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THE
Folly and Unreasonableness
OF
ATHEISM

Demonstrated from
The Advantage and Pleasure of a
Religious Life,
The Faculties of Human Souls,
The Structure of Animate Bodies, &
The Origin and Frame of the World:

In **EIGHT SERMONS**

Preached at the Lecture Founded by
The Honourable *ROBERT BOYLE*, Esquire;
In the *First Year* MDCXCII.

By *RICHARD BENTLEY*, M. A.
Chaplain to the Right Reverend Father in God,
EDWARD, Lord Bishop of Worcester.

L O N D O N,
Printed by *J. H.* for *H. Mortlock* at the *Phoenix* in
St. Paul's Church-yard. 1693.

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T H E
Folly of Atheism,

And (what is now called) *DEISM*;
Even with Respect to the *Present Life*.

A
S E R M O N

Preached in the
Church of St. Martin in the Fields,
March the VII. 1691

Being the First of the Lecture Founded by
the Honourable *ROBERT BOYLE*, Esquire.

By *RICHARD BENTLEY*, M. A.
Chaplain to the Right Reverend Father in God,
EDWARD, Lord Bishop of *Worcester*.

L O N D O N,
Printed for *Tho. Parkhurst* at the *Bible and Three Crowns*
in *Cheapside*, and *H. Mortlock* at the *Phoenix*
in *St. Paul's Church-yard*, 1692.



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Ra. Barker.



To my most Honoured Patrons,
TRUSTEES appointed by the Will of the
Honourable ROBERT BOYLE, Esq;

The Right Reverend Father in God, *Thomas*,
Lord Bishop of *Lincoln*.

Sir *Henry Asburst*, K^t and Baronet.

Sir *John Rotheram*, Serjeant at Law.

John Evelyn, senior, Esquire.

Most Honoured,

GOD having disposed the Heart of that
incomparable Person, the Honourable
Robert Boyle, Esquire, lately decea-
sed, the Glory of our Nation and Age, whose
Charity and Goodness were as universal as his
Learning and Fame; 'To settle an Annual
'Salary for some Divine or Preaching Mini-
'ster, who shall be enjoined to perform the
'Offices following : 1. To preach Eight Ser-
'mons in the Year, for proving the Christian
'Religion against notorious Infidels, viz. A-
'theists, Deists, Pagans, Jews and Mahometans ;

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'not

The Epistle Dedicatory.

not descending to any Controversies that are among Christians themselves: These Lectures to be on the *First Monday* of the respective Months of *January, February, March, April, May, September, October, November*; in such Church as the Trustees shall from time to time appoint: 2. To be assisting to all Companies, and encouraging them in any Undertaking for propagating the Christian Religion: 3. To be ready to satisfy such Real Scruples as any may have concerning those Matters; and to answer such New Objections or Difficulties as may be stated, to which good Answers have not yet been made: *You have been pleased to believe me able in some measure to perform these Offices, and to command this First Essay to be made publick. I am very sensible of the great Honour, as well as the great Extent and Difficulty of the Task; and shall endeavour to the utmost of my poor ability to answer the religious and generous Design of that Excellent Person, and the good Opinion you have entertained of,*

My most Honoured Patrons,

Your very obliged and humble Servant,

R. Bentley.

[I]

THE Folly of Atheism, &c.

Psalms XIV. v. 1.

The Fool hath said in his Heart, There is no God; they are corrupt, they have done abominable works, there is none that doth good.

I Shall not now make any enquiry about the time and occasion and other circumstances of composing this *Psalms*: nor how it comes to pass, that with very little variation we have it twice over, both here the 14th. and again number the 53d. Not that these and such-like are not important considerations in themselves; but that I think them improper now, when we are to argue and expostulate with such persons, as allow no Divine Authority to our Text; and profess no greater, or, it may be they will say, less Veneration for these Sacred Hymns, than for the profane Songs of *Anacreon*

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creon or Horace. So that although I my self do really believe, that all such as *say in their Hearts, There is no God*, are foolish and corrupt, both in Understanding and Will; because I see that infinite Wisdom himself has pronounced them to be so: nevertheless this Argument would at present have no force upon these men, till in due time and method we have evinced the sufficient Authority of Holy Scripture. But however there are other Books extant, which they must needs allow of as proper Evidence; even the mighty Volumes of visible Nature, and the everlasting Tables of Right Reason; wherein, if they do not wilfully shut their eyes, they may read their own Folly written by the Finger of God in a much plainer and more terrible Sentence, than *Belsazzar's* was by the Hand upon the Wall.

Dan. 5. 5.

And as the impious Principles of these persons do preclude any argumentation from the Revealed Word of God: so they prevent us also from speaking at present to the second part of the *Text*. The whole verse hath apparently two propositions; the one denoting the *Folly of Atheism*, *The Fool hath said in his Heart, There is no God*: the second declaring the

the *Corruption* and *Flagitiousness* of Life that naturally attend it, *They are corrupt, they have done abominable works, there is none that doth good*. Now this latter part to a genuine Atheist is meer *Jargon*, as they love to call it; an empty sound of words without any signification. He allows no Natural Morality, nor any other distinction of Good and Evil, Just and Unjust; than as Human Institution and the modes and fashions of various Countries do denominate them. The most Heroical Actions or detestable Villanies are in the nature of the things indifferent to his approbation; if by secrecy they are alike conceal'd from Rewards or Punishments, from Ignominy or Applause. So that till we have proved in its proper place the eternal and essential Difference between Virtue and Vice; we must forbear to urge Atheists with the *Corruption* and *Abominableness* of their Principles. But I presume, the first part of the *Text*, the *Folly and sottishness of Atheism* (which shall be the subject of this discourse) will be allowed to come home to their Case: since they make such a noisy pretence to Wit and Sagacity; and I believe several of them first engage in that Labyrinth of Nonsense and Folly out of

an absurd and preposterous affectation of seeming Wiser than their neighbours.

But before I proceed any farther, it will be necessary to clear and vindicate this expression of the *Psalmist*, *The Fool hath said in his Heart, There is no God.* For I know not any Interpreters, that will allow it to be spoken of such, as *flatly deny* the Being of God; but of them that believing his Existence, do yet seclude him from directing the Affairs of the World, from observing and judging the Actions of Men. I suppose they might be induced to this, from the commonly received notion of an Innate Idea of God, imprinted upon every Soul of Man at their Creation, in Characters that can never be defaced. Whence it will follow, that Speculative Atheism doth subsist only in *our* speculation; whereas really Human Nature cannot be guilty of the crime: that indeed a few sensual and voluptuous Persons may for a season eclipse this native Light of the Soul; but can never so wholly smother and extinguish it, but that at some lucid intervals it will recover it self again, and shine forth to the conviction of their Conscience. And therefore they believed, that the words would not admit of a strict and rigorous interpretation;

pretation; but ought to be so temper'd and accommodated to the nature of things, as that they may describe those profane persons; who, though they *do not, nor cannot* really doubt in their hearts of the Being of God, yet do openly deny his Providence in the course of their lives. Now if this be all that is meant by the *Text*, I do not see how we can defend not only the fitness and propriety, but the very truth of the expression. As to that natural and indeleble signature of God, which Human Souls in their first Origin are supposed to be stamp'd with, I shall shew at a fitter opportunity, that it is a mistake, and that we have no need of it in our Disputes against Atheism. So that being free from that prejudice, I interpret the words of the *Text* in the literal acceptation, which will likewise take in the Expositions of others. For I believe that the Royal Psalmist in this comprehensive brevity of speech, *There is no God*, hath concluded all the various Forms of Impiety; whether of such as excludes the Deity from governing the World by his Providence, or judging it by his Righteousness, or creating it by his Wisdom and Power. Because the consequence and result of *all* these Opinions is

is terminated in down-right Atheism. For the Divine Inspection into the affairs of the World doth necessarily follow from the Nature and Being of God. And he that denies this, doth implicitly deny his Existence: he may acknowledge what he will with his mouth, but *in his heart he hath said, There is no God. A God, therefore a Providence*; was a general argument of virtuous men, and not peculiar to the *Stoics* alone. And again, *No Providence, therefore no God*; was the most plausible reason, and the most frequent in the mouths of Atheistical men. So that it seems to be agreed on all hands, that the Existence of God and his Government of the World do mutually suppose and imply one another.

There are some Infidels among us, that not only disbelieve the *Christian Religion*; but impugn the assertion of a *Providence*, of the *Immortality* of the Soul, of an *Universal Judgment* to come, and of any *Incorporeal Essence*: and yet to avoid the odious name of *Atheists*, would shelter and screen themselves under a new one of *Deists*, which is not quite so obnoxious. But I think the *Text* hath cut them short, and precluded this subterfuge; in as much as it hath declared, that all such wicked

wicked Principles are coincident and all one in the issue with the rankest Atheism: *The Fool*, that doth exempt the affairs of the World from the ordination and disposal of God, *hath said in his Heart, There is no God at all.* † It was the opinion of many of the Ancients, that *Epicurus* introduced a *Deity* into his Philosophy, not because he was persuaded of his Existence, (for when he had brought him upon the Stage of Nature, he made him only *Muta persona*, and interdicted him from bearing any Part in it,) but purely that he might not incur the offence of the Government. Wherefore he was generally suspected *Verbis reliquisse Deum, re sustulisse*; to have framed on purpose such a contemptible paultry *Hypothesis* about him, as indeed left the Name and Title of God in the World; but nothing of his Nature and Power. Just as a Philosopher of our own age gave a ludicrous and fictitious notion about the *Rest of the Earth*, to evade the hard censure and usage, which *Galileo* had lately met with. For my own part, as I do not exclude this reason from being a grand occasion of *Epicurus's* Deism; so I believe that He and *Democritus* too were compelled to it likewise by the necessity of their

*Posidon. apud
Ciceron. Plu-
tarch. &c.*

*Mr. Des-
Cartes.*

their own Systems. For seeing they explain'd the Phenomena of *Vision*, *Imagination*, and *Thought* it self, by certain thin fleeces of Atoms, that flow incessantly from the surfaces of bodies, and by their subtilty and fineness do penetrate any obstacle, and yet retain the exact figures and lineaments of the several bodies from which they proceed; and in this manner insinuating themselves into the Eyes, and the Contexture of the Soul, do there produce and excite Sensation and Perception of themselves: in consequence therefore of this *Hypothesis* they were obliged to maintain that we could have no Phantasia, Idea or Conception of any thing, but what did really subsist either intire or in its several parts. Whence it followed, that mankind could have no imagination of *Jupiter* or *Mars*, of *Minerva* or *Isis*; if there were not actually such Beings in nature to emit those *Effluvia*, which gliding into the Soul must beget such an imagination. And thence it was, that those Philosophers adapted their description of the Deity to the vulgar apprehensions of those times; Gods and Goddeses innumerable, and all of humane figure: because otherwise the conceptions of mankind about them could not possibly

sibly be accounted for from their Physiology. So that if *Epicurus* and *Democritus* were in earnest about their Philosophy, they did necessarily and really believe the *Existence of the Gods*. But as to the nature and authority of them; they bereaved that *Jupiter* of his Thunder and Majesty, forbidding him to look or peep abroad, so much as to enquire what News in the Infinite Space about him; but to content himself and be happy with an eternal laziness and dozing, unless some rambling Troops of *Atoms* upon the dissolution of a neighbouring World might chance to awake him. Now because no *Israelite* in the days of the *Psalmist* is likely to have been so curious about natural Knowledge, as to believe the Being of God for such a quaint and airy reason as this, when he had once boldly denied his Dominion over the World; and seeing that there is not now one Infidel living, so ridiculous as to pretend to solve the Phenomena of *Sight*, *Fancy* or *Cogitation* by those fleeting superficial films of bodies: I must beg leave to think that the *Fool in the Text* was a thorough confirmed *Atheist*; and that the modern disguised *Deists* do only call themselves so for the former reason of

Epicurus, to decline the publick odium and resentment of the Magistrate; and do cover the most arrant Atheism under the mask and shadow of a Deity, by which they understand no more than some eternal inanimate Matter, some universal Nature, and Soul of the World, void of all sense and cogitation, endued with none at all, much less with Infinite Wisdom and Goodness; and therefore in this present Discourse they may deservedly come under that Character which the Text hath given of them, of *Fools that have said in their Hearts, There is no God.*

And now having thus far cleared our way; in the next place we shall offer some notorious Proofs of the gross *Folly* and stupidity of Atheists.

If a Person that had a fair Estate in reverence, which in all probability he would speedily be possess'd of, and of which he might reasonably promise to himself a long and happy Enjoyment, should be assured by some skillfull Physician; That in a very short time he would inevitably fall into a Disease, that would so totally deprive him of his Understanding and Memory, that he should lose the

the knowledge of all things without him, nay all consciousness and sense of his own Person and Being: If, I say, upon a certain belief of this indication, the man should appear overjoyed at the News, and be mightily transported with the discovery and expectation; would not all that saw him be astonished at such behaviour? Would they not be forward to conclude that the Distemper had seized him already, and that even then the miserable Creature was become a meer *Fool* and an *Idiot*? Now the Carriage of our *Atheists* or *Deists* is infinitely more amazing than this; no dotage so insatiate, no phrensie so extravagant as theirs. They have been educated in a *Religion*, that instructed them in the knowledge of a *Supreme Being*; a Spirit most excellently glorious, superlatively Powerfull and Wise and Good, Creator of all things out of nothing; That hath endued the Sons of Men, his peculiar Favorites, with a Rational Spirit, and hath placed them as Spectators in this noble Theatre of the World, to view and applaud these glorious Scenes of Earth and Heaven, the workmanship of his hands; That hath furnished them in general with a sufficient store of all things, either necessary

cessary or convenient for life; and particularly to such as fear and obey him, hath promised a supply of all wants, a deliverance and protection from dangers: *That they that seek him, shall want no manner of thing that is good.* And besides his munificence to them in this life; He *so loved the world, that he sent his Only-begotten Son*, the express Image of his Substance, and Partaker of his eternal Nature and Glory, to bring Life and Immortality to light, and to tender them to Mankind upon fair and gracious Terms; That if they submitted to his *easie yoke and light burthen*, and observed his Commandments which are not grievous, He then gave them the promise of eternal Salvation; He had reserved for them in Heaven an Inheritance incorruptible, and undefiled, and that *fadeth not away*; He had prepared for them an unspeakable, unconceivable Perfection of Joy and Bliss, things that eye had not seen, nor ear heard, neither have entered into the heart of man. What a delightful and ravishing Hypothesis of Religion is this? And in this Religion they have had their Education. Now let us suppose some great Professor in Atheism to suggest to some of these; That all this is a meer dream and impos-

imposture; that there is no such excellent Being, as they suppose, that created and preserves them; that all about them is dark senseless Matter, driven on by the blind impulses of Fatality and Fortune; that men first sprung up, like Mushrooms, out of the mud and slime of the Earth; and that all their Thoughts, and the whole of what they call Soul, are only various Action and Repercussion of small particles of Matter, kept a-while a moving by some Mechanism and Clock-work, which finally ceases and perishes by death. If it be true then (as we daily find it is) that they listen with complacency to these horrid Suggestions; if they let go their hope of Everlasting Life with willingness and joy; if they entertain the thoughts of final Perdition with exultation and triumph; ought they not to be esteem'd most notorious Fools, even destitute of common sense, and abandon'd to a callousness and numbness of Soul?

What then, is Heaven it self with its pleasures for evermore to be parted with so unconcernedly? Is a Crown of Righteousness, a Crown of Life, to be surrendered with laughter? Is an exceeding and eternal weight of Glory too light

*Αἰὼν καὶ ἀ-
λυστον καὶ ἀνα-
στροφῆς γένος.
Max. Tyr.
Diff. 1.

2 Tim. 4. 8.
Jam. 1. 12.

2 Cor. 4. 17.

light in the balance against the hopeless death of the Atheist, and utter extinction? 'Twas a noble saying of the Emperor *Marcus*, That he would not endure to live one day in the world, if he did not believe it to be under the government of Providence. Let us but imagin that excellent Person confuted and satisfied by some *Epicurean* of his time; that All was but *Atoms*, and *Vacuum*, and *Necessity*, and *Chance*. Would He have been so pleased and delighted with the conviction? would He have so triumph'd in being overcome? or rather, as he hath told us, would he not have gone down with sorrow and despair to the grave? Did I but once see an Atheist lament and bewail himself; That upon a strict and impartial examination he had found to his cost, that all was a mistake; that the Privilege of Human Nature was vanished and gone; those glorious hopes of Immortality and Bliss, nothing but cheating Joys and pleasant Delusions; that he had undone himself by losing the comfortable Error, and would give all the World to have better arguments for Religion: there would be great hopes of prevailing upon such an Atheist as this. But, alas! there are none of them

δὲ ἢ π. (Στοι)σκ
σιν; ἢ ὅτι μὴ αὐτῶν
ὅν αὐτῶν ἀπαρτῶν, τῶν
οἱ ἄνθρωποι ἐν κόσμῳ,
νῶν ὁ κόσμος, ἢ πρὸς τοὺς
σ. (ib. 2. 9. 11.)

them of this temper of mind; there are none that *understand and seek after God*; they have ^{v. 2. of this Psalm.} *no knowledge*, nor any desire of instruction; ^{ver. 4.} they *thrust the Word of God from them, and judge* ^{Act. 13. 46.} *themselves unworthy of everlasting life*; they willingly prefer Darkness before Light; and obstinately choose to perish for ever in the Grave, rather than be Heirs of Salvation in the Resurrection of the Just. These certainly are the *Fools* in the Text, indocile intractable Fools, whose stolidity can baffle all arguments, and is proof against Demonstration it self; *whose end* (as the words of St. Paul do truly de- ^{Phil. 3. 19.} *scribe them*) *whose end is destruction*, an eternal Deprivation of Being; *whose God is their belly*, the gratification of sensual Lusts; *whose Glory is in their shame*, in the debasing and villanizing of Mankind to the condition of Beasts; *who mind earthly things*, who if (like that great Apostle) they were *caught up to the third Heaven*, ^{2 Cor. 12. 2.} would (as the Spies did of Canaan) *bring* ^{Num. 13. 32.} *down an evil report* of those Regions of Bliss. And I fear, unless it please God by extraordinary methods to help their unbelief, and en- ^{Mar. 9. 24.} *lighten the eyes of their understanding*; they ^{Eph. 1. 19.} will carry their Atheism with them to the Pit; and the flames of Hell only must convince them of their Error. This

This supine and inconsiderate behaviour of the Atheists is so extremely absurd, that it would be deem'd incredible, if it did not occur to our daily Observation; it proclaims aloud, that they are not led astray by their Reasoning, but led captive by their Lusts to the denial of God. When the very pleasures of Paradise are contemn'd and trampled on, like Pearls cast before Swine; there's small hope of reclaiming them by arguments of Reason. But however, as *Solomon* adviseth, we will answer these *Fools not according to their Folly, lest we also be like unto them.* It is expedient that we put to silence the ignorance of these foolish men, that Believers may be the more confirmed and more resolute in the Faith.

Did Religion bestow Heaven without any terms or conditions indifferently upon all; if the *Crown of Life* was hereditary, and free to Good and Bad; and not settled by Covenant upon the Elect of God only, such as *live soberly and righteously and godly in this present world*: I believe there would be no such thing as an Infidel among us. And without controversie 'tis the Way and Means of attaining to Heaven, that makes profane Scorn-

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Prov. 26. 4.

Tit. 2. 12.

ers so willingly let go the Expectation of it. 'Tis not the Articles of the Creed, but the Duty to God and their Neighbour, that is such an inconsistent incredible Legend. They will not practise the Rules of Religion, and therefore they cannot believe the Promises and Rewards of it.

But however, let us suppose them to have acted like rational and serious Men: and perhaps upon a diligent inquisition they have found, that the Hope of Immortality deserves to be joyfully quitted, and that either out of *Interest*, or *Necessity* which is both.

I. And first, One may conceive indeed, how there might possibly be a *necessity* of quitting it. It might be tied to such Terms, as would render it impossible ever to be obtain'd. For example, if it should be required of all the Candidates of Glory and Immortality, to give a full and knowing Assent to such things as are repugnant to Common Sense, as contradict the *νομοι εἰς ὅλους*, the universal Notions and indubitable Maxims of Reason; if they were to believe, that One and the same Thing may be and not be at the same time and in the same respect; If allowing the received Idea's and denominations

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of Numbers and Figures and Body, they must seriously affirm, that Two and two do make a Dozen, or that the Diameter of a Circle is as long as the Circumference, or that *the same Body may be all of it in distant places at once*. I must confess that the offers of Happiness upon such Articles of Belief as these, would be meer tantalizing of Rational Creatures; and the Kingdom of Heaven would become the Inheritance of only Idiots and Fools. For whilst a man of Common Capacity doth think and reflect upon such Propositions; he cannot possibly bribe his Understanding to give a Verdict for their Truth. So that he would be quite frustrated of the Hope of Reward, upon such unpracticable Conditions as these: neither could he have any evidence of the Reality of the Promise, superior to what he is conscious to of the Falsity of the Means. Now if any Atheist can shew me in the System of Christian Religion any such absurdities and repugnancies to our natural Faculties; I will either evince them to be Interpolations and Corruptions of the Faith, or yield my self a Captive and a Profelyte to his Infidelity.

II. Or,

II. Or, 2dly, they may think 'tis the *Interest* of Mankind, that there should be no Heaven at all; because the Labour to acquire it is more worth than the Purchase: God Almighty (if there be one) having much over-valued the Blessings of his Presence. So that upon a fair estimation, 'tis a greater advantage to take one's swing in Sensuality, and have a glut of Voluptuousness in this life, freely resigning all pretences to future Happiness; which, when a man is once extinguish'd by Death, he cannot be supposed either to want or desire: than to be tied up by Commandments and Rules so thwart and contrary to Flesh and Blood; to *take up one's Cross, to* Mark 8.34. *deny himself*, and refuse the Satisfaction of Natural Desires. This indeed is the true Language of Atheism, and the Cause of it too. Were not this at the bottom, no man in his wits could condemn and ridicule the expectation of Immortality. Now what power or influence can Religion have upon the minds of these men; while not only their Affections and Lusts, but their supposed Interest shall plead against it? But if we can once silence this powerfull Advocate, we shall without much difficulty carry the Cause at the Bar of impartial Reason.

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Now here is a notorious instance of the *Folly* of Atheists, that while they repudiate all Title to the Kingdom of Heaven, meerly for the present Pleasure of Body, and their boasted Tranquillity of Mind; besides the extreme madness in running such a desperate Hazard after Death, (which I will not now treat of) they unwittingly deprive themselves here of that very Pleasure and Tranquillity they seek for. For I shall now endeavour to shew, That Religion it self gives us the greatest Delights and Advantages even in this Life also, though there should prove in the event to be no Resurrection to another. *Her ways are ways of*

Prov. 3. 17. pleasantness, and all her paths are peace.

But before I begin that, I must occur to one specious Objection both against this Proposition and the past part of my discourse; Namely, that Religion doth perpetually haunt and disquiet us with dismal apprehensions of everlasting Burnings in Hell; and that there is no shelter nor refuge from those Fears, but behind the Principles of Atheism.

