tenueis  
 Res quæque, ex summo quoniam jaculantur utræque.*

*Sunt igitur, jam formarum vestigia certa, 85  
 Quæ vulgò volitant subtili prædita filo,  
 Nec singillatim possunt secreta videri.*

*Præterea, omnis Odos, Fumus, Vapor, atque aliæ res  
 Consimiles, ideo diffusæ rebus abundant,  
 Ex alto quia dum veniunt intrinsecus ortæ, 90  
 Scinduntur per iter flexum ; nec recta viarum  
 Ostia sunt, qua contendunt exire coortæ.*

*At contrà, tenuis summi membrana Coloris  
 Cum jacitur, nihil est, quod eam discerpere possit,  
 In promptu quoniam 'st in prima fronte locata. 95*



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 <sup>d</sup> 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 darkned, 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

<sup>d</sup> Colours get loose and are reflected from the Images of Things

*Postremo, in Speculis, in Aqua, Splendoreque in  
omni*

*Quæcunque apparent nobis Simulacra necesse 'st,  
Quandoquidem simili specie sunt prædita rerum,  
Esse in imaginibus missis consistere eorum :  
Nam cur illa cadant magis, ab rebusque recedant 100  
Corpora res multæ quæ mittunt Corpore aperto,  
Quàm quæ tenuia sunt, hiscendi 'st nulla potestas.*

*Sunt igitur tenues formarum, consimilesque  
Effigiæ, singillatim quas cernere nemo  
Cum possit ; tamen assiduo, crebroque repulsu 105  
Rejectæ, reddunt Speculorum ex æquore visum :  
Nec ratione alia servari posse videntur.*

*Tantopere, ut similes reddantur quoique figuræ :  
Nunc age, quàm tenui natura constet Imago,  
Percipe : & imprimis quoniam Primordia tan-  
tum 110*

*Sunt infra nostros sensus, tantòque minora,  
Quàm quæ primùm oculi cæptant non posse tueri.*

*Nunc tamen id quoque uti confirmem, Exordia  
rerum*

*Cunctorum quàm sint subtilia, percipe paucis.*

AND then <sup>e</sup> since the Forms that appear to us in Looking-glafs, 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 tenuious 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 Glafs, 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 tenuious 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 Direption and getting off of Images.

<sup>e</sup> Since the Images, we see in Mirrours, 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 Glafs or Water. We are to observe, that the Image of each Thing, that is seen in the Glafs, 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.

And

*Primum Animalia sunt jam partim tantula,  
eorum*

115

*Tertia pars nulla ut possit ratione videri.*

*Horum Intestinum quodvis quale esse putandum 'st?*

*Quid? Cordis globus aut Oculi? quid? Membra?  
quid? Artus?*

*Quantula sunt? quid? præterea Primordia quæque,  
Unde Anima, atque Animi constet natura neces-  
sum 'st,*

120

*Nonne vides, quam sint subtilia, quàmque minuta?*

*Præterea, quæcunque suo de corpore odorem  
Exspirant acrem, Panaces, Absinthia tetra,  
Abrctonique graves, & tristia Centaurea:*

*Horum unumquodvis leviter si fortè ciebis,*

125

*Quamprimum noscas rerum Simulacra vagare  
Multa modis multis, nulla vi, castaque sensu.*

*Quorum quantula pars sit Imago, dicere nemo 'st*

*Qui possit, neque eam rationem reddere dictis.*

*Sed ne fortè putes ea demum sola vagare,*

130

*Quæcunque ab rebus rerum Simulacra recedunt:*

*Sunt etiam, quæ sponte sua gignuntur, & ipsa  
Constituuntur in hoc cælo, qui dicitur aër:*

*Quæ multis formata modis sublimè feruntur,*

*Nec speciem mutare suam liquentia cessant:*

135

*Et quovisque modi formarum vertere in ora.*

*Ut nubeis facilè interdum concreescere in alto*

*Cernimus, & mundi speciem violare serenam,*

*Aëra mulcenteis motu: Nam sæpe Gigantum*

AND first there are Animals so exceeding small, *The Sub-*  
 that one third Part of them cannot possibly by any *tility of the*  
 means be discover'd. What are you to conceive *Images.*  
 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 subtle and minute they are?

BESIDES, <sup>f</sup> 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 subtle are the Images that are  
 formed from these, no one can conceive or express.

<sup>g</sup> BUT lest you should think, that the Images *Prodigies:*  
 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 car-  
 ried upward, and being very subtle and less com-  
 pact 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 Mo-  
 tion; now the Shape of Giants seem to fly abroad,

<sup>f</sup> Since an Image consists only of those Particles that fly  
 away from the Surface of Bodies, it surpasses all Belief, how  
 subtle and tenuious an Image must be, especially since in a  
 great Length of Time, nothing can be perceived to be ex-  
 haled or worn away.

<sup>g</sup> He speaks now of another Sort of Images, which are  
 certain Compositions or Coagmentations, 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 montes, avolsaque saxa*  
*Montibus anteire, & solem succedere præter :*  
*Inde alios trahere, 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, oppòsta fuerunt,*  
*Densaque, ut in primis Speculum 'st : Nihil accidit*  
*horum,*

*Nam neque uti vestem possit transire, neque ante*  
*Scindi, quàm meminit lævor præstare salutem.*  
*Quapropter fit, ut hinc nobis Simulacra genantur, 155*  
*Et quamvis subito, quovis in tempore, quamque*  
*Rem contra Speculum ponas, apparet Imago :*  
*Perpetuò fluere ut noscas è corpore summo*  
*Texturas rerum tenueis, tenuisque figuras.*  
*Ergo multa brevi spatio Simulacra genuntur, 160*  
*Ut meritò celer bis rebus dicatur origo.*

*Et quasi multa brevi spatio summittere debet*  
*Lumina Sol, ut perpetuò sint omnia plena :*  
*Sic à rebus item simili ratione nècesse 'st*  
*Temporis in puncto rerum Simulacra ferantur 165*

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-glasses, 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 intire. 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.

<sup>h</sup> 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,

<sup>h</sup> 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 Mirrour, the Images of the opposite Things appear, nor do they ever disappear so long as those Things keep their Places.

*Multa modis multis in cunctas undique parteis :  
Quandoquidem Speculum queiscunque obvertimus oris,  
Res ibi respondent similia forma, atque colore.*

*Præterea, modò quom fuerit liquidissima cæli  
Tempeſtas perquàm ſubitò fit turbida fæde* 170

*Undique, uti tenebras omneis Acherunta rearis  
Liquiſſe, & magnas cæli complèſſe cavernas.*

*Uſque adeò tetra nimborum nocte coorta,  
Impendent atræ formidinis ora ſuperne.*

*Quorum quantula pars ſit Imago, dicere nemo'ſt, 175  
Qui poſſit, neque eam rationem reddere dictis.*

*Nunc age, quàm celeri motu Simulacra ferantur,  
Et quæ mobilitas ollis tranantibus auras  
Reddita ſit, longò ut ſpatio brevis hora teratur,  
In quemcunque locum diverſo numine tendunt,* 180

*Suavidicis potiùs, quàm multis verſibus edam :  
Parvus ut eſt Cycni melior canor, illum Gruum quàm  
Clamor, in ætheriis diſperſus nubibus Auſtri.*

*Principio, perſæpe leveis res, atque minutis  
Corporibus factas, celereis licet eſſe videre.* 185

*In quo jam genere'ſt Solis lux, & vapor ejus,  
Propterea quia ſunt è primis facta minutis :  
Quæ quaſi trudentur, perque Aëris intervallum  
Non dubitant tranſire, ſequenti concita plaga.*

*Suppeditatur enim conſeſtim lumine lumen,* 190

*Et quaſi protelo ſtimulatur fulgure fulgur,  
Quapropter Simulacra pari ratione neceſſe 'ſt  
Immemorable per ſpatium tranſcurrere poſſe  
Temporis in puncto : primùm quòd parvola cauſa  
Eſt procul à tergo quæ provebat, atq; propellat :* 195

*Deinde, quòd uſque adeo textura prædita rara  
Mittuntur, facilè ut quaſvis penetrare queant res,  
Et quaſi permanare per Aëris intervallum.*

*Præterea,*



and scatter'd every way abroad; for place your Glafs 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 Darknes 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 Comparifon of these Clouds, are the Images of Things, no one can conceive or exprefs.

AND now, with how swift a Course these Images *The Swift-* are carried on, how suddenly they make their *ness of* Passage through the Air, how they out-strip dull *the Images* Time, wherever by various Motion they intend their Way, I choofe 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 compos'd 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.

Præterea, si, quæ penitus Corpuscula rerum  
 Ex alto in terras mittuntur, Solis uti lux, 200  
 Ac vapor, hæc puncto cernuntur lapsa diei  
 Per totum cæli spatium diffundere sese :  
 Perque volare mare, ac terras, cælumque rigare  
 Quòd supera 'st : Ubi tam volucris hæc levitate fe-  
 runtur.

Quid? quæ sunt igitur jam prima in fronte parata 205  
 Cum jaciuntur, & emissum res nulla moratur,  
 Nonne vides citius debere, & longius ire :  
 Multiplexque loci spatium transcurrere eodem  
 Tempore, quo Solis pervolgant lumina cælum ?

Hoc etiam in primis specimen verum esse videtur, 210  
 Quàm celeri motu rerum Simulacra ferantur,  
 Quòd simul ac primum sub divo splendor Aquæ  
 Ponitur, extemplo, cælo stellante, serena  
 Sidera respondent in Aqua radiantia mundi.

Jamne vides igitur, quàm puncto tempore imago 215  
 Ætheris ex oris ad terrarum accidat oras ?

Quare etiam atque etiam mitti hæc fateare ne-  
 cesse 'st

Corpora, quæ feriant oculos, visumque laceffant :  
 Perpetuoque fluunt certis ab rebus Odores :  
 Frigus ut à fluviiis, Calor à sole, Æstus ab undis 220

<sup>i</sup> 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 <sup>k</sup> 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

<sup>i</sup> 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.

<sup>k</sup> This Flow or Streaming of Images into the Eyes, he says, must be granted, because certain Effluvioms from other Things insinuate themselves into all the other Senses.

*Æquoris, exesor mœrorum litora circum.*  
*Nec variæ cessant Voces volitare per auras :*  
*Denique in os falsi venit humor sæpe Saporis,*  
*Cùm mare versamur propter : Dilutaque contra*  
*Cùm tuimur misceri absinthia, tangit amaror. 225*  
*Usque adeo omnibus ab rebus res quæque fluenter*  
*Fertur : & in cunctas dimittitur undique parteis,*  
*Nec mora, nec requies inter datur ulla fluendi :*  
*Perpetuò quoniam sentimus, & omnia semper*  
*Cernere, Odorari licet, & sentire Sonorem.*

*Præterea, quoniam manibus tractata figura*  
*In tenebris quædam, cognoscitur esse eadem, quæ*  
*Cernitur in luce, & clâro candore ; necesse 'st*  
*Consimili causa Tactum, 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 ?*  
*Esse in Imaginibus quapropter causa videtur*  
*Cernendi, neque posse sine his res ulla videri.*

*Nunc ea, quæ dico, rerum Simulacra feruntur 240*  
*Undique, & in cunctas jaciuntur didita parteis ;*  
*Verùm, nos oculis quia solis cernere quimus,*  
*Propterea fit, uti, speciem quò vertimus, omnes*  
*Res ibi eam contra feriant forma, atque colore.*

*Et quantum quæque à nobis res absit, Imago 245*  
*Efficit ut videamus, & internofcere curat.*  
*Nam cùm 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 Intermision; 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 soever 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 <sup>1</sup> 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

*How we discover the Distance of Objects.*

<sup>1</sup> 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.

Isque ita per nostras acies perlabitur omnis :  
 Et quasi perterget pupillas, atque ita transit. 250  
 Propterea fit, uti videamus quàm procul absit  
 Res quæque : Et quantò plus aëris antè agitatur,  
 Et nostros oculos perterget longior aura,  
 Tam procul esse magis res quæque remota videtur :  
 Scilicet hæc summè celeri ratione geruntur, 255  
 Quale sit ut videamus : Et unà quàm procul absit.  
 Illud in his rebus minimè mirabile habendum est,  
 Cur ea, quæ feriant oculos Simulacra, videri  
 Singula cùm nequeant, res ipsæ perspiciantur :  
 Ventus enim quoque paullatim cùm verberat, Et  
 cùm 260  
 Acre ferit Frigus, non privam quamque solemus  
 Particulam Venti sentire, Et Frigoris ejus ;  
 Sed magis unversum : fierique perinde videmus  
 Corpore tum plagas in nostro, tanquam aliquæ res  
 Verberet, atque sui det sensum corporis extra. 265  
 Præterea, Lapidem digito cùm tundimus, ipsum  
 Tangimus extremum Saxi, summumque colorem.  
 Nec sentimus eum tactu, 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 outmost 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 <sup>m</sup> Image is always *Why the Image appears beyond the Glass.* seen beyond the Glass, for it certainly appears at a remote Distance from us. For Instance: When

<sup>m</sup> 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) protrades 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.

you

Quod genus illa, foris quæ verè transpiciuntur,  
 Janua cùm per se transpectum præbet apertum,  
 Multa facitque foris ex ædibus ut videantur.

Is quoq; enim duplici, geminoq; fit Aëre Visus. 275

Primus enim 'st, citra posteis qui cernitur Aër.

Inde fores ipsæ dextra, lævaque sequuntur.

Post extraria lux oculos perterget, & Aër

Alter, & illa, foris quæ verè transpiciuntur.

Sic ubi se primùm Speculi projecit Imago, 280

Dum venit ad nostras acies, protrudit, agitque

Aëra, qui inter se cunque 'st oculosque locatus :

Et facit, ut priùs Hunc omnem sentire queamus,

Quàm Speculum : Sed ubi Speculum quoque sensimus  
 ipsum

Continuè à nobis in id hæc, quæ fertur, Imago 285

Pervenit, & nostros oculos rejecta revisit :

Atque alium præ se propellens Aëra volvit,

Et facit, ut priùs hunc, quàm se, videamus : eoque

Distare à Speculo tantùm 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



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 <sup>n</sup> ; That Part of the Body that is *Why the*  
 the Right Side, appears in the Glass to be the *Image is*  
 Left ; *transposed.*

<sup>n</sup> 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 cùm offendit Imago, 295*  
*Non convertitur incolumis ; sed recta retrorsum*  
*Sic eliditur, ut siquis prius arida quàm sit*  
*Cretea persona, adlidat pilæve, trabive :*  
*Atque ea continuò rectam si fronte figuram*  
*Servet, & elisam retro sese exprimat ipsa : 300*  
*Fiet ut, ante oculus fuerit qui dexter, hic idem*  
*Nunc sit lævus, & è lævo sit mutua dexter.*

*Fit quoque de Speculo in Speculum ut tradatur*  
*Imago :*

*Quinque etiam, sexve ut fieri Simulacra suerint.*  
*Nam quæcunq; retro parte interiore latebunt : 305*  
*Inde tamen, quamvis tortè, penitusque remota,*  
*Omnia per flexos aditus edueta licebit*  
*Pluribus hæc Speculis videantur in ædibus esse.*  
*Usque adeo è Speculo in Speculum tralucet imago,*  
*Et cùm læva data 'st, fit rursus dextera fiat : 310*  
*Inde retrorsum reddit se, & convertit eodem :*  
*Quinetiam, quæcunque latifcula 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 intire, 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 <sup>o</sup> 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 <sup>p</sup> Convex 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 tenuious Substances, may by dashing against the Glass be inverted backwards in like manner.

<sup>o</sup> 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.

<sup>p</sup> The Pillar'd Convex is one of the sort of Glasses that restores the Image after the usual manner.

Figure

*Adsimili lateris flexura prædita nostri :*

*Dextera ea propter nobis Simulacra remittunt,*

*Aut quia de Speculo in Speculum transfertur Imago,*

*Inde ad nos elisa bis advolat ; aut etiam quòd 316*

*Circumagitur, cùm venit Imago, propterea quòd*

*Flexa figura docet Speculi convertier ad nos.*

*Indugredi porro pariter Simulacra, pedemque*

*Ponere nobiscum credas, gestumque imitari : 320*

*Propterea, quia de Speculi qua parte recedas,*

*Continuò nequeunt illinc Simulacra reverti :*

*Omnia quandoquidem cogit natura referri,*

*Ac resilere ab rebus ad æquos reddita flexus.*

*Splendida porro oculi fugitant, vitantque tueri :*

*Sol etiam cæcat, contra si tendere pergas, 326*

*Propterea, quia vis magna 'st ipsius : & aliè*

*Aëra per purum graviter Simulacra feruntur,*

*Et feriunt oculos turbantia composituras.*

*Præterea, Splendor, quicumque 'st acer, adurit 330*

*Sæpe oculos, ideo quòd semina possidet ignis*

*Multa, dolorem oculis quæ gignunt insinuando.*

*Lurida præterea sunt quæcunque tuentur*

*Arquati, quia luroris de corpore eorum*

*Semina multa fluunt Simulacris obvia rerum, 335*

*Multaque sunt oculis in eorum denique mista,*

*Quæ contage sua pallcribus omnia pingunt.*

*E tenebris autem quæ sunt in luce tuemur,*

*Propterea, quia cùm prior caliginis Aër*

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; <sup>a</sup> because when the dark

dark

<sup>a</sup> When the lucid Air follows the dark, it, by reason of its Subtilty, purges and cleanses the Pores of the Eye, and makes room for the Images to enter; but when the dark Air

*Ater inît oculos prior, & possedit apertos: 340*

*Insequitur candens confestim lucidus Aër,  
Qui quasi purgat eos, ac nigras discutit umbras*

*Aëris illius: Nam multis partibus hic est  
Mobilior, multisque minutior, & mage pollens.*

*Qui simul atque vias oculorum luce replevit, 545  
Atque patefecit quas ante obsederat ater:*

*Continno rerum Simulacra adapertha sequuntur*

*Quæ sita sunt in luce, laceffuntque, ut videamus.*

*Quod contra facere in tenebris à luce nequimus,*

*Propterea, quia posterior caliginis Aër 350*

*Crassior insequitur, qui cuncta foramina complet:*

*Obsiditque vias oculorum, ne Simulacra*

*Possint ullarum rerum conjecta moveri.*

*Quadratasque procul turreis cum cernimus urbis:*

*Propterea fit uti videantur sæpe rotundæ, 355*

*Angulus obtusus quia longè cernitur omnis,*

*Sive etiam potius non cernitur; ac perit ejus*

*Plaga, nec ad nostras acies perlabitur ictus:*

*Aëra per multum quia dum Simulacra feruntur,*

*Cogit hebescere eum crebris offensibus Aër. 360*

*Hinc, ubi suffugit sensum simul angulus omnis,*

*It, quasi tornata ut saxorum structa tuantur:*

*Non tamen ut coram quæ sunt, verèque rotunda,*

*Sed quasi adumbratim paullum simulata videntur.*

*Umbra videtur item nobis in Sole moveri, 365*

*Et vestigia nostra sequi, gestumque imitari,*

(Aëra

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 Darknes 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 stony 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 closed and choaked up by that dull and heavy Air, that it becomes incapable to receive the Images of Things that offer themselves to it.

*(Aëra si credas privatam lumine posse  
 Indugredi, motus hominum, gestusque sequentem.  
 Nam nihil esse potest aliud nisi lumine cassus  
 Aër, id, quod nos Umbram perhibere suëmus). 370  
 Nimirum, quia Terra locis ex ordine certis  
 Lumine privatur Solis, quacunq; meantes  
 Officimus: repletur item, quod liquimus ejus:  
 Propterea fit, uti videatur, quæ fuit Umbra  
 Corporis, è regione eadem nos usque secuta. 375  
 Semper enim nova se radiorum lumina fundunt,  
 Primaque dispereunt, quasi in ignem Lana trabatur.  
 Propterea facilè & spoliatur lumine Terra:  
 Et repletur item, nigrasque sibi abluit Umbras.*

*Nec tamen hìc Oculos falli concedimus hilum: 380  
 Nam, quocunq; loco sit Lux, atque Umbra, tueri  
 Illorum est, eadem verò sint lumina, necne:  
 Umbraque, quæ fuit hic, eadem num transeat illuc:  
 An potiùs fiat, paullo quod diximus antè:  
 Hoc Animi demum Ratio discernere debet: 385  
 Nec possunt Oculi naturam noscere rerum.  
 Proinde Animi vitium hoc Oculis adfingere noli.*



(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<sup>r</sup>. For a Train of new Rays are continually flowing from the Sun, and the first die away like Threads of Wooll 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.

<sup>s</sup> 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.

<sup>r</sup> 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 Wooll drawn through a Flame; for then the Wooll that is first drawn would be consumed by the Fire, whilst other Wooll is in the mean time drawing through it. Thus *Lambinus* explains this Passage, but it is still obscure.

<sup>s</sup> 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, cùm stare videtur :  
 Quæ manet in statione, ea præter creditur ire :  
 Et fugere ad puppim colles, campiq; videntur, 390  
 Quos agimus præter navim, velisque volamus.

Sidera cessare ætheriis adfixa cavernis  
 Cuncta videntur : at adsiduo in sunt omnia motu :  
 Quandoquidem longos obitus exorta revisunt,  
 Cùm permensa suo sunt cælum corpore claro : 395  
 Solque pari ratione manere, & Luna videtur  
 In statione, ea quæ ferri res indicat ipsa.

Exstantesque procul medio de gurgite Montes,  
 Classibus inter quos liber patet exitus, idem  
 Apparent, & longè divolsi licet, ingens 400  
 Insula conjectis tamen ex his una videtur.

Atria versari, & circumcursare columnæ  
 Usque adeo fit uti pueris videantur, ubi ipsi  
 Desierunt verti, vix ut jam credere possint,  
 Non supra sese ruere omnia tecta minari. 405

Famque rubrum tremulis jubar ignibus erigere altè  
 Cùm cæplat Natura, supraque extollere monteis ;  
 Quos tibi tum supra Sol monteis esse videtur,  
 Cominus ipse suo contingens fervidus igni,  
 Vix absunt nobis missus bis mille sagittæ ; 410  
 Vix etiam cursus quingentos sæpe veruti :  
 Inter eos, Solemque jacent immania ponti  
 Æquora, substrata ætheriis ingentibus oris :  
 Interjectaque sunt terrarum millia multa,  
 Quæ variæ retinent gentes, & sæcla ferarum. 415

At conlectus aquæ digitum non altior unum,  
 Qui lapides inter sistit per strata viarum,  
 Despectum præbet sub terras impete tanto,  
 A terris quantum cæli patet allus hiatus :

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

*Nubila despiciere, & cœlum ut videare videre, & 420*  
*Corpora mirando sub terras abdita cœlo.*

*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 ductu,*  
*Stansque in perpetuum paribus suffulta columnis ;*  
*Longa tamen parte ab summa cùm tota videtur, 430*  
*Paullatim trahit angusti fastigia conii,*  
*Tecta sclo jungens, atque omnia dextera lævis :*  
*Donicum in obscurum conii conduxit acumen.*

*In pelago nautis ex undis ortus, in undis*  
*Sol fit uti videatur obire, & condere lumen : 435*  
*Quippe ubi nil aliud nisi aquam, cœlumq; tuentur,*  
*Ne leviter credas labefactari undique sensus.*

*At maris ignaris in portu clauda videntur*  
*Navigia, a plustris fractis, obnitier undis.*  
*Nam quæcunq; supra rorem salis edita pars est 440*  
*Remorum, recta est ; & recta supernè Guberna :*  
*Quæ demersa liquore obeunt, refracta videntur*  
*Omnia converti, sursumque supina reverti :*  
*Et reflexa prope in summo fluitare liquore.*

*Raraque per cœlum cùm venti nubila portant 445*  
*Tempore nocturno, tum splendida Signa videntur.*  
*Labier adversum nubeis, atque ire supernè*

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 fortè oculo manus uni subdita subter  
Pressit eum, 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, & corpora bina.*

*Denique cùm suavi devinxit membra sopore 455  
Somnus, & in summa corpus jacet omne quiete :  
Tum vigilare tamen nobis, & membra movere  
Nostra videmur, & in noctis caligine cæca  
Cernere censemus Solem, lumenque diurnum :  
Conclusoque loco Cælum, Mare, Flumina, Monteis 460  
Mutare, & campos pedibus transire videmur :  
Et sonitus audire, severa silentia noctis  
Undique cùm constant, & reddere dicta tacentes.*

*Cætera de genere hoc mirando multa videmus,  
Quæ violare fidem quasi sensibus omnia quæerunt 465  
Nequicquam : quoniam pars horum maxima fallit  
Propter opinatus Animi, quos addimus ipsi,  
Pro visis ut sint, quæ non sunt sensibus visa.  
Nam nihil egregius, quàm res secernere apertas  
A dubiis, Animus quas ab se protinus addit. 470  
Denique, nil Sciri si quis 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 dissolved 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 Heavens, 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 account 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 difficult 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, † If any one thinks that he knows nothing, he cannot be sure that he knows This,

† He falls upon the middle Academicks, of whom *Arcefilas* was Author; who introduced an incoherent kind of Philosophy, and asserted that nothing could be known; for something (as our Poet says) must be known, otherwise it could not be known that nothing can be known.

when

*An Sciri possit, qui se nil Scire fatetur :  
Hunc igitur contra mittam contendere causam,  
Qui capite ipse suo instituit vestigia retrò.*

*Et tamen hoc quoque uti concedam, scire, at id  
ipsum* 475

*Quæram, (quom in rebus veri nil viderit antè)  
Unde sciat, quid sit Scire, & Nescire vicissim :  
Notitiam veri quæ res, falsique creârît ;  
Et dubium certo quæ res differre probârît ?*

*Invenies primis ab Sensibus esse creatam* 480  
*Notitiam veri, neque Sensus posse refelli :  
Nam majore fide debet reperirier illud,  
Sponte sua veris quod possit vincere falsa.*

*Quid majore fide porro, quàm sensus haberi  
Debet ? An ab sensu falso Ratio orta valebit* 485  
*Dicere eos contra, quæ tota ab Sensibus orta 'st ?*

*Qui nisi sint veri, Ratio quoque falsa fit omnis.  
An poterunt Oculos Aures reprehendere ? an Aureis  
Tactus ? an hunc porro Tactum Sapor arguet oris ?  
An confutabunt Nares, Oculive revincent ?* 490

*Non (ut opinor) ita 'st : Nam seorsum quoique po-  
testas*

*Divisa 'st : sua vis quoique 'st : ideoque necesse 'st,  
Quod molle, aut durum est, gelidum, fervensve,  
seorsum*

*Id molle, aut durum gelidum, fervensve videri ;  
Et seorsum varios rerum sentire Colores,* 495



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 <sup>u</sup> Senses, nor can the Senses be contradicted; for whatever is able, by the Evidence of an opposite Truth, to convince the Senses of Falshood, must be something of greater Certainty than They. But what can deserve greater Credit than the Senses require from us? Will Reason, derived from erring Sense, claim the Privilege to contradict it? Reason, that depends wholly upon the Senses, 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

<sup>u</sup> 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.

*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 reprehendere sese,* 500

*Æqua fides quoniam debet semper haberi.*

*Proinde, quod in quoque est his visum tempore, verum est.*

*Et, si non poterit ratio dissolvere causam,  
Cur ea, quæ fuerint juxtim quadrata, procul sint  
Visa rotunda; tamen præstat rationis egentem* 505  
*Reddere mendosè causas utriusque figuræ,*

*Quàm manibus manifesta suis emittere quæquam;*

*Et violare fidem primam, & convellere tota  
Fundamenta, quibus nixatur Vita, Salusque.*

*Non modò enim Ratio ruat omnis, Vita quoque ipsa* 510

*Concidat extemplo, nisi credere sensibus ausis,*

*Præcipiteisque locos vitare, & cætera, quæ sint*

*In genere hoc fugienda; sequi, contraria quæ sint.*

*Illa tibi est igitur verborum copia cassa*

*Omnis quæ contra sensus instructa, parata est.* 515

*Denique ut in Fabrica, si prava est, Regula prima,*

*Normaque si fallax rectis regionibus exit,*

*Et Libella aliqua si ex parti claudicat hilum;*

*Omnia mendosè fieri, atque obstipa necessum est,*

*Prava, cubantia, prona, supina, atque absona tecta;*

*Jam ruere ut quædam videantur velle, ruantque,* 521

*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 quisque suam rem* 525

*Sentiat, haud quaquam ratio scruposa relicta 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.

AND

*Principio, auditur Sonus, & Vox omnis, in Aureis  
Insinuata suo pepulere ubi corpore sensum.*

*Corpoream quoque enim Vocem constare fatendum est,  
Et Sonitum, quoniam possunt impellere Sensus. 530*

*Præterradit enim Vox fauceis sæpe, facitque  
Asperiora foras gradiens arteria Clamor.*

*Quippe, per angustum turba majore coorta  
Ire foras ubi cæperunt primordia Vocum,  
Scilicet expletis quoque janua raditur oris 535*

*Rauca viis, & iter lædit qua Vox it in auras.*

*Haud igitur dubium est, quin Voces, Verbaque constant  
Corporeis è principiis, ut lædere possint.*

*Nec te fallit item, quid corporis auferat, & quid  
Detrabat ex Hominum nervis, ac viribus ipsis 540*

*Perpetuus Sermo nigraï noctis ad umbram,*

*Auroræ perductus ab exoriente nitore ;*

*Præsertim si cùm summo est clamore profusus :*

*Ergo corpoream Vocem constare necesse est,*

*Multa loquens quoniam amittit de corpore partem 545*

*Asperitas autem Vocis fit ab asperitate*

*Principiorum, & item lævor lævore creatur.*

*Nec simili penetrant Aureis primordia forma,*

*Quom Tuba depresso graviter sub murmure mugit,*

*Aut reboant raucum Retrocita cornua bõmbum : 550*

*Vallibus & Cycni gelidis orti ex Heliconis*

*Cùm liquidam tollunt lugubri voce querelam.*

*Hæc igitur penitus Voces cùm corpore nostro*

*Exprimimus, rectoque foras emittimus ore,*

*Mobilis articulat verborum dædala lingua ; 555*

*Formaturaque labrorum pro parte figurat.*

*Atque*

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 'st, unde illa pro-*  
*fecta*

*Perveniat vox quæque, necesse 'st Verba quoque ipsa*  
*Planè exaudiri, discernique articulatim.*

*Servat enim formaturam, servatque figuram. 560*

*At si interpositum spatium sit longius æquo,*

*Æira per multum confundi Verba necesse 'st,*

*Et conturbari Vocem, dum transvolat auras,*

*Ergo fit, Sonitum ut possis audire, neque hilum*

*Internoscere Verborum sententia quæ sit, 565*

*Usque adeo confusa venit Vox, inque perita.*

*Præterea, Edictum sæpe unum perciet aureis*

*Omnibus in populo emissum præconis ab ore :*

*In multas igitur Voces Vox una repente*

*Diffugit, in privas quoniam se dividit aureis, 570*

*Obsignans formam verbis, clarumque sonorem.*

*At quæ pars Vocum non aureis accidit ipsas,*

*Præterlata perit frustra diffusa per auras :*

*Pars solidis adlisa locis, rejeeta sonorem*

*Reddit, & interdum frustratur imagine Verbi. 575*

*Quæ benè cùm videas, rationem reddere possis*

*Tute tibi atque aliis, quo pacto per loca sola*

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 Case the Voice preserves its proper Frame and Figure; but if the interjacent Space be more than it should be, the Words must needs be confus'd by reason of the Length of Air, and the Voice be disorder'd as it pass'es 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, <sup>y</sup> 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 diffus'd 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 Eccho 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

<sup>y</sup> 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 utter'd by the Speaker, the Formation of the Bodies that burst out of the Mouth is compress'd, 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 cùm monteis inter opacos  
 Quærimus, & magna dispersos voce ciemus. 580  
 Sex etiam, aut septem loca vidi reddere Voces  
 Unam cùm jaceres : Ita colles collibus ipsis  
 Verba repulsantes iterabant dicta referre.*

*Hæc loca capripedes Satyros, Nymphasque tenere  
 Finitimi fingunt, & Faunos esse loquuntur ; 585  
 Quorum noctivago strepitu, ludoque jocanti  
 Adfirmant volgò taciturna silentia rumpi,  
 Chordarumque sonos fieri, dulcisque querelas,  
 Tibia quas fundit digitis pulsata canentum :  
 Et genus Agricolûm latè sentiscere, cùm Pan 590  
 Pineæ semiferi capitis velamina quassans,  
 Unco sæpe labro calamos percurrit hianteis,  
 Fistula silvestrem ne cesset fundere musam.  
 Cætera de genere hoc monstra, ac porienta loquuntur,  
 Ne loca deserta ab Divis quoque fortè putentur 595*



same with those we speak, while we seek our Companions wandering o'er the dark Mountains, or call after them aloud when they are dispersed and lose their Way. <sup>z</sup> 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 Musick, and the soft Notes of the Harp, as the Artist touches and sings to it together; that the Swains all about can distinguish plainly when <sup>a</sup> *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; lest, perhaps, they should be thought to dwell in Places where the *Gods* never come, and therefore

<sup>z</sup> An Echo 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.

<sup>a</sup> *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.

*Sola tenere : Ideo jaſtant miracula dictis.  
Aut aliqua ratione alia ducuntur, ut omne  
Humanum genus eſt avidum nimis 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 sæpe videmus.  
Nimirum, quia Vox per flexa foramina rerum  
Incolumis tranſire poteſt, Simulacra renutant ;  
Perſcinduntur enim, niſi recta foramina tranant : 605  
Qualia ſunt vitri, ſpecies quæ travolat omnis.*

*Præterea, parteis in cunetas dividitur Vox,  
Ex aliis, aliæ quoniam gignuntur ; ubi una  
Diſſiluit ſemel in multas exorta, quaſi ignis  
Sæpe ſolet ſcintilla ſuos ſe ſpargere in igneis, 610  
Ergo replentur loca Vocibus, abdita retrò  
Omnia quæ circum fuerint, ſonituque cientur.  
At Simulacra viis directis omnia tendunt,  
Ut ſunt miſſa ſemel, 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 potiùs, quàm Verba, audire videmur.*

*Hæc, quæis ſentimus ſuccum, lingua atque palatum,  
Pluſculum habent in ſe rationis, pluſque operai. 620*

they invent wonderful Tales like these; or they are induced by some Reason or other, as Mankind 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, <sup>b</sup> 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.

<sup>b</sup> 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 cùm  
 Mandendo exprimimus: ceu plenam spongiam aquaï  
 Si quis fortè manu premere, exsiccareque cœpit;  
 Inde, quod exprimimus, per caulas omne palati  
 Diditur, & raræ perplexa foramina linguæ, 625  
 Hæc ubi lævia sunt manantis corpore Succï,  
 Suaviter attingunt, & suavitur omnia tractant  
 Humida linguæ circum sudantia templa.

At contrà pungunt sensum, lacerantque coorta,  
 Quântò quæque magis sunt asperitate repleta. 630

Deinde voluptas est è succo in fine palati,  
 Cùm verò deorsum per fauceis præcipitavit;  
 Nulla voluptas est, dum diditur omnis in artus:  
 Nec refert quicquam, quo victu corpus alatur,  
 Dummodo, quod capias, concoctum didere possis 635  
 Artibus, & stomachi humectum fervare tenorem.

Nunc aliis alius cur sit Cibus, ut videamus,  
 Expediam; quareve, aliis quod triste, & amarum est,  
 Hoc tamen esse aliis possit prædulce videri.  
 Tantaq; in his rebus distantia, differitasque est, 640  
 Ut quod aliis Cibus est, aliis fuit acre venenum.  
 Est utique, ut Serpens hominis contacta salivis  
 Disperit, ac sese mandendo conficit ipsa.

Præterea,

AND first, We perceive a Taste in the Mouth when we squeeze the Juice from our Food by chewing, as if we were to press a Sponge 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 Sense.

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, <sup>c</sup> different Sorts of Food are agreeable to different Palates; or why, what is sour 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 Spit-tle of a Man, expires and bites himself to Death.

<sup>c</sup> 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 adipēs, & Coturnicibus auget. 645*  
*Ut, quibus id fiat rebus, cognoscere possis,  
Principiò meminisse decet, quæ diximus ante,  
Semina multimodis in rebus mista teneri.*

*Porro omnes, quæcunque cibum capiunt Animantes,  
Ut sunt dissimiles extrinsecùs, & generatim 650*  
*Extima membrorum circumcæsuræ coërcet,  
Proinde ac Seminibus distant variantque figura.  
Semina cum porro distent, differre necesse 'st  
Intervalla, Viasque, Foramina quæ perhibemus,  
Omnibus in membris, & in ore, ipsoque palato. 655*  
*Esse minora igitur quædam, majoraque debent,  
Esse triquetra allis, aliis quadrata necesse 'st :  
Multa rotunda, modis multis multangula quædam.  
Namque Figurarum ut ratio, motusque reposcunt,  
Proinde Foraminibus debent differre figuræ : 660*  
*Et variare viæ proinde ac textura coërcet.  
Ergo ubi quod suave 'st aliis, aliis fit amarum :  
Illis, queis suave 'st, lævissima corpora debent  
Contreſtabiliter caulas intrare palati.*

*At contrà, quibus est eadem res intùs acerba : 665*  
*Aspera nimirum penetrant, hamataque fauceis.*

*Nunc facile ex his est rebus cognoscere quæque.  
Quippe, ubi quoi Febris, bili superante, coorta 'st,  
Aut alia ratione aliqua 'st vis excita morbi ;  
Perturbatur ibi totum jam Corpus, & omnes 670*  
*Commutantur ibi posituræ Principiorum :  
Fit, priùs ad sensum ut quæ corpora conveniebant,  
Nunc non convenient, & cætera sint magis apta,  
Quæ penetrata queunt sensum progignere acerbum.  
Utraque enim sunt in mellis commista sapore, 675*  
*Id quod jam juperà tibi sæpe ostendimus antè.*

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

Nunc age, quo pacto Nareis adjectus odoris  
 Tangat, agam. Primum res multas esse necesse est,  
 Unde fluens volvat varius se fluctus Odorum.  
 Nam fluere, & mitti volgò, spargique putandum est.  
 Verum aliis alius magis est Animantibus aptus, 681  
 Dissimileis propter formas, ideoque per auras  
 Mellis Apes quamvis longè ducuntur odore :  
 Volturiique cadaveribus : tum fissa ferarum  
 Ungula quò tulerit gressum, promissa Canum vis 685  
 Ducit : & humanum longè præsentit odorem  
 Romulidarum arcis servator, candidus Anser.  
 Sic aliis alius nidor datus ad sua quemque  
 Pabula ducit, & à tetro resilire veneno  
 Cogit ; eoque modo servantur sæcla ferarum. 690  
 Hic Odor ipse igitur, nareis quicumque laceffit,  
 Est alio ut possit permitti longiùs alter.  
 Sed tamen haud quisquam tam longè fertur eorum,  
 Quàm Sonitus, quàm Vox, mitto jam dicere, quàm  
 res,  
 Quæ feriunt Oculorum acies, visumque laceffunt. 695  
 Errabundus enim tardè venit, ac perit antè  
 Paullatim facilis distractus in Aëris auras :



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 Carcasses; 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.

<sup>d</sup> 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-

<sup>d</sup> Odours move more slowly through the Air than Sound, are more easily dissipated, and are not diffused 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 slow, 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.

cause

*Ex alto primùm quia vix emittitur ex re.*

*Nam penitus fluere, atque recedere rebus odores*

*Significat, quòd fracta magis redolere videntur 700*

*Omnia, quòd contrita, quòd igni conlabefaeta.*

*Deinde videre licet majoribus esse creatum*

*Principiis Voci : Quoniam per saxea septa*

*Non penetrat, quà Vox volgò, Sonitusque feruntur.*

*Quare etiam quod olet, non tam facilè esse videbis 705*

*Investigare, in qua sit regione locatum.*

*Refrigescit enim cunetando plaga per auras :*

*Nec calida ad sensum decurrit nuntia rerum.*

*Errant sæpe Canes itaque, Et vestigia quærun.*

*Nec tamen hoc solis in Odoribus, atque Saporum 710*

*In genere est : Sed item Species rerum, atque Colores*

*Non ita conveniunt ad sensus omnibus omnes,*

*Ut non sint aliis quædam magis acria visu.*

*Quinetiam Gallum, noctem explaudentibus alis*

*Auroram clara consuetum voce vocare, 715*

*Nenu queunt rapidi contra constare Leones,*

*Inque tueri : Ita continuò meminere fugai :*

*Nimirum, quia sunt Gallorum in corpore quædam*

*Semina, quæ, cum sunt oculis immissa Leonum,*

*Pupillas interfodiunt, acremque dolorem 720*

*Præbent, ut nequeant contrà durare feroces ;*

*Cum tamen hæc nostras acies nil lædere possint :*

*Aut quia non penetrant, aut quòd penetrantibus illis*

*Exitus ex Oculis liber datur, in remeando*

*Lædere ne possint ex ulla lumina parte. 725*

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 <sup>e</sup> Cock, that claps his Wings and drives away the Darknes, 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.

<sup>e</sup> 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.

AND

Nunc age, quæ moveant Animum res, accipe, &  
unde,

Quæ veniunt, veniant in Mentem, percipe paucis.  
Principiò hoc dico, rerum Simulacra vagari  
Multa modis multis in cunctas undique parteis  
Tenuia, quæ facile inter se junguntur in auris, 730  
Obvia cum veniunt, ut aranea, bracteaeque auri.  
Quippe etenim multò magis hæc sunt tenuia textu,  
Quàm quæ percipiunt Oculos, visumque laceffunt :  
Corporis hæc quoniam penetrant per rara, cientque  
Tenuem Animi naturam intùs, sensumque laceffunt. 735

Centauros itaque & Scyllarum membra videmus,  
Cerberaeque canum facies, simulacraque eorum,  
Quorum morte obita tellus amplectitur ossa :  
Omne genus quoniam passim simulacra feruntur,  
Partim sponte sua quæ fiunt Aëre in ipso : 740  
Partim quæ variis ab rebus cumque recedunt :  
Et quæ consistunt ex horum facta figuris.  
Nam certè ex vivo Centauri non fit imago :  
Nulla fuit quoniam talis natura animalis.  
Verum ubi equi atque hominis casu convènit imago, 745  
Hærescit faciliè extemplo, quod diximus antè,  
Propter subtilem naturam, & tenuia texta.

Cætera de genere hoc eâdem ratione creantur.  
Quæ cum mobiliter summa levitate feruntur,  
Ut priùs ostendi, faciliè uno commovet ictu 750  
Quaelibet una animum nobis subtilis imago.

AND now attend, <sup>f</sup> and observe in short, what *The Cause* Things affect the Mind, and from whence proceed *of Imagi-* those Objects that make an Impression upon it. *nation.* 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; *Why we think on Monsters.* 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;

<sup>f</sup> 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 memero) facilè hinc cognoscere possis,  
Quatinus hoc simile est oculis, quod mente videmus,  
Atque oculis simili fieri ratione necesse 'st: 755*

*Nunc igitur quoniam docui me fortè Leones  
Cernere per simulacra, oculos quæcunque laceffunt:  
Scire licet mentem simili ratione moveri  
Per simulacra Leonum cætera, quæ videt æquè,  
Nec minùs, atque oculi: nisi quòd imago tenuia cernit.*

*Nec ratione alia, cùm somnus membra profudit, 761  
Mens animi vigilat, nisi quòd simulacra laceffunt,  
Hæc eadem nostros animos, quæ, quom vigilamus:  
Usque adeo, certè ut videamur cernere eum, quem  
Reddita vitæ jam mors, & terra potita 'st. 765*

*Hoc ideo fieri cogit Natura, quòd omnes  
Corporis effecti sensus per membra quiescunt,  
Nec possunt falsum veris convincere rebus.  
Præterea, Meminisse jacet, languetque sopore,  
Nec dissentit, eum mortis, letbique 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 *Why these Fancies seem real.* 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 jaćtare, & cætera membra.*

*Nam fit, ut in somnis facere hoc videatur Imago.*

*Quippe, ubi prima perit, alioque est altera nata 775*

*Endo statu, prior hæc gestum mutasse videtur.*

*Scilicet id fieri celeri ratione putandum 'st.*

*Multaque in his rebus quæruntur, multaque nobis*

*Clarendum 'st, planè si res exponere avemus.*

*Quæritur in primis, quare, quod quoique libido 780*

*Venerit, extemplo Mens cogitet ejus idipsum.*

*Anne voluntatem nostram Simulacra tuentur ?*

*Et simulac volumus, nobis occurrit Imago ?*

*Si Mare, si Terram cordi 'st, si denique Cælum,*

*Convventus hominum, Pompam, Convivia, Pugnas,*

*Omnia sub verbone creat Natura, paratque ? 786*

*Quom præsertim aliis eadem in regione, loquoque*

*Longè dissimileis Animus res cogitet omnis ?*

*Quid porro, in numerum procedere quom Simu-  
lacra*

*Cernimus in somnis, & mollia membra movere, 790*

*Mollia mobiliter quom alternis brachia mittunt ?*

*Et repetunt oculis gestum pede convenienti ?*

*Scilicet arte madent Simulacra & doctæ 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<sup>h</sup>; for when the first Image is gone, and another springs up in a different Posture, 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 what-*Why we*  
ever we desire to think of, the Mind immediately *think on*  
thinks upon that very Thing? Is it that the I-*what we*  
mages are always ready at the Command of the *will.*  
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? <sup>i</sup> Is not  
this

<sup>h</sup> 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.

<sup>i</sup> 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  
F 3 themselves

*An magis illud erit verum, quia tempore in uno 795*  
*Cùm sentimus id: ut cùm vox emittitur una:*  
*Tempore multa latent, ratio quæ comperit esse:*  
*Propterea fit, uti quovis in tempore quæque*  
*Præsto sint Simulacra locis in queisque parata?*  
*Tanta est mobilitas, & eorum copia tanta. 800*

*Et quia tenuia sunt, nisi se contendit, acutè*  
*Cernere non potis est Animus; proinde omnia, quæ*  
*sunt*

*Præterea, pereunt, nisi sic sese ipse paravit.*  
*Ipsè parat sese porro, speratque futurum,*  
*Ut videat, quod consequitur rem quamque: fit ergo. 805*

*Nonne vides, Oculos etiam, quom, tenuia quæ sint,*  
*Cernere cæperunt, contendere se, atque parare,*  
*Nec sine eo fieri posse, ut cernamus acutè?*  
*Et tamen in rebus quoque apertis noscere possis,*  
*Si non advertas Animum, proinde esse, quasi omni 810*  
*Tempore semotæ fuerint, longèque remotæ.*  
*Cur igitur mirum est, Animus si cætera perdit,*  
*Præter quàm quibus est in rebus deditus ipse?*

*Deinde adopinamur de signis maxima parvis:*  
*Ac nos in fraudem induimus, frustramur & ipsi 815*  
*Fit quoque ut interdum non suppeditetur Imago*  
*Ejusdem generis, sed Fœmina quæ fuit antè,*  
*In manibus Vir tum factus videatur adesse:*

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 tenuious 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, ætasque sequatur :*

*Quod ne miremur, Sopor, atque Obliviva curant. 820*

*Illud in his rebus vitium vehementer, & istum  
Effugere errorem, vitareque præmeditator,  
Lumina non facias Oculorum clara creata,  
Prospicere ut possimus : &, ut proferre viai  
Proceros passus, ideo fastigia posse 825  
Surarum, ac Feminum pedibus fundata plicari :  
Brachia tum porro validis ex apta lacertis  
Esse, Manusque datas utraque à parte ministras,  
Ut facere ad vitam possimus, quæ foret usus.*

*Cætera de genere hoc inter quæcunque pretantur :*

*Omnia perversa præpostera sunt ratione. 831*

*Nil adeo quoniam natum 'st in Corpore, ut uti  
Possemus, sed quod natum 'st, id procreat usum ;  
Nec fuit ante Videre Oculorum lumina nata :  
Nec dictis Orare prius, quàm Lingua creata 'st : 835  
Sed potiùs longè Linguae præcessit crigo  
Sermonem, multòque creatæ sunt prius Aures,  
Quàm Sonus est auditus : & omni denique membra  
Antè fuere (ut opinor) eorum quàm foret usus.  
Haud igitur potuere utendi crescere causa. 840*

different Age and Complexion ; but this we are not to wonder at, since the Senfes are all asleep, and we are wholly in a State of Forgetfulness.

BUT in Subjects of this nature, guard yourself <sup>*The Limbs*</sup> to the utmost of your Power against that <sup>*not made*</sup> Error, that gross Mistake ; and never believe that those <sup>*for proper*</sup> 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 hung 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

<sup>k</sup> 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 præ-existed, 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,

*At contrà conferre manu certamina pugnae,*  
*Et lacerare artus, sedareque membra cruore,*  
*Antè fuit multò, quàm lucida tela volarent.*  
*Et volnus vitare priùs natura coëgit,*  
*Quàm daret objectum parmaï læva per artem. 845*  
*Scilicet & fessum corpus mandare quieti,*  
*Multò antiquius est, quàm læti mollia strata.*  
*Et sedare sitim priùs est, quàm pocula, natum.*  
*Hæc igitur possent utendi cognita causa*  
*Credier, ex usu quæ sunt vitæque reperta. 850*  
*Illâ quidem seorsum sunt omnia, quæ priùs ipsa*  
*Nata, dedere suæ post notitiam utilitatis.*  
*Quo genere in primis Sensus, & 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 quouisque animantis.*  
*Quippe etenim fluere, atque recedere corpora rebus*  
*Multa 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 anbelant:*  
*His igitur rebus rarescit Corpus; & omnis*  
*Subruitur natura, dolor quam consequitur rem:*  
*Propterea capitur Cibus, ut suffulciat artus, 865*  
*Et recreet vireis interdatus, atque patentem*  
*Per membra ac venas ut amorem obturet edendi.*

*Humor item discedit in omnia quæ loca cunque.*  
*Poscunt Humorem, glomerataque multa vaporis*  
*Corpora quæ stomacho præbent incendia nostro, 870*  
*Dissupat adveniens liquor, ac restinguit, ut ignem:*

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 practised 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 *Thirst and Hunger.* 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 rarefied, 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 anabela sitis de corpore nostro*

*Abluitur, sic expletur jejuna cupido.*

*Nunc quí fiat, uti Passus proferre queamus, 875*

*Cùm volumus, varièque datum sit membra movere :*

*Et quæ res tantum hoc oneris protrudere nostri*

*Corporis insuerit, dicam : tu percipe dicta.*

*Dico Animo nostro primùm 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 cùm sese ita commovet, ut velit ire,*

*Inq; gredi, ferit extemplo, quæ in Corpore toto 885*

*Per membra, atque artus, Animai dissita vis est :*

*Et facile 'st factu, quoniam conjuncta tenetur.*

*Inde ea proporro Corpus ferit, atque ita tota*

*Paullatim moles protruditur, atque movetur.*

*Præterea, tum rarefcit quoque Corpas, & Aër, 890*

*Scilicet ut debet qui semper mobilis exstat,*

*Per patefacta venit, penetratque foramina largus ;*

*Et dispergitur ad parteis ita quasque minutas*

*Corporis : hinc igitur rebus fit utrinque duabus,*



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.

<sup>1</sup> 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. *How we move when we please.*

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 closely 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 rarefied, 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

<sup>1</sup> 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 rouses 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.

the

*Corpus uti, ut Navis velis, ventoque, feratur.* 895

*Nec tamen illud in his rebus mirabile constat,  
Tantula quòd tantum Corpus Corpuscula possint  
Contorquere, & onus totum convertere nostrum.  
Quippe etenim Ventus subtili 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 levi sustollit Machina nisu.*

*Nunc quibus ille modis Somnus per membra qui-  
etem* 905

*Inriget, atque Animi curas è pectore solvat :  
Suavidicis potiùs, quàm multis versibus, edam,  
Parvus ut est Cycni melior canor, ille Gruum quàm  
Clamor, in ætheriis dispersus nubibus Austri.  
Tu mihi da tenuis aureis, animumque sagacem, 910  
Ne fieri negites, que dicam posse ; retroque  
Vera repulsanti discedas pectore dicta :  
Tutemet in culpa quom sis ne cernere possis.*

*Principiò Somnus fit, ubi est distracta per artus  
Vis Animæ, partimque foras ejecta recessit : 915  
Et partim contrusa magis concessit in altum.  
Dissolvuntur enim tum demum Membra, fluuntque.  
Nam dubium non est, Animæ quin opera sit*

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 *Memmius*, with attentive Ears and a discerning Mind, lest 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, <sup>m</sup> 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

<sup>m</sup> 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 intirely 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.

*Sensus hic in nobis, quem cùm Sopor impedit esse,  
 Tum nobis Animam perturbatam esse putandum' st, 920  
 Ejectamque foras, non omnem; namque jaceret  
 Æterno Corpus perfusum frigore lethi:  
 Quippe ubi nulla latens Animæ pars remaneret  
 In membris, cinere ut multa latet obrutus Ignis,  
 Unde reconstari Sensus per membra repente 925  
 Possit ut ex igni cæco consurgere Flamma.*

*Sed quibus hæc rebus novitas constetur & unde  
 Perturbari Anima, & Corpus languescere possit,  
 Expediam: tu fac ne ventis verba profundam.*

*Principiò, externa Corpus de parte necessum' st, 930  
 Aëriis quoniam vicinum tangitur auris,  
 Tundier, atque ejus crebro pulsariet ictu.  
 Proptereaque fere res omnes, aut Corio sunt,  
 Aut Seta, aut Conchis, aut Callo, aut Cortice testæ.  
 Interiorem etiam partem spirantibus Aër 935  
 Verberat hic idem cùm ducitur, atque reflatur.  
 Quare utrinque secùs quom Corpus vapulet, & quom  
 Perveniant plagæ per parva foramina nobis  
 Corporis ad primas parteis, elementaque prima;  
 Fit quasi paullatim nobis per membra ruina. 940  
 Conturbantur enim posituræ principiorum  
 Corporis, atque Animi, sic, ut pars inde Animæ  
 Ejiciatur & introrsum pars abdita cedit;*

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, <sup>n</sup> 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

<sup>n</sup> 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 distrahta per artus, non queat esse  
Conjuncta inter se, nec motu mutua fungi: 945  
Inter enim sepit aditus Natura, viasque.*

*Ergo Sensus abit mutatis motibus altè.*

*Et quoniam non est quasi quod suffulciat artus,  
Debile fit Corpus, languescunt omnia membra:  
Brachia, Palpebræque cadunt, Poplitesque procum-  
bunt. 950*

*Deinde cibum sequitur Somnus, quia quæ facit Aër;  
Hæc eadem Cibus, in venas dum diditur omneis,  
Efficit: Et multò Sopor ille gravissimus exstat,  
Quem satur, aut lassus capias, quia plurima tum se  
Corpora conturbant magno contusa labore. 955*

*Fit ratione eadem coniectus porro Animai  
Altior, atque foras ejectus largior ejus,  
Et divisior inter se, ac distractior intus.*

*Et quoi quisque fere studio devinctus adhæret,  
Aut quibus in rebus multum sumus antè morati, 960  
Atque in qua ratione fuit contenta magis Mens,  
In Somnis eadem plerumque videmur obire:  
Causidici causas agere, Et componere leges:  
Induperatores pugnare, ac prælia obire:  
Nautæ contractum cum ventis cernere bellum: 965*

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 intirely 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 soundest 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 *Dreams.* 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 quærere rerum  
Semper, & inventam patriis exponere chartis.  
Cætera sic studia, atque artes plerumque videntur  
In Somnis animos Hominum frustrata tenere.*

*Et, quicumque dies multos ex ordine ludis 970  
Adsiduas dederunt operas, plerumque videmus,  
Quom jam destiterint ea Sensibus usurpare,  
Reliquias tamen esse vias in Mente patenteis,  
Qua possint eadem rerum Simulacra venire.  
Permultos itaque illa dies eadem obversantur 975  
Ante oculos, etiam vigilantes ut videantur  
Cernere saltanteis, & mollia membra moventeis :  
Et citbaræ liquidum carmen, chordasque loquenteis  
Auribus accipere, & confessum cernere eundem,  
Scenaique simul varios splendere decores. 980  
Usque adeo magni refert studium, atque voluntas,  
Et quibus in rebus consuerint esse operati  
Non Homines solùm, sed verò Animalia cuncta.*

*Quippe videbis Equos forteis, cùm membra jacebunt,  
In Somnis sudare tamen, spirareque sæpe, 985  
Et quasi de palma summas contendere vireis,  
Tunc quasi Carceribus patefactis sæpe quiete :  
Venantumque Canes in molli sæpe quiete  
Fastant crura tamen subitò, vocesque repente  
Mittunt, & crebras redducunt naribus auras, 990  
Ut vestigia si teneant inventa ferarum.  
Expergesactique sequuntur inania sæpe  
Cervorum simulacra, fugæ quasi dedita cernant ;  
Donec discussis redeant erroribus ad se :*

*At consueta domi Catulorum blanda propago 995  
Degere, sæpe levem ex oculis, volucremque saporem  
Discutere, & corpus de terra conripere instant,  
Proinde quasi ignotas facies, atque ora tuantur.*



self, 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 of 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. *The Dreams of Beasts.*

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 pursue 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 rouse 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.

*Et quàm quæque magis sunt aspera semina eorum,  
 Tam magis in Somnis eadem sævire necessum est. 1000  
 At varicæ fugiunt Volucres, penniisque repente  
 Sollicitant Divûm nocturno tempore lucos,  
 Accipitres somno in leni si prælia, pugnasque  
 Edere sunt perfectantes, visæque volantes.*

*Porro Hominum mentes magnis quæ motibus  
 edunt? 1005*

*Magna etenim sæpe in Somnis faciuntque, geruntque.  
 Reges expugnant, capiuntur, prælia miscent;  
 Tollunt clamores, quasi si jugulentur ibidem:  
 Multi depugnant, gemitusque doloribus edunt;  
 Et quasi pantheræ morsu sævique leonis 1010  
 Mandantur, magnis clamoribus omnia complent.*

*Multi de magnis per Somnum rebu' loquuntur,  
 Indicioque sui facti persæpe fuere:  
 Multi mortem obeunt, multi de montibus altis  
 Se quasi præcipitent ad terram corpore toto 1015  
 Exterrentur, & ex Somno, quasi mentibu' capti,  
 Vix ad se redeunt permoti corporis æstu.*

*Flumen item sitiens, aut fontem propter amœnum  
 Adsidet; & totum prope faucibus occupat amnem.  
 Pusi sæpe lacum propter, se, ac dolia curta, 1020  
 Somno devinæti credunt extollere vestem,  
 Totius humorem saccatum ut corpori' fundant:  
 Cùm Babylonica magnifico splendore rigantur.*

*Tum, quibus ætatis freta primitus insinuantur,  
 Semen ubi ipsa dies membris matura creavit; 1025*

THE sharper the Seeds are of which the Images *Frightful* are formed, they strike in the Sleep with the great- *Dreams.* er Violence; so, many Birds will fly about, and hide themselves in the inmost Recesses 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. <sup>P</sup>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

<sup>P</sup> 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.

Conveniunt Simulacra foris è corpore quoque,  
 Nuntia præclari voltus, pulchrique coloris :  
 Qui ciet inritans loca turgida semine multo,  
 Ut, quasi transactis sæpe omnibu' rebu' profundant  
 Fluminis ingenteis fluctus, vestemque cruentent. 1030  
 Sollicitatur id in nobis, quòd diximus antè,  
 Semen ; adulta ætas cùm primùm roborat artus.  
 Namque alias aliud res commovet, atque laceffit :  
 Ex homine humanum Semen cièt un' Hominis vis.  
 Quod simulatque suis ejectum sedibus exit, 1035  
 Per membra, atque artus decedit corpore toto  
 In loca conveniens nervorum certa ; cietque  
 Continuo parteis genitales corporis ipsas :  
 Inritata tument loca Semine, fitque voluntas  
 Ejicere id, quò se contendit dira libido ; 1040  
 Idque petit corpus mens, unde' st saucia amore ;  
 Namque omnes plerumque cadunt in volnus, & illam  
 Emicat in partem sanguis, unde icimur icetu,  
 Et si comminus est, hostem ruber occupat humor.  
 Sic igitur, Veneris qui telis accipit icetum, 1046  
 Sive Puer membris muliebribus hunc jaculatur,  
 Seu Mulier toto jacet è corpore amorem,  
 Unde feritur, eo tendit, gestitque coire,  
 Et jacere humorem in corpus de corpore ductum : 1050  
 Namque voluptatem præ sagit multa cupido.  
 Hæc Venus est nobis, hinc autem' st nomen Amoris :  
 Hinc illæ primùm Veneris dulcedinis in cor  
 Stillavit gutta, & successit fervida cura.  
 Nam si abest quod ames, præsto 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 so 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.

BUT

*Sed fugitare decet Simulacra, & pabula amoris  
 Absterrere sibi, atque aliò convertere mentem :  
 Et jacere humorem conlectum in corpora quæque :  
 Nec retinere semel conversum unius amore : 1060  
 Et servare sibi curam, certumque dolorem.  
 Ulcus enim vivescit, & inveterascit alendo,  
 Inque dies gliscit furor, atque ærumna gravescit,  
 Si non prima novis conturbes volnera plagis,  
 Volgivagaque vagus Venere ante recentia cures, 1065  
 Aut aliò possis Animi traducere motus.*

*Nec Veneris fructu caret is, qui vitat amorem :  
 Sed potius, quæ sunt sine pœna, commoda sumit.  
 Nam certa, & pura est sanis magis inde voluptas,  
 Quàm miseris, etenim potiundi tempore in ipso 1070  
 Fluctuat incertis erroribus ardor Amantum :  
 Nec constat quid primùm oculis, manibusque fruantur.  
 Quod petiere premunt arētè, faciuntque dolorem  
 Corporis, & denteis inlidunt sæpe labellis,  
 Osculaque adfigunt, quia non est pura voluptas : 1075  
 Et stimuli subsunt, qui instigant lædere idipsum,  
 Quodcunque est, rabies unde illæ germina surgunt.  
 Sed leviter pœnas frangit Venus inter Amorem,  
 Blandaque refrænat morsus admista voluptas.*

*Namq; in eo spes est, unde' est ardoris origo, 1080  
 Restringui quoque posse ab eodem corpore flammam ;  
 Quod fieri contra coram natura repugnat :  
 Unaque res hæc est, quouis quàm plura habemus,  
 Tam magis ardescit dira cuppedine pectus.  
 Nam Cibus, atque Humor membris adsumitur intus,  
 Quæ quoniam certas possunt obsidere parteis, 1086*

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, lest 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 Votaries, whose Mind in the very instant of Enjoyment 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 remain 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 soothes the Pain, and the sweet Pleasure intermixed restrains 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 certain empty Places, therefore the Appetite of Eating

*Hoc facile expletur laticum, frugumque cupido ;  
 Ex hominis verò facie, pulchroque colore,  
 Nil datur in corpus præter Simulacra fruendum  
 Tenuia, quæ vento spes raptat sæpe misella. 1090  
 Ut bibere in somnis Sitiens quom quærit, & humor  
 Non datur, ardorem in membris qui stingere possit :  
 Sed laticum Simulacra petit, frustra que 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 præfagit gaudia corpus, 1100  
 Atque in eo est Venus, ut muliebria conserat arva ;  
 Adfigunt avidè corpus, junguntque salivas  
 Oris, & inspirant pressantes dentibus ora,  
 Nequicquam : Quoniam nihil inde abradere possunt,  
 Nec penetrare, & abire in corpus corpore toto. 1105  
 Nam facere interdum id velle, & certare videntur :  
 Usqueadeo cupidè Veneris compagibus hærent,  
 Membra voluptatis dum vi labefacta liquefcunt.  
 Tandem ubi se rupit nervis conlecta cupido,  
 Parva fit ardoris violenti pausa parumper ; 1110  
 Inde redit rabies eadem, & furor ille revisit,  
 Quom sibi quod cupiant ipsi, contingere quærunr :  
 Nec reperire malum id possunt quæ machina vincat :  
 Usque adeo incerti tabescunt volnere cæco.*

*Adde quòd absument vireis, pereuntque labore.*



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 Excess 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, <sup>9</sup> they waste their Strength, and perish

<sup>9</sup> Here the Poet enumerates the many Inconveniencies that attend upon the Passion of Love, which at best is a wretched Slavery,

*Adde quòd alterius sub nutu degitur ætas. 1116*  
*Labitur interea Res, & Vadimonia fiunt,*  
*Languent officia, atque ægrotat fama vacillans ;*  
*Unguenta, & pulchra in pedibus Sicyonia rident :*  
*Scilicet & grandes viridi cum luce smaragdi 1120*  
*Auro includuntur, teriturque thalassina vestis*  
*Affiduè, & Veneris sudorem exercita potat :*  
*Et benè parta patrum fiunt Anademata, Mitræ :*  
*Interdum in pallam, ac Melitensia, Cæaque vertunt.*  
*Eximia veste & victu Convivia, Ludi, 1125*  
*Pocula crebra, Unguenta, Coronæ, Serta parantur ;*  
*Nequicquam : Quoniam medio de fonte leporum*  
*Surgit amari aliquid, quod in ipsis floribus angat :*  
*Aut quòd conscius ipse Animus se fortè remordet,*  
*Desidiosè agere ætatem, lustrisque perire : 1130*  
*Aut quòd in ambiguo Verbum jaculata reliquit :*  
*Quòd cupido adfixum cordi vivescit, ut Ignis :*  
*Aut nimium jactarè oculos, aliumve tueri*  
*Quod putat, in voltuque videt vestigia risus.*  
*Atque in Amore mala hæc proprio, summèque se-*  
*cundo 1135*  
*Inveniuntur, in adverso verò, atque inopi sunt,*  
*Prendere quæ possis oculorum lumine aperto,*  
*Innumerabilia : ut meliùs vigilare sit ante,*  
*Qua docui ratione, cavereque, ne inlaqueeris.*  
*Nam vitare, plagas in amoris ne laciamur, 1140*

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 increase, their Duty is neglected and their tottering Reputation sickens. Rich Pearls, and fine Shoes of *Sicyon*, shine upon the Feet of their Mistresses; the large Emeralds, with their green Lustre, are set in Gold; and the blue Vest is daily stained, and continually in use drinks up the Sweat of Lust. The Family Estate, acquired with Honour, is changed into Coronets of Ribbands, and Head-dresses sparkling with Jewels; and is sometimes turned into costly Gowns, or Garments of *Melita*, or *Cean* Robes. Besides, they add to these the Luxury of Feasts and stately Couches, Plays, frequent Carousals, Crowns and Garlands. But in vain! for some Bitter bubbles up from the very Fountain of his Delight, and poisons all his Sweets; either his own guilty Mind stings him for leading such a Life of Sloth, and murdering so large a Part of his Time; or his Mistress has dropped some doubtful Word, which kindles in his fond Heart like Fire; or he thinks she 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 Amour ever so fortunate and constant; but the Miseries of a wretched and disastrous Love are innumerable, and obvious to every one with his Eyes open. You had better therefore be upon your Guard beforehand, and observe the Rules I have laid down to prevent your being caught; for 'tis not so difficult to avoid being drawn into the Snares

Slavery, obnoxious to Suspicions and fantastical Surmises. It wastes the Strength; for, if we believe some Physicians, one Drachm of Semen weakens a Man as much as the Loss of sixty Ounces of Blood.