(1) First therefore I will freely acknowledge to the Atheists; that some part of what hath been said is not directly conclusive against

gainst them; if they say, that before they revolted from the Faith, they had sinned away all expectation of ever arriving at Heaven: and consequently had good reason so *joyfully* to receive the news of Annihilation by Death, as an advantageous change for the everlasting torments of the Damn'd. But because I cannot expect, that they will make such a shameless and senseless Confession, and supply us with that invincible argument against themselves: I must say again, that to prefer final Extinction before a happy Immortality does declare the most deplorable stupidity of mind. Nay although they should confess, that they believed themselves to be Reprobates, before they disbelieved Religion; and took Atheism as a sanctuary and refuge from the Terrors of Hell: yet still the imputation of *Folly* will stick upon them: in as much as they chose Atheism as an Opiate to still those frightening Apprehensions, by inducing a dulness and lethargy of mind; rather than to make use of that active and salutary medicine, a hearty Repentance; that they did not know the *Riches of the goodness and forbearance and long-suffering of God*, and that a sincere Amendment of Life was never too late nor in vain;

Rom. 2. 4.

1 Tim. 4. 10. vain; *Jesus Christ being the Saviour of all men,*
 1 Joh. 5. 14. and a propitiation for the sins of the whole world;
 1 Tim. 1. 15. who came into the world to save sinners, even the
 Rom. 5. 6, 10 chief of them all; and died for the ungodly, and
 his bitterest enemies.

(2.) And secondly, As to the *Fears of Damnation*; those terrors are not to be charged upon Religion it self, which proceed either from the Want of Religion, or Superstitious mistakes about it. For as an honest and innocent Man doth know the punishments, which the Laws of his Country denounce against Felons and Murderers and Traytors, without being terrified or concern'd at them: So a Christian in truth as well as in name, though he believe the consuming Vengeance prepared for the disobedient and unbelievers, is not at all dismayed at the apprehensions of it. Indeed it adds spurs, and gives wings to his diligence,
 Phil. 2. 12. it excites him to *work out his Salvation with fear and trembling*; a religious and ingenuous fear, that is temper'd with hope and with love and unspeakable joy. But he knows, that if he fears him who is *able to destroy both soul and*
 Matt. 10. 28. *body in Hell*, he needs not fear that his own soul or body shall ever go thither.

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I allow that some debauched and profligate Wretches, or some designing perfidious Hypocrites, that are religious in outward profession, but *corrupt and abominable* in their works, are most justly as well as usually liable to these horrors of mind. 'Tis not my business to defend or excuse such as these; I must leave them, as long as they keep their *hardness and impenitent Hearts*, to those gnawing and excruciating Fears, those whips of the Divine *Nemesis*, that frequently scourge even Atheists themselves. For they also can never wholly extinguish these horrible forebodings of Conscience. A thousand occasions do awake the sleeping Tormentors. Any slight Consideration either of themselves, or of any thing without; whatsoever they think on, or whatsoever they look on; all do administer some reasons for suspicion and diffidence, lest possibly they may be in the wrong; and then 'tis a *fearfull thing to fall into the* Heb. 10. 31. *hands of the living God*: There are they in great fear, as 'tis in the 5th. verse of this *Psalms*, under terrible presages of judgment and fiery Heb. 10. 27. *indignation*. Neither can they say, That these Terrors, like Tales about Spectres, may disturb some small Pretenders and puny Novices,

Cic. Plu-
tarch. &c.

ces, but dare not approach the *vere Adepti*, the Masters and Rabbies of Atheism. For 'tis well known both from ancient and modern Experience, that the very boldest of them out of their Debauches and Company, when they chance to be surpris'd with Solitude or Sickness, are the most suspicious and timorous and despondent Wretches in the world: and that the boasted Happy Atheist in the Indolence of body, and an undisturbed Calm and Serenity of mind, is altogether as rare a Creature, as the *Vir Sapiens* was among the *Stoics*; whom they often met with in Idea and Description, in Harangues and in Books, but freely own'd that he never had or was like to exist actually in Nature.

And now as to the present advantages, which we owe to *Religion*, they are very conspicuous; whether we consider Mankind (1.) Separately, or (2.) under *Society* and *Government*.

1. And first, in a *Single Capacity*. How is a good Christian animated and cheer'd by a stedfast belief of the Promises of the Gospel; of an everlasting enjoyment of perfect Felicity, such as after millions of millions of Ages is still youthfull and flourishing and inviting as
at

at the first? no wrinkles in the face, no gray hairs on the head of Eternity; no end, no diminution, no satiety of those delights. What a warm and vigorous influence does a Religious heart feel from a firm expectation of these Glories? Certainly this Hope alone is of inestimable value; 'tis a kind of anticipation and pledge of those Joys; and at least gives him one Heaven upon Earth, though the other should prove a Delusion. Now what are the mighty Promises of Atheism? let us know the glorious Recompences it proposeth; Utter Extinction and Cessation of Being; to be reduced to the same condition, as if we never had been born. O dismal reward of Infidelity! at which Nature does shrink and shiver with horror. What some of the * Learnedest Doctors among the *Jews* have esteem'd the most dreadfull of all Punishment, and have assign'd for the portion of the blackest Criminals of the Damn'd; so interpreting *Tophet*, *Abaddon*, *the Vale of Slaughter* and the like, for final Excision and Deprivation of Being: this Atheism exhibits to us, as an Equivalent to Heaven. We all know what hath been disputed among Schoolmen to this effect. And 'tis an observation
E of

* Vide Poc-
cockii *Notas*
ad *Portam*
Mosis, p.
158, &c.

Plutarch.
 "Οπ' ἐστὶ ζῆν,
 &c. p. 1104,
 1105. Ed.
 Ruald.

Mar. 14. 2.

of *Plutarch*, that the Generality of mankind, *πάντες ἐν πᾶσι*, as well Women as Men, chose rather to endure all the Punishments of Hell, as described by the Poets; than part with the Hope of Immortality, though immortal only in misery. I easily grant, that this would be a very hard Bargain; and that *Not to be at all*, is more eligible, than *to be miserable always*: our Saviour himself having determin'd the question; *Wo to that man, by whom the Son of Man is betrayed; good were it for that man, if he had never been born.* But however thus much it evidently shews, That this desire of Existence is a natural Affection of the Soul; 'tis *Self-preservation* in the highest and truest meaning; 'tis interwoven in the very Frame and Constitution of Man. How then can the Atheist reflect on his own *Hypothesis* without extreme sorrow and dejection of Spirit? Will he say, that when once he is dead, this Desire will be nothing; and that he that is not, cannot lament his Annihilation? So indeed it will be according to his Principles. But notwithstanding, while he continues in Life (which we now speak of) this dusky Scene of Horror, this melancholy Prospect of final Perdition will frequently occur to his Fancy;

Fancy; the sweetest Enjoyments of Life will often become flat and insipid, will be damp'd and extinguish'd, be bitter'd and poison'd by the malignant and venomous quality of this Opinion.

Is it not more comfortable to a man, to think well of himself, to have a high Value and Conceit of the Dignity of his Nature, to believe a noble Origination of his Race, the Off-spring and Image of the great King of Glory: rather than that men first proceeded, as Vermin are thought to do, by the sole influence of the Sun out of Dirt and Putrefaction?

Is it not a firmer foundation for Contentment and Tranquillity, to believe that All things were at first created, and are continually order'd and disposed for the Best, and that principally for the Benefit and Pleasure of Man: than that the whole Universe is meer bungling and blundering; no Art or Contrivance to be seen in't; nothing effected for any purpose and design; but all ill-favour'dly cobled and jumbled together by the unguided agitation and rude shuffles of Matter?

Can any man wish a better Support under affliction, than the Friendship and Favour of Omnipotence, of Infinite Wisdom and Goodness; who is both able, and willing, and knows how to relieve him? Such a man *can* do all things through Christ that strengtheneth him, he can patiently suffer all things with cheerfull submission and resignation to the Divine Will. He has a secret Spring of spiritual Joy, and the continual Feast of a good Conscience within, that forbid him to be miserable. But what a forlorn destitute Creature is the Atheist in Distress? He hath no friend in Extremity, but Poison or a Dagger or a Halter or a Precipice. A violent Death is the last refuge of the *Epicureans*, as well as the *Stoics*. This, says *Lucretius*, is the distinguishing Character of a genuine Son of our Sect, that he will not endure to live in Exile and Want and Disgrace out of a vain fear of death; but dispatch himself resolutely into the State of eternal Sleep and Insensibility. And yet for all this swaggering, not one of a hundred hath boldness enough to follow the Direction. The base and degenerate Saying of one of them is very well known; * That *Life* is always *sweet*, and he should still

* *Mecenas*
apud Senec.
Ep. 101. *De-*
bilem facio
Manu; de-
bilem pede,
coxa; &c.

still desire to prolong it; though, after he had been maim'd and distorted by the Rack, he should lastly be condemn'd to hang on a Gibbet.

And then, as to the *Practical Rules* and Duties of Religion: as the Miracles of our Lord are peculiarly eminent above the *Lying Wonders of Demons*, in that they were not made out of vain Ostentation of Power, and to raise unprofitable Amazement; but for the real Benefit and Advantage of men, by feeding the Hungry, healing all sorts of Diseases, ejecting of Devils, and reviving the Dead: so likewise the Commands which he hath imposed on his Followers are not like the absurd Ceremonies of *Pagan* Idolatry, the frivolous Rites of their Initiations and Worship, that might look like Incantation and Magick, but had no tendency in their Nature to make Mankind the happier. Our Saviour hath enjoyn'd us a *Reasonable service*; Rom. 12. 1. accommodated to the rational part of our nature. All his Laws are in themselves, abstracted from any Consideration of Recompence, conducive to the Temporal Interest of them that observe them. For what can be more availing to a man's Health, or his Credit,

Credit, or Estate, or Security in this world, than Charity and Meekness, than Sobriety and Temperance, than Honesty and Diligence in his Calling? Do not Pride and Arrogance infallibly meet with Contempt? Do not Contentiousness and Cruelty and Study of Revenge seldom fail of Retaliation? Are not Envious and Covetous, Discontented and Anxious minds tormenters to themselves? Do not we see, that Slothfull and Intemperate and Incontinent persons destroy their Bodies with diseases, their Reputations with disgrace, and their Families with want? Are Adultery and Fornication forbidden only by *Moses* and *Christ*? or do not *Heathen* Law-givers punish such Enormities with Fines, or Imprisonment, with Exile, or Death? 'Twas an objection of *Julian* the Apostate; that there were no new Precepts of Morality in our Religion: *Thou shalt not kill, Thou shalt not steal, Thou shalt not covet thy neighbours wife.* Why all the World, says he, is agreed about these Commandments: and in every Country under Heaven, there are Laws and Penalties made to enforce all the Ten, excepting only the *Sabbath* and the *Worship of strange Gods*. We can answer him another way; but he may

Julianus apud Cyril-
lum, p. 134.

may make our Infidels ashamed to complain of those Ordinances as hard Impositions, which the sense of all Nations has thought to be reasonable: which not only the Philosophers of *Greece* and *Italy* and the ancient World; but the Banians of *Mogul*, the Talapins of *Siam*, the Mandarins of *China*, the Moralists of *Peru* and *Mexico*, all the Wisdom of Mankind have declared to be necessary Duties. Nay if the Atheists would but live up to the Ethics of *Epicurus* himself, they would make few or no Profelytes from the Christian Religion. None revolt from the Faith for such things, as are thought peculiar to Christianity; Not because they must love and pray for their enemies, but because they must not poison or stab them: not because they must not look upon a Woman to lust after her, but because they are much more restrain'd from the Perpetration of their Lusts. If wanton glances and libidinous thoughts had been permitted by the Gospel, they would have apostatized nevertheless. This we may conjecture from what *Plato* and others have told us, that it was commonly ἀρσενακοφία, *arsenaphobia*, their immoderate Affections and Lusts, that in the very times of Paganism introduced

Matt. 5. 44.

ver. 28.

Plato de Le-
gib. lib. 10.
p. 886. Ed.
Steph.

duced men to be Atheists. It seems their impure and brutal Sensuality was too much confined by the Religion of *those* Countries, where even *Venus* and *Bacchus* had their Temples. Let not therefore voluptuous Atheists lay all the fault of their Sins upon the Infirmary of Human Nature; nor plead that Flesh and Blood cannot resist those Temptations, which have all their force and prevalence from long Custom and inveterated Habit. What enticement, what pleasure is there in common profane Swearing? yet neither the fear of God nor of the Law will persuade men to leave it. 'Tis prevailing Example that hath now made it fashionable, but it hath not always been so, nor will be hereafter. So other Epidemical Vices, they are rife and predominant only for a season, and must not be ascribed to Human Nature in the Lump. In some Countries Intemperance is a necessary part of Conversation; in others Sobriety is a Virtue universal, without any respect to the Duties of Religion. Nor can they say, that this is only the difference of Climate, that inclines one Nation to Concupiscence and Sensual Pleasures; another to Blood-thirstiness and Desire of Revenge. It would discover great ignorance

rance in History, not to know that in all Climates a whole People has been over-run with some recently invented or newly imported kind of Vice, which their Grandfathers never knew. In the latest Accounts of the Country of *Guiana*, we are told that the eating of Human Flesh is the beloved pleasure of those Savages: two Nations of them by mutual devouring are reduced to two handfulls of men. When the Gospel of our Saviour was preached to them, they received it with gladness of heart; they could be brought to forgo Plurality of Wives; though that be the main impediment to the conversion of the *East-Indies*. But the great Stumbling-block with these *Americans*, and the only Rock of Offence was the forbidding them to eat their Enemies: That irresistible Temptation made them quickly to revolt and relapse into their Infidelity. What, must we impute this to the temperature of the Air, to the nature of the Soil, to the influence of the Stars? Are these *Barbarians* of man-eating Constitutions, that they so hanker after this Diet, which we cannot imagin without horror? Is not the same thing practised in other parts of that Continent? Was it not so in *Europe* of old, and is

it not now so in *Africa*? If an Eleventh Commandment had been given, *Thou shalt not eat Human Flesh*; would not these Canibals have esteem'd it more difficult than all the Ten? And would not they have really had as much reason as our Atheists, to plead the power of the Temptation, and the propensity of Flesh and Blood? how impudent are they then, that traduce the easie and gracious Conditions of the Gospel for Unreasonable and Tyrannical Impositions? *Are not God's ways equal, O ye Children of Destruction, and are not your ways unequal?*

II. Secondly and lastly, As to the benign Influence of Religion upon *Communities* and Governments, *habemus constites Reos*; 'tis so apparent and unquestionable, that 'tis one of the wise Objections of the Atheist, That it first was contrived and introduced by Politicians to bring the wild and stragling Herds of Mankind under Subjection and Laws. *Out of thy own mouth shalt thou be judged thou wicked servant.* Thou say'st that the wise Institutions of Government, Souls elevated above the ordinary pitch of men, thought Religion necessary to Civil Obedience. Why then dost thou endeavour to undermine this foundation,

Luk. 19. 22.

tion, to undo this Cement of Society, and to reduce all once again to thy imaginary State of Nature and Original Confusion? No Community ever was or can be begun or maintain'd, but upon the Basis of Religion. What Government can be imagin'd without Judicial Proceedings? and what methods of Judicature without a Religious Oath; which implies and supposes an Omniscient Being, as conscious to its falshood or truth, and a revenger of Perjury? So that the very nature of an Oath (and therefore of Society also) is subverted by the Atheist; who professeth to acknowledge nothing superiour to himself, no omnipresent observer of the actions of men. For an * Atheist to compose a *System of Politicks* is as absurd and ridiculous, as *Epicurus's* Sermons were about † *Sanctity* and † *Religious Worship*. But there was hope, that the Doctrine of absolute uncontrollable Power and the formidable name of *Leviathan* might flatter and bribe the Government into a *toleration of Infidelity*. We need have no recourse to notion and supposition; we have sad experience and convincing example before us, what a rare Constitution of Government may be had in a whole Nation of Atheists.

* Hobbes de Cive, Leviathan.

† *Περὶ Ομόθυ-
ας*, Laert.

*De sanctitate
& de pietate
adversus De-
os.* Cic.

De Laet. p. theists. The Natives of *Newfoundland* and *New*
 34, 47, 50. *France in America*, as they are *said* to live with-
 Voyage du Si- out any sense of Religion, so they are *known*
 cur de Cham- plain. p. 28. to be destitute of its advantages and blessings;
 & 93. without any Law or form of Community;
 without any Literature or Sciences or Arts;
 no Towns, no fixed Habitations, no Agricul-
 ture, no Navigation. And 'tis entirely owing
 to the power of Religion, that the whole
 World is not at this time as barbarous as
 they. And yet I ought not to have called
 these miserable Wretches *a Nation of Atheists*.
 They cannot be said to be of the Atheist's
 opinion; because they have no opinion at all
 in the matter: They do not say in their hearts,
There is no God; for they never once delibe-
 rated, if there was one or no. They no more
 deny the Existence of a Deity; than they de-
 ny the *Antipodes*, the *Copernican System*, or the
Satellites Jovis: about which they have had
 no notion nor conception at all. 'Tis the *Ig-*
norance of those poor Creatures, and not their
Impiety: their Ignorance as much to be pitied,
 as the Impiety of the *Atheists* is to be detested
 and punish'd. 'Tis of mighty importance to
 the Government, to put some timely stop to
 the spreading Contagion of this *Pestilence* that
 walketh

walketh by day, that dares to disperse its cursed
 seeds and principles in the face of the Sun. The
 Fool in the Text had only said *in his heart, There*
is no God: he had not spoken it aloud, nor o-
 penly blasphem'd in places of publick resort.
 There's too much reason to fear, that some of
 all orders of men, even Magistracy it self, have
 taken the Infection: a thing of dreadfull con-
 sequence and most imminent danger. *Epicu-*
rus was not a little wiser than ordinary, when
 he so earnestly advised his Disciples against
 meddling in publick affairs: He knew the na-
 ture and tendency of his own Philosophy;
 that it would soon become suspected and odi-
 ous to a Government, if ever Atheists were em-
 ployed in places of Trust. But because he had
 made one great Rule superior to all, *That every*
man's only Good was pleasure of Body and content-
ment of Mind: hence it was that men of ambi-
 tious and turbulent Spirits, that were dissatis-
 fied and uneasy with Privacy and Retirement,
 were allowed by his own Principle to engage
 in matters of State. And there they generally
 met with that fortune, which their Master fore-
 saw. Several Cities of *Greece* that had made ex-
 periment of them in Publick Concerns, drove
 them out, as Incendiaries and Pests of Com-
 monweals,

Plutarch.
Adde Bisones.
 Lucret. &c.

Plutarch.
"Om̃i dēi nō dōcē
Qu. Cic. &c.

monweals, by severe Edicts and Proclamations. Atheism is by no means tolerable in the most private condition: but if it aspire to authority and power; if it acquire the Command of an Army or a Navy; if it get upon the Bench or into the Senate, or on a Throne: What then can be expected, but the basest Cowardise and Treachery, but the foulest prevarication in Justice, but betraying and selling the Rights and Liberties of a People, but arbitrary Government and tyrannical Oppression? Nay if Atheism were once, as I may say, the National Religion: it would make its own Followers the most miserable of men; it would be the Kingdom of Satan divided against itself; and the Land would be soon brought to desolation. *Josephus*, that knew them, hath inform'd us, that the Sadducees, those Epicureans among the Jews, were not only rough and cruel to men of a different Sect from their own; but perfidious and inhuman one towards another. This is the genuine spirit and the natural product of Atheism. No man, that adheres to that narrow and selfish Principle, can ever be Just or Generous or Gratefull; * unless he be sometime overcome by Good-nature and a happy Constitution. No Atheist,

Josephus de Bello Judano, l. 2. c. 12.

* *Si sibi ipse consentiat, & non interdum naturæ bonitate vincatur.* Cic. de Offic. 1. 2.

as

as such, can be a true Friend, an affectionate Relation, or a loyal Subject. The appearance and shew of mutual Amity among them, is wholly owing to the smallness of their number, and to the obligations of a Faction. 'Tis like the Friendship of Pickpockets and Highwaymen, that are said to observe strict Justice among themselves, and never to defraud a Comrade of his share of the Booty. But if we could imagin a whole Nation to be Cutpurse and Robbers; would there then be kept that square-dealing and equity in such a monstrous *den of Thieves*? And if Atheism should be supposed to become universal in this Nation (which seems to be design'd and endeavour'd, though we know the gates of Hell shall not be able to prevail) farewell all Ties of Friendship and Principles of Honour; all Love for our Country and Loyalty to our Prince; nay, farewell all Government and Society it self, all Professions and Arts, and Conveniences of Life, all that is laudable or valuable in the World.

And now having in the first place explained the Words of the *Text*, and secondly detected the mere *Deists* of our Age to be no better than disguised *Atheists*, seeing they have now no pretence to the Deism of *Epicurus*; and afterwards having shown, that willingly to entertain the *Hypothesis of Atheism* (which is literally to choose Death and Evil, before Life and Good, and to love Darkness rather than Light) is the most absurd and inconsiderate Folly; and that there is nothing to excuse so silly a Choice: Not any Necessity of it; for Religion doth not impose any Articles of Faith that are repugnant to our Faculties, and incredible to Natural Reason: Not Interest; because Religion it self is even in this Present Life the truest and best Interest; as well of every single Person (for a Christian's Belief is the most comfortable, and his Hope the most glorious of all Men's, and the

Deut. 30. 15.
Joh. 3. 19.

the Practical Duties he is obliged to, are in themselves agreeable to his Nature, and conducive to his Temporal Happiness) as of *Communities and Governments*; because Religion is not only usefull to Civil Society, but fundamentally necessary to its very Birth and Constitution: Having, I say, competently proved these Particulars, as far as the usual brevity of such Discourses will allow; I shall conclude all with one short Reflection, That if *Atheism* or modern *Deism* be evinced to be *Folly*, how great must that *Folly* be? It must not be bare *Folly*, but *Madness* and *Distraction*. Nor do we need to recur to the *Stoical* Paradox, *That all Fools are mad*; Nor to that Saying of one of their own Party, who (not out of Derision, as some would have it, but out of Complement to the Publick) call'd it *Insanientem sapientiam*, the *Mad Philosophy* of Atheism. For so sottishly to lose the purest Pleasures and Comforts of *this* World, and forgo the expectation of Immortality in *another*; and so desperately to run the Risk of *dwelling with everlasting Burnings*, it plainly discovers it self to be what it is; it is manifestly the most pernicious *Folly* and deplorable *Madness* in the World.

May the Father of Mercies and God of Infinite Wisdom reduce the Foolish from their Errors, and make them wise unto Salvation; Confirm the Sceptical and wavering Minds, and so prevent Us, that stand fast, in all our doings, and further us with his continual help, that we may not be of them that draw back unto Perdition, but of them that believe to the saving of the Soul. Amen.

F I N I S.

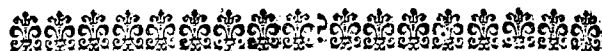
Matter and Motion cannot Think:
OR,
A Confutation of *ATHEISM* from
the Faculties of the Soul.

A
SERMON
Preached at
St. Mary-le-Bow,
April 4. 1692.

Being the *Second* of the Lecture Founded by
the Honourable ROBERT BOYLE, Esquire.

By RICHARD BENTLEY, M. A.
Chaplain to the Right Reverend Father in God,
EDWARD, Lord Bishop of Worcester.

L O N D O N,
Printed for Tho. Parkhurst at the Bible and Three Crowns
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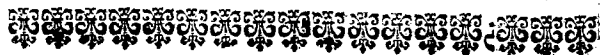


Imprimatur.

Geo. Royse, R. R^{mo} in Christo Patri
ac D^{no} D^{no} Johanni Archiep. Can-
tuar. à Sacris Domest.

April 7.
1692.