*Non ita difficile est quàm captum retibus ipsis  
Exire : & validos Veneris perrumpere nodos.*

*Et tamen implicitus quoque possis, inque peditus  
Effugere infestum, nisi Tute tibi obvius obstes :*  
*Et prætermittas Animi vitia omnia primùm ;* 1145  
*Tum quæ Corpori sunt ejus, quam percupis, ac vis.*  
*Nam hoc faciunt Homines plerumque cupidine cæci :*  
*Et tribuunt ea, quæ non sunt his commoda verè.*  
*Multimodis igitur pravas, turpeisque videmus  
Esse in deliciis, summoque in honore vigere.* 1150  
*Atque alios alii inrident, Veneremque suadent  
Ut placent, quoniam sædo adficiuntur amore :*  
*Nec sua respiciunt miseri mala maxima sæpe.*  
*Nigra, μελίχροσ est : Immunda & Fætida, ἀκοσμοσ.*  
*Cæsia παλλάδιον Nervosa, & Lignea, δορκάς* 1155  
*Parvola, Pumilio, χαρίτων ἴα, tota merum sal.:*  
*Magna, atque Immanis, κατάπληξις, plenaque honoris:*  
*Balba, loqui non quit, τραυλίξις Muta, pudens est.*  
*At Flagrans, Odiosa, Loquacula, λαμπάδιον fit.*  
*Ἰσχυρὸν ἐρωμένιον tum fit, quom vivere non quit* 1160  
*Præ macie : ἐαδινὴ verò est, jam Mortua tussi.*  
*At Gemina & Mammosa, Ceres est ipsa ab Iaccho.*  
*Simula, σιλωνή, ac Satyra'st, Labiosa, φίλημα.*  
*Cætera de genere hoc longum'st si dicere 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 Nasty 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 lisps; 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 Kiss. It would be endless to say all that might be offered upon this Subject.

*Sed tamen esto jam quantovis oris honore, 1165*  
*Quoi Veneris membris vis omnibus exoriatur :*  
*Nempe aliæ quoque sunt, nempe hac sine viximus*  
*antè ;*

*Nempe eadem facit, & scimus facere omnia turpi :*  
*Et miseram tetris se suffit odoribus ipsa,*  
*Quam famulæ longè fugitant, furtimque cachinnant.*

*At lacrymans exclusus Amator limina sæpe 1171*  
*Floribus & Sertis operit, posteisque superbos*  
*Unguit Amaracino, & foribus miser oscula figit.*

*Quem si jam admissum, venientem offenderit aura*  
*Una modo, causas abeundi quærat honestas: 1175*

*Et meditata diu cadat altè sumpta querela :*  
*Stultitiæque ibi se damnet, tribuisse quod illi*  
*Plus videat, quàm mortali concedere par est.*

*Nec Venereꝝ nostras hoc fallit : quò magis ipsæ*  
*Omnia summopere hos vitæ postscenia celant. 1180*

*Quos retinere volunt, adstrictosque esse in amore :*  
*Nequicquam : Quoniam tu animo tamen omnia possis*  
*Protrahere in lucem, atque omneis anquirere nisus.*  
*Et si bello animo est, & non odiosa vicissim,*  
*Prætermittet te humanis concedere rebus. 1185*

*Nec mulier semper ficto suspirat amore :*  
*Quæ complexa viri corpus cum corpore jungit.*  
*Et tenet adsuetis humectans oscula labris.*  
*Nam facit ex animo sæpe, & communia quærens*  
*Gaudia, sollicitat spatium decurrere amoris : 1190*  
*Nec ratione alia Volucres, Armenta, Feræque,*

BUT allow your Mistrefs 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 Mistrefs be of an open Temper, and not sullen 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 pressed 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 quòd illorum subat, ardet abundans,  
 Natura, & venerem salientum læta retrahat.  
 Nonne vidès etiam, quos mutua sæpe voluptas 1195  
 Vinxit, ut in vinclis communibus excrucientur ?  
 In triviis non sæpe Canes discedere aventes,  
 Divorsi cupidè summis ex viribu' tendunt,  
 Cùm interea validis Veneris compagibus hærent ?  
 Quod facerent nunquam, nisi mutua gaudia nôssent :  
 Quæ lacere in fraudem possent, vinctosque tenere. 1201  
 Quare etiam atque etiam (ut dico) est communi' vo-  
 luptas.*

*Et commiscendo cùm Semen fortè virile  
 Fæmina commulxit subita vi, conripuitque ;  
 Tum similes Matrum materno semine fiunt : 1205  
 Ut Patribus patrio : sed quos utriusque figuræ  
 Esse vides juxtim, miscenteis volta Parentum :  
 Corpore de Patrio, & Materno sanguine crescunt,  
 Semina quom Veneris stimulis excita per artus  
 Obvia confligit conspirans mutuus ardor : 1210  
 Et neque utrum superavit eorum, nec superatum' est.  
 Fit quoque, ut interdum similes existere Avorum  
 Possint, & referant Proavorum sæpe figuras,  
 Propterea, quia multa modis primordia multis  
 Mista suo celant in corpore sæpe Parentes, 1215  
 Quæ Patribus Patres tradunt à stirpe profecta.  
 Inde Venus varia producit sorte figuras :  
 Majorumque refert voltus, vocesque, comasque.  
 Quandoquidem nibilo minùs hæc de semine certo  
 Fiunt, quam Facies, & Corpora, Membraque nobis.  
 Et Muliebre oritur patrio de semine sæclum : 1221  
 Maternoque mares existunt corpore creti.  
 Semper enim partus duplici de semine 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 lusty 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

*Why the Child like the Parents.*

*Or like their Grandfathers.*

*Atque, utri simile est magis id, quodcunque creatur,  
Ejus habet plus parte æqua, quod cernere possis, 1225  
Sive Virum suboles sive 'st Muliebris origo.*

*Nec divina satum genitalem Numina quoiquam  
Absterrent, pater à natis ne dulcibus unquam  
Appelletur, & ut sterili Venere exigat ævum ;  
Quod plerique putant : Et multo sanguine mæsti 1230  
Conspargunt aras, adolentque altaria donis,  
Ut gravidas reddant uxores semine largo :  
Nequicquam Divum numen, sorteisque fatigant.  
Nam steriles nimium crasso sunt semine partim :  
Et liquido præter justum, tenuique vicissim. 1235  
Tenuè, locis quia non potis est adfigere adhæsum,  
Liquitur extemplo, & revocatum cedit ab ortu :  
Crassius hoc porro, quoniam concretius æquo  
Mittitur ; aut non tam prolixo provolat ictu,  
Aut penetrare locos æquè nequit ; aut penetratum,  
Ægrè admiscetur muliebri Semine Semen. 1241*

*Nam multum harmoniæ Veneris differre videntur.  
Atque alias alii complent magis, ex aliisque  
Suscipiunt aliæ pondus magis, inque gravescunt.  
Et multæ steriles Hymenæis antè fuerunt 1245  
Pluribus, & nactæ post sunt tamen, unde puellos  
Suscipere, & partu possent ditescere dulci :  
Et, quibus antè domi fœcundæ sæpe nequissent  
Uxores parere, inventa 'st illis quoque compar  
Natura, ut possent natis munire senectam. 1250*

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 prolific Virtue of the Seed, or prevent a Man's 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 Concern stain the Altars with the Blood of many Victims, 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, because 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 agreeable 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 Children, for they never curse with Barrenness either Man or Woman.

Usque adeo magni refert, ut Semina possint  
 Seminibus commisceri genitaliter apta,  
 Crassaque conveniant liquidis, & liquida crassis,  
 Quæ quoi juncta viro sit femina per Veneris res.

Atque adeo refert, quo victu vita colatur. 1255  
 Namque aliis rebus concreescunt Semina membris,  
 Atque aliis extenuantur, tabentque vicissim.

Et quibus ipsa modis tractetur blanda Voluptas,  
 Id quoque permagni refert: Nam more Ferarum,  
 Quadrupedumque magis ritu, plerumque putantur  
 Concipere Uxores, quia sic loca sumere possunt 1261  
 Pectoribus positis, sublatis Semina lumbis.

Nec molles opu' sunt motus Uxoribus bilum.  
 Nam Mulier prohibet se concipere, atque repugnat,  
 Clunibus ipsa viri Venerem si læta retractet: 1265  
 Atque exossato ciet omni pectore fluctus.

Eicit enim Sulci recta regione, viaque  
 Vomerem, atque locis avertit Seminis ictum.  
 Idque sua causa consuerunt Scorta moveri,  
 Ne complerentur crebrò, gravidæq; jacerent, 1270  
 Et simul ipsa viris Venus ut concinnior esset:  
 Conjugibus quod nil nostris opus esse videtur.

Nec divinitus est interdum, Venerisque sagittis  
 Deteriore fit ut forma Muliercula ametur.

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 Feat 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

*Nam facit ipsa suis interdum Fœmina factis, 1275*  
*Morigerisque modis, & mundo corpori cultu,*  
*Ut faciliè infuescat secum Vir degere vitam.*

*Quod superest, Consuetudo concinnat amorem.*  
*Nam leviter quamvis, quod crebro tunditur iëtu,*  
*Vincitur in longo spatio tamen, atque labascit. 1280*  
*Nonne vides, etiam guttas in saxa cadenteis*  
*Humoris longo in spatio pertundere saxa?*



discreet Conduct, by the Sweetness of her Deportment, 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.*



T H E







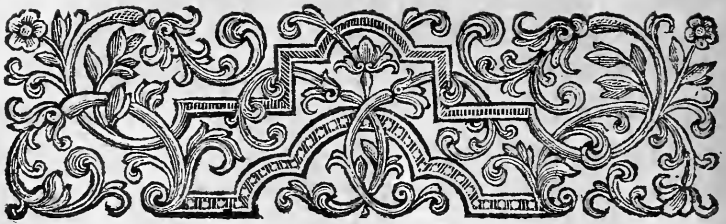
THE  
 ARGUMENT  
 OF THE  
 FIFTH BOOK.

**T**HE 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 shews 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 asserts 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

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 undissolved 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 Resilition 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 Rise 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 Cari*

DE

RERUM NATURA.

LIBER QUINTUS.

**Q**UIS potis est dignum pollenti pectore carmen  
 Condere, pro rerum majestate, hisque repertis?  
 Quisve valet verbis tantum, qui fundere laudes  
 Pro meritis Ejus possit, qui talia nobis  
 Pectore parta suo, quaesitaque praemia liquit? 5  
 Nemo (ut opinor) erit mortali corpore cretus.  
 Nam si, ut ipsa petit majestas cognita rerum,  
 Dicendum est: 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.

**W**HO can, with all his Soul inspired,  
compose fit Numbers, worthy the Ma-  
jesty of so great Things, of these Dis-  
coveries? Or who, in Words alone, can sing  
<sup>a</sup> His Praise, and equal His Deserts, who from the  
Labour of his Mind has left such Benefits, and be-  
stowed 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

<sup>a</sup> 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 *Wis-*  
*dom*, which drives all Uneasiness from the Mind, and in-  
structs us rightly in the Nature of Things; for the *Epicu-*  
*reans* were so modest, that the Name of *Wisdom* they applied  
only to their own Philosophy.

Qui Princeps vitæ rationem invenit eam, quæ  
 Nunc appellatur SAPIENTIA: quiq; per artem 10  
 Fluctibus è tantis vitam, 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; 15

Cùm tamen his posset sine rebus Vita manere:  
 Ut fama'st aliquas etiam nunc vivere genteis.  
 At benè non poterat sine puro pectore vivi.  
 Quò magis hic meritò nobis Deus esse videtur,  
 Ex quo nunc etiam per magnas didita genteis 20  
 Dulcia permulcent animos solatia vitæ.

Herculis antistare autem si facta putabis,  
 Longiùs à vera multò ratione ferere;  
 Quid Nemæus enim nobis nunc magnus biatùs  
 Ille Leonis obsesset, & horrens Arcadius Sus? 25

Denique quid Cretæ taurus, Lernæaque pestis  
 Hydra venenatis posset vallata colubris?  
 Quidve tripeçtora tergemini vis Geryonai?  
 Et Diomedis equi spirantes naribus ignem  
 Ibracen, Bistoniasque plagas, atque Isnara propter, 30  
 Tantopere officerent nobis? Uncisque timendæ  
 Unguibus Arcadiæ volucres Stymphála colentes?

Aureaque Hesperidum servans fulgentia mala  
 Asper, acerba tuens, immani corpore Serpens,  
 Arboris amplexus stirpem: quid deniq; obsesset, 35  
 Propter Atlantæum littus, pelageque severa,  
 Quò neque noster adit quisquam, neque Barbarus audet?  
 Cætera de genere hoc quæ sunt portenta peremta,  
 Si non viçta forent, quid tandem viva nocerent?  
 Nil, ut opinor: Ita ad satietatem terra Ferarum 40

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'erwhelmed in Darknes, has rendered by his Art so calm, and placed in so clear a Light.

COMPARE 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 Tranquility 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 *Nemean* Lion, or the terrible *Arcadian* Boar, affright us now? How could the Bull of *Crete*, or *Hydra*, the Plague of *Lerna*, incompass'd with his poisonous Snakes? Or *Geryon*, with his tripple Face, and the collected Strength of his three Bodies? Or what can we now suffer from *Diomedes'* Horses, from their Nostrils breathing Fire, dreadful to *Thrace*, the *Bistonian* Plains, and all about Mount *Ismarus*? 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 Golden 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 slew, 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

*Nunc etiam sciat, & trepido terrore repleta'st  
Per nemora ac monteis magnos, sylvasque profundas :  
Quæ loca vitandi plerumque est nostra potestas.*

*At nisi purgatum'st pectus, quæ prælia nobis,  
Atque pericula tunc ingratis insinuandum ?* 45

*Quantæ conscindunt hominem Cuppedinis acres  
Sollicitum curæ ? Quantique perinde timores ?  
Quidve Superbia, Spurcities, Petulantia, quantas  
Efficiunt cladeis ? Quid Luxus, Desidiesque ?*

*Hæc igitur qui cuncta subegerit, ex animoque* 50

*Expulerit diētis, non armis ; nonne decebit,  
Hunc Hominem numero Divûm dignarier esse ?  
Cum bene præsertim multa, ac divinitus ipsis  
Immortalibu' de Divis dare diēta suërit ;*

*Atque omnem rerum Naturam pandere diētis.* 55

*Quoius ego ingressus vestigia, nunc rationes  
Persequor, ac doceo diētis, quo quæque creata  
Fœdere sunt, in eo quàm sit durare necessum :  
Nec validas ævi valeant rescindere leges.*

*Quo genere in primis Animi natura reperta'st,* 60  
*Nativo primo consistere corpore creta :*

*Nec posse incolumis magnum durare per ævum :  
Sed Simulacra solere in somnis fallere mentem,  
Cernere cum videamur eum, quem vita reliquit.*

*Quod superest, nunc me huc Rationis detulit ordo,* 65

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 undissolved; 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, <sup>b</sup> as the Order of

<sup>b</sup> 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 mihi, mortali consistere corpore Mundum,  
 Nativumque simul, ratio reddunda sit, esse.  
 Et quibus ille modis congressus Materiai  
 Fundarit Terram, Cælum, Mare, Sidera, Solem,  
 Lunaique globum; tum quæ tellure Animantes 70  
 Exstiterint: Et quæ nullo sint tempore natæ.  
 Quoove modo genus Humanum variante loquela  
 Cæperit inter se vesci per nomina rerum:

- Et quibus ille modis Divûm metus insinuârit  
 Pectora, terrarum qui in orbi sancta tuetur 75  
 Fana, Lacus, Lucos, Aras, Simulacraque Divûm.

Præterea, Solis cursus, Lunæque meatus  
 Expediam, qua vi flestat Natura gubernans:  
 Ne fortè hîc inter Cælum, Terranque reamur  
 Libera sponte sua cursus lustrare perenneis, 80  
 Morigera ad fruges augendas, atque animantæis:  
 Neve aliqua Divûm volvi ratione putemus.

Nam, bene qui didicere Deos securum agere ævum,  
 Si tamen interea mirantur qua ratione  
 Quæque geri possint, præsertim rebus in illis, 85  
 Quæ supera caput ælberis cernuntur in oris;  
 Rursus in antiquas referuntur Relligiones,  
 Et Dominos acreis adsciscunt, omnia posse  
 Quos miseri credunt, ignari quid queat esse,  
 Quid nequeat; finita potestas demique quocique 90  
 Quanam sit ratione, atque altè terminus hærens.

Quod superest, ne Te in promissis plura moremur,  
 Principiò, Maria ac Terras, Cælumque tuere:  
 Horum naturam triplicem, tria corpora, Memmi,

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; lest 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

*Treis species tam dissimileis, tria talia texta, 95*  
*Una dies dabit exitio: multosque per annos*  
*Sustentata ruet moles & machina Mundi.*

*Nec me animi fallit, quàm res nova, miraque*  
*menti*

*Accidat, Exitium Cæli Terræque futurum:*  
*Et quàm difficile id mihi sit pervincere dictis: 100*  
*Ut fit, ubi insolitam rem adportes auribus antè,*  
*Nec tamen hanc possis Oculorum subdere visu,*  
*Nec jacere indu Manus, via quàm munita fidei*  
*Proxima fert humanum in pectus, templaque mentis:*  
*Sed tamen effabor: dictis dabit ipsa fidem res 105*  
*Forsitan, & graviter terrarum motibus orbis*  
*Omnia conquassari in parvo tempore cernes:*  
*Quod procul à nobis flectat Fortuna gubernans:*  
*Et Ratio potiùs, quàm Res persuadeat ipsa,*  
*Succidere horrifeno posse omnia vieta fragore. 110*

*Qua priùs aggrediar quàm de re fundere fata*  
*Sanctiùs, & multò certa ratione magis quàm*  
*Pythia, quæ tripode è Phœbi, lauroque profatur:*  
*Multa tibi expediam doctis solatia dictis:*

*Memmius*, three Beings of so different a Frame, three so wonderfully formed, one Day shall put an End to; and the whole Mass 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 surprizing 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 *Pythonefs* delivers from the Tripod and Laurel of *Apollo*, I shall first offer some Encouragements against your Fears, lest, 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*.

the

*Relligione refrænatus ne fortè rearis,* 115  
*Terras, & Solem, Cælum, Mare, Sidera, Lunam,*  
*Corpore divino debere æterna manere :*  
*Proptereaque putes ritu par esse Gigantum,*  
*Pendere eos pœnas immani pro scelere omneis,*  
*Qui ratione sua disturbent mœnia Mundi,* 120  
*Præclarumque velint cœli restringere Solem,*  
*Immortalia mortali sermone notantes.*

*Quæ procul usqueadeo divino ab numine distent,*  
*Inque deûm numero sic sunt indigna videri,*  
*Notitiam potiùs præbere ut posse putentur,* 125  
*Quid sit vitali motu, sensuque remotum.*  
*Quippe etenim non est cum quovis corpore ut esse*  
*Posse Animi naturâ putetur, Consiliumque.*  
*Sicut in æthere non Arbor, nec in æquore salso*  
*Nubes esse queunt, neque Pisces vivere in arvis ;* 130  
*Nec Cruor in lignis, nec saxis Succus inesse :*  
*Certum, ac dispositum'st, ubi quicquid crescat, & insit.*  
*Sic Animi natura nequit sine Corpore oriri*  
*Sola, neque à nervis, & sanguine longiter esse.*  
*Hoc si posset enim, multò priùs ipsa Animi vis* 135  
*In Capite, aut Humeris, aut imis Calcibus esse*  
*Posset, & innasci quavis in parte soleret :*  
*Tandem in eodem homine, atque in eodem vase maneret.*  
*Quod quoniam nostro quoque constat Corpore certum,*  
*Dispositumque videtur, ubi esse, & crescere possit* 140  
*Seorsum Anima, atque Animus : tantò magis infi-*  
*ciandum,*

*Totum posse extra Corpus, formamque animalem*  
*Putribus in glebis Terrarum, aut Solis in igni,*

*Aut*



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,

*The World  
not an Ani-  
mal.*

*Aut in Aqua durare, aut altis Ætheris oris.*

*Haud igitur constant divino prædita sensu,* 145

*Quandoquidem nequeunt vitaliter esse animata.*

*Illud item non est ut possis credere, sedes*

*Esse Deum sanctas in mundi partibus ullis.*

*Tenuis enim natura Deum, longèque remota*

*Sensibus à nostris, animi vix mente videtur.* 150

*Quæ quoniam manuum tactum suffugit, & ictum,*

*Tactile nil nobis quod sit, contingere debet.*

*Tangere enim non quit, quod tangi non licet ipsum.*

*Quare etiam sedes quoque nostris sedibus esse*

*Dissimiles debent, tenues de corpore eorum.* 155

*Quæ tibi posteriùs largo sermone probabo.*

*Dicere porro, Hominum causa voluisse parare*

*Præclaram mundi naturam, proptereaque*

*Id laudabile opus Divum laudare decere,*

*Æternumque putare, atque immortale futurum,* 160

*Nec fas esse, Deum quod sit ratione vetusta*

*Gentibus humanis fundatum perpetuo ævo.*

*Sollicitare suis ullum de sedibus unquam,*

*Nec verbis vexare, & ab imo evertere summam :*

*Cætera*

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 <sup>d</sup> 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.

*Heaven  
not the  
Seat of the  
Gods.*

AND then, <sup>e</sup> to say that the *Gods* designed this noble Fabrick of the World for the sake 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-

*The World  
not made  
for Man.*

<sup>d</sup> 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 Subtlety of their Nature, can do neither.

<sup>e</sup> *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.

tions.

Cætera de genere hoc adfingere, & addere, Memmi, 165  
 Desipere' st; quid enim Immortalibus, atque Beatis  
 Gratia nostra queat largiri emolumentum,  
 Ut nostra quicquam causa gerere adgrediantur?  
 Quidve novi potuit tantò post antè quietos  
 Inlicere, ut cuperent vitam mutare priorem? 170  
 Nam gaudere novis rebus debere videtur,  
 Cui veteres obsunt; sed, cui nil accidit ægri  
 Tempore in anteacto, cùm pulchrè degeret ævum,  
 Quid potuit novitatis 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, quicumque' st, velle manere  
 In vita donec retinebit blanda voluptas.  
 Qui nunquam verò vitæ gustavit amorem, 180  
 Nec fuit in numero, quid obest non esse creatum?  
 Exemplum porro gignundis rebus, & ipsa  
 Notities Hominum, Divis unde insita primùm?  
 Quid vellent facere ut scirent, animoque viderent?  
 Quoove modo' st unquam vis cognita Principiorum, 185  
 Quidnam inter sese permutato ordine possent,  
 Si non ipsa dedit specimen Natura creandi?

Namque

tions. 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 he 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<sup>f</sup>? For the Seeds of Bodies were

<sup>f</sup> 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 infinito jam tempore percita plagis,  
 Ponderibusque suis consuerunt concita ferri, 190  
 Omnimodisque coire, atque omnia pertentare,  
 Quæcunque inter se possint congressa creare,  
 Ut non sit mirum si in taleis disposituras  
 Deciderunt quoque, & in taleis venere meatus,  
 Qualibus hæc rerum genitur nunc Summa novando. 195*

*Quòd 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 stat prædita culpa. 200*

*Principiò, quantum Cæli tegit impetus ingens,  
 Inde avidam partem Monteis, Sylvæque ferarum  
 Possedere, tenent Rupes, vastæque Paludes,  
 Et Mare, quod latè Terrarum distinet oras.  
 Inde duas porro prope parteis fervidus Ardor, 205  
 Assiduusque Geli casus mortalibus aufert.*

*Quod superest arvi, tamen id Natura sua vi  
 Sentibus obducat, ni vis Humana resistat,  
 Vitæ causa valido consueta bidenti  
 Ingemere, & terram pressis proscindere arâtris. 210  
 Si non facundâs vertentes vomere glebas,  
 Terræque solum subigentes cimus ad ortus :  
 Sponte sua nequeant liquidas existere in auras.*

from all Eternity so variously agitated by Blows from without, and driven so about by their own Weight, and tryed 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 preserve 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.

*The World  
not made  
by an in-  
telligent  
Being.*

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 herself 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 Artift 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.





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, <sup>h</sup> 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.

<sup>h</sup> 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.

*Principiò, quoniam Terrai corpus, & Humor,  
 Aurarumque leves animæ, calidique Vapores,  
 E quibus hæc rerum consistere Summa videtur,  
 Omnia nativo ac mortali corpore constant :*  
*Debet tota eadem Mundi natura putari. 240*  
*Quippe etenim quorum parteis, & membra videmus  
 Corpore nativo & mortalibus esse figuris ;  
 Hæc eadem ferme mortalia cernimus esse,  
 Et nativa simul. Quapropter maxima Mundi  
 Cùm videam membra, ac parteis consumta regigni.  
 Scire licet, Cæli quoque idem Terræque fuisse 246  
 Principiale aliquod tempus, clademque futuram.*

*Illud in his rebus ne me arripuisse rearis,  
 Memmi, quòd Terram, atque ignem mortalia sumpsit  
 Esse: neque Humorem dubitavi, Aurasque perire: 350  
 Atque eadem gigni, rursusque augescere dixi:  
 Principiò, pars Terrai nonnulla perusta  
 Solibus assiduis, multa pulsata pedum vi  
 Pulveris exhalat nebulam, nubisque volantes,  
 Quas validi toto dispergunt aëre venti: 255  
 Pars etiam glebarum ad diluviem revocatur  
 Imbribus, & ripas radentia flumina rodunt.  
 Præterea, pro parte sua quodcunque alid auget,  
 Rодitur: & quoniam dubio procul esse videtur  
 Omniparens, eadem rerum commune sepulcrum: 260*

AND further, <sup>i</sup> Since the Body of the Earth, *The Ele-*  
 the Water, the light Breath of the Air, and the *ments*  
 hot Fire, of which this Universe of Things con- *change-*  
 sists, had all a Beginning, and are all formed of *able.*  
 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 I  
 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 ob-  
 serve, 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,

<sup>i</sup> 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.

*Ergo Terra tibi limatur, & aucta recrefcit.*

*Quod fupereft, Humore novo mare, flumina, fonteis*

*Semper abundare, & latices manare perenneis,*

*Nil opus eft verbis, magnus decurfus aquarum*

*Undique declarat: fed primum quicquid Aquarum 265*

*Tollitur, in fummæque fit, ut nihil Humor abundet,*

*Partim quod validi verrentes æquora venti*

*Deminuunt, radiisque rætens ætherius Sol:*

*Partim quod fubter per terras diditur omneis.*

*Percolatur enim virus, retroque remanat 270*

*Materies Humoris, & ad caput amnibus omnis*

*Convenit; inde fuper terras fluit agmine dulci,*

*Qua via fecta femel liquido pede detulit undas.*

*Æra nunc igitur dicam qui corpore toto*

*Innumerabiliter privas mutatur in horas. 275*

*Semper enim quodcunque fluit de rebus, id omne*

*Æris in magnum fertur mare: qui nifi contrà*

*Corpora retribuatur rebus, recreetque fluenta,*

*Omnia jam refoluta forent, & in Æra verfa.*

*Haud igitur ceffat gigni de rebus, & in res 280*

*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 lest 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 exhales 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<sup>k</sup>, 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 dissolved. The Air therefore is continually produced from

<sup>k</sup> 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 wasting. Now unless the Air constantly restored those Corpuscles to the Bodies from whence they came, all Things by this time would have been wasted to nothing, and totally destroyed; therefore Bodies are perpetually changed into Air, and the Air returns again into Bodies.

*Recidere assiduè, quoniam fluere omnia constat.*

*Largus item liquidi fons luminis, ætherius Sol*

*Inrigat assiduè cælum candore recenti,*

*Suppeditatque novo confestim lumine lumen.*

*Nam primum quicquid fulgoris disperit eij, 285*

*Quòcunque accidit: id licet hinc cognoscere possis,*

*Quòd simul ac primùm nubes succedere Soli*

*Cæpere, & radios inter quasi rumpere lucis,*

*Extemplo inferior pars horum disperit omnis;*

*Terraque inumbratur, qua nimbi cunque feruntur, 290*

*Ut noscas splendore novo res semper egere,*

*Et primum jaëtum fulgoris quemque perire;*

*Nec ratione alia res posse in sole videri,*

*Perpetuò ni suppeditet lucis caput ipsum.*

*Quin etiam nocturna tibi, terrestria quæ sunt, 295*

*Lumina, pendentes Lychni, claræque coruscis*

*Fulguribus, pingues multa caligine Tedæ,*

*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 flammæ.*

*Sic igitur, Solem, Lunam, Stellasque putandum*

*Ex alio, atque alio lucem jaëtare subortu,*

*Et primum quicquid flammæ perdere semper: 305*

Bodies, and continually returns into them again; for Things never remain the same, but are in a perpetual Fluctuation.

THE <sup>1</sup> 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 Intermision; 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;

<sup>1</sup> 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 Mist interposes between the Sun's Orb and Us.

*Inviolabilia hæc ne credas fortè vigere.*

*Denique non Lapides quoq; vinci cernis ab ævo ?  
 Non altas Turreis ruere, & putrescere Saxa ?  
 Non delubra Deùm, Simulacraque fessa fatisci ?  
 Nec sanctum numen fati protollere fineis 319  
 Possè ? Neque adversus naturæ fœdera niti ?  
 Denique non Monumenta virûm dilapsa videmus  
 Cedere proporro, subitoque senescere casu ?  
 Non ruere avolsos Silices à montibus altis,  
 Nec validas ævi vireis perferre, patique 315  
 Finiti ? Neque enim caderent avolsa repente,  
 Ex infinito quæ tempore pertolerassent  
 Omnia tormenta ætatis privata fragore.*

*Denique jam tuere Hoc circum, supraque, quod  
 omnem  
 Continet amplexu terram ; quod procreat ex se 320  
 Omnia (quod quidam memorant) recipitque peremta :  
 Totum nativum mortali corpore constat.  
 Nam quodcunque alias ex se res auget, alitque,  
 Deminui debet, recreari cùm recipit res.*

*Præterea,*



lest 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? <sup>m</sup> 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, <sup>n</sup> 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.

<sup>m</sup> 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.

<sup>n</sup> He confutes those who held that all Things proceed from *Æther*, 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.

FURTHER,

Præterea, si nulla fuit genitalis origo 325  
 Terræ & Cæli, semperque æterna fuere :  
 Cur supera bellum Thebanum, & funera Trojæ,  
 Non alias alii quoque res cecidere Poëtæ ?  
 Quò tot facta virum toties cecinere ? Nec usquam  
 Æternis famæ monumentis insita florent ? 330  
 Verùm (ut opinor) habet novitatem Summa, recensque  
 Natura'st Mundi, neque pridem exordia cepit.  
 Quare etiam quædam nunc Artes expoliuntur,  
 Nunc etiam augefcunt ; nunc addita Navigiis sunt  
 Multa : Modò Organici melicos peperere sonores. 335  
 Denique Natura hæc rerum, Ratioque reperta'st  
 Nuper, & hanc Primus cum primis Ipse repertus  
 Nunc ego sum, in patrias qui possim vertere voces.  
 Quòd si forte fuisse antebac eadem omnia credis :

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 P if you should think that these Things

° He asserts 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.

P 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.

were

*Sed periisse hominum torrenti sæcla vapore,* 340  
*Aut cecidisse urbeis magno vexamine Mundi,*  
*Aut ex imbribus assiduis exisse rapaceis*  
*Per terras Amneis, atque oppida cooperuisse :*  
*Tantò quippe magis victus fateare necesse'st,*  
*Exitium quoque Terrarū, Cælique futurum.* 345  
*Nam cùm res tantis morbis tantisque periclis*  
*Tentarentur, ibi si tristior incubisset*  
*Causa ; darent latè cladem, magnasque ruinas :*  
*Nec ratione alia mortales esse videmur*  
*Inter nos, nisi quòd morbis ægriscimus isdem,* 350  
*Atque illi, quos à vita natura removit.*

*Præterea, quæcunque manent æterna, necesse'st,*  
*Aut quia sunt solido cum corpore, respuere ictus,*  
*Nec penetrare pati sibi quicquam, quod queat arctas*  
*Dissociare intus partes, ut Materiã* 355  
*Corpora sunt, quorum naturam ostendimus antè :*  
*Aut ideo durare ætatem posse per omnem.*  
*Plagarum quia sunt expertia, sicut Inane'st,*  
*Quod manet intactum, neq; ab ictu fungitur bilum :*  
*Aut etiam, quia nulla loci sit copia circum,* 360  
*Quò quasi res possunt discedere, dissolvique.*  
*Sicut Summarum Summa'st æterna, neque extra*  
*Quis locus est, quò diffiliant : Neque corpora sunt,*  
*quæ*

*Possint incidere, & valida dissolvere plaga.*  
*At neq; (uti docui) solido cum corpore Mundi* 365  
*Natura'st, quoniam admistum'st in rebus Inane :*  
*Nec tamen est ut Inane : neq; autem Corpora desunt,*  
*Ex Infinito quæ possint fortè coorta*  
*Proruerè hanc rerum violento turbine Summam,*  
*Aut aliam quamvis cladem importare pericli.* 370  
*Nec porro natura loci, spatiumque profundi*

Deficit,

were long before the same 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 convinc'd, 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, exspergi quo possint mœnia Mundi,  
 Aut alia quavis possint vi pulsa perire.  
 Haud igitur lethi præclusa' st janua Cælo,  
 Nec Soli, Terræque, nec altis Æquoris undis : 375  
 Sed patet immani, & vasto respectat hiatu.  
 Quare etiam Nativa necessum' st confiteare  
 Hæc eadem : neq; enim, mortali corpore quæ sunt,  
 Ex infinito jam tempore adhuc potuissent  
 Immensi validas ævi contemnere vireis. 380  
 Denique tantopere inter se cùm maxima Mundi  
 Pugnent membra, pio nequaquam concita bello ;  
 Nonne vides aliquam longi certaminis ollis  
 Possè dari finem ? Vel cùm Sol, & Vapor omnis  
 Omnibus epotis humoribus exsuperârint, 385  
 Quod facere intendunt, neque adhuc conata patrantur :  
 Tantum suppeditant Annes, ultròque minantur  
 Omnia diluviare ex alto gurgite ponti ;  
 Nequicquam : Quoniam verrentes æquora venti  
 Deminuunt, radiisque retexens ætherius Sol ; 390  
 Et siccare priùs confidunt omnia posse,  
 Quam liquor incepti possit contingere finem.  
 Tantum spirantes æquo certamine bellum  
 Magnis de rebus inter se cernere certant :  
 Cùm semel in terra fuerit superantior Ignis, 395  
 Et semel (ut fama' st) Humor regnârit in arvis.

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, <sup>9</sup> 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 brushing 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

<sup>9</sup> 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 cùm Phaëthonta rapax vi Solis equorum  
 Æthere raptavit toto, terrasque per omneis.*

*At pater Omnipotens ira tum percitus acri* 400

*Magnanimum Phaëthonta repenti fulminis iëtu*

*Deturbavit equis in terram ; Solque cadenti*

*Obvius æternam suscepit lampada mundi ;*

*Disiectosque redegit equos, junxitque trementeis :*

*Inde suum per iter recreavit cuncta gubernans.* 405

*Scilicet, ut veteres Graiùm cecinere Poetæ :*

*Quod procul à verâ st animi ratione repulsum.*

*Ignis enim superare potest, ubi Materiai*

*Ex infinito sunt corpora plura coorta ;*

*Inde cadunt vires aliqua ratione revictæ,* 410

*Aut pereunt res exustæ torrentibus auris :*

*Humor item quondam cœpit superare coortus,*

*Ut fama st hominum, multas quando obruit urbeis :*

*Inde ubi vis aliqua ratione aversa recessit,*

*Ex Infinito fuerat quæcunque coorta,* 415

*Constiterunt Imbres, & Flumina vim minuerunt.*

*Sed quibus ille modis conjectus Materiai*



say) 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 *The World may be burnt.* Horses 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 Horses to the Earth: And *Phæbus* meeting him as he fell, gathered up the scatter'd Rays of the Sun (the great Luminary of the World) brought back the distracted Horses, 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 Masses 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 Masses 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 *How the World began.* Chance the violent Agitation of Matter produced the

† 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

*Fundârit Cælum ac Terram, Pontique profunda,  
Solisque & Lunæ cursus, ex ordine ponam.*

*Nam certè neque consilio Primordia rerum* 420

*Ordine se quæque, atque sagaci mente locârunt ;*

*Nec quos quæque darent motus pepigere profecto :*

*Sed quia multa modis multis Primordia rerum*

*Ex infinito jam tempore percita plagis,*

*Ponderibusque suis consuerunt concita ferri,* 425

*Omnimodisque coire, atque omnia pertentare,*

*Quæcunque inter se possent congressa creare ;*

*Propterea fit, uti magnum volgata per ævum*

*Omnigenos cætus, & motus experiundo,*

*Tandem ea conveniant, quæ ut convenère repente* 430

*Magnarum rerum fiant exordia sæpe,*

*Terraï, Maris, & Cæli, generisque Animantum.*

*Hic neque tum Solis rota cerni lumine largo*

*Alivolans poterat, neque magni Sidera mundi,*

*Nec Mare, nec Cælum, nec denique Terra, neque Aër,*

*Nec similis nostris rebus res ulla videri :* 436

*Sed nova tempestas quædam, molesque coorta.*

*Diffugere inde loci partes cæpere, paresque*

*Cum paribus jungi res, & discludere Mundum,*

*Membraque dividere, & magnas disponere parteis* 440

*Omnigenis è Principiis, discordia quorum*

*Intervalla,*

the Heavens, and the Earth, and the Deeps of the Sea, and the Courses of the Sun and Moon; nor surely the Principles of Things could never fall 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 Mass, and from Seeds of every kind; for the disagreeing Powers of those Seeds so 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 fic poterant conjuncta manere, 445  
 Nec motus inter feſe 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 Terrai corpore quæque, 450  
 Propterea quod erant gravia, & perplexa coibant,*

sturbed their several Courses, Intervals, Conections, 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

*How the Earth was made.*

† It was the Opinion of *Epicurus*, that the Atoms, being embroiled and confused in a Heap together, did by their innate Motion roul 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 these 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 Mass 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 *Elifon* (or, by Expression, from the more dense Corpuscles) that forasmuch as they went not out of the Mass by parallel Ways, they did in the very Progression variously 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 und repressed from them in such a manner, that still new Supplies coming up, the whole ethereal or celestial Re-

*In medioque imas capiebant omnia sedes :*  
*Quæ quantò magis inter se perplexa coibant,*  
*Tam magis expressere ea, quæ Mare, Sidera, Solem,*  
*Lunamque efficerent, & magni mœnia Mundi. 455*  
*Omnia enim magis hæc è lævibus atque rotundis*  
*Seminibus, multòque minoribu' sunt Elementis,*  
*Quàm Tellus : ideo per rara foramina terræ*  
*Partibus erumpens primus se sustulit Æther*  
*Signifer, & multos secum levis abstulit Igneis : 460*  
*Non alia longè ratione, ac sæpe videmus,*  
*Aurea cùm primùm gemmanteis rore per herbas*  
*Matutina rubent radiati lumina Solis,*  
*Exhalantque Lacus nebulam, Fluviique perennes :*  
*Ipsa quoque interdum Tellus fumare videtur : 465*  
*Omnia quæ sursum cùm conciliantur in alto,*  
*Corpore concreto subtexunt nubila Cælum :*  
*Sic igitur tum se levis, ac diffusilis Æther*  
*Corpore concreto circumdatus undique sepsit,*  
*Et latè diffusus in omneis undique parteis, 470*  
*Omnia sic avido complexu cætera sepsit.*

*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 Grass 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 condensed Bodies darken the whole Sky; and so the light and spreading *Æther*, being condensed, stretches widely over every Place; and being diffused on all Sides abroad, embraces every thing with its large Circumference, and incloses it about.

*The Formation of the Heavens.*

THE Beginnings of the <sup>u</sup> Sun and Moon follow next, whose Orbs are rolled in the Air between

gion was aptly made and fabricated by them. This is done (as *Lucretius* observes) in the same manner as when Vapours and Exhalations steam out of the Earth and Water; and being carried aloft, are there condensed and grow into one Body of Clouds, so as to make as it were a Ceiling, under which the Air that remains visible to us is contained.

<sup>u</sup> Having made the Earth as the Foundation of the World, and the Sky the Walls of it (as he calls it) he now places the Sun and Moon, which are of a middle Nature, between the Sky and the Air (as being composed of Principles lighter than those of the Air, and heavier than those of the Sky) in the very Confines of the Air and Sky; where (he tells us) they are in perpetual Motion, as the Lungs and Heart in Animals.

*Quæ neque Terra sibi adscivit neque maximus Æther:  
Quod nec tam fuerint gravia, ut depressa sederent: 475*

*Nec levia, ut possent per summas 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 retractis, Terra repente, 481*

*Maxima, quæ nunc se Ponti plaga cærule tendit,*

*Succidit, & falso suffudit gurgite fossas:*

*Inque dies quantò circum magis Ætheris æstus,*

*Et radii Solis cogebant undique Terram, 485*

*Verberibus crebris extrema ad limina apertam,*

*In medio ut propulsa suo condensa coiret:*

*Tam magis expressus falsus de corpore Sudor*

*Augebat Mare manando, camposque natanteis:*

*Et tantò magis illa foras elapsa volabant 490*

*Corpora multa Vaporis, & Aëris, altaque Cæli*

*Densebant procul à terris fulgentia templa:*

*Sidebant Campi, crescebant Montibus altis*

*Ascensus: neque enim poterant subsidere Saxa,*

*Nec pariter tantundem omnes succumbere partes. 495*

*Sic igitur Terræ concreto corpore pondus*

*Constitit,*



the *Æther* 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 enlarged 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 Mass that sunk together to the Bottom, being pressed on all Sides by the Beams of the Sun and the Heat of the Sky, contracted 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 Mass, being more hard and stiff than the others, they did not all subside 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, & subsedit funditus, ut Fæx.*

*Inde Mare, inde Aër, inde Æther ignifer ipse.*

*Corporibus liquidis sunt omnia pura reliëta; 500*

*Et leviora aliis alia: & liquidissimus Æther,*

*Atque levissimus Aërias super influit auras;*

*Nec liquidum corpus turbantibus Aëris auris*

*Commiscet: sinit hæc violentis omnia verti*

*Turbiniibus: sinit incertis turbare procellis: 505*

*Ipse suos Igneis certo fert impete labens.*

*Nam modicè fluere, atque uno posse Æthera nisu,*

*Significat Ponti Mare, certo quod fluit æstu,*

*Unum labendi conservans usque tenorem.*

*Motibus Astrorum nunc quæ sit causa, canamus. 510*

*Principiò, magnus Cæli si vertitur orbis:*

*Ex utraque Polum parti premere Aëra nobis*

*Dicendum' est, extraque tenere, & claudere utrinque;*

*Inde Alium supera fluere, atque intendere eòdem,*

heavy Body, stood firm; and its whole Mass, like thick Mud, fell to the Bottom, and sunk the lowest, as the Dregs of all.

AND thus were produced the Sea, the Air, and the <sup>y</sup> Sky (or the *Æther*) 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 *Æther* 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 *Æther* calmly glides, and bears along its Fires in a fixed Course; and that the *Æther* 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 <sup>Why the</sup> the Motion of the Stars: And first, If the whole <sup>Stars</sup> Orb of the Heavens be moved, then we must allow, <sup>move.</sup> 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

<sup>y</sup> The resplendent and liquid *Æther*, 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 *Æther* is not in the least incredible, since the *Euxine* Sea does the like, and is continually flowing into the *Propontick*, without changing its Course.

<sup>z</sup> 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.

the

Quo volvenda micant æterni Sidera mundi : 515  
 Ast Alium subter, contrà qui subvebat Orbem :  
 Ut fluxivos versare Rotas, atque Haustra videmus.  
 Est etiam quoque, uti possit Cælum omne manere  
 In statione, tamen cùm lucida signa ferantur :  
 Sive quod inclusi rapidi sunt Ætheris æstus, 520  
 Quærentesque viam circumversantur, & Ignes  
 Passim per Cæli volvunt se immania templa :  
 Sive aliunde fluens alicunde extrinsecus Aër  
 Versat agens igneis : sive Ipsi serpere possunt,  
 Quo cujusque cibus vocat, atque invitat eunteis ; 525  
 Flammea per cælum pascenteis corpora passim.  
 Nam quid in hoc Mundo sit eorum, ponere certum  
 Difficile'st : sed quid possit, fiatque per Omne  
 In variis Mundis varia ratione creatis,  
 Id doceo : plureisque sequor disponere causas 530  
 Motibus astrorum, quæ possint esse per Omne.  
 E quibus una tamen sit & hæc quoque causa necesse'st,  
 Quæ vegeat motum signis : sed quæ sit earum  
 Præcipere, haud quaquam'st pedetentim progredientis,  
 Terraq; ut in media Mundi regione quiescat, 535  
 Evanescere paullatim, & decrescere pondus  
 Convenit : atque aliam naturam subter habere  
 Ex ineunte ævo conjunctam, atque uniter aptam  
 Partibus Aëriis Mundi, quibus insita sedit.

Propterea

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 <sup>a</sup> congenial Ties, and upon which it

*Why the Earth doth not fall.*

<sup>a</sup> 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.

should

Propterea non est oneri, neque deprimit auras : 540  
 Et sua cuique Homini nullo sunt pondere Membra :  
 Nec Caput est oneri Collo, nec denique totum  
 Corporis in Pedibus pondus sentimus inesse.  
 At quæcunque foris veniunt impôstaque nobis  
 Pondera sunt, lædunt permultò sæpe minora : 545  
 Usqueadeo magni refert, cui quæ adjaceat res.  
 Sic igitur Tellus non est aliena repente  
 Adlata, atque auris aliunde objecta alienis :  
 Sed pariter prima concepta ab origine Mundi :  
 Certa que pars ejus, quasi nobis Membra videtur. 550  
 Præterea grandi tonitru concussa repente  
 Terra, supra se quæ sunt, concutit omnia motu :  
 Quod facere haud ulla posset ratione, nisi esset  
 Partibus aëriis mundi, cæloque revincta.  
 Nam communibus inter se radicibus hærent 555  
 Ex ineunte ævo conjuncta, atque uniter apta.  
 Nonne vides etiam, quàm magno pondere nobis  
 Sustineat corpus tenuissima vis Animæ,  
 Propterea quia tam conjuncta, atque uniter apta est ?  
 Denique jam saltu pernicipi tollere Corpus 560  
 Quis potis est, nisi vis Animæ, quæ membra gubernat ?  
 Jamne vides quantum tenuis natura valere  
 Possit, ubi est conjuncta gravi cum corpore, ut Aër  
 Conjunctus terris, & nobis est Animi vis ?

should be staid. 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 565*  
*Esse potest, nostris quàm sensibus esse videtur.*  
*Nam quibus è spatiis cunque Ignes lumina possunt*  
*Adjicere, & calidum membris adflare vaporem,*  
*Illa ipsa intervalla nihil de corpore limant*  
*Flammarum, nibilo ad speciem' st contractior Ignis. 570*  
*Proinde calor quoniam Solis, lumenque profusum*  
*Perveniant nostros ad sensus, & loca tingunt:*  
*Forma quoque hinc Solis debet flumque videri,*  
*Nil adeo ut possis plùs, aut minùs addere verè.*

*Lunaque sive notho fertur loca lumine lustrans, 575*  
*Sive suam proprio jactat de corpore lucem,*  
*Quicquid id est, nibilò fertur majore figura,*  
*Quàm, nostris oculis quam cernimus, esse videtur.*  
*Nam priùs omnia, quæ longè remmota tuemur*  
*Aëra per multum specie confusa videntur, 580*  
*Quam minimum filum: quapropter Luna necesse' st,*  
*Quandoquidem claram speciem, certamque figuram*  
*Præbet, ut est oris extremis cunque notata,*  
*Quanta hæc cunq; fuat, tanta hinc videatur in alto.*

*Postremò, quoscunque vides hinc ætheris Igneis, 585*  
*(Quandoquidem, quoscunque in terris cernimus igneis.*  
*Dum tremor est clarus, dum cernitur ardor eorum;*



BUT further; <sup>b</sup> 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 Sense she appears: For all Objects we look upon at a great Distance, and through a long Tract of Air, shew 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

<sup>b</sup> 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, cùm longiùs absint,)  
Scire licet, perquàm pauxillo posse minores 590  
Esse, vel exigua majores parte, brevique.*

*Illud item non est mirandum, qua ratione  
Tantulus ille queat tantum Sol mittere lumen,  
Quod maria, ac terras omneis cælumque rigando  
Compleat, & calido perfundat cuncta vapore. 595*

*Nam licet hinc Mundi patefactum totius unum  
Largifluum fontem scatere, atque erumpere flumen  
Ex omni Mundo, quò sic Elementa vaporis  
Undique conveniunt, & sic conjectus eorum  
Confluit, ex uno capite hic ut profluat ardor; 600  
Nonne vides etiam, quàm latè parvus aquai  
Prata riget Fons interdum, campisque redundet?*

*Est etiam quoque, uti non magno Solis ab igni  
Aëra percipiat calidis fervoribus ardor.  
Opportunus ita' st si fortè, & idoneus Aër, 605*

*Ut queat accendi parvis ardoribus iētus:  
Quod genus interdum segetes stipulamque videmus  
Accipere ex una scintilla incendia passim,  
Forsitan & rosea Sol altè lampade lucens  
Possideat multum cæcis fervoribus ignem 610  
Circum se, nullo qui sit fulgore notatus,  
Æstiferum ut tantum radiorum exaugeat iētum.*

*Nec ratio Solis simplex, nec certa patescit,*

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 <sup>c</sup> 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 <sup>d</sup> one certain Reason be assigned, why the Sun declines from its Summer Height, and bends

<sup>c</sup> 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.

<sup>d</sup> He proposes the Opinion of *Democritus*, who taught that the lower Spheres are rolled and whirled around by the highest

Quo pacto æstivis è partibus Ægocerotis  
 Brumaleis adeat flexus, atque inde revertens 615  
 Canceris ut vertat metas se ad Solstitialeis :  
 Lunaque mensibus id spatium videatur obire,  
 Annua Sol in quo consumit tempora cursu :  
 Non, inquam, simplex his rebus reddita causa est.  
 Nam fieri vel cum primis id posse videtur, 620  
 Democriti quod sancta viri sententia ponit :  
 Quantò quæque magis sint terram Sidera propter,  
 Tantò posse minùs cum cæli turbine ferri.  
 Evanescere enim rapidas illius, & acreis  
 Imminui subter vireis, ideoque relinqui 625  
 Paullatim Solem cum posterioribus Signis,  
 Inferior multò quòd sit, quàm fervida Signa :  
 Et magis hoc Lunam : & quantò demissior ejus  
 Cursus abest procul à Cælo, terrisque propinquat,  
 Tantò posse minùs cum Signis tendere cursum. 630  
 Flaccidiore etiam quantò jam turbine fertur  
 Inferior quàm Sol, tantò magis omnia Signa.  
 Hanc adipiscuntur, circum, præterque feruntur.  
 Propterea fit, ut Hæc ad Signum quodque reverti  
 Mobiliùs videatur, ad Hanc quia Signa revifunt. 635  
 Fit quoque ut è mundi transversis partibus Aër  
 Alternis certo fluere alter tempore possit,

bends his Winter Course towards the Tropick of *Capricorn*, and then returning, reaches the Tropick 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 oftner: And therefore the Moon seems the sooner to run through all the Signs, when in reality the Signs return to her.

OR perhaps <sup>e</sup> 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.

<sup>e</sup> He introduces two several Airs waiting on the Sun and Moon; by one of which they are shoved down from *Cancer*

Qui queat æstivis Solem detrudere Signis  
 Brumaleis usque ad flexus, gelidumque rigorem :  
 Et qui rejiciat gelidis à Frigoris umbris 640  
 Æstiferas usque in parteis, & fervida Signa.  
 Et ratione pari Lunam, Stellasque putandum' st,  
 Quæ volvunt magnos in magnis orbibus annos,  
 Aëribus posse alternis à partibus ire.  
 Nonne vides etiam diversis nubila ventis 645  
 Diversas ire in parteis, inferna supernis ?  
 Quí minús illa queant per magnos ætheris orbis  
 Æstibus inter se diversis Sidera ferri ?  
 At nox obruit ingenti caligine terras,  
 Aut ubi de longo cursu Sol extima cæli 650  
 Impulit, atque suos efflavit languidus igneis  
 Concussos itere, & labefactos aëre multo :  
 Aut quia sub terras cursum convertere cogit  
 Vis eadem, supera terras quæ pertulit orbem.  
 Tempore item certo roseam Matuta per oras 655  
 Ætheris Auroram defert, & 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 <sup>f</sup> 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 <sup>g</sup> *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.

<sup>f</sup> 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.

<sup>g</sup> 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.

attempts

*Anticipat cœlum radiis accendere tentans :*  
*Aut quia conveniunt ignes, & semina multa*  
*Confluere ardoris consuerunt tempore certo, 660*  
*Quæ faciunt Solis nova semper lumina gigni.*  
*Quod genus Idæis fama'st è montibus altis*  
*Dispersos igneis orienti lumine cerni :*  
*Inde coire globum quasi in unum, & conficere orbem.*

*Nec tamen illud in his rebus mirabile debet 665*  
*Esse, quòd hæc Ignis tam certo tempore possint*  
*Semina confluere, & Solis reparare nitorem.*  
*Multa videmus enim, certo quæ tempore fiunt*  
*Omnibus in rebus, florescunt tempore certo*  
*Arbusta, & certo dimittunt tempore florem. 670*  
*Nec minùs in certo denteis cadere imperat ætas*  
*Tempore, & impubem molli pubescere veste,*  
*Et pariter mollem malis demittere barbam.*  
*Fulmina postremo, Nix, Imbres, Nubila, Venti,*  
*Non nimis incertis fiunt in partibus anni. 675*  
*\*Namque ubi sic fuerunt causarum exordia prima,*  
*Atque uti res mundi cecidere ab origine prima,*  
*Consequa natura'st jam rerum ex ordinè certo.*

*Crescere itemq; Dies licet, & tabescere Nocteis,*  
*Et minui Luces, cùm sumant augmina Noctes : 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 pursue the same, and continue still to act in the same certain Order.

THE <sup>h</sup> Days likewise increase, and the Nights grow shorter; and the Nights increase, and the Days

<sup>h</sup> 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

*Horizon*

*Aut quia Sol idem sub terras, atque superne,  
 Imparibus currens anfractibus ætheris oras  
 Partit : Et in parteis non æquas dividit orbem :  
 Et quod ad alterutra detraxit parte, reponit  
 Ejus in adversa tantò plus parte relatus, 685  
 Donicum ad id signum cæli pervénit, ubi anni  
 Nodus nocturnas exæquat lucibus umbras.  
 Nam medio cursu flatus Aquilonis, & Austri,  
 Distinet æquato cælum discrimine metas,  
 Propter Signiferi posituram totius orbis ; 690  
 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 <sup>i</sup> *Æquinoctial* Line, and makes equal Day and Night; for this Line is equally distant from the the two <sup>k</sup> Tropicks, which are the Bounds of the Sun's Motion towards the North and South; and this is owing to the Obliquity of the <sup>i</sup> *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 *Æquator*, makes two *Æquinoxes* 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 *Æquinox*, that is, those that live under the *Æquator*, 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.

<sup>i</sup> 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*.

<sup>k</sup> The Tropicks of *Cancer* and *Capricorn* are the utmost Bounds of the Sun's Revolution. They are called Tropicks from the Greek *Τροπή*, which signifies *Conversion* or *Turning*; because the Sun, when he comes at those Circles, turns back again towards the *Æquator*, nor ever goes beyond those Bounds, either towards the North or South.

<sup>i</sup> The *Zodiack* is a Circle, or *Zone*, obliquely passing from East to West, before the *Æquinoctial* 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

*Obliquo terras, & cælum lumine lustrans :*

*Ut ratio declarat Eorum, qui loca cæli*

*Omnia dispositis signis ornata notârunt :*

*Aut quia crassior est certis in partibus Aër, 695*

*Sub terris ideo tremulum jubar hæstat ignis,*

*Nec penetrare potest facilè atque emergere ad ortus.*

*Propterea noëtes hiberno tempore longæ*

*Cessant, dum veniat radiatum insigne diei :*

*Aut etiam, quia sic alternis partibus anni 700*

*Tardiùs & citiùs consuerunt confluere ignes,*

*Qui faciant Solem certa de surgere parte.*

*Luna potest Solis radiis percussa nitere,*

*Inque dies majus lumen convertere nobis*

*Ad speciem, quantum Solis secedit ab orbe, 705*

*Domicum cum contra pleno benè lumine fulsit,*

*Atque oriens obitus ejus super edita vidit :*

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, <sup>m</sup> 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 <sup>n</sup> 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*.

<sup>m</sup> These two Reasons are trifling.

<sup>n</sup> 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.

and

*Inde minutatim retrò quasi condere lumen  
 Debet item, quantò propius jam Solis ad ignem  
 Labitur ex alia Signorum parte per orbem : 710  
 Ut faciunt, Lunam qui fingunt esse pilai  
 Consimilem, cursusque viam sub Sole tenere :  
 Propterea fit uti videantur dicere verum.*

*Est etiam quoque uti proprio cum lumine possit  
 Volvier, & varias splendoris reddere formas. 715  
 Corpus enim licet esse aliud, quod fertur, & unà  
 Labitur omnimodis occursans efficiensque,  
 Nec potis est cerni, quia cassum lumine fertur.*

*Versarique potest, globus ut, si fortè, pilai  
 Dimidia ex parti candenti lumine tinctus : 720  
 Versandoque globum varianteis edere formas,  
 Domicum eam partem, quæcunq; est ignibus aucta,  
 Ad speciem vertit nobis, oculosque patenteis :  
 Inde minutatim retrò contorquet, & aufert  
 Luciferam partem glomeraminis, atque pilai : 725  
 Ut Babylonica Chaldeum doctrina refutans  
 Astrologorum artem contrà convincere tendit :  
 Proinde quasi fieri nequeat quod pugnat uterque,  
 Aut minùs hoc illo sit cur amplectier 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 <sup>P</sup> 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. *The Phases of the Moon.*

AND perhaps <sup>Q</sup> 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.

<sup>P</sup> If the Moon shines with unborrowed Light, then we must imagine that another Body, which is opacous and totally dark, always moves with the Moon, and obstructs and turns away her Beams.

<sup>Q</sup> 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* 730  
*Ordine formarum certo, certisque figuris :*  
*Inque dies privos abolere quæque creata,*  
*Atque alia illius reparari in parte, locoque,*  
*Difficile est ratione docere, & vincere verbis :*  
*Ordine cum videas tam certo multa creari.* 735  
*It Ver, & Venus, & Veneris prænuntius antè*  
*Pinnatus graditur Zephyrus vestigia propter :*  
*Flora quibus mater præspersgens ante viai*  
*Cuncta coloribus egregiis, & odoribus opplet.*  
*Inde loci sequitur Calor aridus, & comes una,* 740  
*Pulverulenta Ceres, & Etesia flabra Aquilonum.*  
*Inde Autumnus adit : Graditur simul Euius Euan :*  
*Inde aliæ tempestates, ventique sequuntur,*  
*Altitonans Vulturinus, & Auster fulmine pollens :*  
*Tandem Bruma niveis adfert, pigrumque rigorem* 745  
*Reddit, Hyems sequitur, crepitans ac dentibus Algos.*  
*Quò minus est mirum, si certo tempore Luna*  
*Gignitur, & certo deletur tempore rursus :*  
*Cum fieri possint tam certo tempore multa.*  
*Solis item quoque defectus, Lunæq; latebras,* 750  
*Pluribus è causis fieri tibi posse putandum est.*



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 *Etesian* 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 Frost, 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 <sup>r</sup> Eclipses of the Sun and Moon may proceed, you may suppose, from many Causes; for *Eclipses.*

<sup>r</sup> The Sun (he says) is eclipsed when the Moon, or any opacous 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 opacous 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 queat Terram secludere Solis  
 Lumine, & à terris altum caput obstruere eij,  
 Objiciens cæcum radiis ardentibus orbem :  
 Tempore eodem aliud facere id non posse putetur 755  
 Corpus, quod cassum labatur lumine semper ?  
 Solque suos etiam dimittere languidus igneis  
 Tempore cur certo nequeat, recreareque lumen,  
 Cùm loca præterit flammis infesta per auras :  
 Quæ faciunt igneis interstingui atque perire ? 760  
 Et cur Terra queat Lunam spoliare vicissim  
 Lumine, & oppressum Solem super ipsa tenere,  
 Menstrua dum rigidas Coni perlabitur umbras :  
 Tempore eodem aliud nequeat succurrere Lunæ  
 Corpus, vel supera Solis perlabier orbem, 765  
 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 cæcula Mundi  
 Qua fieri quicquid posset ratione, resolvi : 771  
 Solis uti varios cursus, Lunæque meatus  
 Noscere possimus, quæ vis, & causa cieret :  
 Quove modo soleant offeçto lumine obire,  
 Et nec opinanteis tenebris obducere terras : 775  
 Cùm quasi connivent, & aperto lumine rursum  
 Omnia convisunt clara loca candida luce.  
 Nunc redeo ad Mundi novitatem, & mollia terræ  
 Arva, novo fetu quid primùm in luminis oras  
 Tollere, & incertis tentârît credere ventis. 780  
 Principio, genus Herbarum, viridemque nitorem  
 Terra dedit circum colleis ; camposque per omneis  
 Florida fulserunt viridanti 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 Wandrings of the Moon; in what manner their several Rays are intercepted, and the Earth is covered over with surprising Darknes, 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, *Herbs first produced.* 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 immixtis certamen habenis.* 785

*Ut Pluma atque Pili primum Setæque creantur  
Quadrupedum in membris, & corpore pennipotentum:*

*Sic nova tum Tellus herbas virgultaque primum  
Sustulit: inde loci Mortalia sæcla creavit*

*Multa modis multis varia ratione coorta.* 790

*Nam neque de Cælo cecidisse Animalia possunt,  
Nec terrestria de falsis exisse lacunis.*

*Linqitur ut meritò maternum nomen adepta*

*Terra sit, è terra quoniam sunt cuncta creata.*

*Multaque nunc etiam existunt animalia Terris,* 795

*Imbribus, & calido Solis concreta vapore.*

*Quò minùs est mirum, si tum sunt plura coorta,*

*Et majora nova Tellure, atque Æthere adulto.*

*Principiò, genus Alituum, variæque Volucres*

*Ova relinquebant exclusæ tempore verno:* 800

*Folliculos ut nunc teretes æstate Cicadæ*

*Linqunt, sponte sua victum, vitamque petentes.*

*Tum tibi Terra dedit primum Mortalia sæcla:*

*Multus enim Calor, atque Humor superabat in arvis.*

*Hinc ubi quæque loci regio opportuna dabatur,* 805

*Crescebant Uteri terræ radicibus apti;*

*Quos ubi tempore maturo patefecerat ætas*

*Infantum*

and Nature gave the several Trees a Power to <sup>Then</sup> raise themselves, and grow up with their spreading <sup>Trees.</sup> Branches into the Air. As Feathers, and Hair, and Bristles, 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 less, 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 *Æther* in the Flower of his Age.

OF all the Animal Creation, the feather'd Kind, <sup>Birds the</sup> and various Breed of Birds, first broke through the <sup>first Ani-</sup> 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 <sup>s</sup> Earth next produced the Race of Men and Beasts, for then there <sup>The Origin</sup> was abundance of vital Heat and Moisture in the <sup>of Man.</sup> 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

<sup>s</sup> 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 less than Women now, when they bring forth Children.

*Infantum fugiens humorem, aurasque petissens,  
 Convertebat ibi Natura foramina terræ,  
 Et succum venis cogebat fundere apertis* 810  
*Consimilem Lactis : sicut nunc Fœmina quæque  
 Cùm peperit, dulci repletur Lacte, quòd omnis  
 Impetus in mammas convertitur ille alimenti.  
 Terra cibum Pueris, vestem Vapor, Herba cubile  
 Præbebat multa & molli lanugine abundans.* 815

*At novitas Mundi nec frigora dura ciebat,  
 Nec nimios æstus, nec magnis viribus auras.  
 Omnia enim pariter crescunt, & robora sumunt.  
 Quare etiam atque etiam maternum nomen adepta  
 Terra tenet meritò, quoniam genus ipsa creavit* 820  
*Humanum, atque Animal prope certo tempore fudit  
 Omne, quod in magnis bacchatur montibus passim,  
 Aëriasque simul Volucris variantibus formis.*

*Sed quia finem aliquam pariendi debet habere,  
 Destitit, ut Mulier spatio defessâ vetusto,* 825  
*Mutat enim mundi naturam totius ætas,  
 Ex alioque alius status excipere omnia debet,  
 Nec manet ulla sui similis res : omnia migrant,  
 Omnia commutat Natura, & vertere cogit.  
 Namque aliud putrescit, & ævo debile languet : 830  
 Porro aliud concrefcit, & è contentibus exit.  
 Sic igitur Mundi naturam totius ætas  
 Mutat, & ex alio Terram status excipit alter,  
 Quod potuit, nequeat : possit, quod non tulit antè.*

*Multaque tum Tellus etiam portenta creare* 835  
*Conata'st, 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 Liquer 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 vultu cæca reperta,  
 Vincæque membrorum per totum corpus adhæsu: 840

Nec facere ut possent quicquam, nec cedere quoquam,  
 Nec vitare malum, nec sumere quod foret usus.

Cætera de genere hoc monstra, ac portenta creabat:

Nequicquam: quoniam Natura absterruit auctum:

Nec potuere cupitum ætalis tangere florem, 845

Nec reperire cibum, nec jungi per Veneris res.

Multa videmus enim rebus concurrere debere,

Ut propagando possint producere sæcla.

Pabula primùm ut sint, genitalia deinde per artus

Semina quæ possint membris manare remissis: 850

Fœminaque ut maribus conjungi possit, habendum

Mutua queis nestant inter se gaudia, utrisque.

Multaque tum interiisse Animantium sæcla necesse est.