The remaining Sermons of This Lecture will be
Preached the first Monday in May at St. Martin's in the Fields,
the first Monday in June at St. Mary-le-Bow, and so by turns
at those two Churches, the first Mondays of September, Octo-
ber, November, December, for this present Year.



ACTS XVII. 27.

*That they should seek the Lord, if haply they
might feel after him, and find him: though he
be not far from every one of us; for in him we
Live, and Move, and have our Being.*

THese words are a part of that Dis-
course which S. Paul had at A-
thens. He had not been long in
that inquisitive and pragmatial
City, but we find him *encountred by the Epi- Aa. 17. 18.*
cureans and Stoics, two sorts of people that
were very illqualified for the Christian Faith:
the one by reason of their Carnal Affecti-
ons, either believing no God at all, or that
he was like unto themselves, dissolved in * La-
ziness and Ease; the other through their
Spiritual Pride presuming to declare, that
† a Wife Man of their Sect was equal, and
in some cases superior to the Majesty of
God himself. These men *corrupted through*
Philosophy and vain deceit, took our Apostle and
carried him unto Areopagus, v. 19. a place in the
City, whither was the greatest resort of Tra-
vellers and Strangers, of the gravest Citizens

* Ἀπὸ τοῦ
ἀνθρώπου.

† Arriani E-
pist. l. 1.
c. 12. Ὁς ἡ-
γεῖται τὸν λόγον,

ἐν τῇ Χριστιανικῇ
θεῶν, ἐν τῇ
κεντρικῇ.

Gene. a Ep 53.
Est aliquis
quo sapiens

antecedit De-
um: ille na-
tura beneficio,
non suo sapi-
ens est.

v. 20.

and Magistrates, of their Orators and Philosophers; to give an account of himself and the new Doctrine that he spoke of: *For*, say they, *thou bringest strange things to our ears; we would know therefore what these things mean.* The Apostle, who was to speak to such a promiscuous Assembly, has with most admirable Prudence and Art so accommodated his Discourse, that every branch and member of it is directly opposed to a known Error and Prejudice of some Party of his Hearers. I will beg leave to be the more prolix in explaining the whole; because it will be a ground and introduction not only to this present, but some other subsequent Discourses.

From the Inscription of an Altar to the Unknown God, which is mentioned by Heathen Authors, as *Lucian* and *Philostratus* and Others, he takes occasion (v. 24.) to declare unto them that *God, that made the World and all things therein.* This first Doctrine, though admitted by many of his Auditors, is expressly against the *Epicureans*, who ascribed the Origin and Frame of the World not to the Power of God, but the fortuitous concurrence of Atoms; and to the *Peripatetics*, that supposed all things to have been eternally, as they

Lucianus in
Philopat. Philo-
strat. de vita
Apol. 16 c. 2.
Pausan. in E-
liacis.

they now are, and never to have been made at all, either by the Deity or without him. Which God, says he, *seeing that he is Lord of Heaven and Earth, dwelleth not in temples made with hands, neither is worshipp'd with men's hands as though he needed any thing, seeing he giveth to all Life and Breath and all things.* This is opposed to the Civil and Vulgar Religion of *Athens*, which worshipped God with Temples and Sacrifices, as if he really needed Habitation and Sustenance. And that the common Heathens had such a mean apprehension about the indigency of their Gods, appears plainly, to name no more, from *Aristophanes's Plutus*, and the Dialogues of *Lucian*. But the Philosophers were not touch'd in this point; all Parties and Sects, even the *Epicureans* forsooth, did maintain (τὸ αὐταρκές) * *Lucrer. 2. Ipsa sibi pol- lens opibus, nihil indiga nostri.* the self-sufficiency of the Godhead: and seldom or never sacrificed at all, unless in condescension to the Custom of their Country. There's a very remarkable passage in *Tertullian's* Apology, *Quis enim Philosophum sacrificare compellit, &c?* It appears from thence, that the Philosophers, no less than the Christians, neglected the *Pagan* Worship and Sacrifices; though what was connived at in the one, was

v. 25.

* Lucrer. 2.
Ipsa sibi pol-
lens opibus,
nihil indiga
nostri.

Tertull. Apo-
log. cap. 46.

v. 26.

was made highly penal and capital in the other. *And hath made of one Blood all nations of men, for to dwell on all the face of the Earth, and hath determin'd the times before appointed, and the bound of their habitation.* This Doctrine about the beginning of Human Race, though agreeable enough to the *Platonists* and *Stoics*, doth apparently thwart the *Epicureans* and *Aristotelians*: one of whom did produce their Primitive Men from meer Accident or Mechanism; the other denied that Man had any beginning at all, but had eternally continued thus by Succession and Propagation. Neither were the Commonalty of *Athens* unconcern'd in this point. For although, as we learn from *Isocrates*, *Demosthenes* and others of their Countrymen, they professed themselves to be ** αὐτοχθόνες*, *Aborigines*, not transplanted by Colonies or otherwise from any Foreign Nation, but born out of their own Soil in *Attica*, and had the same Earth for their Parent, their Nurse, and their Country; and perhaps some ** few* might believe that all the rest of Mankind were derived from *them*, and so might apply and interpret the words of the Apostle to this foolish Tradition: yet that conceit was entertain'd

* *Isocrates in Paneg. Demosth. in Epitaph. Cic. Or. pro Flacco. Euripides, &c.*

* *Diog. Laert. in Pref.*

ain'd but by a few; for they generally allowed that the *Ægyptians* and *Sicilians* and some others were *Aborigines* also, as well as themselves. Then follow the words of the Text, *That they should seek the Lord, if haply they might feel after him, and find him; though he be not far from every one of us. For in him we live, and move, and have our being.* And this he confirms by the Authority of a Writer that lived above 300 years before, *as certain also of your own Poets have said, For we are also his Offspring.* This indeed was no Argument to the *Epicurean* Auditors, who particularly had a contempt of and spite against the Poets, because on all occasions they introduced the Ministry of the Gods, and taught the separate Existence of human Souls: And their Master *Epicurus* had bragged, that in all his Writings he had not cited one single Authority out of any Book whatsoever. But it was of great weight and moment to the Common People; who held the Poets in mighty esteem and veneration, and used them as their Masters of Morality and Religion: and the other Sects of Philosophers likewise did frequently adorn and confirm their Discourses by Citations out of Poets,

Thucyd. lib. 6. Herodot. &c.

v. 27, 28.

Plutarch. de Aud. Poet. & contra Coler.

Laert. in vita Epicuri.

v. 29. Poets. For as much then as we are the off-spring of God, we ought not to think that the God-head is like unto Gold or Silver or Stone graven by art or man's device. This is directly level'd against the gross Idolatry of the Vulgar, (for the Philosophers are not concern'd in it) that believed the very Statues of Gold and Silver and other Materials, to be God, and terminated their prayers in those Images; as I might shew from many passages of Scripture, from the Apologies of the Primitive Christians, and the Heathen Writers themselves. And the times of this ignorance God winked at, (the meaning of which is, as upon a like occasion the same Apostle hath expressed it, that in times past he suffer'd all Nations to walk in their own ways) but now commandeth every one to repent; Because he hath appointed a day, in the which he will judge the world in Righteousness, by that man whom he hath ordain'd; whereof he hath given assurance unto all men, in that he hath rais'd him from the dead. Hitherto the Apostle had never contradicted the opinions of all his Hearers at once: so that although at every part of his Discourse some of them might be uneasie and nettled; yet a moderate silence and

v. 30, 31.

Acts 14. 16.

and attention was still observed, because it was agreeable to the notions of the rest. But when they heard of the Resurrection of the Dead, the interruption and clamour became universal; so that here the Apostle broke off his Discourse, and departed from among them. v. 31. What could be the reason of this general dissent from the notion of the Resurrection, seeing that almost all of them did believe the Immortality of the Soul? S. Chrysostom hath a conceit, that the Athenians took ἀνάστασις (the original word for Resurrection) to be preached to them as a Goddess, and in this fancy he is followed by some of the Moderns. The ground of the conjecture is the 18th verse of this Chapter, where some said *What will this Babler say?* other some, *He seemeth to be a setter forth of strange Gods* (ἐξέτατον θεῶν ἰστορίαν, *strange Deities*, which comprehends both Sexes) because he preached unto them Ἰησοῦ καὶ τοῦ ἀναστάντος, *Jesus and the Resurrection*. Now, say they, it could not be said Deities in the plural number, unless it be supposed that ἀνάστασις is a Goddess, as well as Jesus a God. But we know, such a permutation of Number is frequent in all Languages. We have another example of it in the very Text, *As certain also of* your

v. 28.

B

Arati Phen. *your own Poets have said, For we are also his*
 v. 5. *Offspring.* And yet the Apostle meant only
 Πάντες ὅ
 Διὸς καὶ Ἑρμῆος
 οὐ πάντες, τὸ
 γὰρ οὐ γὰρ
 ἑσμέν.
 one, *Aratus the Cilician*, his Countryman, in
 whose Astronomical Poem this Passage is now
 extant. So that although he preached to
 the *Athenians* Jesus alone, yet by a common
 mode of speech he might be called a *setter*
forth of strange Gods. 'Tis my opinion, that
 the general distaste and clamour proceeded
 from a mistake about the nature of the Chri-
 stian Resurrection. The word Resurrection
 (ἀναστῆναι & ἀνάστασις) was well enough known
 amongst the *Athenians*, as appears at this
 time from * *Homer, Æschylus and Sophocles*
 (so that it could hardly possibly be imagin'd
 to be a Goddess) but it always denoted a re-
 turning from the State of the Dead to this
 present World, to eat and drink and con-
 verse upon the Earth, and so after another
 period of Life to die again as before. And
 Festus a Roman seems to have had the same
 apprehensions about it. For when he declares
 the case of *S. Paul* his Prisoner to King *Agrip-
 pa*, he tells him, That the Accusation was
 only about certain questions of the Jewish
 Superstition; and of *one Jesus which was dead,*
 whom *Paul* affirmed to be alive. So that when
 the

* Hom. Il. ο.
 551. Οὐδὲ μιν
 ἀνστήσει, &c.
 Æsch. Eumen.
 655. Ἀνδρὶς
 δ' ἐπιδύνει
 ἀνασπῶν κο-
 ρυ-
 ρίς
 "Ἀπὸ δ' αὐτοῦ
 τῷ, ὅτις ἔσ'
 ἀνέστασις.
 Soph. Electra.
 136. Ἄλλ' ἔ-
 σσι τὴν γ' ἔξ
 αἵματός ποτε
 λήνας πατρί-
 ἀνέστασις, ὅτι
 γέννηται, ὃ λή-
 ταις.

Acts 25. 19.

the *Athenians* heard him mention the Resur-
 rection of the Dead, which according to
 their acceptance of the word was a contra-
 diction to Common Sense, and the Experi-
 ence of all Places and Ages; they had no pa-
 tience to give any longer attention. His
 words seemed to them as idle tales, as the first
 news of our Saviour's Resurrection did to the
 Apostles themselves. All interrupted and
 mocked him, except a few, that seem to have
 understood him aright, which said *they would*
hear him again of this matter. Just as when
 our Saviour said in an Allegorical and Mysti-
 cal sense, *Except ye eat the flesh of the Son of*
Man, and drink his Blood, ye have no life in
you; the Hearers understood him literally
 and grossly. The Jews therefore strove among
 themselves, saying, *How can this man give us*
his flesh to eat? this is a hard saying, who can
hear it? And from that time many of his Disciples
went back, and walked no more with him.

Luk. 24. 11.

v. 60.

v. 66.

I have now gone through this Excellent
 Discourse of the Apostle, in which many
 most important Truths are clearly and suc-
 cinctly deliver'd; such as the Existence,
 the Spirituality, and All-sufficiency of God,
 the Creation of the World, the Origination

of Mankind from one common stock according to the History of *Moses*, the Divine Providence in overruling all Nations and People, the new Doctrin of Repentance by the Preaching of the Gospel, the Resurrection of the Dead, and the appointed Day of an Universal Judgment. To all which particulars by God's permission and assistance I shall say something in due time. But at present I have confined my self to that near and intrinsecal and convincing Argument of the Being of God, which we have from Human Nature it self; and which appears to be principally here recommended by *S. Paul* in the words of the Text, *That they should seek the Lord, if haply they might feel after him, and find him: though he be not far from every one of us; for in him (that is by his power) we live, and move, and have our being.*

The Proposition, which I shall speak to, from this Text is this: That the very Life and Vital Motion and the Formal Essence and Nature of Man is wholly owing to the Power of God: and that the consideration of our Selves, of our own Souls and Bodies, doth directly and neerly conduct us to the acknowledgment of his Existence. And

1. I shall prove, That there is an immaterial Substance in us, which we call Soul and spirit, essentially distinct from our Bodies: and that this Spirit doth necessarily evince the Existence of a Supreme and Spiritual Being. And

2. That the Organical Structure of Human Bodies, whereby they are fitted to live and move and be vitally informed by the Soul, is unquestionably the workmanship of a most wise and powerfull and beneficent Maker. But I will reserve this latter part for the next opportunity; and my present undertaking shall be this, To evince the Being of God from the consideration of Human Souls.

(1.) And first, I say, there is an immaterial Substance in us, which we call Soul, essentially distinct from our Bodies. I shall lay this down as self-evident, That there is something in our Composition, that thinks and apprehends, and reflects and deliberates, determines and doubts, consents and denies; that wills, and demurrs, and resolves, and chooses, and rejects; that receives various sensations and impressions from external objects, and produces voluntary motions of several parts of our Bodies. This every man is conscious

scious of; neither can any one be so sceptical as to doubt of or deny it: that very doubting or denying being each of them mention'd and suppos'd before, and including several of the rest in their Idea's and Notions. And in the next place 'tis as self-evident, that these Faculties and Operations of Thinking, and Wiling, and Perceiving, must proceed from something or other as their efficient Cause: meer Nothing being never able to produce any thing at all. So that if these powers of Cogitation, and Volition, and Sensation, are neither inherent in Matter as such, nor acquirable to Matter by any motion and modification of it; it necessarily follows, that they proceed from some cogitative Substance, some incorporeal Inhabitant within us, which we call Spirit and Soul.

(1.) But first, These Faculties of Sensation and Perception are not inherent in Matter as such. For if it were so; what monstrous absurdities would follow? Every Stock and Stone would be a percipient and rational Creature. We should have as much feeling upon the clipping off a Hair, as the cutting of a Nerve. Or rather, as Men, that is, a complex Being compounded of many vital parts, we should have

have no feeling nor perception at all. For every single Atom of our Bodies would be a distinct Animal, endued with self-consciousness and personal sensation of its own. And a great number of such living and thinking Particles could not possibly by their mutual contact and pressing and striking compose one greater individual Animal, with one Mind and Understanding, and a vital Consension of the whole Body: any more than a swarm of Bees, or a crowd of Men and Women can be conceived to make up one particular Living Creature, compounded and constituted of the aggregate of them all.

(2.) It remains therefore, secondly, that seeing Matter in general, as Matter, has not any Sensation or Thought; if it have them at all, they must be the result of some Modification of it: it must acquire them by some Organical Disposition; by such and such determinate Motions, by the action and reaction of one Particle upon another. And this is the Opinion of every Atheist and counterfeit Deist of these times, that believes there is no Substance but Matter; and excludes all incorporeal Nature out of the number of Beings.

Now

Now to give a clearer and fuller confutation of this Atheistical Assertion, I will proceed in this method.

1. First I will give a true Notion and Idea of Matter; whereby it will appear that it has no inherent Faculty of Sense and Perception.

2. I will prove, that no particular Species of Matter, as the Brain and Animal Spirit, hath any power of Sense and Perception.

3. I will shew, that Motion in general superadded to Matter cannot produce any Sense and Perception.

4. I will demonstrate, that no Determinate Motion, as of the Animal Spirit through Muscles and Nerves, can beget Sense and Perception.

5. I will evince, that no Action and Percussion of the Animal Spirit, one Particle against another, can create any Sense and Perception.

6. I will answer the Atheist's Argument of matter of Fact and Experience in Brute Beasts; which, say they, are allowed to be meer Matter, and yet have some degree of Sense and Perception.

And first I will give a true Notion and Idea of Matter; whereby it will appear that it

has

as no inherent Faculty of Sense and Perception. And I will offer no other, but what all competent Judges, and even Atheists themselves do allow of; and which being part of the *Epicurean* and *Democritean* Philosophy is providentially one of the best Antidotes against their other impious Opinions: as the Oil of Scorpions is said to be against the poison of their Stings. When we frame in our minds any notion of Matter, we conceive nothing else but Extension and Bulk; which is impenetrable and divisible and passive: by which three properties is understood, that any particular quantity of Matter doth hinder all other from intruding into its place, till it self be removed out of it; that it may be divided and broken into numerous parts of different sizes and figures, which by various ranking and disposing may produce an immense diversity of Surfaces and Textures; that if it be once bereaved of Motion, it cannot of it self acquire it again, nor till it be thrust or struck by some other Body from without, or (say we, though not the Atheist) be intrinsically moved by an immaterial self-active Substance, that can penetrate and pervade it. Wherefore in the whole Nature and Idea of Matter, we

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have

have nothing but Magnitude, and Figure, and Situation, and a Capacity of being moved and divided. So that no parts of Matter consider'd by themselves, are either hot or cold, either white or black, either bitter or sweet, or betwixt the extremes. All the various Mixtures and Conjugations of Atoms do beget nothing but new inward Texture, and alteration of Surface. No sensible Qualities, as Light, and Colour, and Heat, and Sound, can be subsistent in the Bodies themselves absolutely consider'd, without a relation to our Eyes, and Ears, and other Organs of Sense. These Qualities are only the effects of our Sensation, which arise from the different motions upon our Nerves from objects without, according to their various modification and position. For example, when pellucid colourless Glass, or Water, by being beaten into a powder or froth, do acquire a very intense whiteness; what can we imagin to be produced in the Glass or Water, but a new disposition of parts? Nay an object under the self-same disposition and modification, when 'tis viewed by us under differing proportions, doth represent very differing colours, without any change at all in it self. For that same

opaque,

opaque, white Powder of Glass, when 'tis seen through a good Microscope, doth exhibit all these little fragments pellucid and colourless; but the whole appear'd to the naked eye, before it was pounded. So that Whiteness, and Redness, and Coldness, and the like, are only Ideas and Vital Passions in *us* that see and feel: but can no more be conceived to be real and distinct Qualities in the Bodies themselves; than Roses or Honey can be thought to smell or taste their own Sweetness, or an Organ be conscious to its Musick, or Gunpowder to its Flashing and Noise.

Thus far then we have proved, and 'tis agreed on all hands, that in our conception of any quantity of Body, there is nothing but Figure and Site, and a Capacity of Motion, either of the Whole, or the insensible Parts. Which Motion, if it be actually impressed upon it, doth only cause a new Order and Contexture of parts: so that all the Ideas of sensible Qualities are not inherent in the inanimate Bodies; but are the effects of their Motion upon our Nerves, and sympathetical and vital Passions produced within our selves.

2. Our Second enquiry must be; what it is in the constitution and composition of a Man,

that hath the Faculty of forming such Idea's, what is that Principle of Life and Self-activity and Reason within us, that performs those higher operations of Cogitation, and Appetite, and Will. Let us carry in our minds this true notion of Body in general, and apply it to our own Substance; and observe what Prerogatives this Rational Machin (as the Atheists would make us to be) can challenge above other parcels of Matter. We observe then in this understanding piece of Clock-work; that his Body, as well as other senseless Matter, has colour, and warmth, and softness, and the like. But we have proved it before, and 'tis acknowledged; that these Qualities are not subsistent in those Bodies, but are operations of Fancy begotten in something else. So that 'tis not Blood and Bones, that can be conscious of their own hardness and redness: and we are still to seek for something else in our Frame and Make, that must receive these impressions. Will they say that these Idea's are performed by the Brain? But the difficulty returns upon them again: for we perceive that the like qualities of softness, whiteness and warmth, do belong to the Brain it self; and seeing the Brain is but

that Body, those Qualities (as we have shewn) cannot be inherent *in it*, but are the Passions of some other Substance *without it*. Therefore the Brain is not that nature, which imagines those qualities of it self.

But they may say, 'tis not the Gross Substance of the Brain that causes Perception; but the Animal Spirit, and insensible Particles, that have their rendezvous there, and are devoid of those qualities, because they never fall under our Senses by reason of their minuteness. But we conceive, that every one of these also hath a determinate figure: they are Spheres, or Cubes, or Pyramids, or Cones, or of some shape or other that is irregular and nameless; and all these are but Modes and Affections of Magnitude; and the Idea's of such Modes can no more be subsistent in the Atoms so modified, than the Idea of Redness was just now found to be inherent in the Blood, or that of Whiteness in the Brain. And what relation or affinity is there between a minute Body and Cogitation, any more than the greatest? Is a small drop of Rain any wiser than the Ocean? or do we grind inanimate Corn into living and rational Meal?

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My very Nails, or my Hair, or the Horns and Hoofs of a Beast may bid as fair for Understanding and Sense, as the finest Animal Spirit of the Brain.

3. But Thirdly, they will say, 'tis not the Bulk and Substance of the Animal Spirit, but its Motion and Agility that produce Intellection and Sense. If then Motion in general, or any degree of its velocity can beget Cogitation; surely a Ship under sail must be a most intelligent Creature; though while she lies at Anchor, those Faculties be asleep: some cold Water or Ice may be phlegmatick and senseless; but when it boils in a Kettle, it has wonderfull Heats of Thinking and Ebullitions of Fancy. Nay the whole corporeal Mass, all the brute and stupid Matter of the Universe must upon these terms be allowed to have Life and Understanding: seeing that there is nothing that we know of, in a state of absolute Rest. Those things that seem to be so upon the surface of the Earth, are daily wheel'd about its Axis, and yearly about the Sun with a prodigious swiftness.

4. But Fourthly, they will say, 'tis not Motion in general, that can do these feats of Sensation and Perception; but a particular sort of it, that

that is made in an Organized Body through the determinate Roads and Channells of Muscles and Nerves. But, I pray, among all the kinds of Motion, whether direct, or circular, or parabolical, or in what curve they please; what pretence can one make to Thinking and Liberty of Will, more than another? Why do not these persons make a Diagram of these cogitative Lines and Angles; and demonstrate their Properties of Perception and Appetite, as plainly as we know the other properties of Triangles and Circles? But how little can any Motion, either circular or other, contribute to the production of Thought? No such Motion of the same Atom can be all of it existent at once; it must needs be made gradually and successively both as to place and time: seeing that *Body* cannot at the same instant be in more places than one. So that at any instant of time the moving Atom is but in one single point of the Line. Therefore all but that one point is either future or past; and no other parts are coexistent or contemporary with it. Now what is not present, is nothing at all, and can be the efficient of nothing. + So that if Motion be the cause of Thought; then Thought must be produced

produced by one single *Punctum* of Motion with relation to time as well as place. And such a *Punctum* to our Conceptions is almost equivalent to Permanency and Rest, or at least to any other *Punctum* of all Motion whatsoever. What then is become of the privilege of that organical Motion of the Animal Spirit above any other? Again, we have shewn, that this circular and other Motion is but the successive Flux of an Atom, and is never existent together; and indeed is a pure *Ens Rationis*, an operation of the Soul, which considering past motion and future, and recollecting the whole by the Memory and Fancy, calls this by one denomination and that by another. How then can that Motion be the efficient of Thought, which is evidently the Effect and the Product of it?