Nec potuisse propagando procudere prolem.

Nam quæcunque vides vesci vitalibus auris, 855

Aut Dolus, aut Virtus, aut denique Mobilitas est

Ex ineunte ævo genus id tutata reservans.

Multaque sunt, nobis ex Utilitate sua quæ

Commendata manent tutelæ tradita nostræ,

Principiò, genus acre Leonum, sævaque sæcla 860

Tutata est Virtus, Vulpeis Dolus, & Fuga Cervos.

At levissomna Canum fido cum pectore corda,

Et genus omne, quod est Veterino semine partum,

Lanigeræque simul pecudes, & Bucera sæcla,

Omnia sunt Hominum tutelæ tradita, Memini. 865

Nam cupidè fugere Feras, pacemque secutæ

Sunt, & larga suo sine pabula parta labore:

Quæ



between the two Sexes, not properly of both, yet *The Earth* not far removed from either) some without Feet, *produced* and others without Hands; many without a Mouth *Monsters.* 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 Swiftnes, 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 Swiftnes 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

*Quæ damus Utilitatis eorum præmia causa.*

*At, queis nil horum tribuit Natura, nec ipsa  
Sponte sua possent ut vivere, nec dare nobis 870  
Utilitatem aliquam, quare pateremur eorum  
Præsidio nostro pasci genus, esseque tutam?  
Scilicet hæc aliis prædæ, lucroque jacebant  
Indupedita suis fatalibus omnia vinclis,  
Donicum ad interitum genus id natura redegit. 875*

*Sed neque Centauri fuerunt, neque tempore in ullo  
Esse queat duplici natura, & corpore bino  
Ex alienigenis membris compacta potestas,  
Hinc illinc par vis ut non sic esse potis sit.  
Id licet hinc quamvis hebeti cognoscere corde. 880*

*Principio, circum tribus ætis impiger annis  
Floret Equus, Puer haudquaquam: quin sæpe etiam nun  
Ubera mammaram in somnis lactantia quærit.  
Post ubi Equum validæ vires ætate senectæ,  
Membraque deficiunt fugienti languida vita: 885  
Tum demum Pueris ævo florente juvenas  
Occipit, & molli vestit lanugine malas:*

*Ne fortè ex Homine, & Veterino semine equorum  
Confieri credas Centauros posse, nec esse:  
Aut rapidis canibus succinctas semimarinis 890  
Corporibus Scyllas, & cætera de genere horum,  
Inter se quorum discordia membra videmus:  
Quæ neque florescunt pariter, neque robora sumunt  
Corporibus, neque projiciunt ætate senectæ:  
Nec simili Venere ardescunt, nec moribus unis 895  
Conveniunt, nec sunt eadem jucunda per artus.*

*Quippe videre 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 *No 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. *tours nor Chimæra's.* 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

Flamma quidem verò cum corpora fulva leonum  
 Tam soleat torrere, atque urere, quàm genus omne 900  
 Visceris, in terris quodcunque & sanguinis extet :  
 Quis fieri potuit, triplici cum corpore ut una  
 Prima Leo, postrema Draco, media ipsa Chimæra  
 Ore foras acrem efflaret de corpore flammam ?

Quare etiam Tellure nova, Cæloque recenti 905  
 Telia qui fingit potuisse animalia gigni,  
 Nixus in hoc uno novitatis nomine inani ;  
 Multa licet simili ratione effutiat ore :

Aurea tum dicat per terras Flumina volgò  
 Fluxisse, & Gemmis florere Arbusta suèsse : 910  
 Aut Hominem tanto membrorum esse impete natum,  
 Trans maria alta pedum nisus ut ponere posset ;  
 Et manibus totum circum se vertere cælum.

Nam quòd multa fuere in terris semina rerum,  
 Tempore quo primùm Tellus Animalia fudit : 915  
 Nil tamen est signi, mistas potuisse creari

Inter se pecudes, compactaque membra animantum :  
 Propterea quia quæ de terris nunc quoque abundant  
 Herbarum genera, ac Fruges, Arbustaque læta,  
 Non tamen inter se possint complexa creari. 920

Res sic quæque suo ritu procedit : & omnes  
 Fædere naturæ certo discrimina servant.

Et genus humanum multò fuit illud in arvis  
 Durius, ut decuit, Tellus quod dura creâisset :  
 Et majoribus & solidis magis ossibus intus 925  
 Fundatum, & validis aptum per viscera nervis ;  
 Nec facilè ex æstu, nec frigore quod caperetur :  
 Nec novitate cibi nec labi corporis ulla.

Multoque per cælum Solis volventia lustra  
 Volgivago vitam tractabant more ferarum. 930  
 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 *Æther* 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 she 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 *of Man.* Earth bore them. They were built within upon larger and more solid Bones, and their Limbs were strained 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 falcibu' ramos.  
 Quod Sol, atque Imbres dederant, quod Terra creárat  
 Sponte sua, satis id placabat peētorá donum ; 936  
 Glandiferas inter curabant corpora quercus  
 Plerumque, & quæ nunc hiberno tempore cernis  
 Arbuta Pæniceo fieri matura colere,  
 Plurima tum Tellus etiam majora ferebat : 940  
 Multaque præterea novitas tum florida mundi  
 Pabula dia tulit, miseris mortalibus ampla.  
 At sedare sitim Fluvii Pontesque vocabant :  
 Ut nunc montibus è magnis decursus aquai  
 Claricitat latè sitientia sæcla Ferarum. 945  
 Denique noctivagi silvestria templa tenebant  
 Nympharum, quibus exhibant humore fluenta  
 Lubrica, proluvie larga lavere humida saxa,  
 Humida saxa super viridi stillantia musco :  
 Et partim plano scatere atque erumpere campo. 950  
 Necdum res Igni scibant tractare, nec uti  
 Pellibus, & Spoliis corpus vestire ferarum :  
 Sed Nemora, atque cavos Monteis, Sylvasque colebant,  
 Et frutices inter condebant squalida membra,  
 Verbera ventorum vitare imbreisque coacti. 955  
 Nec commune bonum poterant spectare, nec ullis  
 Moribus inter se scibant, nec legibus uti.  
 Quod cuique obtulerat prædæ fortuna, ferebat,  
 Sponte sua sibi quisque valere & vivere doctus.  
 Et Venus in sylvis jungebat corpora amantum. 960  
 Conciliabat enim vel mutua quamque cupido,  
 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

*Vel pretium, Glandes, atque Arbuta, vel Pira lecta.*

*Et manuum mira freti virtute, pedumque,  
Consectabantur sylvestria sæcla Ferarum* 965

*Missilibus saxis, & magno pondere clavæ,  
Multaque vincebant, vitabant pauca latebris :  
Setigerisque pares Suibus sylvestria membra  
Nuda dabant terræ nocturno tempore capti,  
Circum se foliis ac frondibus involventes.* 970

*Nec plangore diem magno, Solemque per agros  
Querebant pavidi, palantes noctis in umbris :  
Sed taciti respectabant, somnoque sepulti,  
Dum rosea face Sol inferret lumina cælo.*

*A parvis quod enim consuerant cernere semper* 975  
*Alterno tenebras, & lucem tempore gigni,  
Non erat, ut fieri posset, mirarier unquam,  
Nec diffidere, ne Terras æterna teneret  
Nox, in perpetuum detracto lumine Solis.*

*Sed magis illud erat curæ, quod sæcla Ferarum* 980  
*Infestam miseris faciebant sæpe quietem :  
Ejectique domo fugiebant saxea tecta  
Setigeri Suis adventu, validique Leonis,  
Atque intempesta cedebant nocte paventes  
Hospitibus sævis instrata cubilia fronde.* 985

*Nec nimio tum plus, quam nunc, mortalia sæcla  
Dulcia linquebant labentis lumina vitæ.  
Unus enim tum quisque magis deprensus eorum  
Pabula viva feris præbebat dentibus haustus :  
Et nemora ac monteis gemitu, sylvasque replebat,* 990  
*Viva videns vivo sepeliri viscera busto.*

*At quos effugium servârat, corpore adest,*

*Posterius*



were softned by Presents, a Dish of Acorns, of Apples, or of choice Pears.

THESE unpolished Mortals, relying on the mighty Strength of their Arms, and the Swiftnes 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 overtook them, like bristly 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 Darknes 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 used to observe, that there was a regular Succession of Light and Darknes; and therefore they did not think it possible, they never feared or distrusted, that an Eternal Night should cover the Earth, or that the Light of the Sun would never more return.

BUT what disturb'd them most was, that the wild Beasts often surpris'd and destroyed 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 strong Lion; and trembling, in the dead of Night, to give up their Beds of Leaves to their cruel Guests.

AND yet, in those Times, fewer died than do now; for then the One unhappy Wretch that was seized, was sure to be devoured alive between their cruel Teeth; and therefore he filled the Groves, the Mountains and the Woods with his Cries, as he saw his reeking Bowels buried in a living Grave: But those who saved themselves by

Posterius tremulas super ulcera terra tenentes  
 Palmas, horrifera accibant vocibus Orcum,  
 Domicum eos vita privârunt Vermina sæva, 995  
 Experteis opis, ignaros quid volnera vellent.

At non multa Virum sub signis millia ducta  
 Una dies dabat exitio: nec turbida ponti  
 Æquora lædebant naves ad saxa, virosque.  
 Sed temerè, incafsùm Mare fluctibu' sæpe coortis 1000  
 Sævibat, leviterque minas ponebat inaneis,  
 Nec poterat quemquam placidi pellacia Ponti  
 Subdola pellicere in fraudem ridentibus undis.  
 Improba navigii ratio tum cæca jacebat.

Tum Pœnuria deinde cibi, languentia letho 1005  
 Membra dabat: contra nunc rerum Copia mersat.  
 Illi imprudentes, ipsi sibi sæpe Venenum  
 Vergebant: nunc dant aliis sollertiùs ipsi.

Inde Casas postquam, ac Pelleis, Ignemque pararunt,  
 Et Mulier conjuncta Viro concessit in unum: 1010  
 Castaque privatae Veneris connubia læta  
 Cognita sunt, Prolemque ex se videre creatam:  
 Tum genus Humanum primùm mollescere cœpit.  
 Ignis enim curavit, ut alia corpora frigus  
 Non ita jam possent cœli sub tegmine ferre: 1015  
 Et Venus imminuit vireis, Puerique parentum  
 Blanditiis facilè ingenium fregère superbum.  
 Tunc & amicitiam cœperunt jungere habentes  
 Finitima inter se nec lædere, nec violare:  
 Et pueros commendârunt, muliebrequæ sæclum 1020  
 Vocibus, & gestu, cùm barbè significarent,  
 Imbecillorum esse æquum misererier omnium.  
 Non tamen omnimodis poterat concordia gigni:

Sed

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 understood as proper Objects of Compassion. This mutual Amity, though it did not prevail among

O 3

them

*Sed bona, magnaue pars servabant fœdera casti:*  
*Aut genus Humanum jam tum foret omne peremptum,*  
*Nec potuisset adhuc perducere sæcla propago. 1026*  
*At varios linguæ Sonitus Natura subegit*  
*Mittere, & Utilitas expressit nomina rerum:*  
*Non alia longè ratione, atque ipsa videtur*  
*Protrahere ad gestum Pueros infantia linguæ, 1030*  
*Cùm facit, ut digito, quæ sint præsentia, monstrent.*  
*Sentit enim vim quisque suam, quam possit abuti,*  
*Cornua nata priùs vitulo quam frontibus extent,*  
*Illis iratus petit, atque infensus inurget.*  
*At catuli Pantherarum, scymnique Leonum 1035*  
*Unguibus, ac pedibus jam tum, morsuque repugnant,*  
*Vixdum cùm 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.

*How  
Names  
were first  
imposed.*

† It may be reasonably asked, how Leagues could be made, and Societies established, 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, caused 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 distribuisse* 1040  
*Rebus, & inde Homines didicisse vocabula prima,*  
*Desipere'st : nam cur Hic posset cuncta notare*  
*Vocibus, & varios sonitus emittere linguæ,*  
*Tempore eodem Alii facere id non quisse putentur ?*

*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 scirent, animoque viderent ?*  
*Cogere item plureis Unus, victosque domare*  
*Non poterat, rerum ut perdiscere nomina vellent : 1050*  
*Nec ratione docere ulla, suadereque surdis,*  
*Quid factò esset opus, faciles neq; enim paterentur,*  
*Nec ratione ulla sibi ferrent amplius 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,*  
*Cùm Pécudes mutæ, cùm denique sæcla Ferarum*  
*Dissimileis soleant voces variasque ciere,*  
*Cùm Metus, aut Dolor est, & cùm jam Gaudia gliscunt ?*  
*Quippe etenim id licet è rebus cognoscere apertis. 1061*

*Inritata canum cùm primum magna Molossùm*  
*Mollia ricta fremunt duros nudantia denteis :*  
*Longè alio sonitu rabie distraëta minantur :*  
*Et cùm jam latrant, & vocibus omnia complent,* 1065  
*At catulos blandè cùm lingua lambere tentant,*  
*Aut ubi eos jaëtant pedibus, morsuque petentes,*  
*Suspensis teneros imitantur dentibus haustus :*

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 Mastiffs 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

Longè alio pacto gannitu vocis adulant :  
 Et cùm deserti baubantur in ædibus, aut cùm 1070  
 Plorantes fugiunt summissò corpore plagas.

Denique non Hinnitus item differre videtur,  
 Inter equas ubi Equus florenti ætate juvencus  
 Pinnigeri sævit calcaribus ietus Amoris ;  
 Et fremitum patulis sub naribus edit ad arma : 1075  
 Ac cùm sis aliàs concussis artubus hinnit ?

Postremò, genus Aituum, variæque volucres,  
 Accipitres, atque Ossifragæ, Mergique marinis  
 Fluctibus in salsis victum vitamque petentes,  
 Longè alias alio jaciunt in tempore voces, 1080  
 Et cum de victu certant, prædaque repugnant :  
 Et partim mutant cum tempestatibus unà  
 Raucifonos cantus, Cornicum ut sæcla vetusta,  
 Corvorumque greges, ubi aquam dicuntur & imbreis  
 Poscere, & interdum ventos aurasque vocare. 1085  
 Ergo, si varii sensus Animalia cogunt,  
 Muta tamen cum sint, varias emittere voces :  
 Quantò mortaleis magis æquum 'st tum potuisse  
 Dissimileis alia, atque alia res voce notare ?

Illud in his rebus tacitus ne fortè requiras : 1090  
 Fulmen detulit in terras mortalibus Ignem  
 Primitus : Inde omnis Flammarum diditur ardor.  
 Multa videmus enim cælestibus incita flammis  
 Fulgere, cùm cæli donavit plaga vapores.  
 Et ramosa tamen cùm ventis pulsa vacillans 1095  
 Æstuat 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 Neighings 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 Lust among the Mares, and, eager to engage, with open Nostrils snuffs the Scent ? Does not he shake his trembling 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 different 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 forward by the Winds, grow hot, and by the violent Agitation.

*Et micat interdum flammæ fervidus ardor,  
Mutua dum inter se rami stirpesque teruntur :  
Quorum utrumque dedisse potest mortalibus Ignem.* 1100

*Inde Cibum coquere, ac flammæ mollire vapore  
Sol docuit, quoniam mitescere multa videbant  
Verberibus radiorum, atque æstu victa per agros.  
Inque dies magis hi victum vitamque priorem  
Commutare novis monstrabant rebus, & igni, 1105  
Ingenio qui præstabant, & corde vigeant.*

*Condere cæperunt urbeis, arcemque locare  
Præsidium Reges ipsi sibi, per fugiumque :  
Et pecudes, & agros divisere, atque dedere  
Pro Facie cujusque, & Viribus, Ingenioque. 1110  
Nam Facies multum valuit, viresque vigeant :  
Posteriùs Res inventa est, Aurumque repertum,  
Quod facilè & Validis, & Pulchris demsit honorem.  
Divitioris enim sectam plerumque sequuntur  
Quamlibet & fortes, & pulchro corpore creti. 1115*

*Quòd si quis vera vitam ratione gubernet,  
Divitiæ grandes homini sunt, Vivere parcè  
Æquo animo ; neque enim est unquam pænuria Parvi :  
At claros se homines voluere esse, atque potenteis,  
Ut fundamento stabili fortuna maneret, 1120  
Et placidam possent Opulenti degere vitam ;  
Nequicquam : Quoniam ad summum succedere ho-  
norem*

*Certantes, iter infestum fecere viai.  
Et tamen è summo quasi Fulmen dejicet istos  
Invidia interdum contemptim in Tartara tetra : 1125*

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, *The Division of* and to raise Castles, as a Defence to themselves, *Lands.* 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<sup>u</sup>, 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

<sup>u</sup> 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 satiùs multò jam sit parere quietum,  
 Quàm regere Imperio res velle, & Regna tenere.  
 Proinde, sive incassùm defessi sanguine sudent  
 Angustum per iter luētantes Ambitionis :  
 Invidia quoniam seu Fulmine summa vaporant 1130  
 Plerumque, & quæ sunt aliis magis edita cunq̄ue :  
 Quandoquidem sapiunt alieno ex ore : petuntque  
 Res ex auditis potiùs, quàm sensibus ipsis :  
 Nec magis id nunc est, nec erit mox, quàm fuit antè.  
 Ergo Regibus occisis subversa jacebat 1135  
 Pristina majestas soliorum, & sceptrâ superba ;  
 Et capitis Summi præclarum Insigne cruentum  
 Sub pedibus Volgi magnum lugebat honorem :  
 Nam cupidè conculcatur nimis antè metutum. 1139  
 Res itaque ad summam Fæcem Turbasque redibat,  
 Imperium sibi cùm, ac summatum quisque petebat.  
 Inde Magistratum partim docuere creare,  
 Juraque constituère. ut vellent legibus uti :  
 Nam genus Humanum defessum vi colere ævum,  
 Ex inimiciis languebat ; quò magis ipsum 1145  
 Sponte sua cecidit sub leges, arētaque jura :  
 Acriùs ex Ira quòd enim se quisque parabat  
 Ulcisci, quàm nunc concessum' est Legibus æquis ;  
 Hanc ob rem' est Homines pertæsum vi colere ævum :  
 Unde Metus maculat pœnarum præmia vitæ. 1150  
 Circumretit enim Vis atque Injuria quemque,  
 Atque, unde exorta' est, ad eum plerumque revertit ;  
 Nec facile' est placidam ac pacatam degere vitam,  
 Qui violat factis 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 Highest of them all are blasted 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 Case; it always was so, and ever will be.

THOSE Kings then being slain, 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 spurn at what we too much feared before.

THE Government now returned to the Rabble, *Republics.* and the very Dregs of the People; whilst every one reached at Empire, and the Supreme Power for himself. And therefore the Wisest among them taught the rest to settle a Magistracy, and to establish 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 Resentment, pursued 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 soured all their Pleasures of Life with the Fears of Punishment; for Force and Wrong intangle the Man that uses them, and commonly recoil upon the Head that contrived them. Nor is it easy for that Man to live a secure and pleasant Life; who by his Conduct breaks through the common

*Etsi fallit enim Divûm genus Humanumque, 1155*  
*Perpetuò tamen id fore clam diffidere debet :*  
*Quippe ubi se multi per Somnia sæpe loquentes,*  
*Aut Morbo delirantes procrâxe ferantur,*  
*Et celata diu in medium peccata dedisse.*

*Nunc quæ causa Deûm per magnas Numina genteis*  
*Pervolgârit, & ararum compleverit urbeis, 1161*  
*Suscipiendaque curârit sollennia sacra,*  
*“ Quæ nunc in magnis florent sacra rebu' locisque :*  
*Unde etiam nunc est Mortalibus insitus Horror,*  
*Qui delubra Deûm nova toto suscitât orbi 1165*  
*Terrarum, & festis cogit celebrare diebus :*  
*Non ita difficile' st rationem reddere verbis.*

*Quippe etenim jam tum Divûm Mortalia sæcla*  
*Egregias animo facies vigilante videbant,*  
*Et magis in somnis mirando corporis auctu. 1170*  
*His igitur sensum tribuebant, propterea quod*  
*Membra movere videbantur, vocesque superbas*  
*Mittere pro facie præclara, & viribus amplis :*  
*Æternamque dabant vitam, quia semper eorum*  
*Suppeditabatur facies, & forma manebat, 1175*  
*(Et manet omnino) & quòd tantis viribus auctos*  
*Non temere ulla vi convinci posse putabant.*  
*Fortunisque ideo longè præstare putabant*  
*Quòd mortis timor haud quemquam vexaret eorum,*  
*Et simul in somnis quia multa, & mira videbant 1180*  
*Efficere, & nullum capere ipsos inde laborem.*

*Præterea, Cæli rationes ordine certo,*  
*Et varia anhorum cernebant tempora verti ;*

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 dispersed 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 majestick 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 habebant omnia Divis 1185  
Tradere, & illorum nutu facere omnia flecti.*

*In Cœloque Deum sedes, & templa locarunt,  
Per cœlum volvi quia Sol, & Luna videntur :  
Luna, Dies, & Nox, & noctis Signa severa,  
Noctivæque faces cœli, Flammæque volantes, 1190  
Nubila, Ros, Imbres, Nix, Venti, Fulmina, Grando,  
Et rapidi fremitus, & murmura magna minarum.*

*O genus infelix humanum ! talia Divis  
Cum tribuit facta, atque iras adjunxit acerbis :  
Quantos tum gemitus Ipsi sibi, quantaque nobis 1195  
Volnera ; quas lacrymas peperere minoribus nostris !*

*Nec Pietas ulla est velatum sæpe videri  
Vertier ad Lapidem, atque omneis accedere ad aras ;  
Nec procumbere humi prostratum, & pandere palmas.  
Antè Deum delubra, nec aras sanguine multo 1200  
Spargere quadrupedum, nec votis necere vota :  
Sed magè pacata posse omnia mente tueri.*

*Nam cum suspicimus magni cœlestia mundi  
Templa super, stellisque micantibus æthera fixum,  
Et venit in mentem Solis, Lunæque viarum, 1205  
Tunc aliis oppressa malis in pectore cura  
Illa quoque expergescens caput erigere insti,  
Ecquæ fortè Deum nobis immensa potestas  
Sit vario motu quæ candida sidera verset.  
Tentat enim dubiam mentem rationis egestas, 1210  
Ecquæenam fuerit Mundi genitalis origo :*



could discover nothing of the Causes of these Revolutions, and therefore they had this Resort; 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 Meteors wandering in the Dark, the flying Lightning, the Clouds, the Dew, the Rain, the Snow, the Thunder, the Hail, the dreadful Noises, the Threatnings and loud Roarings of the Sky.

UNHAPPY Race of Men! to ascribe such Events, 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 Posterity?

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 Altars 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 Courses 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* endowed with so great Power, that can direct the various 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

*Et simul, ecquæ sit finis, quoad mœnia Mundi,  
Et tanti motus hunc possint ferre laborem :*

*An Divinitus æterna donata salute,  
Perpetuo possint ævi labentia tractu, 1215  
Immensi validas ævi contemnere vireis.*

*Præterea, cui non animus formidine Divûm  
Contrahitur? cui non contrepunt membra pavore,  
Fulminis horribili cùm plaga torrida Tellus 1219  
Contremit, & magnum percurrunt Murmura cælum?  
Non Populi, Gentesque tremunt? Regesque superbi  
Conripiunt Divûm perculsi membra timore,  
Ne quod ob admissum fœdè, dictumve superbè  
Pœnarum grave sit solvendi tempus adaëctum?  
Summa etiam cum vis violenti per mare venti 1225  
Induperatorem classis super æquora verrit,  
Cum validis pariter Legionibus, atque Elephantis :  
Non Divûm pacem votis adit? ac prece quæsit  
Ventorum pavidus paces, animasque secundas?  
Nequicquam : quoniam violento turbine sæpe 1230  
Conreptus nibilo fertur minùs ad vada lethi :  
Usqueadeo res humanas Vis abdita quædam  
Obterit, & pulcbros Fasceis, sævasque Secureis  
Proculcare, ac ludibrio sibi habere videtur.*

*Denique sub pedibus Tellus cùm tota vacillat, 1235  
Concussæque cadunt urbes, dubiæque minantur :  
Quid mirum si se temnunt Mortalia sæcla?  
Atque potestates magnas, mirasque relinquunt  
In rebus vireis Divûm, quæ cunãta gubernent?*

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 despise 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 scorch'd 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, despise their own weak selves, and ascribe infinite Power and irresistible Force to the *Gods*, by which they direct and govern the World?

Quod superest, Æs, atque Aurum, Ferrumque  
reperit' est, 1240

Et simul argenti pondus, Plumbique potestas :  
Ignis ubi ingenteis sylvas ardore cremarat  
Montibus in magnis, seu cæli fulmine misso,  
Sive quod inter se bellum sylvestre gerentes,  
Hostibus intulerant ignem formidinis ergo ; 1245

Sive quod induc'ti Terræ bonitate, volebant  
Pandere agros pingueis, & pascua reddere rura :  
Sive Feras interficere, & ditescere præda :  
Nam Fovea, atque Igni prius est venarier ortum,  
Quàm sepire Plagis saltum, Canibusque ciere. 1250

Quicquid id est, quacunque è causa flammeus ardor  
Horribili sonitu sylvas exederat altis  
Ab radicibus, & terram percoxerat igni,  
Manabat venis ferventibus in loca terræ  
Concava conveniens Argenti rivus & Auri, 1255

Æris item & Plumbi ; quæ cùm concreta videbant  
Posteriori claro in terris splendere colore,  
Tollebant nitido capti, levique lepore :  
Et simili formata videbant esse figura,  
Atque lacunarum fuerant vestigia cuique, 1260

Tum penetrabat eos, posse hæc liquefacta calore,  
Quamlibet in formam, & faciem decurrere rerum,  
Et prorsum quamvis in acuta ac tenuia posse  
Mucronum duci fastigia procudendo ;  
Ut sibi tela parent, sylvasque excidere possint, 1265

Materiem lævare, dolare, ac radere tigna,  
Et terebrare etiam, ac pertundere, perque forare.  
Nec minùs Argento facere hæc Auroque parabant,  
Quàm validi primùm violentis viribus Æris :  
Nequicquam : Quoniam cedebat victa potestas, 1270

Nec poterat pariter durum sufferre laborem.  
Nam fuit in pretio magis Æs, Aurumque jacebat  
Propter

AND last of all Brass, 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 enrich 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

Propter inutilitatem hebeti mucrone retusum,  
 Nunc jacet Æs, Aurum in summum successit honorem:  
 Sic volvenda ætas commutat tempora rerum, 1275  
 Quod fuit in pretio, fit nullo denique honore:  
 Porro aliud succedit, & è contemptibus exit,  
 Inque dies magis appetitur, floretque repertum  
 Laudibus, & miro'st mortaleis inter honore.

Nunc tibi quo pacto Ferri natura reperta 1280  
 Sit, facile'st ipsum per te cognoscere, Memmi,  
 Arma antiqua, Manus, Ungues, Dentefq; fuerunt,  
 Et Lapides, & item sylvarum fragmina Rami,  
 Et Flammæ, atque Ignes postquam sunt cognita primum:  
 Posterius Ferri vis est, Ærisque reperta: 1285

Et prior Æris erat quàm Ferri cognitus usus:  
 Quò facilis magis est natura, & copia major.  
 Ære solum terræ tractabant, Æreque belli  
 Miscebant fluctus, & volnera vasta serebant,  
 Et pecus, atque agros adimebant: Nam facilè ollis  
 Omnia cedebant armatis nuda & inerma. 1291

Inde minutatim processit Ferreus ensis,  
 Versaque in opprobrium species est Falcis abenæ,  
 Et Ferro cæpere solum proscindere terræ;  
 Exæquataque sunt creperi certamina belli. 1295

Et prius est reppertum in Equi conscendere costas,  
 Et moderarier hunc frænis dextraque vigere;  
 Quàm Bijugo curru belli tentare pericla:  
 Et bijugo prius est, quàm bis conjungere Binos,  
 Et quàm falciferos inventum ascendere Currus. 1300  
 Inde boves Lucas turrato corpore tetros

Value, and Gold was neglected, as a blunt, useless 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 Instruments 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 Dangers 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 volnera Pœni  
 Sufferre, & magnas Martis turbare catervas.  
 Sic alid ex alio peperit Discordia tristis,  
 Horribile humanis quod gentibus esset in armis : 1305  
 Inque dies belli terroribus addidit augmen.  
 Tentârunt etiam Tauros in mœnere belli,  
 Expertique Sues sævos sunt mittere in hosteis ;  
 Et validos Parthi præ se misere Leones  
 Cum ductoribus armatis, sævisque magistris, 1310  
 Qui moderarier hos possent, vincisque tenere ;  
 Nequicquam : Quoniam permista cæde calentes  
 Turbabant sævi nullo discrimine turmas,  
 Terrificas capitum quatientes undique cristas ;  
 Nec poterant Equites fremitu perterrita equorum 1315  
 Pectora mulcere, & frænis convertere in hosteis.  
 Inritata Lææ jaciebant corpora saltu  
 Undique, & advorsum venientibus ora petebant :  
 Et nec-opinanteis à tergo diripiebant,  
 Deplexæq; dabant in terram volnere vinclos : 1320  
 Morsibus adfixæ validis, atque unguibus uncis.  
 Factabantque Sues Tauri, pedibusque terebant ;  
 Et latera, ac ventres hauribant subter equorum  
 Cornibus, ad terramque minanti mente ruebant.  
 At validis socios cædebant dentibus Aprî, 1325  
 “ Tela infracta suo tingentes sanguine sævi :  
 “ In se fracta suo tingentes sanguine tela :  
 Permistasque dabant equitum peditumque ruinas.  
 Nam transversa feros exhibant dentis adaçtus  
 Jumenta, aut pedibus ventos erecta petebant : 1330  
 Nequicquam : Quoniam à nervis succisa videres  
 Concidere, atque gravi terram consternere casu.



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 tasted, they broke in their Fury through the Troops of Friends and Enemies without Distinction, shaking their dreadful Manes on every Side. Nor could the Horsemen 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 antè domi domitos satis esse putabant,  
 Effervescere cernebant in rebus agundis,  
 Volneribus, clamore, fuga, terrore, tumultu: 1335  
 Nec poterant ullam partem reducere eorum.  
 Diffugiebat enim varium genus omne ferarum:  
 Ut nunc sæpe boves Lucæ ferro malè maētæ  
 Diffugiunt, fera facta suis cùm multa dedere.  
 Sic fuit, ut facerent: Sed vix adducor, ut antè 1340  
 Non quierint animo præsentire, atque videre,  
 Quàm commune malum fuerat, fædumq; futurum.  
 Et magis id possis factum contendere in Omni,  
 In variis mundis varia ratione creatis,  
 Quàm certò atq; uno terrarum quolibet Orbi. 1345  
 Sed facere id non tam vincendi spe voluerunt,  
 Quam dare quod gement hostes, ipsique perire,  
 Qui numero diffidebant, armisque vacabant.  
 Nexilis antè fuit vestis, quàm Textile tegmen:  
 Textile post ferrum est: quia ferro tela parantur: 1350  
 Nec ratione alia possunt tam lævia gigni  
 Infilia, ac fusi, & radii, scapique sonantes.  
 Et facere antè Viros lanam Natura coëgit,  
 Quàm Muliebre genus, nam longè præstat in arte,  
 Et sollertius est multò genus omne Virile: 1355  
 Agricolæ donec vitio vertere severi,  
 Ut Muliebribus id manibus concedere vellent,  
 Atque ipsi potiùs 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, pinn'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 harden'd their Limbs and their Hands with rougher Work.

BUT

*At specimen Sationis, & Infitionis origo* 1360  
*Ipsa fuit rerum primùm Natura creatrix.*  
*Arboribus quoniam baccæ, glandesque caducæ*  
*Tempeſtiva dabant pullorum examina ſubter.*  
*Unde etiam libitum'ſt ſtirpeis committere ramis :*  
*Et nova defodere in terram virgulta per agros:* 1365  
*Inde aliam, atque aliam culturam dulcis agelli*  
*Tentabant, fruētusque feros mānſueſcere terra*  
*Cernebant indulgendo, blandèque colendo.*  
*Inque dies magis in montem ſuccedere ſylvas*  
*Cogebant, infraque locum concedere cultis :* 1370  
*Prata, Lacus, Rivos, Segetes, Vinetaque læta*  
*Cellibus, & campis ut haberent, atque olearum*  
*Cærula diſtinguens inter plaga currere poſſet*  
*Per tumulos, & convalleis, camposque profuſa :*  
*Ut nunc eſſe vides vario diſtineta lepore* 1375  
*Omnia, quæ pomis interſita dulcibus ornant :*  
*Arbuſtiſque tenent felicibus obſita circum.*  
*At liquidas avium voces imitarier ore*  
*Antè fuit multò, quàm lævia carmina Cantu*  
*Concelebrare homines poſſent, aureiſque juvare.* 1380  
*Et Zephyri cava per calamorum ſibila primum*  
*Agreſteis docuere cavas inflare cicutas,*  
*Inde minutatim dulceis didicere querelas,*  
*Tibia quas fundit digitis pulſata canentum,*  
*Avia per nemora, ac ſylvas ſaltusque reperta,* 1385  
*Per loca paſtorum deſerta, atque otia dia :*  
*Sic unum quicquid paulatim protrahit Ætas*  
*In medium, Ratioque in luminis eruit oras.*  
*Hæc animos ollis mulcebant atque juvabant*

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 tum sunt omnia cordi. 1390  
 Sæpe itaque inter se prostrati in gramine molli  
 Propter aquæ rivum, sub ramis arboris altæ.  
 Non magnis opibus jucundè corpora habebant :  
 Præsertim cum tempestas ridebat, & anni  
 Tempora pingebant viridanteis floribus herbas, 1395  
 Tum Joca, tum Sermo, tum dulces esse Cæcinni  
 Consuerant : agrestis enim tum Musa vigebat :  
 Tum caput, atque humeros plexis redimire coronis,  
 Floribus, & foliis lascivia læta monebat :  
 Atque extra numerum procedere membra moventeis  
 Duriter, & duro terram pede pellere matrem: 1401  
 Unde oriebantur Risus, dulcesque Cæcinni,  
 Omnia quod nova tum magis hæc, & mira vigebant.  
 Et vigilantibus hinc aderant solatia somni,  
 Ducere multimodis voces, & flectere cantus ; 1405  
 Et supera calamos unco percurrere labro :  
 Unde etiam vigiles nunc hæc accepta tuentur,  
 Et numerum servare genus didicere ; neque hilo  
 Majorem interea capiunt dulcedini fructum,  
 Quàm Sylvestre genus capiebat Ferrigenarum. 1410  
 Nam quod adest præsto, nisi quid cognovimus antè  
 Suavius, in primis placet, & pollere videtur ;  
 Posteriorque ferè melior res illa reperta  
 Perdit, & immutat sensus ad pristina quæque.  
 Sic odium cæpit Glandis : sic illa relicta 1415  
 Strata Cubilia sunt herbis, & frondibus aucta.  
 Pellis item cecidit, vestis contempta Ferina est,  
 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 Jest, 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 aukward Tune, and running o'er the Reeds with crooked Lip. These are the Pleasures now our wanton Youth pursue, who sit 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 letbum infidiis, qui gessit primus, obiret :  
 Et tandem inter eos distractum, sanguine multo 1420  
 Dispersisse, neque in fructum convertere quisse.

Tunc igitur Pelles, nunc Aurum, & Purpura curis  
 Exercent hominum vitam, belloque fatigant.  
 Quò magis in nobis (ut opinor) culpa residit.  
 Frigus enim nudos sine Pellibus excruciat 1425  
 Terrigenas : at nos nil lædit veste carere

Purpurea, atque Auro, signisque ingentibus apta ;  
 Dum Plebeia tamen sit, quæ defendere possit :  
 Ergo hominum genus incassum, frustra que laborat,  
 Semper & in curis consumit inanibus ævum ; 1430  
 Nimirum, quia non cognovit, quæ sit habendi  
 Finis, & omnino quoad crescat vera voluptas :  
 Idque minutatim vitam provexit in Altum,  
 Et belli magnos commovit funditus æstus.

At vigiles mundi magnum & versatile templum  
 Sol & Luna suo lustrantes lumine circum 1436  
 Perdocuere homines Annorum tempora verti :  
 Et certa ratione geri rem, atque ordine certo.

Jam validis septi degebant Turribus ævum,  
 Et divisa colebatur, discretaque tellus. 1440  
 Tum Mare velivolam florebat navibus pandis :  
 Auxilia, & socios jam pacto fœdere habebant :  
 Carminibus cum res gestas cœpère Poetæ  
 Tradere : nec multò prius sunt Elementa reperta.  
 Propterea quid sit prius ætæ respicere ætas 1445  
 Nostra nequit, nisi quæ ratio vestigia monstrat.



raised such Envy to himself, that he was treacherously slain, he was torn to Pieces, and his leathern Garment stained with his own Blood, nor was he suffer'd to enjoy the Fruit of his own Invention.

AT that time Men fought for Skins, but now Gold and Purple employ their Cares, and set 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 those Earth-born Wretches; but we suffer nothing, if we go without Purple or Cloth of Gold, embroider'd in the richest Figures, since a meaner Dress would as well secure us against the Cold.

WRETCHED therefore, and vain, are the Troubles of Mankind; they spend their whole Life in the Pursuit of empty Cares; and no wonder, since they fix no Limits to what they possess, 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 raises the most violent Storms of War throughout the World.

BUT the wakeful Sun and Moon, surveying 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 inclosed themselves and lived in Castles; the Lands were parted out, and each enjoyed his own; the Sea was sailed o'er by crooked Ships, and Men joined together for Defence, and formed Alliances by certain Bonds. The Poets then began to celebrate in Verse the great Exploits, and Letters were not long before discover'd. What was transacted many Ages past, those Times knew nothing of, but what their Reason darkly traced out.

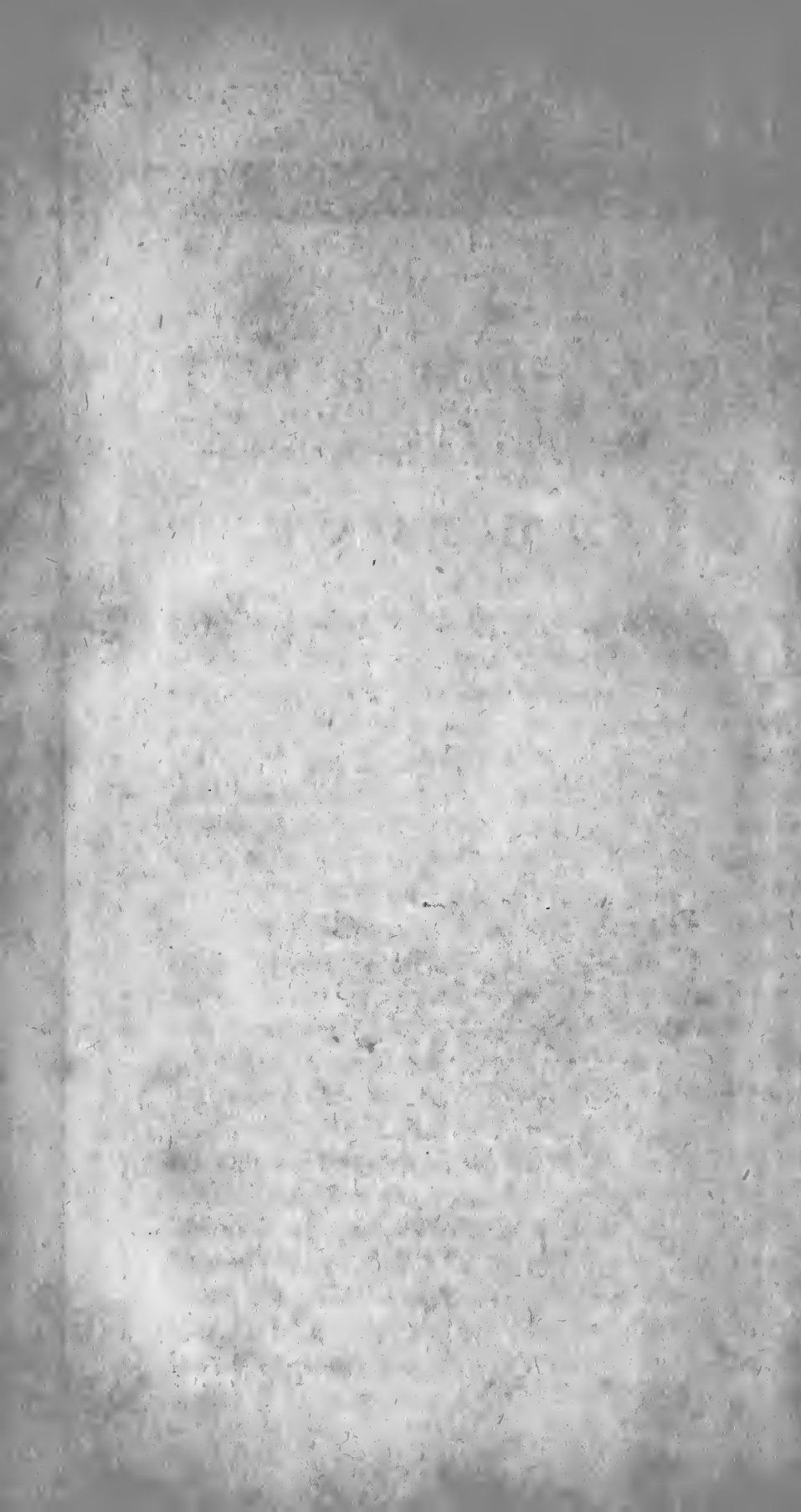
*Navigia, atque Agri culturas, Mœnia, Leges,  
 Arma, Vias, Vestes, & cœtera de genere horum,  
 Præmia, delicias quoque vitæ funditus omneis,  
 Carmina, Picturas, & dædala signa polire, 1450  
 Usus, & impigræ simul Experientia mentis  
 Paullatim docuit pedetentim progredientes.  
 Sic unum quicquid paullatim protrahit ætas  
 In medium, ratioque in luminis eruit oras.  
 Namque alid ex alio clarescere corde videmus 1455  
 Artibus, ad summum donec venêre 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 Corrasion, 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 forc'd 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 subtile 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, clashes 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 Thuscans 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 Prester, 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

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 *Ætna*; and it proceeds, he says, either from the Violence of the Wind, or to the Exæstuation 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 Etesian 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 Diseases; 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.

**P** *PRIMÆ frugiferos fœtus mortalibus ægris  
 Dididerunt quondam præclaro nomine Athenæ:  
 Et recreaverunt vitam, Legesque rogârunt:  
 At primæ dederunt solatia dulcia vitæ,  
 Cùm genuere VIRUM tali cum corde repertum, 5  
 Omnia veridico qui quondam ex ore profudit:  
 Cujus & extincti propter divina reperta  
 Divolgata vetus, jam ad cælum Gloria fertur.  
 Nam cùm vidit Hic, ad victum quæ flagitat usus,  
 “ Et per quæ possent vitam consistere tutam, 10*

*Omnia*



1875

1875



P. Moynard pinx.  
L. du Guernier scul.  
Lib. 6



*T. Lucretius Carus,*

OF THE

NATURE *of* THINGS.

THE

SIXTH BOOK.

**R**ENOWNED <sup>a</sup> *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 Epicu-*  
 sublime Truths, as from an Oracle; whose Fame *rus.*  
 for so Divine Discoveries, dispersed every way  
 abroad, was raised after Death above the Skies.

FOR when He saw how little would suffice for  
 necessary Use, and by what small Provisions Life

<sup>a</sup> It is the general Opinion of the Ancients, that the *Athe-*  
*nians* 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.

might.

Omnia jam ferme Mortalibus esse parata :  
 Divitiis homines, & Honore, & Laude potenteis  
 Affluere, atque bona Natorum excellere fama :  
 Nec minùs esse domi cùiquam tamen Anxia corda,  
 Atque animum infestis cogi servire querelis : 15  
 Intellexit, ibi vitium Vas efficere ipsum,  
 Omniaque illius vitio corrumpier intùs,  
 Quæ conlata foris, & commoda cuique venirent,  
 Partim quod fluxum, pertusumque esse videbat,  
 Ut nulla posset ratione explerier unquam : 20  
 Partim quòd tetro quasi conspurcare sapore  
 Omnia cernebat quæcunque receperat intùs.  
 Veridicis igitur purgavit pectora dictis,  
 Et finem statuit Cuppedinis atque Timoris,  
 Expojuitque Bonum Summum, quò tendimus omnes, 25  
 Quid foret, atque viam monstravit tramite prono,  
 Quà possemus ad id reëto contendere cursu :  
 Quidve Mali foret in rebus mortalibu' passim,  
 Quod flueret Naturæ vi, varièque volaret,  
 Seu Casu, seu Vi, quòd sic Natura parâsset : 30  
 Et quibus è portis occurri cuique deceret :  
 Et genus Humanum frustra plerumque probavit  
 Volvere curarum tristeis in pectore fluctus.

Nam veluti Pueri trepidant, atque omnia cæcis  
 In tenebris metuunt, sic Nos in luce timemus 35  
 Interdum nihilo quæ sunt metuenda magis, quàm  
 Quæ Pueri in tenebris pavitant, finguntque futura.  
 Hunc igitur terrorem animi, tenebrasque necessest  
 Non radii Solis, nec lucida tela diei  
 Discutiant, sed Naturæ species, Ratioque : 40  
 Quò magis inceptum pergam 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 Desires 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 Darknes 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 templa  
 Esse, & nativo consistere corpore Cælum :  
 Et quæcunque in eo fiunt, fientque, necesse  
 Esse ea dissolvi : Quæ restant percipe porro. 45  
 Quandoquidem semel insignem conscendere currum  
 Vincendi spes hortata'st, atque obvia cursu  
 Quæ fuerant, sunt placato conversa furore.

Cætera, quæ fieri in Terris, cæloque tuentur  
 Mortales, pavidis cum pendent mentibus sæpe 50  
 Efficiunt animos humileis formidine Divum,  
 Depressosque premunt ad terram, propterea quod  
 Ignorantia causarum conferre Deorum  
 Cogit ad imperium res, & concedere regnum : &  
 Quorum operum causas nulla ratione videre 55  
 Possunt hæc fieri Divino numine rentur.

Nam bene qui didicere Deos securum agere ævum :  
 Si tamen interea mirantur, qua ratione  
 Quæque geri possint, præserim rebus in illis,  
 Quæ supera caput ætheriis cernuntur in oris, 60  
 Rursus in antiquas referuntur Relligiones,  
 Et Dominos acreis asciscunt, omnia posse  
 Quos miseri credunt, ignari quid queat esse,  
 Quid nequeat ; finita potestas denique cuique  
 Quanam sit ratione, atque altè terminus hærens. 65  
 Quò magis errantes tota regione feruntur.

Quæ nisi respuis ex animo, longèque remittis,  
 Diis indigna putando, alienaque pacis eorum,  
 Delibata Deum per te tibi numina sancta

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 Suspense, 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 Conceits, 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

*Sæpe aderunt ; non quòd violari summa Deùm vis* 70  
*Possit, ut ex ira pœnas petere imbibat acreis :*  
*Sed quia Tute tibi placida cum pace quietos*  
*Constitues magnos irarum volvere fluctus :*  
*Nec delubra Deùm placido cum pectore adibis :*  
*Nec, de corpore quæ sancto Simulacra feruntur,* 75  
*In menteis hominum Divinæ nuntia formæ,*  
*Suscipere hæc animi tranquilla pace valebis.*  
*Inde videre licet, qualis jam vita sequatur.*  
*Quam quidem ut à nobis Ratio verissima longè*  
*Rejiciat, quanquam sunt à me multa profata,* 80  
*Multa tamen restant, & sunt ornanda politis*  
*Versibus, & ratio Cæli, speciesque tenenda.*

*Sunt Tempestates, & Fulmina clara canenda,*  
*Quid faciant, & qua de causa quæque ferantur,*  
*Ne trepides cæli divisis partibus amens,* 85  
*Unde volans Ignis pervenerit, aut in utram se*  
*Verterit hinc partem : quo pacto per loca septa*  
*Insinuârit, & hinc dominatus ut extulerit se :*  
*Quorum operum causas nulla ratione videre*  
*Possunt, ac fieri Divino numine rentur.* 90

*Tu mihi supremæ præscripta ad candida calcis*  
*Currenti spatium præmonstra callida Musa,*  
*Calliope, requies Hominum, Divûmque voluptas :*  
*Te duce ut insignem capiam cum laude coronam.*



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 Tempests, 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 Conduct, I may gain a Crown, and end the Race with Glory.

*Principio, Tonitru quatiuntur cœrula cœli, 95*  
*Propterea quia concurrunt sublime volantes*  
*Ætheriæ Nubes contra pignantibu' Ventis.*  
*Nec fit enim sonitus cœli de parte serena,*  
*Verùm ubicunque magis denso sũnt agmine Nubes,*  
*Tam magis hinc magno fremitus fit murmure sæpe. 100*  
*Præterea, neque tam condenso corpore Nubes*  
*Esse queunt, quàm sunt Lapides, ac Tigna : neque*  
*autem*

*Tam tenues, quàm sunt Nebulæ, Fumique volantes.*  
*Nam aut cadere abrupto deberent pondere pressæ,*  
*Ut Lapides : aut, ut Fumus, constare nequirent, 105*  
*Nec cobibere niveis gelidas, & grandinis imbreis.*

*Dant etiam sonitum patuli super æquora mundi,*  
*Carbasus ut quondam magnis intenta theatris*  
*Dat crepitum malos inter jaëtata, trabeisque :*  
*Interdum perscissa furit petulantibus Euris, 110*  
*Et fragileis sonitus chartarum commeditatur,*  
*Id quoque enim genus in Tonitru cognoscere possis,*  
*Aut ubi suspensam vestem, chartasve volanteis*  
*Verberibus venti versant, planguntque per auras.*

FIRST, <sup>b</sup> The blue Arch of Heaven is shaken *Of Thunder.* 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 Noise; 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 <sup>c</sup> 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 Noise like Paper torn. This Thunder, you observe, will sound like Cloaths spread out, or flying Sheets, when tossed by Strokes of Wind they roll and flutter through the Sky.

<sup>b</sup> 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 Noise 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 Noise, 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.

<sup>c</sup> He observes, that one single Cloud, driven by the Wind, is sometimes rent asunder by the Violence of the Blast, and makes a Noise like the Rustling 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.

*Fit quoque enim interdum, ut non tam concurrere*

*Nubes*

115

*Frontibus adversis possint, quàm de latere ire*

*Diverso motu radentes corpori tractum :*

*Aridus unde aurcis terget sonus ille diuque*

*Ducitur, exierit donec regionibus arctis.*

*Hoc etiam pacto Tonitru concussa videntur*

120

*Omnia sæpe gravi tremere, & divolsa repente*

*Maxima dissiluisse capacis mœnia mundi,*

*Cùm subito validi Venti conlecta procella*

*Nubibus intorsit sese, conclusaque ibidem*

*Turbine versanti magis ac magis undique Nubem* 125

*Cogit, uti fiat spisso cava corpore circum.*

*Post ubi commovit vis ejus & impetus acer,*

*Tum perterricrepro sonitu dat missa fragorem.*

*Nec mirum, cùm plena animæ Vesicula parva*

*Sæpe ita dat pariter sonitum displosa repente.* 130

*Est etiam ratio, cùm Venti nubila perflant,*

*Cur sonitus faciant : etenim ramosa videmus*

*Nubila sæpe modis multis, atque aspera ferri.*

*Scilicet ut crebram sylvam cùm flamina Cauri*

*Perflant, dant sonitum frondes, ramique fragorem.* 135

*Fit quoque, ut interdum validi vis incita venti*

*Perfcindat nubem perfringens impete recto.*

*Nam quid possit ibi flatus, manifesta docet res.*

*Hic, ubi lenior est, in terra cùm tamen alta*

*Arbusta evolvens radicibus haurit ab imis.* 140

*Sunt etiam fluctus per nubila, qui quasi murmur*

*Dant infringendo graviter : quod item fit in altis*

*Fluminibus, magnoque mari, cùm frangitur æstu.*

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 crashing 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

*Fit quoque, ubi è nube in nubem vis incidit ardens  
 Fulminis : hæc multo si fortè humore recepit 145  
 Ignem, continuò ut magno clamore trucidet :  
 Ut calidis candens ferrum è fornacibus olim  
 Stridit, ubi in gelidum properè demersimus imbrem.  
 Aridior porro si Nubes accipit ignem,  
 Uritur ingenti sonitu succensa repente : 150  
 Lauricomos ut si per monteis flamma vagetur,  
 Turbine ventorum comburens impete magno.  
 Nec res ulla magis, quàm Phœbi Delpnica Laurus  
 Terribili sonitu flamma crepitante crematur.  
 Denique sæpe Geli multus fragor, atque ruina 155  
 Grandinis, in magnis sonitum dat Nubibus altè.  
 Ventus enim cùm confercit, franguntur in arctum  
 Concreti montes nimborum, & grandine misti.  
 Fulgit item, Nubes ignis cùm semina multa  
 Excussere suo concursu, seu Lapidem si 160  
 Percutiat Lapis, aut Ferrum, nam tum quoque lumen  
 Exsilit, & claras scintillas dissipat ignis.  
 Sed Tonitrum fit uti post auribus accipiamus,  
 Fulgere quàm cernant oculi, quia semper ad aureis*

broken and rages with the Tide. And sometimes <sup>d</sup> 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 instantly, 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 sound like Thunder; for when the Winds have driven and pressed them close, these mountainous Clouds, being condensed, will burst and discharge their Weight of Ice and Hail.

It <sup>e</sup> 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 *Why the* have seen the Lightning; for the Images of *Light is* Things approach our <sup>f</sup> Ears much slower than *seen before* we hear *the Thun-* der.

<sup>d</sup> 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*.

<sup>e</sup> 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.

<sup>f</sup> The Reason is, because the *Materia Subtilis* in lucid 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.

*Tardiùs adveniunt, quàm visum quæ moveant res.* 165

*Id licet hinc etiam cognoscere: cædere siquem*

*Ancipiti videas ferro procul arboris auctum,*

*Antè fit ut cernas ictum, quàm plaga per aureis*

*Det sonitum: sic Fulgorem quoque cernimus antè*

*Quàm Tonitrum accipimus, pariter qui mittitur igni,*

*E simili causa, & concursu natus eodem:* 171

*Hoc etiam pacto volucris loca lumine tingunt*

*Nubes, & tremulo tempestas impete fulgit.*

*Ventus ubi invasit Nubem, & versatus ibidem*

*Fecit, ut antè, cavam, docui, spissescere Nubem,* 175

*Mobilitate sua ferviscit; ut omnia motu*

*Percalescens vides ardescere: plumbea verò*

*Glans etiam longo cursu volvenda liquefit.*

*Ergo fervidus Hic Nubem cum percudit atram,*

*Dissipat ardoris quasi per vim expressa repente* 180

*Semina, quæ faciunt instantia fulgura flammæ:*

*Inde Sonus sequitur, qui tardiùs adlicit aureis,*

*Quàm quæ perveniunt oculos ad lumina nostros.*

*Scilicet hoc densis fit nubibus, & simul altè*

*Exstructis aliis alias super impete miro.* 185

*Nec tibi sit fraudi, quòd nos inferne videmus*

*Quàm sint lata magis, quàm sursum exstructa quid*

*extent;*

*Contemplator enim cum montibus adsimilata*

*Nubila portabunt Venti transversa per auras:*

*Aut ubi per magnos monteis cumulata videbis* 190

*Insuper esse aliis alia, atque urgere superna*

*In statione locata sepultis 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 <sup>s</sup> 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 *Thick Clouds.* 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

<sup>s</sup> 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.

*Speluncasque velut saxi pendentibu' struētas*  
*Cernere, quas Venti cū, tempestate coorta, 195*  
*Complerunt, magno indignantur murmure clausi*  
*Nubibus, in caveisque ferarum more minantur :*  
*Nunc hinc, nunc illinc fremitus per Nubila mittunt :*  
*Quærentesque viam circumversantur, & ignis*  
*Semina convolvunt è Nubibus : atque ita cogunt 200*  
*Multa, rotantque cavis flammam fornacibus intus,*  
*Donec divolsa fulserunt nube corusci.*

*Hac etiam fit uti de causa mobilis ille*  
*Devolet in terram liquidi color aureus ignis,*  
*Semina quòd Nubeis ipsas permulta necesse 'st 205*  
*Ignis habere : etenim cū sunt humore sine ullo,*  
*Flammeus est plerumque colos & splendidus ollis.*  
*Quippe etenim Solis de lumine multa necesse 'st*  
*Concipere, ut meritò rubeant, igneisque profundant.*  
*Hasce igitur cū Ventus agens contrufit in unum 210*  
*Compressitque locum cogens : expressa profundunt*  
*Semina, quæ faciunt flammæ fulgere colores.*

*Fulgit item, cū rarefcunt quoque Nubila cæli.*  
*Nam cū Ventus eas leviter diducit eunteis,*  
*Dissolvitque, cadant ingratis illa necesse 'st 215*  
*Semina, quæ faciunt fulgorem : tum sine tetro*  
*Terrore, & 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 toss 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 <sup>h</sup> 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.

<sup>h</sup> 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 ictus, & iniusta vapore  
 Signa, notæque graveis balantes Sulfuris auras. 220  
 Ignis enim sunt hæc, non Venti signa, neque Imbris.  
 Præterea, per se accendunt quoque tecta domorum,  
 Et celeri flamma dominantur in tædibus ipsis.  
 Hunc tibi subtilem cum primis ignibus ignem  
 Constituit natura minutis, mobilibusque 225  
 Corporibus, cui nil omninò obsistere possit.  
 Transit enim validè Fulmen per septa domorum,  
 Clamor uti, ac Voces: transit per saxa, per æra:  
 Et liquidum puncto 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: &  
 Mobiliter solvens differt primordia Vini:  
 Quod Solis vapor ætatem non posse videtur 235  
 Efficere, usqueadeo pollens fervore corusco:  
 Tanto mobilior vis, & dominantior hæc est.

Nunc ea quo pacto gignantur, & impete tanto  
 Fiant, ut possint ictu discludere Turreis,  
 Disturbare domos, avellere tigna, trabeisque, 240  
 Et Monumenta virum demoliri, atque ciere,  
 Exanimare Homines, Pecudes prosternere passim:  
 Cætera de genere hoc qua vi facere omnia possint,  
 Expediam, neque Te in promissis plura morabor.

Now of what Seeds the <sup>i</sup> 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 Brasses, and in a Moment melts both Brasses 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 *The* rage with so great Force, as by their Strokes to *Strength* beat down Towers, to overturn Houses, to tear *of Thunder.* 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.

<sup>i</sup> Having treated of the Consecration 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.

You

*Fulmina gignier è crassis, altèque putandum' st* 245  
*Nubibus exstructis : nam cælo nulla sereno,*  
*Nec leviter densis mittuntur nubibus unquam.*  
*Nam dubio procul hoc fieri manifesta docet res,*  
*Quòd tunc per totum concresecunt Aëra nubes*  
*Undique, uti tenebras omneis Acherunta reamur* 250  
*Liquisse, & magnas cæli complèsse cavernas :*  
*Usqueadeo tetra nimborum nocte coorta*  
*Impendent atræ formidinis ora superne,*  
*Cùm commoliri tempestas Fulmina cœptat.*

*Præterea, persepe niger quoque per mare Nimbus,*  
*Ut picis è cælo 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 horrescant, ac tecta requirant.* 260  
*Sic igitur supera nostrum caput esse putandum' st*  
*Tempestatem altam : neque enim caligine tanta*  
*Obruerent terras, nisi incædificata supernè*  
*Multa forent multis exempto Nubila sole :*  
*Nec tanto possent hæc terras opprimere imbri,* 265  
*Flumina abundare ut facerent, camposque natare,*  
*Si non exstructis foret altè Nubibus æther.*

*His igitur Ventis, atque Ignibus omnia plena*  
*Sunt ; ideo passim fremitus, & fulgura sunt :*  
*Quippe etenim superà docui, permulta vaporis* 270  
*Semina habere cavas nubeis : & multa necesse' st*  
*Concipere ex Solis radiis, ardoreque eorum.*  
*Hic ubi Ventus eas idem qui cogit in unum*  
*Fortè locum quemvis, expressit multa vaporis*  
*Semina, seque simul cum eo commiscuit igni :* 275  
*Insinuatus ibi Vortex versatur in alto,*  
*Et calidis acuit Fulmen fornacibus intus.*

*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 Mass of Darknes 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 Darknes, 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 calefcit, & è contagibus ignis.*

*Inde ubi percaluit vis Venti, vel gravis Ignis, 280.*

*Impetus incessit : maturum tum quasi Fulmen  
Percindit subito Nubem, ferturque coruscis*

*Omnia luminibus lustrans loca percitus ardor :*

*Quem gravis insequitur Sonitus, displosa repente*

*Opprimere ut cæli videantur templa superne. 285*

*Inde tremor Terras graviter pertentat, & altum*

*Murmura percurrunt cælum : nam tota fere tum*

*Tempeftas concussa tremit, fremitusque moventur :*

*Quo de concuffu fequitur gravis Imber, & uber,*

*Omnis uti videatur in Imbrem vertier Æther, 290*

*Atque ita præcipitans ad diluviem revocare :*

*Tantus difcidio nubis, ventique procella,*

*Mittitur ardenti Sonitus cùm provolat ic̄tu.*

*Est etiam cùm vis extrinsecùs incita Venti*

*Incidit in validam maturo fulmine Nubem : 295*

*Quam cùm percudit, 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 miffa sine igni,*

*Ignescat tamen in fpatio, longoque meatu, 300*

*Dum venit, amittens in curfu corpora quædam*

*Grandia ; quæ nequeunt pariter penetrare per auras :*

*Atque alia ex ipfo conradens Aëre portat*

*Parvula, quæ faciunt ignem commiffa volando :*

*Non alia longè ratione, ac plumbea sæpe 305*

*Fervida fit Glans in curfu, cùm multa rigoris*

*Corpora dimittens ignem concepit in auris.*

*Fit*



der. 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, <sup>k</sup> 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.

<sup>k</sup> 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.

*Fit quoque, ut ipsius Plagæ vis excitet ignem,*  
*Frigida cùm Venti pepulit vis missa sine igni :*  
*Nimirum quia cùm vehementi perculit ictu,* 310  
*Confluere ex ipso possunt elementa Vaporis ;*  
*Et simul ex illa, quæ tum res excipit ictum,*  
*Ut lapidem ferro cùm cædimus, evolat Ignis :*  
*Nec quòd frigida vis sit ferri, hoc secius illa*  
*Semina concurrunt calidi fulgoris ad ictum :* 315  
*Sic igitur quoque res accendi Fulmine debet,*  
*Opportuna fuit si fortè, & idonea flammis.*  
*Nec temerè omnino planè vis frigida Venti*  
*Esse potest, ex quo tanta vi immissa superne est :*  
*Quin priùs in cursu si non accenditur igni,* 320  
*At tepè facta tamen veniat commista calore.*

*Mobilitas autem fit Fulminis, & gravis ictus,*  
*Et celeri ferme pergunt sic Fulmina lapsu :*  
*Nubibus ipsa quòd omnino priùs incita se Vis*  
*Conligit, & magnum conamen sumit eundi.* 325  
*Inde, ubi non potuit Nubes capere impetis auctum,*  
*Exprimitur vis, atque ideo volat impete miro,*  
*Ut validis quæ de Tormentis missa feruntur.*

*Adde quod è parvis, ac levibus est elementis :*  
*Nec facile est tali naturæ obsistere quicquam :* 330  
*Inter enim fugit, ac penetrat per rara viarum.*  
*Non igitur multis offensibus in remorando*  
*Hæsitat : hanc ob rem celeri volat impete labens.*

Deinde,

AND the Fury of the <sup>1</sup> 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 Swiftnefs 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.

<sup>1</sup> 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 Swiftnefs 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.

Deinde, quod omnino natura Pondera deorsum  
 Omnia nituntur : cùm plaga sit addita verò, 335  
 Mobilitas duplicatur, & impetus ille gravescit :  
 Ut vehementius, & citius, quæcunque morantur  
 Obvia, discutiat plagis, itinerque sequatur.

Denique, quod longo venit impete, sumere debet  
 Mobilitatem, etiam atque etiam quæ crescit eundo, 340  
 Et validas auget vireis, & roborat ictum.

Nam facit, ut, quæ sint illius Semina cunque,  
 E regione locum quasi in unum cuncta ferantur,  
 Omnia conjiciens in eum volventia cursum.  
 Forsan & ex ipso veniens trahat Aëre quædam 345  
 Corpora, quæ plagis intendunt mobilitatem.

Incolumeisque venit per res, atque integra transit  
 Multa, foraminibus liquidis quia travolat Ignis.  
 Multaque perfringit, cùm corpora Fulminis ipsa  
 Corporibus rerum inciderint, quæ texta tenentur. 320  
 Dissolvunt porro facilè Æs, Aurumque repente  
 Conservesfacit ; è parvis quia facta minutè  
 Corporibus vis est, & lævibus ex elementis,  
 Quæ facile insinuantur, & insinuata repente  
 Dissolvunt nodos omneis, & vincla relaxant. 355

Autumnoque magis stellis fulgentibus alta  
 Concutitur Cæli domus undique, totaque Tellus ;  
 Et cùm tempora se Veris florentia pandunt.  
 Frigor enim desunt Ignes, Ventique Calore  
 Deficiunt, neque sunt tam denso corpore Nubes. 360  
 Inter utrumque igitur cùm Cæli tempora constant,  
 Tum variæ causæ 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 Brass 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

*Nam fretus ipse anni permiscet Frigus, & Æstus :  
Quorum utrumque opus est fabricanda ad Fulmina  
nobis,*

*Ut discordia sit rerum, magnoque tumultu* 365

*Ignibus, & Ventis furibundus fluctuet Aër.*

*Prima Caloris enim pars, & postrema Rigoris,  
Tempus id est Vernalium : quare pugnare necesse 'st  
Dissimiles inter se res, turbareque mistas.*

*Et Calor extremus primo cum Frigore mistus* 370

*Voluitur, Autumni quod fertur nomine tempus.*

*Hic quoque conflagunt Hiemes Æstatibus acres.*

*Propterea sunt hæc Bella anni nominanda :*

*Nec mirum 'st in eo si tempore plurima sunt*

*Fulmina, tempestasque cietur turbida cælo,* 375

*Ancipiti quoniam bello turbatur utrinque,*

*Hinc Flammas, illinc Ventis, Humoreque misto.*

*Hoc est igniferi naturam Fulminis ipsam*

*Perspicere, & qua vi faciat rem quamque videre :*

*Non Tyrrhena retrò volventem carmina frustra* 380

*Indicia occultæ Divûm perquirere mentis,*

*Unde volans Ignis pervenerit, aut in utram se*

*Verterit hic partem, quo pacto per loca septa*

*Insinuârit, & hinc dominatus ut extulerit se,*

*Quidve noscere queat de cælo fulminis ictus.* 385

*Quod si Jupiter atque alii fulgentia divi*

*Terrifico quatiunt sonitu cælestia templa,*

*Et jaciunt igneis, quo cuique 'st cumque voluptas,*

*Cur, quibus incautum scelus averfabile cumque 'st,*

*Non faciunt, icti flammis ut Fulguris balent* 390

*Pectore perfixo, documen mortalibus acre ?*

are made up of Heat and Cold blended together ; of both these is formed the Thunder ; that so these jarring Elements may raise the greater Combustions, and the tormented Air toss 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 Tempests 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 ; <sup>m</sup> 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 Noise, 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

<sup>m</sup> Here the Poet insults the College of Augurs and Soothsayers of *Rome*, who, from the *Tuscans*, pretended to teach Divination as if it had been a Science.