5. But Fifthly, they will say farther, (which is their last refuge) that 'tis not Motion alone, or under this or that Determination, that produceth Cogitation; but when it falls out that numerous Particles of Matter, aptly disposed and directed, do interfere in their Motions, and strike and knock one another; this is it which begets our Sensation. All the active Power and Vigor of the Mind, our Faculties

of

of Reason, Imagination and Will are the wonderfull result of this mutual Occurse, this Pulsion and Repercussion of Atoms. Just as we experience it in the Flint and the Steel; you may move them a-part as long as you please, to very little purpose: but 'tis the Hitting and Collision of them that must make them strike Fire. You may remember I have proved before, that Light and Heat, and the rest of those Qualities, are not such Passions in the Bodies, as we perceive in our selves. So that this smiting of the Steel with the Flint doth only make a Comminution and a very rapid Whirling and Melting of some Particles: but that Idea of Flame is wholly in *us*. But what a strange and miraculous thing should we count it, if the Flint and the Steel, instead of a few Sparks, should chance to knock out Definitions and Syllogisms? And yet it's altogether as reasonable, as this sottish opinion of the Atheists; That dead senseless Atoms can ever jostle and thump one another into Life and Understanding. All that can be effected by such encounters of Atoms, is either the imparting or receiving of Motion, or a new determination and direction of its Course. Matter, when it acts upon Matter,

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can

can communicate nothing but Motion; and that we have shew'd before to be utterly unable to produce those Operations of our Minds. And again, how can that Concussion of Atoms be capable of begetting those intrinsic and vital Affections, that Self-consciousness and other Powers and Energies that we feel in our Minds: seeing they only strike upon the outward Surfaces; they cannot inwardly pervade one another; they cannot have any Penetration of Dimensions and Conjunction of Substance. But, it may be, that these Atoms of theirs may have it in them, but they are refractory and fullen; and therefore, like Men of the same Tempers, must be bang'd and buffeted into Reason. And indeed that way of Argumentation would be most proper and effectual upon these Atheistical Atomists themselves. 'Tis a vigorous Execution of good Laws, and not rational Discourses only, either neglected or not understood, that must reclaim the profaneness of those perverse and unreasonable Men. For what can be said more to such persons, that are either so disingenuous or so stupid, as to profess to believe; That all the natural Powers and acquired Habits

of

of the Mind, that penetrating Understanding and accurate Judgment, that strength of Memory and readiness of Wit, that Liberty and Justice and Prudence and Magnanimity, that Charity and Beneficence to Mankind, that ingenuous Fear and awful Love of God, that comprehensive Knowledge of the Histories and Languages of so many Nations, that experienced Insight into the works and wonders of Nature, that rich Vein of Poetry and inexhausted Fountain of Eloquence, those lofty Flights of Thought and almost intuitive Perception of abstruse Notions, those exalted Discoveries of Mathematical Theorems and Divine Contemplations; all these admirable Endowments and Capacities of Human Nature, which we sometimes see actually existent in one and the same Person, can proceed from the blind shuffling and casual clashing of Atoms. I could as easily take up with that senseless assertion of the Stoics, That Vertues and Vices and Sciences and Arts and Fancies and Passions and Appetites are all of them real Bodies and distinct Animals; as with this of the Atheist, That they can all be derived from the Power of meer Bodies. 'Tis utterly incredible and impossible.

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Seneca Ep. 113.
Plutarch. de
Contrad. Stoic.

impossible; and we cannot without indignation go about to refute such an absurd imagination, such a gross contradiction to unprejudiced Reason. And yet if the Atheists had not been driven from all their posts and their subterfuges; if we had not pursued their Atoms through all their turnings and windings, their cells and recesses, their interferences and justlings; they would have boasted, that they could not be answered with an arrogant scorn and a mighty flutter and triumph.

6. Nay though they are so miserably confounded and baffled, and can offer no further Explication of the Cause and the Manner; yet they will, Sixthly, urge matter of Fact and Experience, that meer Body may produce Cogitation and Sense. For, say they, do but observe the Actions of some Brutes, how neerly they approach to Human Reason, and visibly discover some glimpses of Understanding: and if that be performed by the pure Mechanism of their Bodies (as many do allow, who yet believe the Being of God, and an immaterial Spirit in Man) then 'tis but raising our Conceptions and supposing Mankind to be Engines of a finer Make and Contexture, and the business

ness is done. I must confess, that the *Cartesians* and some others, men that have given no occasion to be suspected of Irreligion, have asserted that Brutes are meer *Machines* and *Automata*. I cannot now engage in the Controversie, neither is there any necessity to do so; for Religion is not endangered by either opinion. If Brutes have immaterial Souls, they'll say, then they must be either annihilated, or immortal. This objection supposeth the Being of God: and God can as easily annihilate as create. Or, if they be immortal, what need we be concerned about it? 'tis only by the good pleasure of their Maker, who doth all things for the best. And if they be bare Engines and Machines, I admire and adore the divine Artifice and Skill in such a wonderfull contrivance. But I shall deny then, that they have any Reason or Sense; if they be nothing but Matter. Omnipotence it self cannot create cogitative Body. And 'tis not any imperfection in the Power of God, but an incapacity in the Subject: the Idea's of Matter and Thought are absolutely incompatible. And this the *Cartesians* themselves do allow. Do but convince *them*, that Brutes have the least

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least participation of Thought, or Will, or Appetite, or Sensation or Fancy; and they'll readily retract their Opinion. For none, but besotted Atheists, do join the two Notions together, and believe Brutes to be Rational or Sensitive Machins. They are either the one or the other; either endued with Sense and some glimmering Rays of Reason from a higher Principle than Matter; or (as the *Cartesians* say) they are purely Body, devoid of all Sensation and Life: and, like the Idols of the Gentiles, *they have eyes, and see not; ears, and hear not; noses, and smell not*: they eat without hunger, and drink without thirst, and howl without pain. They perform the outward material actions; but they have no inward Self-consciousness, nor any more Perception of what they do or suffer; than a Looking-Glass has of the Objects it reflects, or the Index of a Watch of the Hour it points to. And as one of those Watches, when it was first presented to the Emperor of *China*, was taken there for an Animal: so on the contrary, our *Cartesians* take Brute Animals for a sort of Watches. For, considering the infinite distance betwixt the poor mortal Artist, and the almighty Opificer; the few
Wheels

Wheels and Motions of a Watch, and the innumerable Springs and Organs in the Bodies of Brutes; they may affirm (as they think, without either absurdity or impiety) * *Vide Zenobium & Suidam in Δαίδαλις ποιήματα, & Scholiasten Eurip. Hecubæ V. 838.* that they are nothing but moving *Automata*, as the fabulous * Statues of *Dædalus*, bereaved of all true Life and vital Sensation; which never act spontaneously and freely, but as Watches must be wound up to set them agoing; so *their* Motions also are excited and inhibited, are moderated and managed by the Objects without them.

(2.) And now that I have gone through the six parts that I proposed, and sufficiently shewn that Sense and Perception can never be the product of any kind of Matter and Motion; it remains therefore, that it must necessarily proceed from some Incorporeal Substance within us. And though we cannot conceive the manner of the Soul's Action and Passion; nor what Hold it can lay on the Body, when it voluntarily moves it: yet we are as certain, that it doth so, as of any Mathematical Truth whatsoever; or at least of such as are proved from the Impossibility or Absurdity of the contrary, which notwithstanding

notwithstanding are allowed for infallible Demonstrations. Why one motion of the Body begets an Idea of Pleasure in the Mind, and another of Pain, and others of the other Senses; why such a disposition of the Body induceth Sleep, another disturbs all the operations of the Soul, and occasions a Lethargy or Frenzy; this Knowledge exceeds our narrow Faculties, and is out of the reach of our discovery. I discern some excellent Final Causes of such a vital Conjunction of Body and Soul; but the Instrumental I know not, nor what invisible Bands and Fetters unite them together. I resolve all that into the sole Pleasure and *Fiat* of our Omnipotent Creator: whose Existence (which is my last Point) is so plainly and nearly deducible from the Established proof of an Immaterial Soul; that no wonder the resolved Atheists do so labour and bestir themselves to fetch Sense and Perception out of the Power of Matter. I will dispatch it in three words. For seeing we have shewn, that there is an Incorporeal Substance within us: whence did that proceed, and how came it into Being? It did not exist from all Eternity, that's too absurd to be supposed; nor could it
come

come out of Nothing into Being without an Efficient Cause. Something therefore must have created our Souls out of Nothing; and that Something (seeing Nothing can give more than it has) must *it self* have all the Perfections, that it hath given to *them*. There is therefore an Immaterial and Intelligent Being, that created our Souls: which Being was either Eternal it self, or Created immediately or ultimately by some other Eternal, that hath all those Perfections. There is therefore Originally *an Eternal, Immaterial, Intelligent Creator*; all which together are the *Attribute of God alone*.

And now that I have finished all the Parts, which I propos'd to discourse of; I will conclude all with a short Application to the Atheists. And I would advise them, as a friend, to leave off this dabbling and smattering in Philosophy, this shuffling and cutting with Atoms. It never succeeded well with them, and they always come off with the loss. Their old Master *Epicurus* seems to have had his Brains so muddled and confounded with them, that he scarce ever kept
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in the right way ; though the main Maxim of his Philosophy was, To trust to his Senses, and follow his Nose. I will not take notice of his doting conceit, That the Sun and Moon are no bigger, than they appear to the Eye, a foot or half a yard over ; and that the Stars are no larger, than so many Glow-worms. But let us see how he manages his Atoms, those Almighty Tools that do every thing of themselves without the help of a Workman. When the Atoms (says he) *descend* in infinite space (very ingeniously spoken, to make High and Low in Infinity) they do not fall plumb down ; but decline a little from the Perpendicular, either Obliquely or in a Curve : and this Declination (says he) from the direct Line is the cause of our Liberty of Will. But, I say, this Declination of Atoms in their Descent, was it self either necessary or voluntary. If it was necessary, how then could that Necessity ever beget Liberty ? if it was voluntary, then Atoms had that power of Volition before : and what becomes then of the *Epicurean* Doctrine of the fortuitous Production of Worlds ? The whole business

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is Contradiction and ridiculous Nonsense. 'Tis as if one should say, that a Bowl equally poised, and thrown upon a plain and smooth Bowling-Green, will run necessarily and fatally in a direct Motion : but if it be made with a Byas, that may decline it a little from a straight Line, it may acquire by that Motion a Liberty of Will, and so run spontaneously to the Jack. It would behoove the Atheists to give over such trifling as this, and resume the old solid way of confuting Religion. They should deny the Being of the Soul, because they cannot see it. This would be an Invincible Argument against us : for we can never exhibit it to their Touch, nor expose it to their View ; nor shew them the Colour and Complexion of a Soul. They should dispute, as a bold Brother of theirs did ; That he was sure there was no God, Because (says he) if there was one, he would have struck me to Hell with Thunder and Lightning, that have so reviled and blasphemed him. This would be an Objection indeed. Alas ; all that we could answer is in the next words to the Text, *That God hath appointed a day*

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Epicurus apud Laert.
Lucret. l. 5.
Cicero de Fin.
l. 1. Acad. l. 2.

Lucret. l. 2.
Cic. de Fin. 5.
l. 1. de Nat. Deor.
Plutarch. &c.

in which he will judge all the world in Righteousness; and that the Goodness and Forbearance and Long-suffering of God, which are some of his Attributes, and Essential Perfections of his Being, ought not to be abused and perverted into arguments against his Being. But if this will not do, we must yield our selves overcome: for we neither can, nor desire to command fire to come down from Heaven and consume them; and give them such experimental Conviction of the Existence of God. So that they ought to take these Methods, if they would successfully attack Religion. But if they will still be meddling with Atoms, be hammering and squeezing Understanding out of them; I would advise them to make use of their own Understanding for the instance. Nothing, in my opinion, could run us down, more effectually than that. For we readily allow, that if any Understanding can possibly be produced by such clashing of senseless Atoms; 'tis that of an Atheist, that hath the fairest Pretensions and the best Title to it. We know, who it is, that hath said in his Heart, there is no God. And 'tis no less a Truth than a Paradox, That there are no greater Fools, than Athe-

Atheistical Wits; and none so credulous as Infidels. No Article of Religion, though as demonstrable as the Nature of the thing can admit, hath credibility enough for them. And yet these same cautious and quick-sighted Gentlemen can wink and swallow down this sottish Opinion about Percipient Atoms; which exceeds in Incredibility all the Fictions of Æsop's Fables. For is it not every whit as likely or more, That Cocks and Bulls might discourse, and Hinds and Panthers hold Conferences about Religion, as that Atoms can do so? Can invent Arts and Sciences, can institute Society and Government, can make Leagues and Confederacies, can devise Methods of Peace and Stratagems of War? And moreover, The Modesty of Mythology deserves to be commended. The Scenes there are laid at a distance; 'Tis once upon a time, in the Days of Yore, and in the Land of Utopia, there was a Dialogue between an Oak and a Cedar: whereas the Atheist is so impudently silly, as to bring the Farce of his Atoms upon the Theatre of the present Age; to make dull senseless Matter trans-

transact all publick and private Affairs, by Sea and by Land, in Houses of Parliament, and Closets of Princes. Can any Credulity be comparable to this? If a Man should affirm, That an Ape casually meeting with Pen, Ink, and Paper, and falling to scribble, did happen to write exactly the *Leviathan* of *Thomas Hobbes*: Would an Atheist believe such a story? and yet he can easily digest as incredible as that; That the innumerable Members of a Human Body, which in the Style of the Scripture *are all written in the Book of God*, and may admit of almost infinite Variations and Transpositions above the Four and twenty Letters of the Alphabet, were at first fortuitously scribbled, and by meer accident compacted into this beautifull, and noble and most wonderfully usefull Frame, which we now see it carry. Put this will be the Argument of my next Discourse; which is the second Proposition drawn from the Text, That the Admirable Structure of Human Bodies, whereby they are fitted to live and move, and be vitally informed by the Soul, is unquestionably the Work-

Workmanship of a most wise and powerfull and beneficent Maker: *To which Almighty Creator, together with the Son and the Holy Ghost, be all Honour and Glory and Majesty and Power both now and from henceforth evermore. Amen.*

F I N I S.

Lately Printed for Henry Mortlock at the
Phoenix in St. Paul's Church-Yard,

A Sermon preached before the Queen at *White-Hall*, Febr.
22. 1688³. upon 1 Pet 4. ver. 18.

A Sermon preached before the King and Queen at *White-
Hall*, March 23. 1688³. upon *Ecclesiast*. 11. ver. 9.

Christian Magnanimity: A Sermon preached in the Cath-
edral Church at *Worcester*, at the Time of the Assizes, Septemb.
21. 1690. upon 2 *Tim*. 1. ver. 7.

A Sermon preached before the Queen at *White-Hall*, Mar. 1.
1690³. on *Luk*. 6. ver. 46.

The Mysteries of the Christian Faith Asserted and Vindicated:
In a Sermon preached at *St. Lawrence-Jewry* in *London*, April 7.
1691. upon 1 *Tim*. 1. ver. 15.

A Sermon preached before the Queen at *White-Hall*, March
13. 1691³. upon *Rom*. 8. ver. 6. All by the Right Reverend
Father in God, *Edward*, Lord Bishop of *Worcester*.

The Bishop of *Worcester*'s Charge to the Clergy of his Dio-
cese, in his Primary Visitation, begun at *Worcester*, Septemb.
11. 1690.

The Unreasonableness of a Separation from the New Bishops: or,
A Treatise out of Ecclesiastical History; Shewing, That although
a Bishop was unjustly deprived, neither he nor the Church ever
made a Separation; if the Successor was not a Heretick. Transla-
ted out of an ancient Greek Manuscript in the Publick Library
at Oxford, by *Humfrey Hody*, B. D. Fellow of *Wadham Col-
lege*.

*The Folly of Atheism, and (what is now called) Deism; even
with Respect to the Present Life*. A Sermon preached in
the Church of *St. Martin in the Fields*, March 7. 1691³. Being
the First of the Lecture Founded by the Honourable *Robert
Boyle*, Esq; By *Richard Bentley*, M. A. Chaplain to the Right
Reverend Father in God, *Edward*, Lord Bishop of *Worcester*.

645. e. 12
A
Confutation of Atheism

From the
Structure and Origin of Humane Bodies.

PART I.

A
SERMON

PREACHED

At Saint *Martin's in the Fields*,

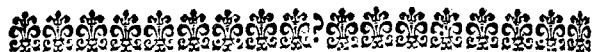
May 2. 1692.

Being the Third of the Lecture Founded by
the Honourable *ROBERT BOYLE*, Esquire.

By *RICHARD BENTLEY*, M. A.
Chaplain to the Right Reverend Father in God,
EDWARD, Lord Bishop of *Worcester*.

L O N D O N,

Printed for *Tho. Parkhurst* at the Bible and Three Crowns
in *Cheapside*, and *H. Mortlock* at the Phoenix
in *St. Paul's Church-yard*, 1692.



Imprimatur.

Geo. Royse, R. R^{mo} in Christo Patri
ac D^{no} D^{no} Johanni Archiep. Can-
tuar. à Sacris Domest.

May 7.
1692.



ACTS XVII. 27.

That they should seek the Lord, if haply they might feel after him, and find him: though he be not far from every one of us; for in him we Live, and Move, and have our Being.

I Have said enough in my last, to shew the fitness and pertinency of the Apostle's Discourse to the Persons he address'd to: whereby it sufficiently appears that he was no Babler, as some of the Athenian Rabble reproach'd him; not a *σπευδαλὸς*, a busie prating Fellow; as in another language they say *Sermo-Plautus. nes serere* and *Rumores serere* in a like mode of *Virgil. Livium.* Expression; that he did not talk at random, but was thoroughly acquainted with the several humors and opinions of his Auditors; and as *Moses was learned in all the Wisdom of the Egyptians*, so it is manifest from this Chapter alone, if nothing else had been now extant, that St. Paul was a great Master in all the Learning of the Greeks. One thing further I shall observe from the words of the Text, before I enter upon the Subject which I propos'd; That it requires *some* Industry and Consideration to find out the Being of God; we must *seek the Lord* and *feel after him*,

before we can find him by the Light of Nature. The search indeed is not very tedious, nor difficult; *He is not far from every one of us; for in him we live, and move, and have our Being.* The consideration of our Mind and Understanding, which is an incorporeal Substance independent from Matter; and the contemplation of our own Bodies, which have all the stamps and characters of excellent Contrivance; these alone, though we look upon nothing abroad, do very easily and proximately guide us to the wise Author of all things. But however, as we see from our Text, *some Thought and Meditation are necessary to it;* and a man may possibly be so stupid, or wilfully ignorant or perverse, as not to have *God in all his thoughts, or to say in his heart, There is none.* And this being observed, we have an effectual answer to that Cavil of the Atheists; who make it an objection against the Being of God, that they do not discover him without any Application, in spite of their corrupt Wills and debauch'd Understandings. If, say they, such a God, as we are told of, had created and formed us; surely he would have left upon our Minds a native and indeleble Inscription of Himself; whereby we must needs have *felt* him, even without *seeking*; and believed in him, whether we would or no. So that these Atheists being con-

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scious to themselves, that they are void of such Belief, which they say) if God was, would actually and necessarily be in them, do bring their own wicked Doubting and Denying of God as Evidence against His Existence; and maketh their very Infidelity an argument for it self. To which we reply, That God hath endued Mankind with Powers and Abilities, which we call Natural Light, and Reason, and Common Sense; by the due use of which we cannot miss of the Discovery of his Being; and this is sufficient. But as to any other original Notion and Proposition, that *God is*, actually imprinted on us, antecedently to all use of our Faculties, we may affirm against the Atheists, that the absence of such a Notion doth not give the least presumption against the Truth of Religion: because, though God be supposed to be, yet that Notion distinct from our Faculties would not be requisite; nor is it pretended to by Religion. *First*, it would not be requisite; because without any such primitive Impression, we can easily attain to the knowledge of the Deity by the sole use of our Natural Reason. And again, such an Impression would have render'd the Belief of a God irresistible and necessary, and thereby have bereaved it of all that is good and acceptable in it. For as by taking away the Freedom of Human Will, and making us mere

mere Machins under Fatal ties and impulses, it would destroy the very nature of Moral Vertue: so likewise as to Faith, there would be nothing worthy of praise and recompence in it, if there were left no possibility of Doubting or Denying. And *secondly*, such a radical Truth, that *God is*, springing up together with the essence of the Soul, and previous to all other Thoughts, is not pretended to by Religion. No such thing, that I know of, is affirmed or suggested by the Scriptures. There are several Topics there used against the Atheism and Idolatry of the Heathens; such as the visible marks of Divine Wisdom and Goodness in the works of the Creation, the vital Union of Souls with Matter, and the admirable Structure of Animate Bodies, and the like. But if our Apostle had asserted such an Anticipating Principle engraven upon our Souls before all Exercise of Reason; what did he talk of *seeking the Lord*, if haply they might feel after him and find him: seeing that if the knowledge of him was in that manner innate and perpetual, there would be no occasion of *seeking*, nor any *hazard* in the finding? Such an Inscription would be self-evident without any Ratiocination or Study, and could not fail constantly to exert its Energy in their Minds. What did he talk of the *Unknown God* and *ignorantly worshipping*; when

when if such an Original Signature were always inherent in their hearts; God could not be unknown to, or ignorantly worshipp'd by any? That primary Proposition would have been clear, and distinct, and efficacious, and universal in the minds of men. St. *Paul* therefore, it appears, had no apprehension of such a First Notion; nor made use of it for an argument; which (seeing that whosoever hath it, must needs know that he hath it) if it be not believed before by the Adversary, is false; and if it be believed, is superfluous: and is of so frail and brittle a texture, that whereas other arguments are not answered by bare denying without contrary Proof, the mere doubting and disbelieving of this must be granted to be *ipso facto* the breaking and confuting of it. Thus much therefore we have proved against the Atheist; that such an original irresistible Notion is neither requisite upon supposition of a Deity, nor is pretended to by Religion; so that neither the Absence of it is any argument against the Being of God, nor a supposed false Assertion of it an objection against the Scripture. 'Tis enough, that all are furnish'd with such Natural Powers and Capacities; that if they seriously reflect, if they *seek the Lord* with meditation and study, they cannot fail of *finding* and discovering him: whereby God is
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not *left without witness*, but the Atheists *without excuse*. And now I haste to the Second Proposition deduced from the Text, and the argument of my present Discourse, That the Organical Structure of Human Bodies, whereby they are fitted to live, and move, and be vitally informed by the Soul, is unquestionably the workmanship of a most wise, and powerfull, and beneficent Maker.

First, 'tis allowed and acknowledged by all parties; that the Bodies of Men and other Animals are excellently well fitted for Life, and Motion, and Sensation; and the several Parts of them well adapted and accommodated to their particular Functions. The Eye is very proper and meet for seeing, the Tongue for tasting and speaking, the Hand for holding and lifting, and ten thousand Operations beside; and so for the inward Parts; the Lungs are suitable for Respiration, the Stomach for Concoction, the Lacteous Vessels for the Reception of the Chyle, the Heart for the Distribution of the Blood to all the Parts of the Body. This is matter of Fact, and beyond all dispute; and in effect is no more than to say, that *Animals are Animals*; for if they were deprived of these Qualifications, they could not be so. This therefore is not the matter in Question between us and the

the Atheists: But the Controversie is here. We, when we consider so many constituent parts in the Bodies of Men, all admirably compacted into so noble an Engine; in each of the very Fingers, for example, there are Bones, and Gristles, and Ligaments, and Membranes, and Muscles, and Tendons, and Nerves, and Arteries, and Veins, and Skin, and Cuticle, and Nail; together with Marrow, and Fat, and Blood, and other Nutritious Juices; and all those Solid parts of a determinate Size, and Figure, and Texture, and Situation; and each of them made up of Myriads of little Fibres and Filaments, not discoverable by the naked Eye: I say, when We consider how innumerable parts must constitute so small a member, as the Finger, we cannot look upon *it* or the whole Body, wherein appears so much Fitness, and Use, and Subserviency to infinite Functions, any otherwise than as the effect of Contrivance and Skill, and consequently the Workmanship of a most Intelligent and Beneficent Being. And though now the Propagation of Mankind is in a settled method of Nature, the instrument of God; yet we affirm that its first Production was by the immediate Power of the Almighty Author of Nature: and that all succeeding Generations of Men are the Progeny of one primitive Couple.