*Et potius nullæ sibi turpis consciu' rei  
Volvitur in flammis innoxius, inque peditur,  
Turbine cælesti subito conreptus & igni?*

*Cur etiam loca sola petunt, frustra que laborant? 395*

*An con brachia suefaciunt, firmantque lacertos;*

*In terra que Patris cur telum perpetiuntur*

*Obtundi? cur Ipse sinit, neque parcit in hosteis?*

*Denique, cur nunquam cælo jacet undique puro*

*Jupiter in terras Fulmen, sonitusque profundit? 400*

*An simul ac Nubes successere, Ipse in eas tum*

*Descendit, propè ut hinc teli determinet ietus?*

*In Mare qua porro mittit ratione? quid undas*

*Arguit, & liquidam molem, camposque natantes?*

*Præterea, si vult caveamus Fulminis ietum, 405*

*Cur dubitat facere, ut possimus cernere missum?*

*Si nec-opinanteis autem vult opprimere igni,*

*Cur tonat ex illa parte, ut vitare queamus?*

*Cur tenebras antè, & fremitus, & murmura concit?*

*Et simul in multas partes quæ credere possis 410*

*Mittere? an hoc ausis nunquam contendere factum,*

*Ut fierent ietus uno sub tempore plures?*

*At sæpe est numero factum, fierique necesse est,*

*Ut pluere in multis regionibus, & cadere Imbreis,*

*Fulmina sic uno fieri sub tempore multa. 415*

*Postremò,*



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 surer 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 Darknes, 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 insist 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.

Postremò, cur sancta Deùm delubra, suasque  
 Discutit infesto præclaras Fulmine sedes :  
 Et bene facta Deùm frangit simulacra ? suisque  
 Demit imaginibus violento vulnere honorem ?  
 Altaque cur plerumque petit loca ? plurimaque hujus  
 Montibus in summis vestigia cernimus Ignis ? 421

Quod supereft, facile'ft ex his cognoscere rebus,  
 Πρὸς ἄρκυς Graii quos ab re nominatârunt,  
 In mare qua missi veniant ratione supernè.  
 Nam fit, ut interdum tanquam demissa columna 425  
 In mare de cælo descendat, quam Freta circum  
 Ferviscunt graviter spirantibus incita flabris :  
 Et quæcunque in eo tum sunt deprensa tumultu  
 Navigia, in summum veniunt vexata periculum.  
 Hoc fit, ubi interdum non quit vis incita Venti 430  
 Rumpere, quam cœpit nubem ; sed deprimit, ut fit  
 In mare de cælo tanquam demissa columna.  
 Paullatim, quasi quid pugno, brachiique supernè  
 Conjectu tradatur, & extendatur in undas :  
 Quam cùm discidit, hinc prorumpitur in mare Venti  
 Vis, & fervorem mirum concinnat in undis. 436  
 Versabundus enim Turbo descendit, & illam  
 Deducit pariter lento cum corpore nubem.

IN the last place: Why does He with his deadly Thunder beat down the sacred Temples of the other *Gods*, and the stately 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 <sup>n</sup> *Præsters*) 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 slow in its Motion, it bears along with it through

<sup>n</sup> A *Præster* (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 *Præster*, the sure Destruction of Sailors.

*Quam simul ac gravidam detrusit ad æquora Ponti,  
Ille in aquam subitò totum se immittit, & omne 440  
Excitat ingenti sonitu Mare fervere cogens.*

*Fit quoque, ut involvat venti se nubibus ipse  
Vortex, conradens ex Aëre semina nubis,  
Et quasi demissum cælo Præstera imitetur.  
Hic ubi se in terras demisit, dissolvitque : 445  
Turbinis immanem vim promovit, atque procellæ.  
Sed quia fit rarò omninò, monteisque necesse 'st  
Officere in Terris : appâret crebriùs idem  
Prospectu Maris in magno, cæloque patenti.*

*Nubila concrescunt, ubi corpora multa volando 450  
Hoc super in Cæli spatio cõire repente  
Asperiora, modis quæ possint indupedita  
Exiguïs, tamen inter se comprehensa teneri.  
Hæc faciunt primùm parvas consistere Nubeis ;  
Inde ea comprehendunt inter se, conque gregantur, 455  
Et conjungendo crescunt, ventisque feruntur  
Usqueadeo, donec Tempestas sæva coorta 'st.*

*Fit quoque uti Montis vicina cacumina cælo  
Quàm sint quæque magis, tantò magis edita fument  
Assiduè fulvæ Nubis caligine crassa ; 460  
Propterea, quia cùm consistunt Nubila primùm,*

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 *Prester* 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 every thing 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, <sup>P</sup> 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 Darknes of a yellow Cloud; because the Mists 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 condensing and joining with one another, make the thick and heavy Clouds.

<sup>P</sup> Clouds frequently seem to rise from the Tops of high Mountains, because some thin Mists 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.

*Ante videre oculi quàm possint tenuia, Venti  
Portantes cogunt ad summa cacumina Montis.*

*Hic demum fit, uti turba majore coorta,  
Condensa, ac stipata simul cernantur, & udo 465  
Vertice de Montis videantur surgere in æthram.*

“ *Nam loca declarat sursum ventosa patere*

“ *Res ipsa, & sensus, Monteis cùm ascendimus altos.*

*Præterea, permulta Mari quoque tollere toto  
Corpora Naturam, declarant littore vestes 470  
Suspensæ, cùm concipiunt humoris adhæsum.*

*Quò magis ad nubeis augendas multa videntur  
Possè quoque è salso consurgere momine ponti.*

*Præterea, fluvii ex omnibus, & simul ipsa 475  
Surgere de terra nebulas, æstumque videmus :*

*Quæ velut balitus, hinc ita sursum expressa feruntur,  
Suffunduntque sua Cælum caligine, & altas  
Sufficiunt nubeis paullatim conveniundo.*

*Urget enim quoque signiferi super Ætheris æstus, 480  
Et quasi densando subtexit cærulea nimbis.*

*Fit quoque, ut hunc veniant in cætum extrinsecus  
illa*

*Corpora, quæ faciunt Nubeis, nimbosq; volanteis.*

*Innumerabilem enim numerum, summamq; Profundi  
Esse infinitam docui: Quantaque volarent 485*

*Corpora mobilitate, ostendi, quàmque repente  
Immemorable per spatium transire solerent.*

*Haud igitur mirum est, si parvo tempore sæpe  
Tam magnos Monteis tempestas, atque tenebræ  
Cooperiant Maria, ac Terras, impensa superne. 490  
Undique quandoquidem per caulas ætheris omneis,*

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 shew 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 demonstrate, 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 circum spiracula mundi  
Exitus, introitusque elementis redditus extat.*

*Nunc age, quo pacto Pluvius concrescat in aliis  
Nubibus humor, & in terras demissus ut Imber 495  
Decidat, expediam. Primum jam semina Aquarum  
Multa simul vincam consurgere nubibus ipsis  
Omnibus ex rebus, pariterque ita crescere utrasque,  
Et Nubeis, & Aquam, quæcunque in nubibus extat,  
Ut pariter nobis corpus cum sanguine crescit, 500  
Sudor item atque humor quicunque est denique membris.  
Concipiunt etiam multum quoque sæpe marinum  
Humorem, veluti pendentia vellera lanæ  
Cum supera magnum venti mare nubila portant.*

*Consimili ratione ex omnibus annibus humor 505  
Tollitur in nubeis: quò cum benè semina aquarum  
Multa modis multis convenere undique adaucta:  
Confertæ nubes vi venti mittere certant  
Dupliciter: nam vis venti contrudit, & ipsa  
Copia nimborum, turba majore coorta, 510  
Urget, & è supero premit, ac facit effluere Imbreis.*

*Præterea, cum rarefcunt quoque Nubila ventis,  
Aut-dissolvuntur Solis super icæta calore:  
Mittunt humorem pluvium, stillantque, quasi igni  
Cera super calido tabescens multa liquefcant. 515*

*Sed vebemens imber fit, ubi vebementer utroque  
Nubila vi cumulata premuntur, & impete venti.*

*At retinere diu pluviae, longumque morari  
Consuerunt, ubi multa fuerunt Semina aquarum;  
Atque aliis aliæ Nubes, nimbique rigantes 520*



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 Wooll, 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

*Insuper, atque omni volgò de parte feruntur :  
Terraque cùm fumans humorem tota rehalat.*

*Hinc ubi Sol radiis tempestatem inter opacam  
Adversa fulsit nimborum aspergine contra :  
Tum color in nigris existit nubibus Arqui.* 525

*Cætera, quæ sursum crescunt, sursumq; creantur :  
Et quæ concrescunt in nubibus omnia, prorsum  
Omnia, Nix, Venti, Grando, gelidæque Pruine,  
Et vis magna Geli, magnum duramen aquarum :  
Et mora, quæ fluviis passim refrænât eunteis : 530  
Perfacile'st tamen hæc reperire, animoque videre,  
Omnia quo pacto fiant, quareve creentur,  
Cùm benè cognôris, elementis reddita quæ sint.*

*Nunc age, quæ ratio Terræ motibus extet,  
Percipe : Et in primis Terram fac ut esse rearis 535  
Subter item, ut supera'st ; Ventis, atque undique ple-  
nam*

*Speluncis, multosque lacus, multasque lacunas  
In gremio gerere, & rupeis, deruptaque saxa :  
Multaque sub tergo Terræ flumina tecta  
Volvere vi fluctus, submersaque saxa putandum'st. 540  
Undique enim similem esse sui, res postulat ipsa.*

*His igitur rebus subjunctis, suppositisque :  
Terra supernè tremit magnis concussa ruinis  
Subter, ubi ingenteis speluncas subruit ætas,  
Quippe cadunt toti montes, magnoque repente 545  
Concussu, latè differpunt inde tremores :  
Et meritò, quoniam plaustris concussa tremiscunt  
Tecta viam propter non magno pondere tota.  
Nec minùs exsultant, ubi currus fortis equùm vis  
Ferratos utrinque rotarum succutit orbis.* 550

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, *Rainbow.* 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 *Earth-* first, you are to suppose that the Earth is the same *quakes.* 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 vetustate è terra provolvitur ingens,  
 Ut jaçtetur aqua, & fluctu quoque terra vacillet :  
 Ut vas in terra non quit constare, nisi humor  
 Destitit in dubio fluctu jaçtarier intus.* 555

*Præterea, Ventus cum per loca subcava terræ  
 Conlectus parti ex una procumbit, & urget  
 Obnixus magnis speluncas viribus altas ;  
 Incumbit tellus quò Venti prona premit vis :  
 Tum supera terram quæ sunt exstructa domorum, 560  
 Ad cælumque magis quantò sunt edita quæque,  
 Inclinata minent in eandem proclita partem :  
 Protractæque trabes impendent ire paratæ :  
 Et metuunt magni Naturam credere Mundi  
 Exitiale aliquod tempus, clademque manere, 565  
 Cum videant tantam Terrarum incumbere molem.  
 Quòd nisi respirent Venti, non ulla refrænet  
 Res, neque ab exitio possit reprendre eunteis :  
 Nunc quia respirant alternis, inque gravescunt,  
 Et quasi conlecti redeunt ceduntque repulsi.* 570

*Sæpius hanc ob rem minitatur Terra ruinas,  
 Quàm facit : inclinatur enim, retroque recellit,  
 Et recipit prolapsa suas se in pondere sedeis :  
 Hac igitur ratione vacillant omnia tecta,  
 Summa magis mediis, media imis, ima perbilum.* 575

*Est hæc ejusdem quoque magni causa tremoris,  
 Ventus ubi, atque Animæ subitò vis maxima quædam,*

THIS happens likewise, when great Weights of Earth, loosen'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 Mass 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 oftner 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 less, the Lowest little or nothing.

THE great <sup>a</sup> Tremblings of the Earth may arise yet from another Cause; when Wind or violent Blasts

<sup>a</sup> This Inclination and fluctuating Motion of the Earth, is often attended with a violent Beating and Succussion 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

*Aut extrinsecus, aut ipsa à tellure coorta*  
*In loca se cava Terrai coniecit, ibique*  
*Speluncas inter magnas fremit antè tumultu : 580*  
*Versabundaque portatur, post incita cùm vis*  
*Exagitata foras erumpitur, & simul artam*  
*Diffindens terram magnum concinnat biatum :*  
*In Tyria Sidone quod accidit, & fuit Ægis*  
*In Peloponneso : Quas exitus hic animai 585*  
*Disturbât urbeis, & Terræ motus obortus !*  
*Multaque præterea ceciderunt mœnia magnis*  
*Motibus in terris, & multæ per mare pëssum*  
*Subsedere suis pariter cum civibus urbes.*  
*Quòd nisi prorumpit, tamen impetus ipsæ Animai 590*  
*Et fera vis Venti per crebra foramina terræ*  
*Dispertitur, ut Horror, & incutit inde tremorem :*  
*Frigus uti nostros penitus cùm venit in artus,*  
*Concutit inuitos cogens tremere atque moveri.*  
*Ancipiti trepidant igitur terræ per urbeis : 595*  
*Tecta superne timent, metuunt inferne, cavernas*  
*Terrai ne dissolvat Natura repente :*  
*Neu distracta suum latè disspandat biatum :*  
*Idque suis confusa velit complere ruinis.*

*Proinde licet, quamvis cælum terramque reantur*  
*Incorrupta fore æternæ mandata saluti : 601*  
*Attamen interdum præsens vis ipsa pericli*  
*Subditat hunc stimulum quadam de parte timoris,*  
*Ne pedibus raptim Tellus subtrac̃ta feratur*

Blasts (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 Chasim. 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; lest Nature should instantly break to Pieces the Caverns below; lest 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 staggers them, and raises terrible Apprehensions, lest the Earth should instantly fail under their Feet, and sink into the great Abyss; lest the Dissolution of the Universe, from the very Founda-

Trembling, or as it were a Shuddering of the Earth, which is caused by the chilling Wind that is diffused through all its Pores.

*In baratrum, rerumque sequatur prodita Summa 605*  
*Funditus, & fiat Mundi confusa ruina.*

*Nunc ratio reddunda, augmen cur nesciat Æquor.*  
*Principio, Mare mirantur non reddere majus*  
*Naturam, quò tantu' fuit decursus aquarum,*  
*Omnia quò 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 summam*  
*Guttaï vix instar erunt unius ad augmen :*  
*Quò minùs est mirum, Mare non augescere magnum.*

*Præterea, magnam Sol partem detrahit æstu. 616*  
*Quippe videmus enim vesteis humore madenteis,*  
*Exsiccare suis radiis ardentibu' Solem.*  
*At Pelage multa, & latè substraëta videmus.*  
*Proinde licet quamvis ex uno quoque loco Sol 620*  
*Humoris parvam delibet ab æquore partem :*  
*Largiter in tanto spatio tamen auferet undis.*

*Tum porro Venti magnam quoque tollere partem*  
*Humoris possunt verrentes æquora ponti :*  
*Una nocte vias quoniam persæpe videmus 625*  
*Siccari, mollisque luti concrefcere crustas.*

*Præterea,*



tion, should follow, and the Fabrick of the World should fall into Ruin and Confusion.

AND now we are to account why the Waters *The Sea* of the <sup>r</sup> Sea are never increased. And first, Men *not in-* wonder that Nature does not enlarge the Bounds *crease.* 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 Vastness 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 so vast 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.

<sup>r</sup> The Sea does not increase, because the Gulph into which the Rivers disembogue their Streams, is so vast, 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,

Præterea, 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 raro cum corpore Tellus  
 Est, & conjunctas oras maris undique cingit :  
 Debet, ut in mare de terris venit humor aquai,  
 In terras itidem manare ex æquore salso ;  
 Percolatur enim virus, retròque remanat 635  
 Materies humoris, & ad caput amnibus omnis  
 Confluit : inde super terras redit agmine dulci,  
 Quà via seeta semel liquido pede detulit undas.

Nunc ratio quæ sit, per fauceis montis ut Ætnæ  
 Exspirent ignes interdum turbine tanto, 640  
 Expediam : neque enim media de clade coorta  
 Flammæ tempestas Siculùm dominata per agros  
 Finitimis ad se convertit gentibus ora,  
 Fumida cum cæli scintillare omnia templa  
 Cernentes pavida complebant pectora cura, 645  
 Quid moliretur rerum Natura novarum.  
 Hisce tibi rebus latè 'st, altèque videndum,  
 Et longè cunctas in parteis dispiciendum,  
 Ut reminiscaris, Summam rerum esse profundam,  
 Et videas, cælum Summæ totius unum 650  
 Quàm sit parvula pars, & quàm multesima constet :  
 Et quota pars Homo Terræ sit totius unus.  
 Quod bene propositum si planè contueare,  
 Ac videas planè ; mirari multa relinquant.

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 sur- rounds 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 Wa- ters 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 neighbour- ing People, who seeing the whole Heavens spark- ling with Fire, and full of Smoke, trembled with anxious Concern, and wonder'd what new *Phæ- nomenon* 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, si quis in artus* 655  
*Accipit calido Febrim fervore coortam,*

*Aut alium quemvis Morbi per membra dolorem?*

*Obturgescit enim subito Pes, arripit acer*

*Sæpe dolor Denteis, oculos invadit in ipsos:*

*Existit sacer Ignis, & urit corpore serpens* 660

*Quamcunque arripuit partem, repitque per artus.*

*Nimirum, quia sunt multarum Semina rerum:*

*Et satis hæc Tellus nobis Cælumque mali fert,*

*Unde queat vis immensi procreescere morbi.*

*Sic igitur toti cælo, terræque putandum est* 665

*Ex infinito satis omnia suppeditare,*

*Unde repente queat Tellus concussa moveri,*

*Perque mare, & terras rapidus percurrere Turbo,*

*Ignis abundare Ætnæus, flammescere Cælum.*

*Id quoque enim fit, & ardescunt cælestia templa,* 670

*Ut Tempestates pluviae graviore coortu*

*Sunt, ubi fortè ita se tetulerunt Semina aquarum.*

*At nimis est ingens Incendii turbidus ardor.*

*Scilicet, & fluvius, qui non est, maximus eii est*

*Qui non antè aliquem majorem vidit: & ingens* 675

*Arbor, Homoque videtur: & omnia de genere omni,*

*Maxima quæ vidit quisque, hæc ingentia fingit:*

*Cùm tamen omnia cum Cælo, Terraque, Marique*

*Nil sint ad Summam Summæ totius omnem.*

*Nunc tamen, illa modis quibus inritata repente* 680

*Flamma foràs vastis Ætnæ fornacibus efflet,*

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 <sup>s</sup> *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 *Ætna*, 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 *Ætna* 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 <sup>The</sup> raging <sup>Breaking</sup> Flame bursts suddenly abroad from the vast <sup>out of</sup> fiery <sup>Flames.</sup>

<sup>s</sup> Commonly called *St. Anthony's Fire*.

<sup>t</sup> The Eruption from Mount *Ætna* is caused by the Force of Wind. The Seeds of that Wind come from the Infinite Universe,

*Expeditam. Primùm totius subcava mōtis  
 Est natura, ferè silicum suffulta cavernis :  
 Omnibus est porro in speluncis Ventus & Aër.  
 Ventus enim fit, ubi est agitando percitus Aër. 685  
 Hic ubi percaluit, calefecitque omnia circum  
 Saxa furens, quà contingit, Terramque : & ab ollis  
 Excussit calidum flammis velocibus ignem :  
 Tollit se, ac reētis ita faucibus ejicit allè,  
 Funditque ardorem longè, longèque favillam 690  
 Differt, & crassa volvit caligine fumum :  
 Extruditque simul mirando pondere saxa :  
 Ne dubites, quin hæc Animai turbida sit vis.*

*Præterea, magna ex parti Mare montis ad ejus  
 Radices frangit fluctus, æstumque resorbet. 695  
 Ex hoc usque mari Speluncæ Montis ad altas  
 Perveniunt subter fauceis : Hæc ire fatendum est,  
 “ Et penetrare mari penitus res cogit aperto :  
 Atque efflare foras, ideoque extollere flammæ,  
 Saxaque subjētare, & arenæ tollere nimbos. 700  
 In summo sunt ventigeni Cratères, ut ipsi  
 Nominant, Nos quas Fauceis perbibemus, & Ora.*

*Sunt aliquot quoque res, quarum unam dicere causam  
 Non satis est, verùm plureis, unde una tamen sit.*

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 Blasts of Wind within.

BESIDES, the Sea, for a great Way, dashes its Waves against the Roots of this Mountain, and then again sucks 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 Basons, 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 jacere 705*  
*Conspicias Hominis : fit ut omneis dicere causas*  
*Conveniat letbi, dicatur ut istius una.*

*Nam neque cum ferro, neque frigore vincere possis*  
*Interiisse, neque à morbo, neque fortè veneno :*  
*Verùm aliquid genere esse ex hoc, quod Concio dicat, 710*  
*Scimus : Item in multis hoc rebus dicere habemus.*

*Nilus in æstati crescit, campisque redundat*  
*Unicus in terris Ægypti totius amnis.*  
*Is rigat Ægyptum medium per sæpe calorem,*  
*Aut quia sunt æstate Aquilones ostia contra 715*  
*Anni tempore eo, quo Etesia flabra feruntur :*  
*Et contra fluvium flantes remorantur, & undas*  
*Cogentes sursus replent, coguntque manere.*  
*Nam dubio procul hæc adverso flabra feruntur*  
*Flumine, quæ gelidis à stellis Axis aguntur. 720*  
*Ille ex æstifera parti venit amnis ab Austro*  
*Inter nigra virum, percoctaque sæcla calore,*  
*Exoriens penitus media ab regione diei.*

*Est quoque, uti possit magnus congestus arenæ*  
*Fluctibus adversis oppilare ostia contra, 725*



out 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 <sup>u</sup> River in all *Egypt*, in-<sup>The Over-  
flowing of  
Nile.</sup>creases 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 *Etesia'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 foddren 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

<sup>u</sup> He assigns natural Causes for the Overflowing of the *Nile*. He says, first, that the *Etesian* 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 *Etesian* 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, casts 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.

*Cùm Mare permotum ventis ruit intus arenam.*

*Quo fit uti pacto liber minùs exitus amni,*

*Et proclivus item fiat minùs impetus undis.*

*Fit quoque, uti pluviae forsàn magis ad caput ejus*

*Tempore eo fiant, quo Etesia flabra Aquilonum 750*

*Nubila conjiciunt in eas tunc omnia parteis.*

*Scilicet ad mediam regionem ejeçta diei*

*Cùm convenerunt, ibi ad altos denique monteis*

*Contrusæ nubes coguntur, vique premuntur.*

*Forfit & Æthiopum penitus de montibus altis 735*

*Crescat, ubi in campos albas descendere ningueis*

*Tabificis subigit radiis Sol omnia lustrans.*

*Nunc age, Averna tibi quæ sint loca cumque lacusque,*

*Expediam, quali natura prædita constant.*

*Principiò, quòd Averna vocantur, nomen id ab re 740*

*Impositum est, quia sunt Avibus contraria cunçtis,*

*E regione ea quòd loca cùm advenere volantes,*

*Remigii oblitæ pennarum vela remittunt,*

*Præcipitesque cadunt molli cervice profusæ*

*In terram, si fortè ita fert natura locorum : 745*

*Aut in aquam, si fortè lacus substratus Averno est.*

*Qualis apud Cumas locus est montemque Vesevum,*

*Oppleti calidis ubi fumant fontibus auçtus.*

*Est & Athencæis in mænibus, arcis in ipso*

*Vertice,*

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 *Æthiopians*, 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 *The* call <sup>x</sup> *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 *Cumæ* 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 *Cumæ*, another near *Minerwa'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 *ἄρνις*, derived from the Privative Particle *ἀ*, and *ρνις* a 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 almæ, 750  
 Quò nunquam pennis appellunt corpora rauca  
 Cornices, non cùm fumant Altaria donis :  
 Usqueadeo fugitant non iras Palladis acreis  
 Pervigili causa, Graiùm ut cecinere poetæ :  
 Sed natura loci hoc opus efficit ipsa sua vi. 755

In Syria quoque fertur item locus esse, videri,  
 Quadrupedes quoque quò simul ac vestigia primùm  
 Intulerint, graviter vis cogat concidere ipsa,  
 Manibus ut si sint Divis mactata repente.  
 Omnia quæ naturali ratione geruntur, 760  
 Et quibus è causis fiant, apparet origo :  
 Janua ne his Orci potiùs regionibus esse  
 Credatur pòsta, hinc Animas Acheruntis in oras  
 Ducere fortè deos Maneis infernè reamur :  
 Naribus alipedes ut Cervi sæpe putantur 765  
 Ducere de latebris serpentina sæcla ferarum.  
 Quod procul à vera quàm sit ratione repulsum,  
 Percipe, namque ipsa de re nunc dicere conor.

Principiò hoc dico, quod dixi sæpe quoque ante,  
 In Terra cujusque modi rerum esse figuras : 770  
 Multa homini quæ sunt vitalia : multaque morbos  
 Incutere, & Mortem quæ possint accelerare :  
 Et magis esse aliis alias Animantibus aptas  
 Res ad vitai rationem ostendimus antè,  
 Propter dissimilem naturam, dissimileisque 755  
 Texturas inter sese, primasque figuras :  
 Multa meant inimica per aureis, multa per ipsas,  
 Insinuant nareis infesta atque aspera odore :  
 Nec sunt multa parùm tactu vitanda, nec autem  
 Aspectu fugienda, saporeque tristia quæ sint. 780  
 Deinde videre licet quam multæ sint Homini res  
 Acriter infesto sensu, spurcæque, gravesque.

Arboribus

of that high Tower, near which the kind *Tritonian Pallas* has her Temple: Here the hoarse 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 <sup>y</sup> *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; lest 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.

<sup>y</sup> This refers to the Story of *Coronis* in *Ovid's Metamorph. lib. ii.*

*Arboribus primùm certis gravis umbra tributa 'st,  
 Usqueadeo, capitis faciant ut sæpe 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 permista gerit Tellus, discretaque tradit.* 790

*Nocturnumque recens extinctum Lumen, ubi acri  
 Nidore offendit nareis consopit ibidem,  
 Dejicere ut pronos qui morbus sæpe suëvit.  
 Castoreoque gravi Mulier sopita recumbit,  
 Et manibus nitidum teneris opus effluit eij,* 795  
*Tempore eo si odorata 'st quo menstrua solvit.*

*Multaque præterea languentia membra per artus  
 Solvunt, atque Animam labefaētant sedibus intus.*

*Denique, si in calidis etiam cunētere lavacris,  
 Plenior & solio in fueris ferventis aquai :* 800  
*Quàm facilè in medio fit uti des sæpe ruinas ?*

*Carbonumque gravis vis, atque odor insinuatur  
 Quam facilè in cerebrum, nisi aquam præcepimus antè ?*

*At cùm membra hominis percepit fervida febris,  
 Tum fit odor Vini plagæ maētabilis instar.* 805

*Nonne vides etiam terra quoque Sulfur in ipsa  
 Gignier ? & tetro concrefcere odore Bitumen ?*

*Denique ubi Argenti venas, Aurique sequuntur,  
 Terrai penitus scrutantes abdita ferro ;*

Some <sup>z</sup> 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 stupifies, 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 intirely 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 pursue the Veins of Gold and Silver, and with their Tools dig in the very

<sup>z</sup> *Pliny, lib. xvii. cap. 12.* says, that the Shade of the Walnut-tree offends the Head, and that no Plants will thrive under it.

*Qualeis exspirat Scaptacula subter odores? 810*  
*Quidve mali fit ut exbalent Aurata metalla?*  
*Quas Hominum reddunt facies? qualeisque colores?*  
*Nonne vides, audisve perire in tempore parvo*  
*Quàm soleant, & quàm vitæ copia desit,*  
*Quos opere in tali cohibet vis magna? necesse 'st 815*  
*Hos igitur tellus omneis exæstuet, æstus;*  
*Expiretque foras in aperta, promptaque Cæli.*

*Sic & Averna loca Alitibus summittere debent*  
*Mortiferam vim, de terra quæ surgit in auras,*  
*Ut spatium cæli quadam de parte venenet: 820*  
*Quò simul ac primùm pennis delata fit Ales,*  
*Impediatur ibi cæco conrepta veneno,*  
*Ut cadat è regione leci, quâ dirigit æstus:*  
*Quò cùm conruit, hæc eadem vis illius æstus:*  
*Reliquias vitæ membris ex omnibus aufert. 825*  
*Quippe etenim primò quasi quendam conciet æstum:*  
*Posteriùs fit, uti cùm jam cecidere veneni*  
*In fonteis ipsos, ibi sit quoque Vita vomenda,*  
*Propterea quòd magna mali sit copia circum.*

*Fit quoque ut interdum vis hæc, atque æstus Averni,*  
*Æra, qui inter ovis cunque 'st terramque locatus,*  
*Discutiat, propè uti locus hinc linquatur inanis:*  
*Cujus ubi è regione loci venère volantes,*  
*Claudicat extemplo pennarum nisus inanis:*  
*Et conamen utrinque alarum proditur omne. 835*  
*Hic ubi nictari nequeunt, insistereque alis,*  
*Scilicet in terram delabi pondere cogit*  
*Natura; & vacuum propè jam per inane jacentes*  
*Dispergunt Animas per caulâs corporis omneis.*

*Frigidior porrò in puteis Æstate fit Humor, 840*  
*Rarescit quia Terra calore, & semina siqua*  
*Fortè vaporis habet, properè dimittit in auras.*  
*Quò magis est igitur Tellus affecta calore:*  
*Hoc fit frigidior, qui in terra 'st abditus, Humor.*



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 stopt, 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 *Wells cold* in Summer; because the Earth is rarefied by the *in Summer.* 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 cùm premitur porro omnis terra, coitque, 845*  
*Et quasi concrefcit : Fit fcilicet, ut coëundo*  
*Exprimat in puteos, fiquem gerit ipfa, Calorem.*

*Eft apud Ammonis fanum fons luce diurna*  
*Frigidus, at calidus nocturno tempore fertur :*  
*Hunc homines fontem nimis admirantur, & acri 850*  
*Sole putant fubter terras fervifcere raptim,*  
*Nox ubi terribili terras caligine texit :*  
*Quod nimis a vera'ft longè ratione remotum :*  
*Quippe ubi Sol nudum contrectans corpus aquaï,*  
*Non quierit calidum fupera de reddere parte, 855*  
*Cùm fuperum lumen tanto fervore fruatur :*  
*Quï queat hic fubter tam craffo corpore terram,*  
*Percoquere humorem, & calido fociare vaporï ?*  
*Præfertim cùm vix poffit per fepta domorum*  
*Infinuare fuum radiis ardentibus æftum ? 860*

*Quæ ratio eft igitur ? nimirum terra magis quòd*  
*Rara tenet circum hunc Fontem, quàm cætera tellus.*  
*Multaque funt ignis propè femina corpus aquaï.*  
*Hinc, ubi roriferis terram nox obruit umbris,*  
*Extemplò fubtus frigefcit terra, coitque. 865*  
*Hac ratione fit, ut, tanquam compreffa manu fit,*  
*Exprimat in Fontem, quæ Semina cumque habet ignis,*  
*Quæ calidum faciunt laticis tactum atque faporem.*  
*Inde ubi Sol radiis terram dimovit obortis,*  
*Et rarefecit calido mifcente vapore : 870*

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 <sup>a</sup> 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 warm 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

<sup>a</sup> 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.

*Rurfus in antiquas redeunt primordia sedes  
Ignis, & in terram cedit calor omnis aquai :  
Frigidus hanc ob rem fit Fons in luce diurna.*

*Præterea, Solis radiis jaſtatur aquai  
Humor, & in luci tremulo rareſcit ab æſtu : 875  
Propterea fit uti quæ ſemina cunque habet ignis,  
Dimittat : quaſi sæpe gelum, quod continet in ſe,  
Mittit, & exoluit glaciem, nodosque relaxat.*

*Frigidus eſt etiam Fons, ſupra quem ſita sæpe  
Stupa jacet flammæ concepto protinus igni : 880  
Tedaque conſimili ratione accenſa per undas  
Conlucet, quocunque natans impellitur auris :  
Nimirum quia ſunt in Aqua permulta vaporis  
Semina, de Terraque neceſſe eſt funditus ipſa  
Ignis corpora per totum conſurgere Fontem, 885  
Et ſimul exſpirare foras, exireque in auras,  
Non tam viva tamen, calidus queat ut fieri Fons.*

*Præterea, diſperſa foras erumpere cogit  
Viſ per Aquam ſubito, ſurſumque ea conciliari :  
Quod genus endo mari ſpirat Fons, dulcis aquai 890  
Qui ſcatit, & ſalſas circum ſe dimovet undas.  
Et multis aliis præbet regionibus æquor  
Utilitatem oportunam ſitientibu' Nautis,  
Quod dulceis inter ſalſas intervomit undas.  
Sic igitur per eum poſſunt erumpere Fontem, 895  
Et ſcatere illa foras in ſtupam Semina : quò cum  
Conveniunt, aut cum tediæ corpori adherent,*

*Ardeſcunt.*

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 extinguished, 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<sup>b</sup>. 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

<sup>b</sup> 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.