This is a Religious man's account of the Frame and Origination of himself. Now the Atheists agree with us, as to the Fitness of Man's Body and its several parts to their various Operations and Functions (for that is visible and past all contradiction) but they vehemently impugn, and horribly dread the Thought, That this Usefulness of the Parts and the Whole should first arise from Wisdom and Design. So that here will be the point in debate, and the subject of our present Undertaking; Whether this acknowledged Fitness of Humane Bodies must be attributed, as we say, to a wise and good God: or, as the Atheists averr, to dead, senseless Matter. They have contrived several tricks and *methods of Deceit*, one repugnant to another, to evade (if possible) this most cogent Proof of a Deity; All which I will propose and refute; and I hope to make it appear, that here, as indeed every where, but here certainly, in the great Dramatick Poem of Nature, is *dignus Deo vindice Nodus*, a necessity of introducing a God.

And first, I will answer what Exceptions they can have against Our Account: and secondly, I will confute all the Reasons and Explications they can give of their own.

1. *First*, I will answer what Exceptions they can have against Our account of the Production of

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Eph. 4 14.

of Mankind. And they may object, That the Body it self, though pretty good in its kind and upon Their *Hypothesis*, nevertheless doth not look like the workmanship of so great a Master, as is pretended by Us; that Infinite Wisdom and Goodness and Power would have bestowed upon us more Senses than five, or at least these five in a much higher Perfection; that we could never have come out of the Hands of the Almighty, so subject to numerous Diseases, so obnoxious to violent Deaths, and at best of such a short and transitory Life. They can no more ascribe so sorry an Effect to an Omniscient Cause, than some ordinary piece of Clock-work with a very few motions and uses, and those continually out of order, and quickly at an end, to the best Artist of the Age. But to this we reply: *First*, as to the Five Senses; it would be rash indeed to affirm, That God, though he had pleased, could not have endued us with more. But thus much we may averr, That though the Power of God be infinite and perfect, yet the Capacities of Matter are within limits and bounds. Why then doth the Atheist suspect, that there may possibly be any more ways of Sensation, than what we have already? Hath he any Idea, or Notion, or Discovery of any more? So far from that, that he cannot make any addition or

progress in those very Senses he hath, further than they themselves have informed him. He cannot imagine one new Colour, or Taste, or Smell, beside those that have actually fallen under his respective Senses. Much less can he that is destitute of an entire Sense, have any Idea or Representation of it; as one that is born Deaf hath no Notion of Sounds; or Blind, of Colours and Light. If then the Atheist can have no Imagination of more Senses than five, why doth he suppose that a Body is capable of more? If we had double or triple as many, there might still be the same suspicion for a greater number without end; and therefore in both cases, 'tis equally unreasonable and groundless. *Secondly* we affirm, that our Senses have that degree of perfection, which is most fit and suitable to our Estate and Condition. If the *Eye* were so piercing, as to descry even opaque and little objects a hundred Leagues off, it would do us little service; it would be terminated by neighbouring Hills and Woods, or in the largest and evenest Plain by the very Convexity of the Earth: unless we could always inhabit the tops of Mountains and Cliffs, or had Wings too to fly aloft, when we had a mind to take a Prospect. And if mankind had had Wings (as perhaps some extravagant Atheist may think us deficient in that)

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all the world must have consented to clip them; or else Humane Race had been extinct before this time, nothing upon that supposition being safe from Murder and Rapine. Or if the *Eye* were so acute, as to rival the finest Microscopes, and to discern the smallest Hair upon the leg of a Gnat, it would be a curse and not a blessing to us; it would make all things appear rugged and deformed; the most finely polish'd Chrystal would be uneven and rough: The sight of our own selves would affright us: The smoothest Skin would be beset all over with ragged Scales, and bristly Hairs. And beside, we could not see at one view above what is now the space of an Inch, and it would take a considerable time to survey the then mountainous bulk of our own Bodies. Such a faculty of sight so disproportion'd to our other Senses and to the Objects about us would be very little better than Blindness it self. And again, God hath furnished us with invention and industry; so that by Optical Glasses we can more than supply that imaginary defect of our own Eyes; and discover more remote and minute Bodies with that assistance, than perhaps the most whimsical Atheist would desire to do without it. So likewise if our Sense of *Hearing* were exalted proportionably to the former, what a miserable condition would Mankind be

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be in? what Whisper could be low enough, but many would over hear it? what Affairs, that most require it, could be transacted with secrecy? and whither could we retire from perpetual humming and buzzing? every breath of Wind would incommode and disturb us: we should have no quiet or sleep in the silentest nights and most solitary places; and we must inevitably be stricken Deaf or Dead with the noise of a clap of Thunder. And the like inconveniences would follow, if the Sense of *Feeling* was advanced to such a degree, as the Atheist requires. How could we sustain the pressure of our very Cloaths in such a condition; much less carry burthens, and provide for conveniencies of Life? We could not bear the assault of an Insect, or a Feather, or a puff of Air without pain. There are examples now of wounded persons, that have roared for anguish and torment at the discharge of Ordnance, though at a very great distance; what insupportable torture then should we be under upon a like concussion in the Air, when all the whole Body would have the tenderness of a wound? In a word, all the Changes and Emendations, that the Atheists would make in our Senses, are so far from being Improvements, that they would prove the utter Ruine and Extirpation of Mankind.

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But perhaps they may have better success in their complaints about the Distempers of the Body and the Shortness of Life. We do not wonder indeed, that the Atheist should lay a mighty stress upon this Objection. For to a man that places all his Happiness in the Indolency and Pleasure of the Body, what can be more terrible than Pain or a Fit of Sickness? nothing but *Death* alone, the most dreadful thing in the world. When an Atheist reflects upon Death, his very Hope is Despair; and 'tis the crown and top of his Wishes, that it may prove his utter Dissolution and Destruction. No question if an Atheist had had the making of himself, he would have framed a Constitution, that could have kept pace with his insatiable Lust, been invincible by Gluttony and Intemperance, and have held out vigorous a thousand years in a perpetual Debauch. But we answer; *First*, in the words of St. Paul: *Nay, but, O Man, who art thou, that* Ro. 9. 20.
repliest against God? shall the thing formed say to him that formed it, Why hast thou made me thus? We adore and magnifie his most holy Name for his undeserved mercy towards us, that he made us the Chief of the visible creation; and freely acquit his Goodness from any imputation of Unkindness, that he has placed us no Higher. *Secondly*, Religion gives us a very good account of

of the present Infirmary of our Bodies. Man at his first Origin was a Vessel of Honour, when he came first out of the Hands of the Potter; endued with all imaginable perfections of the Animal Nature; till by Disobedience and Sin, Diseases and Death came first into the world. *Thirdly*, The Distempers of the Body are not so formidable to a Religious man, as they are to an Atheist: He hath a quite different judgment and apprehension about them: he is willing to believe, that our present condition is better for us in the issue, than that uninterrupted Health and Security, that the Atheist desires; which would strongly tempt us to forget God and the concerns of a better Life. Whereas now he receives a Fit of Sickness, as the *πυδελξ τῆ πατρὸς*, the kind Chastisement and Discipline of his Heavenly Father, to wean his affections from the world, where he is but as on a Journey; and to fix his thoughts and desires on things above, where his Country and his Dwelling is: that where he hath placed his *Treasure* and Concerns, *there his heart may be also*. *Fourthly*, Most of the Distempers that are incident to us are of our own making, the effects of abused Plenty, and Luxury, and must not be charged upon our Maker; who notwithstanding out of the Riches of his Compassion hath provided for us store of excel-

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lent Medicines, to alleviate in a great measure those very Evils which we bring upon our selves. And now we are come to the last objection of the Atheist, That Life is too short. Alas for him, what pity 'tis that he cannot wallow immortally in his sensual Pleasures! If his Life were many whole Ages longer than it is, he would still make the same Complaint, *Brevis est hic fructus homullis*. For Eternity, and that's the thing he trembles at, is every whit as long, after a thousand years as after fifty. But Religion gives us a better prospect, and makes us look beyond the gloomy Regions of Death with Comfort and Delight: *When this corruptible shall put on incorruption, and this mortal put on immortality*. We are so far from repining at God, that he hath not extended the period of our Lives to the Longevity of the Antediluvians; that we give him thanks for contracting the days of our Trial, and receiving us more maturely into those Everlasting Habitations above, that he hath prepared for us.

And now that I have answer'd all the Atheist's Exceptions against Our account of the Production of Mankind, I come in the next place to examine all the Reasons and Explications they can give of their own.

The Atheists upon this occasion are divided
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into Sects, and (which is the mark and character of Error) are at variance and repugnancy with each other and with themselves. *Some* of them will have Mankind to have been thus from all Eternity. But the rest do not approve of any infinite Successions, but are positive for a beginning; and they also are subdivided into three Parties: the *first* ascribe the Origin of Men to the Influence of the Stars upon some extraordinary Conjunction or Aspect: Others again reject all Astrology; and *some* of these mechanically produce Mankind at the very first Experiment by the action of the Sun upon duly prepared Matter: but *others* are rather of opinion, that after infinite blundering and miscarrying our Bodies at last happen'd and jump'd into this Figure by mere Chance and Accident. There's no Atheist in the world, that reasons about his Infidelity (which God knows most of them never do) but he takes one of these *four* Methods. I will refute them every one in the same order that I have named them: the two former in the present Discourse, reserving the others for another occasion.

1. And *First*, the Opinion of those Atheists that will have Mankind and other Animals to have subsisted thus eternally in infinite Generations already past, will be found to be flat Nonsense and Contradiction to it self; and repugnant

also

also to matter of Fact. *First*, it is contradiction to its self. Infinite Generations of Men (they say) are already past and gone: but whatsoever is now past, was once actually present; so that each of those Infinite Generations was once in its turn actually present: therefore all except One Generation were once future and not in being, which destroys the very supposition: For either that One Generation must it self have been Infinite, which is nonsense; or it was the Finite beginning of Infinite Generations between it self and us, which is, Infinity terminated at both ends, which is nonsense as before. *Again*, Infinite past Generations of Men have been once actually present: therefore there may be some one Man of them given, that was at infinite distance from *us* now: therefore that man's Son likewise, suppose forty years younger than his Father, was either at infinite distance from *us* or at finite: if that Son too was at infinite distance from *us*, then one Infinite is longer by forty years than another; which is absurd: if at finite, then forty years added to finite makes it infinite, which is as absurd as the other. And *again*, The number of men that are already dead and gone is infinite, as they say: but the number of the Eyes of those men must necessarily be twice as much as that of the men themselves, and that

of the Fingers ten times as much, and that of the Hairs of their Heads thousands of times. So that we have here one Infinite number twice, ten times, and thousands of times as great as another, which is contradiction again. Thus we see it is impossible in it self, that any successive duration should be actually and positively infinite, or have infinite successions already gone and past. Neither can these Difficulties be applied to the Eternal Duration of God Almighty. For though we cannot comprehend Eternity and Infinity; yet we understand what they are *not*. And something, we are sure, must have Existed from all Eternity; because all things could not emerge and start out of Nothing. So that if this præ-existent Eternity is not compatible with a successive Duration, as we clearly and distinctly perceive that it is not; then it remains, that some Being, though infinitely above our finite comprehensions, must have had an identical, invariable Continuance from all Eternity; which Being is no other than God. For as his Nature is perfect and immutable without the *least shadow of change*; so his Eternal Duration is permanent and indivisible, not measurable by Time and Motion, nor to be computed by number of successive moments. *One day with the Lord is as a thousand years, and a thousand years as one day.*

And

And *Secondly*, this Opinion of Infinite Generations is repugnant likewise to Matter of Fact. 'Tis a truth beyond opposition, that the universal Species of Mankind hath had a gradual increase, notwithstanding what War, and Famine, and Pestilence, and Floods, and Conflagrations, and the Religious Profession of Celibacy, and other Causes, may at certain periods of time have interrupted and retarded it. This is manifest from the History of the Jewish Nation, from the account of the Roman *Census*, and Registers of our Own Country, where the proportion of Births to Burials is found upon observation to be yearly as Fifty to Forty. Now if Mankind do increase, though never so slowly, but one Couple suppose in an Age; 'tis enough to evince the falshood of Infinite Generations already expired. For though an Atheist should contend, that there were ten thousand million couple of Mankind now in being, (that we may allow him multitude enough) 'tis but going back so many Ages, and we descend to a single Original Pair. And 'tis all one in respect of Eternal Duration yet behind, whether we begin the world so many millions of Ages ago, or date it from the late *Æra* of about Six Thousand years. And moreover this recent beginning of the world is further established from the known Original of Empires and

Vide Observations upon the Bills of Mortality.

and Kingdoms, and the Invention of Arts and Sciences: whereas if infinite Ages of Mankind had already preceded, there could nothing have been left to be invented or improved by the successfull industry and curiosity of our own. The Circulation of the Blood, and the Weight and Spring of the Air (which is as it were the Vital Pulse and the great Circulation of Nature, and of more importance in all Physiology, than any one Invention since the beginning of Science) had never lain hidden so many myriads of Generations, and been reserved for a late happy Discovery by two great Luminaries of this Island. I know the Atheist may endeavour to evade this by supposing, That though Mankind have been from everlasting, and have perpetually encreas'd by generation; yet at certain great periods there may be universal Deluges, which may *not* wholly extinguish Mankind (for, they'll say, there is not Water enough in Nature for that) but may cover the Earth to such a Height, that none but a few Mountainers may escape, enough to continue Humane Race; and yet being illiterate Rusticks (as Mountainers always are) they can preserve no Memoirs of former times, nor propagate any Sciences or Arts; and so the world must needs be thought by Posterity to have begun at such periods. But to this I answer, *First*, That upon this

this supposition there must have been infinite Deluges already past: for if ever this Atheist admits of a first Deluge, he is in the same noose that he was. For then he must assert, That there were infinite generations and an infinite increase of mankind before that first Deluge; and then the Earth could not receive them, but the infinite Bodies of Men must occupy an infinite space, and then all the Matter of the Universe must be humane Body, and other absurdities that follow it, which are infinite too. But if he says, That there have been infinite Deluges heretofore, this is impossibility again; for all that I said before against the Notion of infinite past Generations, is alike applicable to this. *Secondly*, such Universal Deluges (seeing the Deity is now excluded) must be produced in a natural way: and therefore gradually, and not in an instant: and therefore (because the tops of Mountains, they say, are never overflown) the civilized people may escape thither out of Villages and Cities; and consequently, against the Atheist, Arts, and Sciences, and Histories, may be preserved, and derived to the succeeding world. *Thirdly*, Let us imagin the whole Terraqueous Globe with its Atmosphere about it; What is there here, that can naturally effect an Universal Deluge? If you would drown one Country or Continent with Rains.

Rains and Inundations, you must borrow your Vapor and Water from some other part of the Globe. You can never overflow all at a time. If the Atmosphere it self was reduced into Water, (as some think it possible) it would not make an Orb above 32 foot deep, which would soon be swallowed up by the cavity of the Sea, and the depressed parts of the Earth, and be a very feeble attempt towards an Universal Deluge. But then what immense Weight is there above, that must overcome the expansive force of the Air, and compress it into near the thousandth part of the room that it now takes up? We, that acknowledge a God Almighty, can give an account of one Deluge, by saying it was miraculous; but it would be a little strange to see an Atheist have recourse to a Miracle; and that not once only, but upon infinite occasions. But perhaps they may endeavour to prove the possibility of such a natural Deluge, by borrowing an ingenious Notion, and pretending, That the face of Nature may be now quite changed from what it was; and that formerly the whole Collection of Waters might be an orbicular Abyss, arched over with an exterior Crust or Shell of Earth; and that the breaking and fall of this Crust might naturally make a Deluge. I'll allow the Atheist all the fair play in the world. Let us suppose

the Fall of this imaginary Crust. *First*, It seems to be impossible, but that all the Inhabitants of this Crust must be dash'd to pieces in its Ruins. So that this very Notion brings us to the necessity of a new production of Men; to evade which it is introduced by the Atheist. *Again*, If such a Crust naturally fell, then it had in its own constitution a tendency towards a Fall; that is, it was more likely and inclinable to fall this thousand years, suppose, than the last. But if the Crust was always gradually nearer and nearer to falling; that plainly evinces, that it had not endured eternally before its Fall. For let them assign any imaginable period for its falling, how could it have held out till then (according to the supposition) the unmeasurable duration of infinite Ages before? And *again*, such a Crust could fall but once; for what Architect can an Atheist suppose, to rebuild a new Arch out of the ruins of the other? But I have shewn before, that this Atheist hath need of infinite Deluges to effect his design; and therefore I'll leave him to contrive how to make infinite Crusts one upon the back of another; and now proceed to examine in the second place, The Astrological Explication of the Origin of Men. *

2. If you ask one of this Party, what Evidence he is able to produce for the truth of his Art,

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he

he may perhaps offer some Physical Reasons for a general influence of the Stars upon terrestrial bodies: but as Astrology is consider'd as a System of Rules and Propositions, he will not pretend to give any reason of it *a priori*; but resolves all that into Tradition from the *Chaldeans* and *Egyptians*, who first learnt it by long observation, and transmitted it down to Posterity; and that now it is daily confirmed by Events, which are experienced to answer the Predictions. This is all that can be said for Astrology as an Art. So that the whole Credibility of this Planetary production of Mankind must depend upon Observation. But are they able to shew among all the Remains of the *Chaldaick* Observations for four hundred and seventy thousand years (as they pretended) any Tradition of such a Production? So far from that, that the *Chaldeans* believed the world and mankind to have been from everlasting, which opinion I have refuted before. Neither can the *Egyptian* Wizards with their long Catalogue of Dynasties, and Observations for innumerable Years, supply the Atheists with one instance of such a Creation. Where are the fragments of *Petofiris* and *Necepsa*, that may countenance this Assertion? I believe if they had had any example of men born out of the Soil, they would rather have ascribed it to the

the fruitfull Mud of the Nile (as they did the breeding of Frogs, and Mice, and Monsters) than to the efficacy of Stars. But with the leave of these Fortune-tellers, did the Stars do this feat once only, which gave beginning to Humane Race? or have they frequently done so, and may do it again? If frequently, why is not this Rule deliver'd in *Ptolemy* and *Albumasar*? If once only at the beginning, then how came it to be discover'd? Who were there then in the world, to observe the Births of those First Men, and calculate their Nativities, as they sprawl'd out of Ditches? Those Sons of Earth were very wise Children if they themselves knew, that the Stars were their Fathers. Unless we are to imagine, that they understood the Planets and the Zodiack by instinct, and fell to drawing Schemes of their own Horoscopes, in the same Dust they sprung out of? For my part I can have no great veneration for *Chaldaick* Antiquity; when I see they could not discover in so many thousand years, that the Moon was an opaque Body, and received her Light from the Sun. But suppose their Observations had been never so accurate, it could add no Authority to modern Astrology,

So Diodorus Siculus, lib. 1. c. 2.
 ἡ ἀστρολογία ἀπὸ τῶν Αἰγυπτίων καὶ τὴν ἐξ
 αὐτῶν τῶν ἑλλάνων γέγονεν παλαιὰ τῆς
 ἀνθρώπων γνώσεως καὶ τῆς Αἰγυπ-
 τίου, διὰ τὴν εὐκλείαν τὴν γε-
 γνησθεῖσαν, καὶ διὰ τὴν φύσιν τοῦ Νείλου, &c.

Vitruvius, lib. 9. c. 4. Lucret.
 lib. 5. *Ut Babylonica Chaldaeum*
doctrina, &c. Apuleius de Deo So-
cratis: Seu illa (Luna) proprio
& perpetui fulgore, ut Chaldaei ar-
bitrantur, parte luminis compos,
parte altera cassi fulgoris.

which is borrowed from the *Greeks*. 'Tis well known that *Berosus* or his Scholars, new modelled and adapted the *Babylonian* Doctrines to the *Grecian* Mythology. The supposed Influences of *Aries* and *Taurus* for example, have a manifest relation to the *Grecian* Stories of the Ram that carried *Phrixus*, and the Bull that carried *Europa*. Now which of these is the Copy, and which the Original? Were the Fables taken from the Influences, or the Influences from the Fables? the Poetical Fables, more ancient than all Records of History; or the Astrological Influences, that were not known to the *Greeks* till after *Alexander* the Great? But without question those Fabulous Tales had been many a time told and sung to lull children asleep, before ever *Berosus* set up his Intelligence-Office at *Coos*. And the same may be said of all the other Constellations. First, Poetry had filled the Skies with Asterisms and Histories belonging to them; and then Astrology devises the feigned Virtues and Influences of each, from some property of the Image, or allusion to the Story. And the same trifling futility appears in their XII Signs of the *Zodiack*, and their mutual Relations and Aspects. Why no more Aspects than diametrically opposite, and such as make æquilateral figures? Why are the Masculine and Feminine, the Fiery and

Airy,

Airy, and Watry and Earthy Signs all placed at such regular distances? Were the Virtues of the Stars disposed in that order and rank, on purpose only to make a pretty Diagram upon Paper? But the Atheistical Astrologer is doubly pressed with this absurdity. For if there was no Counsel at the making of the world, how came the Asterisms of the same nature and energies to be so harmoniously placed at regular intervals? And how could all the Stars of one Asterism agree and conspire together to constitute an Universal? Why does not every single Star shed a separate influence; and have Aspects with other Stars of their own Constellation? But what need there many words? As if the late Discoveries of the Celestial Bodies had not plainly detected the imposture of Astrology? The Planet *Saturn* is found to have a great Ring that encircles him, and three lesser Planets that move about him, as the Moon doth about the Earth; and *Jupiter* hath four *Satellites*, which by their Interposition between him and us make some hundreds of Eclipses every year. Now the whole Tribe of Astrologers, that never dream'd of these Planets have always declared, that when *Jupiter* and *Saturn* come about again to any given Point, they exert (consider'd singly by them-

themselves) the same Influence as before. But 'tis now manifest, that when either of them return to the same point; the Planets about them, that must make up an united Influence with them, have a different situation in respect of us and each other, from what they had the time before: and consequently the joint Influence must be perpetually varied, and never be reducible to any Rules and Observations. Or if the Influences be conveyed hither distinct, yet sometimes some of the Little Planets will eclipse the Great one at any given point; and therefore intercept and obstruct the Influence. I cannot now insist on many other Arguments deducible from the late Improvements of Astronomy; For if the Earth be not the Centre of the Planetary Motions, what must become then of the present Agrology, which is wholly adapted to that vulgar *Hypothesis*? And yet nevertheless, when they lay under such wretched mistakes for many Myriads of Years, if we are willing to believe them; they would all along, as now, appeal to Experience and Event for the confirmation of their Doctrins. That's the invincible Demonstration of the Verity of the Science: And indeed as to their Predictions, I think our Astrologers may assume to themselves that infallible Oracle of *Tiresias*,

O Laertiade, quicquid dico, aut erit, aut non.