*Ardescunt facilè extemplò : quia multa quoque in se  
Semina habent ignis stupæ tedæque tenentes.*

*Nonne vides etiam, nocturna ad lumina Lychnum  
Nuper ubi extinctum admoveas, accendier antè 901*

*Quàm tetigit flammam ? tedamque pari ratione ?*

*Multaque præterea, priùs ipso tacta vapore*

*Eminus ardescunt, quàm cominus imbuat ignis.*

*Hoc igitur fieri quoq; in illo Fonte putandum' st. 905*

*Quod superest, agere incipiam quo fædere fiat*

*Naturæ, Lapis hic ut ferrum ducere possit,*

*Quem Magneta vocant patrio de nomine Graii,*

*Magnetum quia sit patrius in finibus ortus.*

*Hunc*

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* of Nature it is that the Stone (which the *Greeks* *Loadstone.* call a <sup>c</sup> *Magnet*, from the Country that produces it, for it is found in the Region of the *Magnetes*) has the Virtue to attract Iron.

## MEN

<sup>c</sup> 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 intangled and twined together) and consequently the whole Mass 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, quippe catenam  
Sæpe ex annellis reddit pendentibus ex se. 911*

*Quinque etenim licet interdum, plureisque videre  
Ordine demissos levibus jactarier auris,  
Unus ubi ex uno dependet subter adhærens;  
Ex alioque alius Lapidis vim, vinculaque noscit: 915  
Usqueadeo permananter vis pervolet ejus.*

*Hoc genus in rebus firmandum est multa prius, quam  
Ipsius rei rationem reddere possis:*

*Et nimium longis ambagibus est adeundum:  
Quò magis attentas aureis, animumque reposco. 920*

*Principiò, omnibus à rebus, quascunque videmus,  
Perpetuò fluere, ac mitti, spargique necesse est  
Corpora, quæ feriant oculos visumque laceessant:  
Perpetuòque, fluunt cretis ab rebus odores,  
Frigus ut à fluviis, Calor à sole, Æstus ab undis 925  
Æquoris exesor mærorum littora propter:  
Nec varii cessant sonitus manare per Aures.*

*Denique in Os salsi venit humor sæpe saporis,  
Cum mare versamur propter; dilutaque contra  
Cum tuimur misceri Absinthia tangit Amaror: 930  
Usqueadeo omnibus ab rebus res quæque fluenter  
Pertur, & in cunctas dimittitur undique parteis:  
Nec mora, nec requies inter datur ulla fluendi,*

*Perpetuò*



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 intirely 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 always 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 Intermiſſion, the Seeds

says, that this could not be, but by reason that the empty Space that is made by Corpufcles 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.

*Perpetuò quoniam sentimus, & omnia semper  
Cernere, Odorari licet, & sentire Sonorem.* 935

*Nunc omnes repetam quàm raro corpore sint res,  
Commemorare, quod in primo quoque carmine claret.  
Quippe etenim, quamquam multas hoc pertinet ad res  
Noscere, cum primis hanc ad rem protinus ipsam,  
Qua de differere aggredior, firmare necesse est* 940  
*Nil esse in promptu, nisi mistum Corpus Inani.*

*Principio fit, ut in speluncis saxa superna  
Sudent humore, & guttis manantibus stillent :  
Manat item nobis è toto corpore Sudor,  
Crescit barba, pilique per omnia membra, per artus :  
Diditus in venas cibus omneis, auget, alitque* 946  
*Corporis extremas quoque parteis unguiculosque.  
Frigus item transire per æs, calidumque vaporem  
Sentimus : sentimus item transire per aurum,  
Atque per argentum, cum pocula plena tenemus.* 950  
*Denique per dissepta domorum saxea voces  
Pervolitant, permanat Odos, Frigusque, Vaposque  
Ignis : quin Ferri quoque vim penetrare suèvit,  
Undique qua circum corpus lorica coercet ;  
Morbida vis quæcunque extrinsecus insinuatur.* 955  
*Et tempestates terra cæloque coortæ  
E cælo emotæ terraque repente faceffunt,  
Quandoquidem nihil est, non raro corpore nexum.*

*Huc accedit, uti non omnia, quæ jaciuntur  
Corpora cunque ab rebus, eodem prædita sensu,* 960  
*Atque eodem pacto rebus sint omnibus apta.  
Principiò, Terram, Sol excoquit, & facit are :  
At glaciem dissolvit, & allis montibus altè  
Exstructas ningueis radiis tabescere cogit,  
Denique cera liquefcit in ejus pòsta vapore,* 965  
*Ignis item liquidum facit æs, aurumque resolvit :  
At coria, & carnem trahit, & conducit in unum.*

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 Brass, 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 Quality 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

Humor aquæ porro ferrum condurat ab igni,  
 At coria, & carnem mollit durata calore :  
 Barbigeras oleaster eò iuvat usque Capellas, 970  
 Diffluat ambrosia quasi verò, & nectare tinctus :  
 At nihil est, Homini fronde hac quod amarius extet.  
 Denique Amaracinum fugitat Sus & timet omne  
 Unguentum ; nam, setigeris subus acre venenum' est,  
 Quod nos interdum tanquam recreare videtur. 975  
 At contrà Nobis Cænum teterrima cùm sit,  
 Spurcicies, eadem Subus hæc res munda videtur,  
 Infatiabiliter toti ut volvantur ibidem.

Hoc etiam superest, ipsa quam dicere de re  
 Aggredior, quod dicendum priùs esse videtur. 980  
 Multa foramina cùm variis sint reddita rebus,  
 Dissimili inter se natura prædita debent  
 Esse, & habere suam naturam quæque, viasque,  
 Quippe etenim varii sensus Animantibus insunt,  
 Quorum quisque suam propriè rem percipit in se. 985  
 Nam penetrare alià sonitus, aliaque saporem  
 Cernimus è succis, alià Nidoris odores,  
 Propter dissimilem naturam, textaque rerum :  
 Præterea manare aliud per Saxa videtur :  
 Atq; aliud per Ligna : aliud transire per Aurum : 990  
 Argentoque foras aliud, Vitroque meare.  
 Nam fluere hæc Species, illàc Calor ire videtur :  
 Atque aliis aliud citiùs transmittere eâdem.  
 Scilicet id fieri cogit Natura viarum,  
 Multimodis varians, ut paullò ostendimus antè. 995  
 Quapropter benè ubi hæc confirmata atque locata  
 Omnia constiterint nobis præpôsta, parata :  
 Quod superest, facilè hinc ratio reddetur, & omnis  
 Causa patefiet, 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 Bristly Race, but cheers our Spirits with a sweet Delight: And then, to roll in Mud is the most odious Filthiness 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 'st  
 Semina, sive Æstum, qui discutit Aëra plagis : 1001  
 Inter qui Lapidem, Ferrumque 'st cunque locatus.  
 Hoc ubi inaniter spatium, multusque vacesit  
 In medio locus : extemplo primordia Ferri  
 In vacuum prolapsa cadunt conjuncta, fit utque 1005  
 Annulus ipse sequatur, eatque ita corpore toto.  
 Nec res ulla magis primoribus ex elementis  
 Indupedita suis arctè connexa cobæret,  
 Quàm validi Ferri naturæ frigidus horror.  
 Quò minùs est mirum, quod paullò diximus antè, 1010  
 Corpora si nequeunt de Ferro plura coorta  
 In vacuum ferri, quin Annulus ipse sequatur :  
 Quod facit & sequitur donec pervénit ad ipsum  
 Jam Lapidem, cæcisque in eo compagibus hæsit.  
 Hoc fit item cunctas in parteis, unde vacesit 1015  
 Cunque locus, sive ex transverso, sive superne,  
 Corpora continuò in vacuum vicina feruntur.  
 Quippe agitantur enim plagis aliunde, nec ipsa  
 Sponte sua sursum possunt consurgere in auras,  
 Huc accedit item, quare queat id magis esse : 1020

AND first, <sup>d</sup> Many Seeds or Effluvia are continually flying off from the Stone, and by their Blows disperse 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 said 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

<sup>d</sup> He says, that many Corpuscles flow as well from the Leadstone 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 Leadstone, 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 Leadstone: 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.

“ Hæc quoque res adjumento, motuque juvatur :  
 Quòd simul à fronte est Anelli rarior Aër  
 Factus, inanitusque locus magis ac vacuatus.  
 Continud fit, uti qui post est cunque locatus  
 Aër, à tergo quasi provehat atque propellat. 1025  
 Semper enim circum positus res verberat Aër.  
 Sed tali fit uti propellat tempore Ferrum,  
 Parte quòd ex una spatium vacat, & capit in se.  
 Hic, ubi, quem memoro, per crebra foramina Ferri<sup>st</sup>  
 Parvas ad parteis subtiliter insinuatus : 1030  
 Trudit & impellit, quasi Navim velaque Ventus.

Denique res omnes debent in corpore habere  
 Aëra, quandoquidem raro sunt corpore, & Aër  
 Omnibus est rebus circumdatus appositusque.  
 Hic igitur, penitus qui in Ferro<sup>st</sup> abditus Aër, 1035  
 Sollicito motu semper jaëtatur, eoque  
 Verberat Anellum dubio procul : & ciet intus  
 Scilicet : atque eòdem fertur, quo præcipitavit  
 Jam semel, & quamquam in partem conamina sumsit.

Fit quoque ut à Lapide hoc Ferri natura recedat 1040  
 Interdum, fugere, atque sequi consueta vicissim.  
 Exsultare etiam Samothracia ferrea vidi :  
 Et ramenta simul Ferri furere intus abenis  
 In Scaphiis, lapis hic Magnes cùm subditus esset :  
 Usqueadeo fugere à Saxo gestire videtur. 1045



this Experiment, which is, that the <sup>e</sup> 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 toss'd 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 brasen 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-

<sup>e</sup> 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.

version

*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 habet quâ tranet, ut antè. 1050  
 Cogitur offensare igitur pulsareque fluctu  
 Ferrea texta suo ; quo pacto respuit ab se,  
 Atque per Æs agitat, sine eo quæ sæpe resorbet.*

*Illud in his rebus mirari mitte, quòd æstus  
 Non valet è Lapide hoc alias impellere item res : 1055  
 Pondere enim fretæ partim stant, quod genus Aurum ;  
 Ac partim Raro quia sunt cum corpore, ut æstus  
 Pervolet intactus, nequeunt impellier usquam ;  
 Lignea materies in quo genere esse videtur.  
 Inter utrasque igitur Ferri natura locata, 1060  
 Æris ubi accepit quædam corpuscula : tum fit,  
 Impellant ut eam Magnesi semina saxi.*

*Nec tamen hæc ita sunt aliarum rerum aliena,  
 Ut mihi multa parum genere ex hoc suppeditentur,  
 Que memorare queam inter se singulariter apta. 1065  
 Saxa vides primum sola coalescere Calce :  
 Glutine materies Taurino ita jungitur una,  
 Ut vitio venæ tabularum sæpius hiscant,  
 Quàm laxare queant compages taurca vincla.  
 Vitigeni latices in Aquai 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 surpris'd <sup>f</sup> 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 brassen 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,

<sup>f</sup> 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.

when

*Misceri, cùm Pix nequeat gravis, & leve Olivum :*  
*Purpureusque colos Conchylî mergitur unâ*  
*Corpore cum Lanæ, dirimi qui non queat usquam ;*  
*Non si Neptuni fluctu renovare operam des :*  
*Non, mare si totum velit eluere omnibus undis. 1075*  
*Denique res Auro Argentum concopulat unâ,*  
*Ærique æs 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 hîc operam consumere par est :*  
*Sed breviter paucis restat comprehendere multa. 1081*

*Quorum ita texturæ ceciderunt mutua contra,*  
*Ut cava conveniant plenis hæc illius, illa*  
*Hujusque : inter se junctura horum optima constat.*  
*Est etiam, quasi ut annellis, hamisque plicata 1085*  
*Inter se quædam possint coplata teneri :*  
*Quod magis in Lapide hoc fieri Ferroque videtur.*

*Nunc, ratio quæ sit Morbis, aut unde repente*  
*Mortiferam possit cladem conflare coorta*  
*Morbida vis Hominum generi, Pecudumque catervis,*  
*Expediam. Primùm multarum semina rerum 1091*  
*Esse supra docui, quæ sint vitalia nobis :*  
*Et contrâ, quæ sint morbo, mortique, necesse est*  
*Multa volare ; ea cùm casu sunt fortè coorta,*  
*Et perturbarunt cælum, fit morbidus Aër. 1095*  
*Atque ea vis omnis Morborum, pestilitasque,*  
*Aut extrinsecus, ut nubes nebulæque supernè*  
*Per cælum veniunt, aut ipsa sæpe 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 soulder 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 <sup>s</sup> 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, *Of* and whence arise the pestilential Blasts, that spread *Plagues.* 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

<sup>s</sup> On the Surface of the *Magnet* there are Hooks, and of the Surface of the Steel little Rings, which the Hooks catch hold of.

from

*De terra surgunt, ubi putrorem humida nacta est,  
Intempestivis Pluviisque, & Solibus iſta.* 1100

*Nonne vides etiam cœli novitate, & aquarum  
Tentari, procul à patria quicunque domoque  
Adveniunt? Ideo quia longè discrepat Aër.*

*Nam quid Britannum cœlum differre putamus,  
Et quod in Ægypto est, quàm mundi claudicat Axis?* 1105

*Quidve quod in Ponto est differre à Gadibus, atque  
Usque ad nigra virum, percoëtaque sæcla calore.*

*Quæ cum quatuor inter se diversa videmus,  
Quatuor à ventis, & cœli partibus esse,*

*Tum color & facies hominum distare videntur* 1110

*Largiter, & morbi generatim sæcla tenere.*

*Est Elephas morbus, qui propter flumina Nili  
Gignitur Ægypto in media, neque præterea usquam.*

*Attbide tentantur Gressus, Oculique in Achæis*

*Finibus, inde aliis alius locus est inimicus* 1115

*Partibus, ac membris: Varius concinnat id Aër.*

*Proinde ubi se Cœlum, quod nobis fortè alienum est,  
Commovet, atque Aër inimicus serpere cœpit:*

*Ut nebula, ac nubes paullatim repit, & omne*

*Quàm graditur, conturbat, & immutare coëtat.* 1120

*Fit quoque, ut in nostrum cum venit deniq; cœlum,*

*Corrumpat, reddatque sui simile atque alienum.*

*Hæc igitur subitò clades nova, pestilitasque,*

*Aut in aquas cadit, aut fruges perfidit in ipsas,*

*Aut aliòs hominum pastus, pecudumq; cibatus:* 1125

*Aut etiam suspensa manet vis Aëre in ipso:*

from the Earth itself, when drenched by fierce unseasonable Showers, and pierced by the Sun's scorching Beams, it sends unwholsome 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 *Æthiopia*, where the black Race of Men are thoroughly sodd'n 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 oppos'd 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 no where else. The *Athenians* are tortured with the Gout, the *Achæans* with sore 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 sad infectious Blasts, fall either in the Water, or fix upon the Fruits or other Food of Men, or on the Proviender of Cattle; or they may hang suspended in the  
Air

Et cùm spiranteis mistas hinc ducimus auras,  
 Illa quoque in corpus pariter sorbere necesse est.  
 Consimili ratione venit Bubus quoque sæpe  
 Pestilitas, etiam pecubus balantibus ægor. 1130  
 Nec refert utrum nos in loca deveniamus  
 Nobis adversa, & cæli mutemus amictum :  
 An cælum nobis ultrò natura cruentum  
 Deferat, aut aliquid, quo non consuevimus uti :  
 Quod nos adventu possit tentare recenti. 1135  
 Hæc ratio quondam morborum, & mortifer æstus  
 Finibus Cecropiis funestos reddidit agros,  
 Vastavitque vias, exhausit civibus urbem.  
 Nam penitus veniens Ægypti è finibus ortus,  
 Aëra permensus multum, camposq; natanteis, 1140  
 Incubuit tandem populo Pandionis : omnes  
 Inde catervatim morbo mortique dabantur.  
 Principiò, caput incensum fervore gerebant :  
 Et duplicis oculos suffusa luce rubenteis.  
 Sudabant etiam fauces intrinsecus atro 1145  
 Sanguine, & ulceribus vocis via septa coibat ;  
 Atque animi interpretès manabat lingua cruore,  
 Debilitata malis, motu gravis, aspera tactu :  
 Inde, ubi per fauceis pectus complerat, & ipsum  
 Morbida vis in cor mæstum confluxerat ægris : 1150  
 Omnia tum verò vitæ claustra lababant.  
 Spiritus ore foras tetrum volvebat odorem,  
 Rancida quo perolent projecta cadavera ritu.  
 Atque animi prorsum vires totius, & omne

Languerat



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, *The Plague of Athens.* poison'd the Coasts of <sup>h</sup> *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 stopt by Ulcers; the Tongue (the Interpreter of the Mind) o'erflowed with Gore, and, faulted 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 Carcases; the Powers of all the Soul and all the Body flag

<sup>h</sup> 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 *Cecropid*, from *Cecrops* who built it. This Plague is no less accurately than elegantly described by *Thucydides*, who was himself both a Spectator and Sharer of it.

Languēbat corpus, lethi jam limine in ipso. 1155  
 Intolerabilibusque malis erat anxius anguor  
 Assiduē comes, & gemitu commista querela,  
 Singultusque frequens noctem persæpe, diemque,  
 Conripere assiduē nervos & membra coactans,  
 Dissolvebat eos, defessos antè, fatigans. 1160  
 Nec nimio cuiquam posses ardore tueri  
 Corporis in summo summam ferviscere partem :  
 Sed potiùs tepidum manibus proponere tactum,  
 Et simul ulceribus quasi iniustis omne rubere  
 Corpus, ut est per membra Sacer cùm deditur ignis. 1165  
 Intima pars homini verò flagravit ad ossa :  
 “ Flagravit stomacho flamma, ut fornacibus intus,  
 Nil adeo posset cuiquam leve, tenueque membris  
 Vertere in utilitatem : ad ventum & frigora semper  
 In fluvios partim gelidos ardentia morbo 1170  
 Membra dabant, nudum jacentes corpus in undas.  
 Multi præcipites lymphis putealibus aliè  
 Inciderunt, ipso venientes ore patente.  
 Insedabiliter sitis arida corpora mersans  
 Æquabāt multum parvis humoribus imbrem. 1175  
 Nec requies erat ulla mali, defessa jacebant  
 Corpora, mussabat tacito Medicina timore,  
 Quippe patentia cùm totas ardentia nocteis  
 Lumina versarent oculorum expertia somno,  
 Multaq; præterea mortis tum signa dabantur, 1180  
 Perturbata Animi mens in mærore, metuque,  
 Tristè supercilium, furiosus voltus, & acer,  
 Sollicitæ porro plenæque sonoribus aures,  
 Creber spiritus, aut ingens, raròque coortus,  
 Sudorisq; madens per collum splendidus humos, 1180  
 Tenuia sputa, minuta, croci continèta colore,  
 Salsaque 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 Distress and Sinking of the Mind, loud Sighs with bitter Moans; and frequent Sobblings, all the Day and Night, twitch'd and convulsed the Nerves and every Limb, and loosen'd every Joint, and forely 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 Pustules, 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 plunged their Bodies, scorched with the Disease, in Rivers, and naked threw themselves in chilling Streams; some ran with open Mouths, and headlong leap'd into deep Wells; the parching Thirst, insatiable, so burnt their Bodies, it made whole Showers of Water seem no more than a few Drops.

THE Pain was without Intermiſſion, without End; the Body lay quite spent, stretched out; the burning Eyes wide open, and, without Sleep for many a restless Night, rolled dreadfully about. The Physician mutters to himself in silent Fear, and leaves the Patient in Despair, for many Signs of coming Death appeared: The Mind distracted with Dread and Horror; a stern Brow; a Countenance fierce and furious; the Ears tormented with a buzzing Noise; the Breath thick, or deep and seldom drawn; a frothy Sweat, flowing in Abundance over the Neck; the Spittle thin and dry, and yellow as Saffron, and the salt Matter could scarce be brought up through the Jaws by coughing; a Contraction of the Nerves in the

*A pedibusque minutatim succedere frigus  
Non dubitabat, item ad supremum denique tempus  
Compressæ nares, nasi primoris acumen* 1191

*Tenue, cavati oculi, cava tempora, frigida pellis,  
Duraque, inborrebat rictum, frons tenta minebat :  
Nec nimio rigida post strati morte jacebant :*

*Octavoque ferè candenti lumine solis,* 1195  
*Aut etiam nona reddebant lampade vitam.*

*Quorum si quis (ut est) vitârat funera lethi,  
Ulceribus tetris, & nigra proluvie alvi ;*

*Posteriùs tamen hunc tabes lethumque manebat :  
Aut etiam multus capitis cum sæpe dolore* 1200

*Corruptus sanguis plenis ex naribus ibat :  
Huc hominis totæ vires corpusque fluebat.*

*Profluvium porro qui tetri sanguinis acre  
Exierat, tamen in nervos huic morbus & artus  
Ibat, & in parteis genitales corporis ipsas.* 1205

*Et graviter partim metuentes limina lethi  
Vivebant ferro privati parte virili :*

*Et manibus sine nonnulli pedibusque manebant  
In vita tamen, & perdebant lumina partim :  
Usqueadeo mortis metus his incēsserat acer.* 1210

*Atque etiam quosdam cepere oblivia rerum  
Cunctorum, neque se possent cognoscere ut ipsi.*

*Multaque humi cùm inhumata jacerent corpora  
supra*

*Corporibus, tamen alituum genus atque ferarum  
Aut procul absiliebat, ut acrem exiret odorem :* 1215

*Aut, ubi gustârat, languebat morte propinquâ.  
Nec tamen omnino temerè illis solibus ulla*

*Comparebat avis, nec noctibus sæcla ferarum  
Exibant sylvis : Languebant pleraque morbo,  
Et moriebantur : cùm primis fida canum vis* 1220

*Strata viis animam ponebat in omnibus ægram.  
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

*Incomitata rapi certabant funera vasta :*

*Nec ratio remedi communis certa dabatur :*

*Nam quod aliis dederat vitaleis Aëris auras* 1225

*Volvere in ore licere, & cæli templa tueri :*

*Hoc aliis erat exitio, lethumque parabat.*

*Illud in his rebus miserandum & magnopere unum  
Ærumnabile erat, quòd ubi se quisque videbat*

*Implicitum morbo, morti damnatus ut esset,* 1230

*Deficiens animo mæsto cum corde jacebat*

*Funera respectans, animam & mittebat ibidem.*

*Idque vel in primis cumulabat funere funus :*

*Quippe etenim nullo cessabant tempore apisci*

*Ex aliis alios avidi contagia morbi :* 1235

*Nam quicumque suos fugitabant visere ad ægros,*

*Vitæ nimium cupidi, mortisque timentes,*

*Pænibat paullò post turpi morte malaque*

*Desertos, opis experteis, incuria mactans,*

*Lanigeras tanquam pecudes, & bucera sæcla.* 1240

*Qui fuerant autem præstò, contagibus ibant,*

*Atque labore, pudor quem tum cogebat obire,*

*Blandaque lassorum vox mista voce querelæ.*

*Optimus hoc lethi genus ergo quisque subibat :*

*Inque aliis alium populum sepelire suorum* 1245

*Certantes, lacrymis lassi luctuque redibant.*

*Inde bonam partem in lectum mærcore dabantur :*

*Nec poterat quisquam reperiri, quem neq; morbus,*

*Nec moris, nec luctus 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 preserved 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, abandon'd, 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,  
 Languabant, penitusque casis contrusa jacebant  
 Corpora, paupertate & morbo dedita morti.  
 Exanimis pueris super exanimata parentum  
 Corpora nonnunquam posses, retroque videre 1255  
 Matribus, & patribus natos super edere vitam:  
 Nec minimum partim ex agris ægroris in urbem  
 Confluxit, languens quem contulit Agricolarum  
 Copia, conveniens ex omni morbida parti.  
 Omnia complebant loca tecta que quò mage eos tum 1260  
 Confertos ita acervatim mors accumulabat.  
 Multa sibi prostrata viam per, proque voluta  
 Corpora silanos ad aquarum strata jacebant,  
 Interclusa anima nimia ab dulcedine aquai.  
 Multaq; per populi passim loca promta, viasq; 1265  
 Languida semianimo tum corpore membra videres,  
 Horrida pædore, & pannis cooperta perire  
 Corporis inluvie: Pellis super ossibus una,  
 Ulceribus tetris prope jam, sordique sepulta.  
 Omnia deniq; sancta Deum delubra replerat 1270  
 Corporibus mors exanimis, onerataque passim  
 Cuncta cadaveribus Cælestum templa manebant:  
 Hospitibus loca quæ complerant Ædituentes.  
 Nec jam relligio Divum, nec Numina magni  
 Pendebantur: Enim præsens Dolor exsuperabat. 1275  
 Nec mos ille Sepulturæ remanebat in urbe,  
 Ut prius hic populus semper consuerat humari.  
 Perturbatus enim totus trepidabat, & unus



BESIDES, the Shepherds and the Herdsmen, and the lusty 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 Nastiness.

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 Carcases. 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

*Quisque suum pro re consortem mæstus humabat.*

*Multaque vis subita, & paupertas horrida suasit.*

*Namque suos consanguineos aliena rogorum* 1281

*Insuper instructa ingenti clamore locabant,*

*Subdebantque faceis, multo cum sanguine sæpe*

*Rixantes potiùs quàm corpora desererentur.*



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 forsake the Bodies of their Friends.

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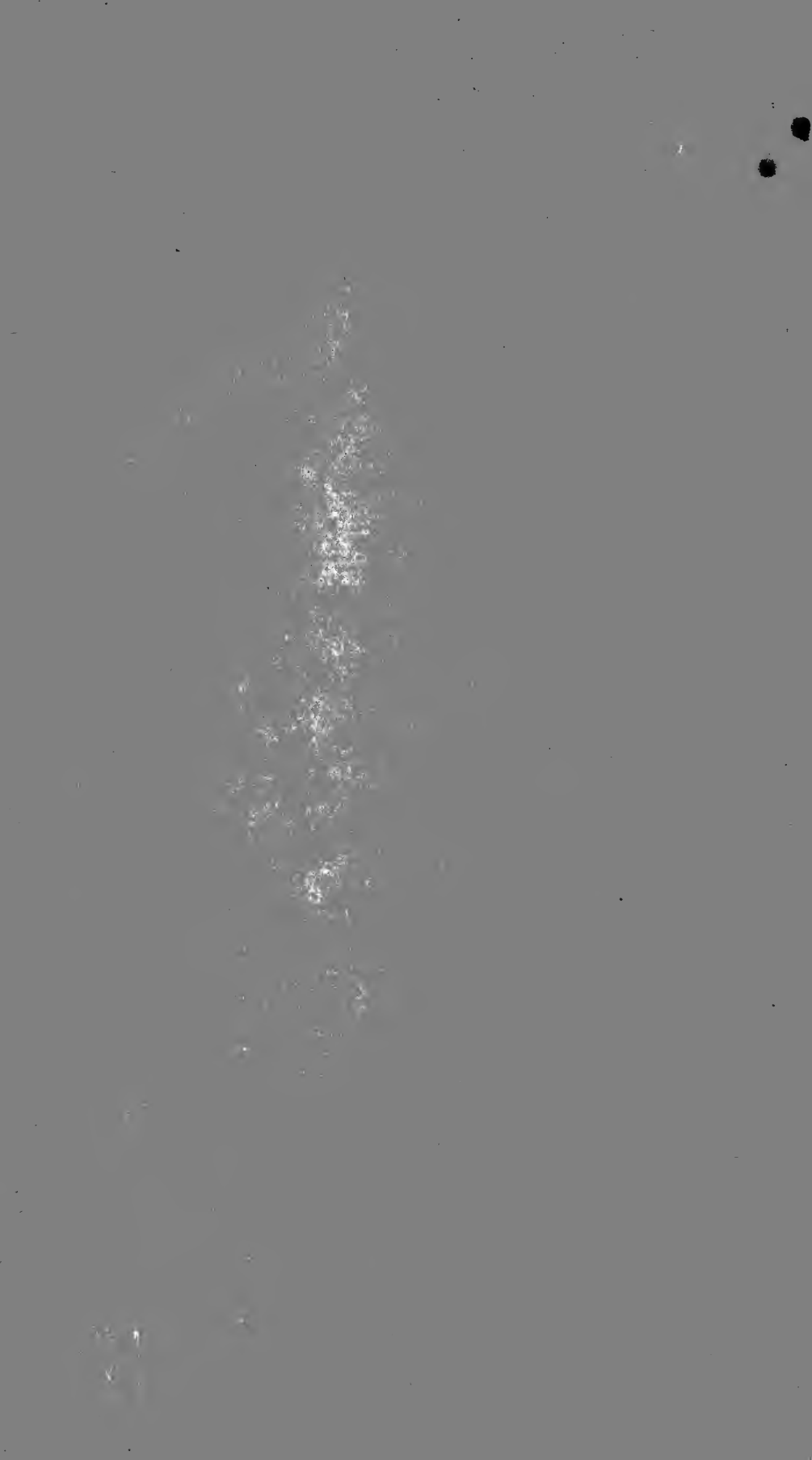
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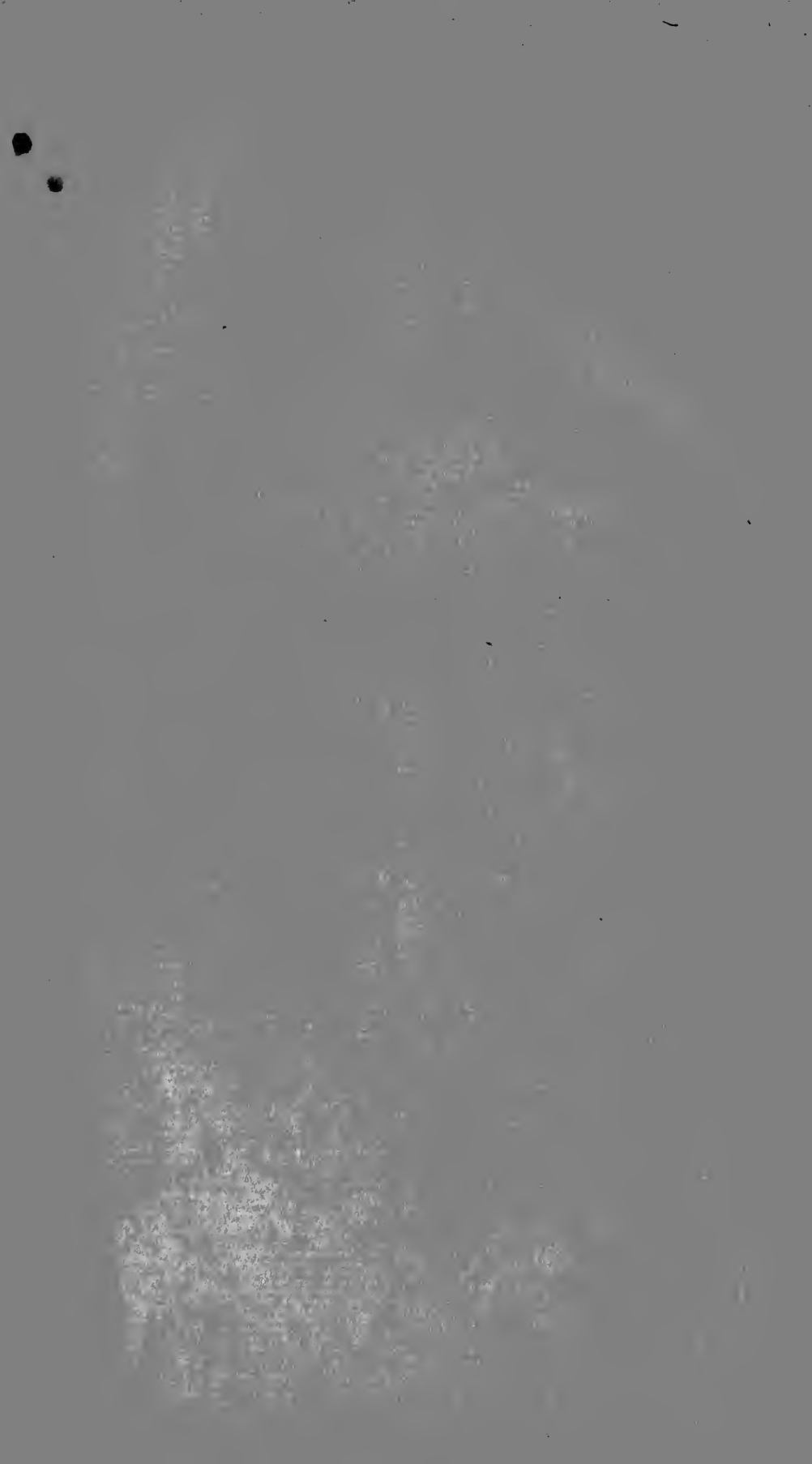
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