There

There's but a true and a false in any telling of Fortune; and a man that never hits on the right side, cannot be called a bad Gueffer, but must miss out of design, and be notably skilfull at lighting on the wrong. And were there not formerly as great pretensions to it from the superstitious observation of the Entrails of Cows, of the flying of Vulturs, and the pecking of Chickens? Nay, the old *Augurs* and *Southsayers* had better reason to profess the Art of Divining, than the modern Astrological Atheist: for They supposed there were some *Dæmons*, that directed the indications. So likewise the *Chaldean* and *Ægyptian* Astrologers were much more excusable than He. It was the Religion of their Countries to worship the Stars, as we know from unquestionable Authority. They believed them Intelligent Beings, and no other than very Gods; and therefore had some Reason to suspect, that they might govern Humane Affairs. The Influence of the Stars was in their apprehensions no less than Divine Power. But an Atheist, that believes the Planets to be dark, solid and senseless Bodies, like the brute Earth he treads on; and

Maimonides More Nevochim
De Zabim & Chaldeis. Plato
in Cratyllo. Diodorus, lib. 1. c. 2.
Eusebius Demonst. Evangel. lib. 1.
c. 6. Φοίνικας τοιραυτὸν καὶ Αἰ-
γυπτίους, πρῶτους ἀπάντων κατέχευ-
ε λόγους ἡλίου καὶ σελήνης καὶ ἀστ-
ερός θεός ἀποφύλλαι.

and the Fixt Stars and the Sun to be inanimate Balls of Fire ; what Reasons can He advance for the credit of such Influences? He acknowledgeth nothing besides Matter and Motion ; so that all that he can conceive to be transmitted either from the Stars, must needs be perform'd either by Mechanism or Accident : either of which is wholly unaccountable, and the latter irreconcilable to any Art or System of Science. But if both were allowed the Atheist ; yet as to any production of Mankind, they will be again refuted in my following Discourse. I can preserve a due esteem for some great Men of the last Age, before the Mechanical Philosophy was revived, though they were too much addicted to this nugatory Art. When Occult Quality, and Sympathy and Antipathy were admitted for satisfactory Explications of things, even wise and vertuous Men might swallow down any Opinion that was countenanced by Antiquity. But at this time of day, when all the general powers and capacities of Matter are so clearly understood ; he must be very ridiculous himself, that doth not deride and explode the antiquated Folly. But we may see the miserable Shifts that some men are put to ; when that which was first founded upon, and afterward

suppor-

supported by *Idolatri*, is now become the tottering Sanctuary of *Atheism*. If the Stars be no Deities, Astrology is groundless : and if the Stars be Deities, why is the Astrologer an Atheist? He may easily be no Christian ; and 'tis difficult indeed to be both at once : because, as I have said before, Idolatri is at the bottom ; and by submitting Humane Actions and Inclinations to the Influence of the Stars, they destroy the very Essence of Moral Vertue and the Efficacy of Divine Grace : and therefore Astrology was justly condemn'd by the Ancient Fathers and Christian Emperours. An Astrologer, I say, may very easily be no Christian ; he may be an Idolater or a Pagan : but I could hardly think Astrology to be compatible with rank Atheism ; if I could suppose any great gifts of Nature to be, where either do reside. But let him be what he will, he is not able to do much hurt by his Reasons and Example. For Religion it self, according to his Principles, is derived from the Stars. And he owns, 'tis not any just Exceptions he hath taken against Christianity, but 'tis his Destiny and Fate ; 'tis *Saturn* in the Ninth House, and not Judgment and Deliberation, that made him an Atheist.

F I N I S.

Concil. La-
od. Can. 36
Conc. 6. in
Trullo.
Can. 61.
Cod. Just.
lib. 9.
tit. 18.
Cod. The-
odos. lib. 9.
tit. 16.
Βασιλικών
lib. 60.
tit. 39.

*Lately Printed for Henry Mortlock at the
Phoenix in St. Paul's Church-Yard.*

A Sermon preached before the Queen at *White-Hall*, Febr.
22. 1688³, upon 1 *Pet.* 4. ver. 18.

A Sermon preached before the King and Queen at *White-
Hall*, March 23. 1688³, upon *Ecclesiast.* 11. ver. 9.

Christian Magnanimity: A Sermon preached in the Catho-
dral Church at *Worcester*, at the Time of the Assizes, Septemb.
21. 1690. upon 2 *Tim.* 1. ver. 7.

A Sermon preached before the Queen at *White-Hall*, Mar. 1.
1691, on *Luk.* 6. ver. 46.

The Mysteries of the Christian Faith Asserted and Vindicated:
In a Sermon preached at *St. Lawrence-Jewry* in London, April 7.
1691. upon 1 *Tim.* 1. ver. 15.

A Sermon preached before the Queen at *White-Hall*, March
13. 1691, upon *Rom.* 8. ver. 6. All by the Right Reverend
Father in God, *Edward*, Lord Bishop of *Worcester*.

The Bishop of *Worcester's* Charge to the Clergy of his Dio-
cese, in his Primary Visitation, begun at *Worcester*, Septemb.
11. 1690.

The Folly of Atheism, and (what is now called) *Deism*; even
with Respect to the Present Life. A Sermon preached in
the Church of *St. Martin in the Fields*, March 7. 1691. Being
the First of the Lecture Founded by the Honourable *Robert
Boyle*, Esq; The Second Edition. By *Richard Bentley*, M. A.
Chaplain to the Right Reverend Father in God, *Edward*,
Lord Bishop of *Worcester*.

Matter and Motion cannot Think: or, A Confutation of
Atheism from the Faculties of the Soul. A Sermon preach-
ed at *St. Mary-le-Bow*, April 4. 1692. Being the Second
of the Lecture Founded by the Honourable *Robert Boyle*, Esq;
The Second Edition. By *Richard Bentley*, M. A.

R. With the preceding

A
Confutation of Atheism

From the
Structure and Origin of Humane Bodies.

PART II.

A
SERMON

Preached at
St Mary-le-Bow,

June 6. 1692.

Being the *Fourth* of the Lecture Founded by
the Honourable *ROBERT BOYLE*, Esquire.

By *RICHARD BENTLEY*, M. A.
Chaplain to the Right Reverend Father in God,
EDWARD, Lord Bishop of *Worcester*.

L O N D O N,
Printed for *Tho. Parkhurst* at the *Bible and Three Crowns*
in *Cheapside*, and *H. Mortlock* at the *Phoenix*
in *St. Paul's Church-yard*, 1692.

ACTS XVII. 27.

That they should seek the Lord, if haply they might feel after him, and find him : though he be not far from every one of us ; for in him we Live, and Move, and have our Being.

Imprimatur.

*Ra. Barker, R^{mo} in Christo Patri
ac D^{no} D^{no} Johanni Archiep. Can-
tuar. à Sacris Domest.*

*June 10.
1692.*

IN the former part of this Enquiry I have examin'd and refuted two Atheistical Notions oppos'd to the grand Doctrine of the Text, *That we owe our Living and Being to the power of God*: The one of the *Aristotelian* Atheists, who, to avoid the difficulties of the first production of Mankind, without the intervention of Almighty Wisdom and Power, will have the Race to have thus continued without beginning by an eternal succession of infinite past Generations; which Assertion hath been detected to be mere nonsense, and contradictory to it self: The other of the *Astrological* undertakers, that would raise Men like Vegetables out of some fat and slimy soil well digested by the kindly heat of the Sun, and impregnated with the influence of the Stars upon some remarkable and periodical conjunctions: Which opinion hath been vamp'd up of late by *Cardan*

and *Cesalpinus*, and other News-mongers from the Skies; a Pretence as groundless and silly, as the dreaming Oneirocriticks of *Artemidorus* and *Asirampsyclus*, or the modern Chiromancy and Divinations of Gypsies.

I proceed now to the two remaining Paradoxes of such Sects of Atheists, as laying aside Astrology and the unintelligible Influence of Heavenly Bodies more than by their Gravity, and Heat, and Light, do either produce Mankind mechanically and necessarily from certain connexions of Natural Causes, or more dully and supinely, though altogether as reasonably, resolve the whole Business into the unaccountable shuffles and tumults of Matter, which they call Chance and Accident. But at present I shall only take an account of the supposed Production of Humane Bodies by Mechanism and Necessity.

The Mechanical or Corpuscular Philosophy, though peradventure the oldest, as well as the best in the world, had lain buried for many Ages in contempt and oblivion; till it was happily restored and cultivated anew by some excellent Wits of the present. But it principally owes its re-establishment and lustre, to that Honourable Person of ever Blessed Memory, who hath

hath not only shewn its usefulness in Physiology above the vulgar Doctrines of Real Qualities and Substantial Forms; but likewise its great serviceableness to Religion it self. And I think it hath been competently proved in a former Discourse, how friendly it is to the Immateriality of Humane Souls, and consequently to the Existence of a Supreme Spiritual Being. And I may have occasion hereafter to shew further, that all the Powers of Mechanism are intirely dependent on the Deity, and do afford a solid Argument for the Reality of his Nature. So far am I from the apprehension of any great feats, that this Mechanical Atheist can do against Religion. For if we consider the Phenomena of that Material World with a due and serious attention, we shall plainly perceive, that its present frame and constitution and the established Laws of Nature are constituted and preserved by Gravitation alone. That is the powerfull cement, which holds together this magnificent structure of the world; *Which stretcheth* Job 26. 7. *the North over the empty space, and hangeth the Earth upon Nothing*; if we may transfer the words of *Job* from the first and real Cause to the secondary Agent. Without that the whole Universe, if we suppose an undetermin'd power of Motion

Motion infused into Matter, would have been a confused Chaos, without beauty or order, and never stable and permanent in any condition. Now it may be proved in its due place, that this Gravity, the great Basis of all Mechanism, is not it self Mechanical; but the immediate *Fiat* and Finger of God, and the Execution of the Divine Law; and that Bodies have not the power of tending towards a Centre, either from other Bodies or from themselves: which at once, if it be proved, will undermine and ruine all the Towers and Batteries that the Atheists have raised against Heaven. For if no Compound Body in the visible world can subsist and continue without Gravity, and Gravity do immediately flow from a Divine Power and Energy; it will avail them nothing, though they should be able to explain all the particular Effects, even the Origination of Animals, by mechanical principles. But however at present I will forbear to urge this against the Atheist. For, though I should allow him, that this Catholick Principle of Gravitation is essential to Matter without introducing a God; yet I will defy him to shew, how a Humane Body could be at first produced naturally, according to the present System of things, and the mechanical affections of Matter.

And

And because this Atheist professeth to believe as much as we; that the first production of Mankind was in a quite different manner from the present and ordinary method of Nature, and yet affirms nevertheless, that That was Natural too; which seems at the first sight to be little less than a contradiction: It should lie upon him to make out, how matter by undirected Motion could at first necessarily fall, without ever Erring or Miscarrying, into such a curious formation of Humane Bodies; a thing that by his own confession it was never able to do since, or at least hath not done for some thousands of years: to declare to us what shape and contexture Matter then had, which it cannot have now: how it came to be altered by long course of time, so that living Men can no more be produced out of putrefaction in the primary way; and yet the species of Mankind; that now consists of and is nourished by Matter so altered, should continue to be the same as it was from the beginning. He should undertake to explain to us the first steps and the whole progress of such a formation; at least by way of *Hypothesis*, how it naturally might have been, though he did not affirm that it was actually so. Whether he hath a new No-

tion.

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tion peculiar to himself about that Production, or takes up with some old one, that is ready at hand: whether that most witty Conceit of *Anaximander*, That the first Men and all Animals were bred in some warm moisture, inclosed in crustaceous skins, as it were various kinds of Crabfish and Lobsters; and so they continued, till they had arrived at perfect age; when their shelly Prisons growing dry and breaking made way for their liberty: or the no less ingenious opinion of the great *Empedocles*; That Mother Earth first brought forth vast numbers of Legs, and Arms, and Heads, and the other members of the Body scatter'd and distinct, and all at their full growth; which coming together and cementing (as the pieces of Snakes and Lizards have been said to do, if one cuts them asunder) and so configuring themselves into Humane shape, made lusty proper men of thirty years age in an instant: or rather the divine Doctrine of *Epicurus* and the *Aegyptians*; That there first grew up a sort of Wombs, that had their Roots in the Earth, and attracted thence a kind of Milk for the nourishment of the inclosed *Fetus*; which at the time of maturity broke through those Membranes, and shifted for themselves. I say, he

Plutarch.
de Plac.
Phil. lib. 5.
c. 19. &
Sympos. 8.
c. 8. Censorinus
de die Natali
cap. 4.

Plutarch.
de Plac.
Phil. 5. 19.
Censorin.
ibidem.

Censorinus.
ibid.
Lucret.
lib. 5.
Diodorus
Siculus,
lib. 1. c. 2.

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bought to acquaint us which of these he is for, or bring a new explication of his own; and not require *Us* to prove the Negative, That a Spontaneous production of Mankind, neither warranted by example, nor defended by reason, nevertheless may not *possibly* have been true. This is a very unreasonable demand, and we might justly put him off with such an answer as this; That there are several things, which all men in their wits do disbelieve, and yet none but madmen will go about to disprove. But to shew him how much we endeavour to satisfy and oblige him, I will venture once for his sake to incur the censure of some persons for being elaborately trifling. For with respect to the most of Mankind, such wretched absurdities are more wisely condemn'd than confuted, and to give them a serious answer, may only make them look more considerable.

First then, I take it for granted by him, That there were the same Laws of Motion, and the like general Fabrick of the Earth, Sea and Atmosphere, at the beginning of Mankind, as there are at this day. For if any Laws at first were once settled and constituted; like those of the *Medes* and *Persians*, they are never to be reversed. To violate and infringe them, is the same

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as what we call Miracle; and doth not sound very Philosophically out of the mouth of an Atheist. He must allow therefore, that Bodies were endowed with the same affections and tendencies then as ever since, and that if an *Axis* 2 R. 5. 6. *head* be supposed to float upon water, which is specifically much lighter than it; it had been supernatural at that time, as well as in the days of *Elisba*. And this is all that I desire him to acknowledge at present. So that he may admit of those Arguments as valid and conclusive against his *Hypothesis*, that are fairly drawn from the present powers of Matter, and the visible constitution of the World.

Now that we may come to the point; All Matter is either Fluid or Solid, in a large acceptation of the words, that they may comprehend even all the middle degrees between extreme Fixedness and Coherency, and the most rapid intestine motion of the Particles of Bodies. Now the most cavilling Atheist must allow, that a solid inanimate Body, while it remains in that state, where there is none, or a very small and inconsiderable change of Texture, is wholly incapable of a vital production. So that the first Humane Body, without Parents and without a Creator, if such an one ever was, must have

have naturally been produced in and constituted by a Fluid. And because this Atheist goes mechanically to work; the universal Laws of Fluids must have been rigidly observed during the whole process of the Formation. Now this is a Catholick Rule of Staticks; That if any Body be bulk for bulk heavier than a Fluid, it will sink to the bottom of that Fluid; and if lighter, it will float upon it; having part of it self extant, and part immersed to such a determinate depth, as that so much of the Fluid as is equal in Bulk to the immersed part, be equal in Gravity to the whole. And consequently if several portions of one and the same Fluid have a different specifick gravity, the heavier will always (in a free vessel) be gradually the lower; unless violently shaken and blended together by external concussion. But that cannot be in our present case. For I am unwilling to affront this Atheist so much, as to suppose him to believe, that the first organical Body might possibly be effected in some Fluid portion of Matter, while its Heterogeneous parts were jumbled and confounded together by a Storm, or Hurricane, or Earthquake. To be sure he will rather have the primitive Man to be produced by a long process in a kind of digesting *Balneum*, where all the heavier Lees

Archimedes de In-
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Stevin des
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may have time to subside, and a due *Equilibrium* be maintain'd, not disturb'd by any such rude and violent shogs, that would ruffle and break all the little *Stamina* of the *Embryon*, if it were a making before. Now because all the parts of an undisturbed Fluid are either of equal Gravity, or gradually placed and storied according to the differences of it; any concretion that can be supposed to be naturally and mechanically made in such a Fluid, must have a like structure of its several parts; that is, either be all over of a similar Gravity, or have the more ponderous parts nearer to its Basis. But there need no more concessions than this, to extinguish these supposed First-born of Nature in their very formation. For suppose a Humane Body to be a forming in such a Fluid in any imaginable posture, it will never be reconcilable to this Hydrostatical Law. There will be always something lighter beneath, and something heavier above; because Bone, or what is then the Stuff and Rudiments of Bone, the heaviest *in specie*, will be ever in the midst. Now what can make the heavier particles of Bone ascend above the lighter ones of Flesh, or depress these below those, against the tendency of their own Nature? This would be wholly as miraculous, as the swimming

ming of Iron in Water at the command of *Elisba*: and as impossible to be, as that the Lead of an Edifice should naturally and spontaneously mount up to the Roof, while lighter materials employ themselves beneath it: or that a Statue, like that in *Nebuchadnezzar's* Vision, whose Head was of fine and most ponderous Gold, and his Feet of Iron and Clay, should mechanically erect it self upon them for its Basis.

Secondly, Because this Atheist goes mechanically to work, he will not offer to affirm, That all the parts of the *Embryon* could according to his explication be formed at a time. This would be a supernatural thing, and an effectual refutation of his own Principles. For the Corpuscles of Matter having no consciousness of one anothers acting (at least before or during the Formation; as will be allowed by that very Atheist, that attributes Reason and Perception to them, when the Formation is finished) they could not consent and make a compact together, to carry on the work in several places at once; and one party of them be forming the Brain, while another is modelling the Heart, and a third delineating the Veins. No, there must be, according to Mechanism, a successive and gradual operation: Some few Particles must

must first be united together, and so by apposition and mutual connexion still more and more by degrees, till the whole System be completed: and a Fermentation must be excited in some assignable place, which may expand it self by its Elastical power; and break through, where it meets with the weakest resistance; and so by that so simple and mechanical action, may excavate all the various Ducts and Ventricles of the Body. This is the only general account, as mean as it appears to be, that this Machin of an Atheist can give of that *fearfull and wonderful* Production. Now to confute these Preterences, *First*, There is that visible Harmony and Symmetry in a Humane Body, such a mutual communication of every vessel and member of it, as gives an intrinsic evidence; that it was not formed successively, and patch'd up by piecemeal. So uniform and orderly a system with innumerable Motions and Functions, all so placed and constituted, as never to interfere and clash one with another, and disturb the Oeconomy of the whole, must needs be ascribed to an Intelligent Artist; and to such an Artist, as did not begin the matter unprepared and at a venture; and when he was put to a *Nonplus*, pause and hesitate, which way he should proceed;

ceed; but he had first in his comprehensive Intellect a complete *Idea* and Model of the whole Organical Body, before he enter'd upon the Work. But *Secondly*, if they affirm, That mere Matter by its mechanical Affections without any design or direction could form the Body by steps and degrees; what member then do they pitch upon for the foundation, and cause of all the rest? Let them shew us the beginning of this Circle; and the first Wheel of this Perpetual Motion. Did the Blood first exist, antecedent to the formation of the Heart? But that is to set the Effect before the Cause: because all the Blood that we know of, is made in and by the Heart, having the quite different form and qualities of Chyle, before it comes thither. Must the Heart then have been formed and constituted, before the Blood was in being? But here again, the Substance of the Heart it self is most certainly made and nourished by the Blood, which is conveyed to it by the Coronary Arteries. And thus it is through the whole system of the Body; every member doth mutually sustain and supply one another; and all are coætantaneous, because none of them can subsist alone. But they will say, That a little Ferment first making a Cavity, which became the left Ventricle of the Heart, did thence further expand it self, and

and thereby delineate all the Arteries of the Body. Now if such a slight and sorry business as that, could produce an Organical Body; one might reasonably expect, that now and then a dead lump of Dough might be leven'd into an Animal: for there a like Ferment makes notable Tumors and Ventricles; besides sundry long and small Channels, which may pass tolerably well for Arteries and Veins. But I pray, in this supposed Mechanical Formation, when the Ferment was expanded to the extremities of the Arteries, if it still had any elastical force remaining, why did it not go on and break through the Receptacle, as other Ferment must be allowed to have done at the Mouth and the Nostrils? There was as yet no membranous Skin formed, that might stop and repel it. Or if the force of it was spent, and did not wheel about and return; what mechanical cause then shall we assign for the Veins? for this Ferment is there supposed to have proceeded from the small capillary extremities of them to the Great Vein and the Heart; otherwise it had made Valves which would have stopp'd its own passage. And why did that Ferment, that at first dispersed it self from the Great Artery into infinite little ramifications, take a quite contrary method in the making of the Veins, where innumerable

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little Rivulets have their confluence into the Great Vein, the common chanel of the Blood? Are such opposite motions both equally mechanical, when in both cases the Matter was under the same modification? And again, When the first Ferment is excited, and forms the left Ventricle; if the Fluid Matter be uniform and of a similar texture, and therefore on all sides equally resist the Expansion; then the Cavity must continue One, dilated more and more, 'till the expansive force and the uniform resistance be reduced to an equality, and so nothing at all can be formed by this Ferment, but a single round Bubble. And moreover this Bubble (if that could make a Heart) by reason of its comparative Levity to the Fluid that incloses it, would necessarily ascend to the top; and consequently we should never find the Heart in the midst of the Breast. But if the Fluid be supposed to consist of Heterogeneous Particles, then we cannot conceive how those dissimilar parts should have a like situation in two several Fluids, when the Ferment begins. So that upon this supposition there could be no Species of Animals, nor any Similitude between them: One would have its Lungs, where another hath its Liver, and all the other Members preposterously placed;

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there could not be a like Configuration of Parts in any two Individuals. And again, What is that which determines the Growth of all living Creatures? What principles of Mechanism are sufficient to explain it? Why do not all Animals continually increase in bigness during the whole space of their Lives, as it is reported of the Crocodile? What sets a bound to their stature and dimensions? and if we suppose a Bound and *Ne plus ultra* to be mechanically fixed, why again so great a variety in the Bulk of the several Kinds? why also such Constancy observed in that manifold Variety? For as some of the largest Trees have Seeds no bigger or less than some diminutive Plants, and yet every Seed is a perfect Plant with Trunk and Branches and Leaves inclosed in a Shell: So the first Embryon of an Ant is supposed by inquisitive Naturalists to be as big, as that of an Elephant, and to promise as fair at its primitive Formation for as spacious a Body: which nevertheless by an immutable Decree can never arrive to the millionth part of the others Bulk. And what modification of the first liquid Matter can vary so much, as to make one Embryon capable of so prodigiously vast augmentation, while another is confined to the minuteness of an Insect? Is not this manifestly a Divine Sanction: the

Swam-
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Hypor. In-
sect. p. 3.

that hath fixed and determin'd the Shape, the Stature, the Appetites, and the Duration of all Creatures in the World? Hither must we have recourse in that great and mysterious Affair of an Organical Formation: And I profess that I cannot discern one Step in the whole, that is agreeable to the natural Laws of Motion. If we consider the Heart, which is supposed to be the first principle of Motion and Life, and mentally divide it into its constituent Parts, its Arteries and Veins and Nerves and Tendons and Membranes, and the innumerable little Fibres, that these Secondary Parts do consist of; we shall find nothing here Singular, but what is in any other Muscle of the Body. 'Tis only the Site and Posture of these several Parts and the Configuration of the whole, that give it the Form and Functions of a Heart. Now why should the first single Fibres in the Formation of the Heart be peculiarly drawn in Spiral Lines; when the Fibres of all other Muscles are made by a transverse rectilinear Motion? What could determin the Fluid Matter into that odd and singular Figure, when as yet no other Member is supposed to be form'd, that might design the Orbit of its Course? Let Mechanism here make an Experiment of its Power, and produce a spiral and turbinated motion of the whole

moved Body without an external Director. When all the Organs are once framed by a supernatural and divine Principle, we do willingly admit of Mechanism in many Functions of the Body: but that the Organs themselves should be mechanically formed, we conceive it to be impossible and utterly inexplicable. And if any Atheist will give a clear and philosophical account of the things that are here touch'd upon; he may then hear of many more and perhaps more difficult than these, which their unsuitness for a popular Auditory, and the remaining Parts of my Subject, that press forward to be treated of, oblige me now to omit.

But as the Atheist, when he is put to it to explain, How any Motion of dead Matter can beget Thought and Perception, will endeavour to defend his baffled Impiety with the instance of Brutes, which he calls Thinking Machines: so will he now also appeal from the Arbitration of Reason in the Case of Animal Productions, to Example and Matter of Fact. He will declaim to us about the admirable Structure of the Bodies of Insects; that they have all the Vital Parts, which the largest of Quadrupeds and even Man himself can boast of; whose Fabric they the rather excell in his opinion, for
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that very Minuteness, that makes them contemptible: and that one would be apt to imagine, that these elegant and elaborate little Engines were all now propagated by Generation, and at first produced by some Divine Wisdom and Power; if we did not find by experience, that they are the easy and obvious Products of unintelligent Nature, that spontaneously and mechanically forms them out of putrefied Carcasses and the warm moisture of the Soil: and yet (which is mightily to his purpose) that these Insects, so begotten without Parents, have nevertheless fit Organs of Generation and Difference of Sex, and can propagate their own kinds, as if themselves had been born so too: and that if Mother Earth in this her barrenness and decrepitness of Age can procreate such swarms of curious Engines, which not only themselves enjoy their portion of Life, but by a most wonderful Instinct impart it to many more, and continue their Species: might she not in the flower of her Youth, while she was succulent and fertile, have produced Horses and Elephants and even Mankind it self, the largest and perfectest Animals, as easily as in this parched and sterile condition she can make a Frog or an Insect? Thus he thinks, he hath made out from Example and Analogy, that at the Beginning
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of things every Species of Animals might spring mechanically out of the Soil without an Intelligent Creator. And indeed there is no one thing in the World, which hath given so much Countenance and Shadow of Possibility to the Notion of Atheism, as this unfortunate mistake about the equivocal generation of Insects: And as the oldest Remains of Atheistical Writings are charged full with that Comparifon; so it is the main refuge of those, that in this and the last Age have had the Folly and Impudence to appear in so wretched a Cause.

Now to this last Subterfuge of the Mechanical Atheists we can occur several ways. And at present we affirm, *First, ex abundanti*, That though we should allow them the spontaneous production of some minute Animals, yet a like primitive Origination of Mankind could not thence be concluded. Because they first tacitly suppose, that there is an universal decay of Moisture and Fertility in the Earth. And they cannot avoid the necessity of so doing: For if the Soil be as fruitfull now, as it was in the beginning; why would it not produce Men, and the nobler kinds of Beasts in our days too, if ever it did so? So that if that supposition be evinced to be erroneous and groundless, all the Arguments that they build upon it, will be sub-

subverted at once. Now what more easily refuted, than that old vulgar Assertion of an universal Drought and Exsiccation of the Earth? As if the Sun could evaporate the least drop of its Moisture, so that it should never descend again, but be attracted and elevated quite out of the Atmosphere? 'Tis now a matter agreed and allowed by all competent Judges, that every Particle of Matter is endowed with a Principle of Gravity, whereby it would descend to the Centre, if it were not repelled upwards by heavier bodies. So that the smallest Corpuscle of Vapour, if we suppose it to be exhaled to the top of the Atmosphere, thence it must come down again, or at least must there remain incumbent upon others: for there's either nothing or nothing heavier above it to protrude it any higher, neither can it spontaneously mount any more against the tendency of its nature. And lest some ignorant Atheist should suspect, that peradventure there may be no such Top of the Atmosphere; but that it may be continued on to the Sun or to indefinite Space: he must vouchsafe to be instructed, That the whole weight of any Column of the Atmosphere, and likewise the Specifick gravity of its Basis are certainly known by many Experiments; and that by this computation (even making allowance

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ance for its gradually larger Expansion, the higher we go,) the very top of any Pillar of Air is not One hundred Miles distant from the Surface of the Earth. So that hence it is manifest, that the whole Terraqueous Globe with its Atmosphere cannot naturally have lost the least particle of Moisture, since the foundation of the World. But still they may insist, That although the whole Globe cannot be deprived of any of its Moisture, yet the habitable Earth may have been perpetually the drier, seeing it is assiduously drained and exhausted by the Seas. But to this we reply, That the very contrary is demonstrable; That the longer the World shall continue, the Moisture will be the whole Aggregate of the Land. For (to take no notice of the supply of its moisture by Rains and Snow and Dews and Condensation of Vapours, and perhaps by subterraneous passages) the tops of Mountains and Hills will be continually washed down by the Rains, and the Channels of Rivers corroded by the Streams; and the Mud that is thereby conveyed into the Sea will raise its bottom the higher; and consequently the Declivity of Rivers will be so much the less; and therefore the Continents will be the less drain'd, and will gradually increase in Humidity from the first period of their Duration

tion to their final Consummation of all things: if a Divine Power do not interpose and change the settled course and order of Nature.

But let us allow their supposition, That the Total of the dry Land may have been robbed of some of its Moisture which it had at its first Constitution: yet still there are some parts of the Earth sufficiently soak'd and water'd, to produce, if ever, those Sensitive and Locomotive and Intelligent Plants. For do not the *Nile*, and the *Niger*, and the *Ganges*, and the *Menam*, make yearly Inundations in our days, as they have formerly done? And are not the Countries so overflown still situate between the Tropicks under the direct and most vigorous Rays of the Sun, the very place where these Mechanical Atheists lay the Scene of that great Trans-action? So that if Mankind had ever sprung naturally out of the Soil, the Experiment would succeed now every year in *Æthiopia* and *Siam*; where are all the requisite qualifications, that ever have been, for such a production. And again, if there hath been such a gradual diminution of the Generative Faculty of the Earth, that it hath dwindled from nobler Animals to puny Mice and Insects; why was there not the like decay in the production of

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Vegetables? We should have lost by this time the whole Species of Oaks and Cedars and the other tall and lofty Sons of the Forest, and have found nothing but dwarfish Shrubs and creeping Moss and despicable Mushrooms. Or if they deny the present spontaneous production of larger Plants, and confine the Earth to as Pigmy Births in the Vegetable Kingdom, as they do in the other: yet surely in such a supposed universal decay of Nature, even Mankind it self that is now nourished (though not produced) by the Earth, must have degenerated in Stature and Strength in every Generation. And yet we have certain demonstration from *Egyptian Mummies*, and *Roman Urns and Rings* and Measures and *Ædifices* and many other Antiquities, that Human Stature has not diminished for above Two Thousand years. Now if the Decay hath not been constant and gradual, there hath been no Decay at all; or at least no natural one, nor what may be accounted for by this Mechanical Atheist. I conclude therefore, That although we should allow the spontaneous production of Insects; yet no Argument can be deduced from thence for a like Origination of Mankind.

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But, *Secondly*, we affirm, That no Insect or Animal did ever proceed æquivocally from Putrefaction, unless in Miraculous Cases, as in *Egypt* by the Divine Judgments; but all are generated from Parents of their own Kind, Male and Female: a Discovery of that great Importance, that perhaps few Inventions of this Age can pretend to equal Usefulness and Merit; and which alone is sufficient (if the Vices of Men did not captivate their Reason) to explode and exterminate rank Atheism out of the World. For if all Animals be propagated by Generation from Parents of their own Species, and there be no instance in Nature of even a Gnat or a Mite either now or in former Ages spontaneously produced *de novo*: how came there to be such Animals in Being, and whence could they proceed? There is no need of much study and deliberation about it: for either they have existed eternally by infinite Successions already gone and past, which is in its own Notion absurd and impossible; or their Origin must be ascribed to a Supernatural and Divine Power, that formed and created them. Now to prove our assertion about the Seminal production of all living Creatures; that we may not repeat the Reasons which we have offer'd before against

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the first Mechanical Formation of Human Bodies, which are equally valid against the spontaneous Origin of the minutest Insects; we appeal to Observation and Experiment, which carry the strongest conviction with them, and make the most sensible and lasting impressions. For whereas it hath been the general Tradition and Belief, that Maggots and Flies breed in putrefied Carcasses, and particularly Bees come from Oxen, and Hornets from Horses, and Scorpions from Crabfish, &c. all is now found to be Fable and Mistake. That sagacious and learned Naturalist *Francisco Redi* made innumerable trials with the putrid Flesh of all sorts of Beasts and Fowls and Fishes and Serpents, with corrupted Cheese and Herbs and Fruits and even Insects themselves: and he constantly found, that all those Kinds of Putrefaction did only afford a Nest and Aliment for the Eggs and Young of those Insects that he admitted to come there; but produced no Animal of themselves by a spontaneous Formation. For when he suffer'd those things to putrefie in Hermetically sealed Glasses, and Vessels close cover'd with Paper; and not only so, lest the Exclusion of the Air might be supposed to hinder the Experiment; but in Vessels cover'd

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with fine Lawn, so as to admit the Air and keep out the Insects: no living thing was ever produced there, though he expos'd them to the action of the Sun, in the warm Climate of *Florence*, and in the kindest season of the year. Even Flies crush'd and corrupted, when inclos'd in such Vessels, did never procreate a new Fly: though there, if in any case, one would have expected that success. And when the Vessels were open, and the Insects had free access to the Aliment within them, he diligently observed, that no other Species were produced, but of such as he saw go in and feed and deposit their Eggs there: which they would readily do in all Putrefaction; even in a mulilage of bruised Spiders, where Worms were soon hatch'd out of such Eggs, and quickly changed into Flies of the same kind with their Parents. And was not that a surprizing Transformation indeed, if according to the vulgar opinion those dead and corrupted Spiders spontaneously changed into Flies? And thus far we are obliged to the diligence of *Redi*: from whence we may conclude, That no dead Flesh nor Herbs nor other putrefied Bodies, nor any thing that hath not then actually either a vegetable or animal Life can produce any Insect.

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And if we should allow, as he did, that every Animal and Plant doth naturally breed and nourish by its substance some peculiar Insect: yet the Atheist could make no advantage of this Concession as to a like Origination of Mankind. For surely 'tis beyond even an Atheist's Credulity and Impudence, to affirm that the first Men might proceed out of the Galls and Tumors of Leaves of Trees, as some Maggots and Flies are supposed to do now; or might grow upon Trees, as the story goes about Barnacles; or perhaps might be the Lice of some vast prodigious Animals, whose Species is now extinct. But though we suppose him guilty of such an extravagant folly, he will only shift the difficulty, and not wholly remove it; for we shall still expect an account of the spontaneous Formation of those mountainous kind of Animals and Men-bearing Trees. And as to the Worms that are bred in the Intestines and other inward parts of Living Creatures, their production is not material to our present enquiry, till some Atheist do affirm, that his own Ancestors had such an Original. I say, if we should allow this concession of *Redi*, it would do no service to our Adversaries: but even here also they are defeated

ted by the happy curiosity of *Malpighi* and others, who observed and discovered, That each of those Tumors and Excrescences of Plants, out of which generally issues a Fly or a Worm, are at first made by such Insects, which wound the tender buds with a long hollow Trunk, and deposit an Egg in the hole with a sharp corroding liquor, which causeth a swelling in the leaf, and so closeth the orifice: and within this Tumor the Worm is hatcht and receives its aliment, till it hath eat its way through. Neither need we recurr to an æquivocal production of Vermin in the *Phthiriasis* and in *Herod's Disease*, who was *σκαλινδίζων*, eaten of worms, or maggots. Those horrible distempers are always accompanied with putrefying ulcers; and it hath been observed by the most accurate *Lewenboeck*, that Lice and Flies, which have a most wonderfull instinct and acuteness of sense to find out convenient places for the hatching and nourishment of their young, do mightily endeavour to lay their Eggs upon Sores; and that one will lay above a hundred Eggs, and may naturally increase to some hundreds of thousands in a quarter of a year: which gives a full and satisfactory account of the *Phænomena* of those Diseases. And whereas it

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Epistol.*

Act. 12. 23.

*Continuat.
Epistol. p.
101.*

is said, *Exod. 16. v. 20.* That some of the *Israelites* left of the Manna until the morning, and it bred worms and stank; which an Atheist may make an objection, as either against us, or against the truth of the Scriptures: I understand it no otherwise, than that the Manna was *fly-blown*. It was then the Month of *October*, which in that Southern Climate, after the preceding Autumnal Rains, doth afford a favourable season and copious nutriment for infinite swarms of Insects. Neither do I ascribe it to a miraculous power, that some of the Manna should breed worms, but that all the rest should be preserved sound and untainted. And if any one shall rigidly urge the literal expression of *breeding*; he must give leave to speak in the language of the Vulgar in common affairs of life. We do now generally believe the *Copernican* System; yet I suppose upon ordinary occasions we shall still use the popular terms of Sun-rise and Sun-set, and not introduce a new pedantick description of them from the motion of the Earth. And then as to the vulgar opinion, That Frogs are made in the Clouds and brought down by the Rains, it may be thus easily refuted: for at that very instant, when they are supposed to descend,

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you may find by dissection not only their Stomachs full of meat, but their Intestines full of excrement: so that they had lurked before in the day-time in holes and bushes and grass, and were then invited abroad by the freshness of a Shower. And by this time we may understand, what credit and authority those old Stories ought to have about monstrous productions in *Ægypt* after the inundation of the *Nile*, of Mice and Frogs and Serpents, half flesh and half mud; nay of the Legs, and Arms, and other Limbs of Men, & *quicquid Græcia mendax*; altogether as true, as what is seriously related by *Helmont*, That foul Linen, stopt in a vessel that hath Wheat in it, will in 21 days time turn the Wheat into Mice: which without conjuring one may guess to have been the philosophy and information of some Housewife, who had not so carefully cover'd her wheat, but that the Mice could come at it, and were there taken napping, just when they had made an end of their good cheer. Corn is so innocent from this calumny of breeding of Mice; that it doth not produce the very Weevils that live in it and consume it: the whole course of whose generation and periodical changes hath been curiously observed and described by the ingenious *Lewenhoeck*. And moreover, that we may deprive the Atheist of all hopes and pretensions of Argument from this baffled opinion of equivocal Insects, we

Helmont
Imago Fer-
ment. &c.
p. 92. Edit.
1652.

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will acquaint him from the most accurate observations of *Swammerdam*, That even the supposed change of Worms into Flies is no real transmutation; but that most of those Members, which at last become visible to the Eye, are existent at the beginning, artificially complicated together, and cover'd with Membranes and Tunicles, which are afterwards stript off and laid aside: and all the rest of that process is no more surprizing, than the eruption of Horns in some Brutes, or of Teeth and Beard in Men at certain periods of age. And as we have establish'd our assertion of the seminal production of all kinds of Animals; so likewise we affirm, That the meanest Plant cannot be rais'd without seed by any formative power residing in the Soil. To which assertion we are encourag'd, *First*, from the known Seeds of all Vegetables, one or two only excepted, that are left to future discovery: which Seeds by the help of Microscopes are all found to be real and perfect Plants, with Leaves and Trunk curiously folded up and enclosed in the *Cortex*: nay one single grain of Wheat or Barly or Rye, shall contain four or five distinct Plants under one common Tunicle: a very convincing argument of the Providence and Goodness of God: that those Vegetables that were appointed to be the chief sustenance of Mankind, should have that multiplied fecundity above any others: and *secondly*, by that famous experiment

of *Malpighi*, who a long time enclosed a quantity of Earth in a vessel, secured by a fine cloth from the small imperceptible seeds of Plants that are blown about with the winds; and had this success of his curiosity, to be the first happy discoverer of this noble and important Truth, That no species of Plants can be produced out of Earth *de novo*, without a præexistent seed; and consequently they were all created and rais'd at the beginning of things by the Almighty Gardener, God blessed for ever. And *Lastly*, as to those various and elegant Shells, that are dug up in Continents and embodied in Stones and Rocks at a vast distance from any Sea; which this Atheist may possibly allege for an instance of a Plastick faculty of Nature: 'tis now generally agreed by the most diligent Inquirers about them, That they are no sportfull productions of the Soil, as was formerly believed, but that all did once belong to real and living Fishes; seeing that each of them doth exactly resemble some other Shell on the Sea-shore, both in its outward lineaments, and inward texture, and specifick gravity, and all other properties: which therefore are so far from being subservient to Atheists in their audacious attempts against God and Religion, that they rather afford an experimental confirmation of the Universal Deluge.

And thus we have competently shewn, that every Species of Living Creatures, every small Insect, and

and even the Herbs of the Field give a casting vote against Atheism; and declare the necessity of a supernatural Formation. If the Earth in its first constitution had been left to its self, what horrid deformity and desolation had for ever overspread its face? not one living Inhabitant found on all its spacious surface; not so much as a Worm in the Bowels of it, nor one single Fish in the vast Bosom of the Sea; not a Mantle of Grass or Moss, to cover and conceal the nakedness of Nature. An eternal Sterility must have possessed the World, where all things had been fixed and fasten'd everlastingly with the Adamantin chains of Specifick Gravity; if the Almighty had not spoken and said, *Let the Earth bring forth Grass, the Herb yielding Seed, and the Fruit-tree yielding Fruit after its kind, and it was so.* 'Twas God, that then created the first seminal forms of all Animals and Vegetables, that *commanded the Waters to bring forth abundantly, and the Earth to produce Living Creatures after their kind; that made Man in his own Image after his own likeness: that by the efficacy of his first Blessing made him be fruitfull and multiply and replenish the Earth; by whose alone power & conservation we all live and move and have our Being.*

May the same most Glorious God of his infinite mercy grant, that as we have sought the Lord, and felt after him, and found him in these works of his Creation: so now that we have known God, we may glorify him as God both now, and for evermore. Amen.

F I N I S.

A

Confutation of Atheism

From the

Structure and Origin of Humane Bodies.

The Third and Last PART.

A

S E R M O N

Preached at

Saint Martin's in the Fields,

SEPTEMBER the 5th 1692.

Being the Fifth of the Lecture Founded by the Honourable ROBERT BOYLE, Esquire.

By RICHARD BENTLEY, M.A.

Chaplain to the Right Reverend Father in God, EDWARD, Lord Bishop of Worcester.

The Second Edition.

L O N D O N,

Printed for Henry Mortlock, at the Phoenix in St. Paul's Church-yard. 1692.

ACTS XVII. 27.

That they should seek the Lord, if haply they might feel after him, and find him: though he be not far from every one of us; for in him we Live, and Move, and have our Being.

Imprimatur.

*Geo. Royse, R^{mo} in Christo Patri
ac D^{no} D^{no} Jobanni Archiep. Can-
tuar. à Sacris Domest.*

*Septemb. 7.
1692.*

IN my former Discourses, to which I must refer you, I have endeavour'd to prove, that Humane Race was neither (1) from Everlasting without beginning; nor (2) owes its beginning to the Influence of Heavenly Bodies; nor (3) to what they call Nature, or to the necessary and mechanical motions of dead senseless Matter. I proceed now to examin the fourth and last Plea of the Enemies to Religion and their own Souls, That Mankind came accidentally into the World, and hath its Life and Motion and Being by mere *Chance* and *Fortune*.

We need not much wonder, that this last Opinion should obtain almost universally among the Atheists of these times. For where-as the Other do require some small stock of Philosophy to understand or maintain them: This Account is so easy and compendious,

that it needs none at all ; and consequently is the more proper and agreeable to the great Industry and Capacity of the most numerous Party of them. For what more easy to say, than that all the Bodies of the first Animals and Plants were shuffled into their several Forms and Structures *fortuitously*, that is, these Atheists know not how, nor will trouble themselves to endeavour to know ? For that is the meaning of Chance ; and yet this is all, that they say, or can say to the great Matter in question. And indeed this little is enough in all reason ; and could they impose on the rest of Mankind, as easily as delude themselves with a notion, That *Chance* can effect a thing ; it would be the most expedite and effectual means to make their Cause victorious over Vertue and Religion. For if you once do allow them such an acceptance of Chance, you have precluded your self (they think) from any more reasoning and objecting against them. The Mechanical Atheist, though you grant him his Laws of Mechanism, is nevertheless inextricably puzzled and baffled with the first Formation of Animals : for he must undertake to determin all the various Motions and Figures and Positions and Combina-

tions

tions of his Atoms ; and to demonstrate, that such a quantity of Motion impressed upon Particles so shaped and situated, will necessarily range and dispose them into the Form and Frame of an Organical Body : an attempt as difficult and unpromising of success, as if he himself should make the Essay, to produce some new Kinds of Animals out of such senseless Materials, or to rebuild the moving and living Fabrick out of its dust in the grave. But the Atheist, that we are now to deal with, if you do but concede to him, that Fortune may be an Agent ; doth presume himself safe and invulnerable, secure above the reach of any further disputes. For if you proceed to ask questions, and bid him assign the proper Causes and determinate Manner of that fortuitous Formation : you thereby deny him what you granted before, and take away the very *Hypothesis* and the Nature of Chance ; which supposeth that no certain Cause or Manner of it can possibly be assigned. And as the stupidity of some Libertines, that demand a sight of a Spirit or Humane Soul to convince them of its Existence, hath been frequently and deservedly exposed ; because whatsoever may be the object of our Sight, must not be

be a Soul or Spirit, but an opaque Body : so this Atheist would tax us of the like Nonsense and Contradiction ; if after he hath named to us Fortune or Chance, we should expect from him any particular and distinct account of the Origin of Mankind. Because it is the very essence and notion of his Chance, to be wholly unaccountable : and if an account could be given of it ; it would then no longer be Chance, but Mechanism, or a necessary production of certain Effects from certain Causes according to the Universal Laws of Motion. Thus we are to know, that if once we admit of Fortune in the Formation of Mankind ; there is no further Enquiry to be made, no more Difficulties to be solved, and no Account to be demanded. And who then can admire, if the inviting easiness and compendiousness of this Assertion should so dazzle the eyes of our Atheist, that he over-looks those gross Absurdities, that are so conspicuous in it?

(1) For first, if this Atheist would have his Chance or Fortune to be a real and substantial Agent ; as the Vulgar seem to have commonly apprehended, some making it a Divinity, others they do not conceive what : he is doubly more stupid and more supinely ignorant

norant than those Vulgar ; in that he assumes such a notion of Fortune, as besides its being erroneous, is inconsistent with his Atheism. For seeing that according to the Atheists, the whole Universe is *Corpus & Inane, Body and nothing else* : this Chance, if it do really and physically effect any thing, must it self be Body also. And what a numerous train of Absurdities do attend such an assertion ? too visible and obvious to deserve to be here insisted on. For indeed it is no less than flat contradiction to it self. For if this Chance be supposed to be a Body ; it must then be a part of the common Mass of Matter : and consequently be subject to the universal and necessary Laws of Motion : and therefore it cannot be Chance, but true Mechanism and Nature.

(2) But secondly, if he forbear to call Chance a real Agent, and is content to have it only a Result or Event : seeing that all Matter or some portion of it may be naturally exempt from these supposed Mechanical Laws, and be endowed with a power of spontaneous or fortuitous Motion ; which power, when it is exerted, must produce an Effect properly Casual, and therefore might constitute the first Animate Bodies accidentally, against

Serm. 2.

gainst the supposed natural tendency of the Particles of those Bodies: even this second Assertion is contrary to common Sense as well as common Observation. For how can he conceive, that any parcel of dead Matter can spontaneously divert and decline it self from the line of its motion without a new impulse from external Bodies? If it can intrinsically stir it self, and either commence its motion or alter its course; it must have a principle of self-activity, which is Life and Sense. But Sense I have proved formerly to be incompatible with mere Bodies, even those of the most compound and elaborate textures; much more with single Atoms or solid Particles of Matter, that having no intestine motion of Parts are destitute of the first foundation and capacity of Life. And moreover, though these Particles should be supposed to have this internal principle of Sense, it would still be repugnant to the notion of Chance: because their Motions would not then be Casual, but Voluntary; not by Chance, but Choice and Design. And *again*, we appeal to Observation, whether any Bodies have such a power of Fortuitous Motion: we should surely have experiment of it in the Effects

fects of Nature and Art: No Body would retain the same constant and uniform Weight according to its Bulk and Substance; but would vary perpetually, as that spontaneous power of Motion should determin its present tendency. All the various Machins and Utensils would now and then play odd Pranks and Capricios quite contrary to their proper Structures and Designs of the Artificers. Whereas on the contrary all Bodies are observed to have always a certain and determinate Motion according to the degrees of their External Impulse, and their inward Principle of Gravitation, and the Resistence of the Bodies they occur with: which therefore is without Error exactly foreseen and computed by sagacious Artists. And if ever Dead Matter should deviate from this Motion; it could not proceed from it self, but a Supernatural Agent; and ought not to be called a Chance, but a Miracle.

For Chance is but a mere Name, and really Nothing in it self: a conception of our own Minds, and only a Compendious way of speaking, whereby we would express, That such Effects, as are commonly attributed to Chance, were verily produced by their true

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Plutarch.
πρὸς τὴν ἀθεΐαν.

and proper Causes, but without their designing to produce them. And in any Event called Casual, if you take away the real and physical Causes, there remains nothing, but a simple Negation of the Agents intending such an Event: which Negation being no real Entity, but a Conception only of Man's Intellect wholly extrinsecal to the Action, can have no title to a share in the production. As in that famous Example (which, *Plutarch* says, is the only one, where Fortune is related to have done a thing artificially) of a Painter, that having finished the Picture of a Horse, excepting the loose Froth about his Mouth and his Bridle; and after many unsuccessful essays despairing to do that to his satisfaction, in a great rage threw his Sponge at it, all besmear'd, as it was, with the Colours; which fortunately hitting upon the right place, by one bold stroke of Chance most exactly supplied the want of Skill in the Artist: even here it is manifest, that considering the Quantity and Determination of the Motion, that was impressed by the Painter's hand upon the Sponge, compounded with the specifick Gravity of the Sponge, and the resistance of the Air; the Sponge did mechanically and unavoidably

avoidably move in that particular line of Motion, and so necessarily hit upon that part of the Picture; and all the paint, that it left there, was as certainly placed by true natural Causes, as any one stroke of the Pencil in the whole Piece. So that this strange effect of the Sponge was fortuitous only with respect to the Painter, seeing he did not design nor foresee such an effect; but in it self and as to its real Causes it was necessary and natural. In a word, the true notion of *Fortune* (τὴν τύχην) denoteth no more, than the Ignorance of such an event in some knowing Agent concerned about it. So that it owes its very Being to Human Understanding, and without relation to that is really Nothing. How absurd then and ridiculous is the Atheist, that would make this Fortune the cause of the Formation of Mankind; whereas manifestly there could be no such Thing or Notion in the World as Fortune, till Humane Nature was actually formed? It was Man that first made Fortune, and not Fortune that produced Man. For seeing that Fortune in its proper acceptation supposeth the Ignorance of something, in a subject capable of Knowledge; if you take away Mankind, such a Notion hath no Existence, neither with relation to In-

animate Bodies that can be conscious of nothing, nor to an Omniscient God, that can be ignorant of nothing: And so likewise the adequate Meaning of *Chance* (τὸ Ἀυτομάτη) (as it is distinguished from Fortune; in that the latter is understood to befall only Rational Agents, but Chance to be among Inanimate Bodies) is really a bare Negation, that signifies no more than this, That any Effect among such Bodies ascribed to Chance, is verily produced by Physical Agents, according to the established Laws of Motion, but without their Consciousness of concurring to the Production, and without their Intention of such an Effect. So that *Chance* in its true sense is all one with *Nature*: and both words are used

Plato X. de Legibus.
 Πῶς ἂν ἴδωμεν ὅτι τὰ πάντα
 ἐκ φύσεως πάντα ἐκ τῆς φύ-
 σεως φασὶν ὅτι διὰ τὴν
 φύσιν ἐστὶ διὰ τὴν φύσιν, ἀλλὰ
 ὁ λέγων φύσιν ἢ τὴν φύσιν.

promiscuously by some ancient Writers to express the same thing. And we must be wary, lest we ascribe any real Subsistence or Personality to this Nature or Chance: for it is merely a notional and imaginary thing; an abstract Universal, which is properly Nothing; a Conception of our own making, occasion'd by our reflecting upon the settled Course of things; denoting only thus much, That all those Bodies move and act according

according to their essential properties and qualities without any consciousness or intention of so doing. So that in this genuine acceptance of Chance, here is nothing supposed, that can supersede the known Laws of Natural Motion: and thus to attribute the Formation of Mankind to Chance, is all one with the former Atheistical Assertion, that ascribes it to Nature or Mechanism: and consequently it hath received a prolix and sufficient Refutation in my preceding Discourse.

(3) But thirdly, 'tis likely that our Atheist may willingly renounce the Doctrine of Chance as a thing differing from Nature, and may allow it to be the same thing, and that too no real and substantial Agent, but only an abstract intellectual Notion: but still he hath another Expedient in reserve, which is a middle and safe way between the former rigorous Mechanism and the extravagancies of Fortuitous Motion: viz. That at the Beginning all things ('tis true) proceeded necessarily and fatally according to the Mechanical powers and affections of Matter: but nevertheless the several Kinds of Animals were not formed at the first trial and effort without error or miscarriage; (as strict Mechanism would suppose;)

pose;) but there was an immense Variety of Ferments and Tumors and Excrescences of the Soil, pregnant and big with *Fetus's* of all imaginable shapes and structures of Body: Millions of which were utterly incapable of Life and Motion, being the *Molæ*, as it were, and the Abortions of Mother Earth: and many of those that had Life and Powers, to preserve their own Individuals, yet wanted the due means of Propagation, and therefore could not transmit their Species to the following Ages: and that those few only, that we now find in Being, did happen (for he cannot express it but by the Characters of a Chance) to have all the parts necessary not only for their own Lives, but for the Continuation of their Kinds. This is the favourite Opinion, among the Atheists, and the most plausible of all; by which they think they may elude that most formidable Argument for the Being of God, from the admirable contrivance of Organical Bodies and the exquisite fitness of their several Parts for those Ends and Uses they are put to, and seem to have been designed for. For, say they, seeing that those innumerable Instances of Blunder and Deformity were quickly removed out of Knowledge

By the
Design
Emped.

ledge and Being; it is plain that no Animals ought now to be found, but such as have due Organs necessary for their own nourishment and increase of their Kinds: so that this boasted Usefulness of Parts, which makes Men attribute their Origination to an intelligent and wise Agent, is really no argument at all: because it follows also from the Atheists Assertion. For seeing that some Animals are actually preserved in Being till now, they must needs all of them have those parts that are of Use and Necessity: but That at first was only a Lucky Hit without Skill or Design, and ever since is a necessary condition of their Continuation. And so for instance, when they are urged with the admirable Frame and Structure of the Eye; which consists of so great a Variety of Parts, all excellently adapted to the Uses of Vision; that (to omit Mathematical Considerations more proper for Opticks) hath its many Coats and Humors transparent and colourless, lest it should tinge and sophisticate the Light that it lets in, by a natural Jaundice; that hath its Pupil so constituted, as to admit of Contraction and Dilatation according to the differing degrees of Light, and the Exigencies of seeing; that hath

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Eye-lids so commodiously placed, to cleanse the Ball from Dust, to shed necessary moisture upon it through numerous Glandules, and to be drawn over it like a Curtain for the convenience of sleep; that hath a thousand more Beauties in its figure and texture never studied nor admired enough: they will briskly reply, that they willingly concede all that can be said in the commendation of so noble a member; yet notwithstanding they cannot admit for good reasoning, *He that formed the Eye, shall not be see?* for it was blind Nature alone or Matter mechanically moved without consciousness or direction, that made this curious Organ of Vision. For the short of the matter is this: This elegant structure of the Eye is no more than is necessary to Seeing; and this noble faculty of Seeing is no more than is necessary to Life; and consequently is included in the very supposition of any Animals living and continuing till now; though those be but the very few that at the beginning had the good fortune to have Eyes, among many millions of Monsters that were destitute of them, *sine vultu cæca reperta*, and therefore did fatally perish soon after their Birth. And thus when we insist on o-
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Psal. 94.
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Lucret.
lib. 5.

ther like arguments of Divine Wisdom in the frame of Animate Bodies; as the artificial Position of many Myriads of Valves, all so situate as to give a free passage to the Blood and other Humors in their due Channells and Courses, but not permit them to regurgitate and disturb the great Circulation and Oeconomy of Life; as the Spiral, and not Annular, Fibres of the Intestines for the better Exercise of their Functions; as the provident furnishing of Temporary parts for the *Fetus* during the time of gestation, which are afterwards laid aside; as the strange sagacity of little Insects in choosing of fit Places for the Exclusion of their Eggs, and for the provision of proper food, when the young ones are hatcht and need it; as the ardent *segni* or natural Affection in those Animals, whose off-spring cannot at first procure their own sustenance, but must infallibly perish, if not fed by the Parents; as the untaught Instincts and Impresses upon every species, directing them without imitation or deliberation to the ready knowledge of proper food, to one and the best way of their preservation and defence, and to the never-failing propagation of their own kind: what-ever Considerations of this nature you
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propose to this Atheist, as indeed such Instances are innumerable, all evidently setting forth the Almighty's Wisdom and Goodness to such as are able to judge and will judge indifferently and impartially; he hath this one subterfuge from them all, That these things are mistaken for tokens of Skill and Contrivance, though they be but necessary Consequences of the present Existence of those creatures. For he that supposeth any Animals to subsist, doth by that very supposition allow them every Member and Faculty that are necessary to subsistence; such as are those we have just now enumerated. And therefore, unless we can prove *a priori* and independent of this Usefulness, now that Things are once supposed to have existed and propagated; That among almost infinite Trials and Essays at the beginning of things, among millions of monstrous Shapes and imperfect Formations, a few such Animals, as now exist, *could not possibly* be produced; these After-Considerations are of very little moment: because if such Animals could in that way *possibly* be formed, as might live and move and propagate their Beings; all this admired and applauded Usefulness of their several Fabricks is but a necessary

sary condition and consequence of their Existence and Propagation.

This is the last pretence and sophistry of the Atheists against the Proposition in my Text, That we received our Life and Being from a Divine Wisdom and Power. And as they cannot justly accuse me of any ways concealing or balking their grand Objection: so I believe these following Considerations will give them no reason to boast, That it cannot receive a just and satisfactory Answer.

(1) First therefore, we affirm that we can prove and have done it already by arguments *a priori* (which is the challenge of the Atheists) that these Animals, that now exist, could not *possibly* have been formed at first by millions of trials. For seeing that they allow by their very *Hypothesis* (and without standing to that Courtesie we have proved it before) that there can be no Casual or spontaneous Motion of the Particles of Matter: it will follow that every single Monster among so many supposed Myriads must have been mechanically and necessarily formed according to the known Laws of Motion, and the temperament and quality of the Matter that it was made of. Which is sufficient to evince, that

*Multaq;
tum tel-
lus etiam
Portenta
creare,
&c. Lu-
cret. 5.*

no such Monsters were or could have been formed. For to denominate them even Monsters; they must have had some rude kind of Organical Bodies; some *Stamina* of Life, though never so clumsy; some System of Parts compounded of Solids and Liquids, that executed (though but bunglingly) their peculiar Motions and Functions. But we have lately shewn it impossible for Nature unassisted to constitute such Bodies, whose structure is against the Law of Specifick Gravity. So that she could not make the least endeavour towards the producing of a Monster; or of any thing that hath more Vital and Organical Parts, than we find in a Rock of Marble or a Fountain of Water. And *again*, though we should not contend with them about their Monsters and Abortions; yet seeing that they suppose even the perfect Animals, that are still in being, to have been formed mechanically among the rest; and only add some millions of Monsters to the reckoning; they are liable to all the Difficulties in the former Explication, and are expressly refuted through the whole preceding Sermon: where it is abundantly shewn, that a Spontaneous Production is against the Catholick Laws of Motion, and
against

against Matter of Fact; a thing without Example, not only in Man and the nobler Animals, but in the Smallest of Insects and the Vilest of Weeds: though the Fertility of the Earth cannot be said to have been impaired since the beginning of the World.

(2) Secondly, we may observe that this Evasion of the Atheist is fitted only to elude such Arguments of Divine Wisdom, as are taken from things Necessary to the conservation of the Animal, as the Faculties of Sight and Motion and Nutrition, and the like; because such Usefulness is indeed included in a general Supposition of the Existence of that Animal: but it miserably fails him against other Reasons from such Members and Powers of the Body, as are not necessary absolutely to Living and Propagating, but only much conduce to our better Subsistence and happier Condition. So that the most obvious Contemplation of the frame of our Bodies; as that we all have double Sensories, two Eyes, two Ears, two Nostrils, is an effectual Confutation of this Atheistical Sophism. For a double Organ of these Senses is not at all comprehended in the Notion of bare Existence: one of them being sufficient
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to have preserved Life, and kept up the Species; as common Experience is a witness. Nay even the very Nails of our Fingers are an infallible Token of Design and Contrivance: for they are usefull and convenient to give strength and firmness to those Parts in the various Functions they are put to; and to defend the numerous Nerves and Tendons that are under them, which have a most exquisite sense of Pain, and without that native Armour would continually be exposed to it: and yet who will say, that Nails are absolutely necessary to Humane Life, and are concluded in the Supposition of Simple Existence? It is manifest therefore, that there was a Contrivance and Foresight of the Usefulness of Nails antecedent to their Formation. For the old stale pretence of the Atheists, That things were first made fortuitously, and afterwards their Usefulness was observed or discover'd, can have no place here; unless Nails were either absolutely requisite to the Existence of Mankind, or were found only in some Individuals or some Nations of men; and so might be ascribed to Necessity upon one account, or to Fortune upon the other. But from the Atheist's supposition, That among the infinite Diversity

*Lucret.
lib. 4. Nil
ideo quo-
nam na-
tum est in
corpore,
ut uti
Possemus:
sed quod
natum
est, nil pro
creat u-
sum.*

versity of the first terrestrial Productions, there were Animals of all imaginable shapes and structures of Body, all of which survived and multiplied, that by reason of their Make and Fabrick could possibly do so; it necessarily follows, that we should now have some Nations without Nails upon their Fingers; others with one Eye only, as the Poets describe the *Cyclopes* in *Sicily*, and the *Arimaspi* in *Scythia*; others with one Ear, or one Nostril, or indeed without any Organ of Smelling, because that Sense is not necessary to Man's subsistence; others destitute of the use of Language, seeing that Mutes also may live: one People would have the Feet of Goats, as the feigned *Satyrs* and *Panisci*, another would resemble the Head of *Jupiter Ammon*, or the horned Statues of *Bacchus*: the *Sciapodes*, and *Enotritæ* and other monstrous Nations would be no longer Fables, but real instances in Nature: and, in a word, all the ridiculous and extravagant shapes that can be imagin'd, all the fancies and whimsies of Poets and Painters and *Egyptian* Idolaters, if so be they are consistent with Life and Propagation, would be now actually in Being, if our Atheist's Notion were true: which therefore may deservedly pass.

*Plinius &
Strabo.*

pass for a mere Dream and an Error: till they please to make new Discoveries in *Terra Incognita*, and bring along with them some Savages of all these fabulous and monstrous Configurations.

(3) But thirdly, that we may proceed yet further with the Atheist, and convince him, that not only his Principle is absurd, but his Consequences also as absurdly deduced from it: we will allow him an uncertain extravagant Chance against the natural Laws of Motion: though not forgetting that that notion hath been refuted before, and therefore this Concession is wholly *ex abundanti*. I say then, that though there were really such a thing as this Chance or Fortune; yet notwithstanding it is down-right madness to ascribe the Formation of Human Bodies to a Cast of this Chance. For let us consider the very Bodies themselves. Here are confessedly all the marks and characters of Design in their structure, that can be required, though one suppose a Divine Author had made them: here is nothing in the Work it self, unworthy of so great a Master: here are no intrinsical arguments from the Subject against the truth of that Supposition. Have we then any capacity

city to judge and distinguish, what is by Chance, and what by Art and Wisdom? Can we be sure, when a Medal is dug out of the ground, with some *Roman* Emperor's Image upon it, and an Inscription that agrees to his Titles and History, and an Imprese upon the Reverse relating to some memorable occurrence in his life; can we be sure, that this Medal was really coined by an Artificer, or is but a Product of the Soil from whence it was taken, that might casually or naturally receive that texture and figure: as many kinds of Fossils are very oddly and elegantly shaped according to the modification of their constituent Salts, or the cavities they were formed in? Is it a matter of doubt and controversy, whether the Pillar of *Trajan* or *Antoninus*, the Ruins of *Persepolis*, or the late Temple of *Minerva* were the Designs and Works of Architecture; or perhaps might originally exist so, or be raised up in an Earthquake by subterraneous Vapour? Do not we all think our selves infallibly certain, that this or that very commodious House must needs have been built by Humane Art; though perhaps a natural Cave in a Rock may have something not much unlike to Parlors or Chambers? And yet he must be a mere Idiot, that cannot discern more Strokes

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and Characters of Workmanship in the Structure of an Animal (in an Humane Body especially) than in the most elegant Medal or Ædifice in the World. They will believe the first Parents of Mankind to have been fortuitously formed without Wisdom or Art: and that for this solid reason, Because it is not simply *impossible*, but that they may have been formed so. And who can demonstrate (if Chance be once admitted of) but that *possibly* all the Inscriptions and other remains of Antiquity may be mere *Lusus Naturæ*, and not Works of Humane Artifice. If this be good reasoning, let us no longer make any pretences to Judgment or a faculty of discerning between things Probable and Improbable: for, except flat contradictions, we may upon equal reasons believe all things, or nothing at all. And do the Atheists thus argue in common matters of Life? Would they have Mankind lye idle, and lay aside all care of Provisions by Agriculture or

Lucret. 5. *Diffis dabit
ipsa fidem res Forsitan, &
graviter terrarum motibus
orbis Omnia conquassari in
parvo tempore cernes.*

Commerce; because possibly the Dissolution of the World may happen the next moment? Had *Dinocrates* really carved Mount *Atkos* into a Statue of *Alexander* the Great, and had the memory of the fact been obliterated by some accident; who could
after-

afterwards have proved it impossible, but that it might casually have been formed so? for every Mountain must have some determinate figure, and why then not a Humane one, as possibly as another? And yet I suppose none could have seriously believed so, upon this bare account of Possibility. 'Tis an opinion, that generally obtains among Philosophers, That there is but one Common Matter, which is diversified by Accidents, and the same numerical quantity of it by variations of Texture may constitute successively all kinds of Bodies in the World. So that 'tis not absolutely impossible; but that, if you take any other Matter of equal weight and substance with the Body of a Man, you may blend it so long, till it be shuffled into Humane shape and an Organical structure. But who is he so abandon'd to sottish credulity, as to think, upon that Principle, That a clod of Earth in a Sack may ever by eternal shaking receive the Fabrick of Man's Body? And yet this is very near a-kin, nay it is exactly parallel to the reasoning of Atheists about fortuitous Production. If mere Possibility be a good foundation for Belief; even *Lucian's* True History may be true upon that account, and *Palæphatus's* Tales may be *credible* in spite of the Title.

Palæph.
Hæsi. Anti-
stas De In-
credibili-
bus.

It

Cicero
de Natu-
ra Deo-
rum, 2.
37.

It hath been excellently well urged in this case both by Ancients and Moderns, that to attribute such admirable Structures to blind Fortune or Chance, is no less absurd than to suppose, That if innumerable figures of the XXIII Letters be cast abroad at random, they might constitute in due order the whole *Aeneis* of *Virgil* or the *Annales* of *Ennius*. Now the Atheists may pretend to elude this Comparison; as if the Case was not fairly stated. For herein we first make an Idea of a particular Poem; and then demand, if Chance can possibly describe That: and so we conceive Man's Body thus actually formed, and then affirm that it exceeds the power of Chance to constitute a Being like That: which, they may say, is to expect Imitation from Chance, and not simple Production. But at the first Beginning of things there was no Copy to be followed, nor any præ-existent Form of Humane Bodies to be imitated. So that to put the case fairly, we should strip our minds and fancies from any particular Notion and Idea of a Living Body or a Poem: and then we shall understand, that what Shape and Structure soever should be at first casually formed, so that it could live and propagate, might be Man: and whatsoever should result from the strowing of those

those loose Letters, that made any Sense and Measures, might be the Poem we seek for.

To which we reply, That if we should allow them, that there was no præ-existent Idea of Humane Nature, till it was actually formed, (for the Idea of Man in the Divine Intellect must not now be consider'd) yet because they declare, that great Multitudes of each Species of Animals did fortuitously emerge out of the Soil in distant Countries and Climates; what could that be less than Imitation in blind Chance, to make many Individuals of one Species so exactly alike? Nay though they should now, to cross us and evade the force of the Argument, desert their ancient Doctrine, and derive all sorts of Animals from single Originals of each kind, which should be the common Parents of all the Race: yet surely even in this account they must necessarily constitute Two at least, Male and Female, in every Species; which Chance could neither make so very nearly alike, without Copying and Imitation; nor so usefully differing, without Contrivance and Wisdom. So that let them take whether they will: If they deduce all Animals from single pairs of a sort; even to make the

Second

Lucret. 5. *Hinc ubi quæque loci regio opportuna datur, Crescebant uteri, &c.*
& ibid. *Inde loci mortalia sæcla creavit, Multa modis multis varia ratione coorta.*

Second of a Pair, is to write after a Copy; it is, in the former comparison, by the casting of loose Letters to compose the præ-existent particular Poem of *Ennius*: But if they make numerous Sons and Daughters of Earth among every Species of Creatures, as all their Authors have supposed; this is not only, as was said before, to believe a Monky may once scribble the *Leviathan* of *Hobbes*, but may do the same frequently by an Habitual kind of Chance, even above the number of all the Impression.

Let us consider, how next to Impossible it is, that Chance (if there were such a thing) should in such an immense Variety of Parts in an Animal twice hit upon the same Structure, so as to make a Male and a Female. Let us resume the former instance of the XXIII Letters thrown at random upon the ground. 'Tis a Mathematical Demonstration, That these XXIII do admit of so many Changes in their order, may make such a long roll of differently ranged Alphabets, not two of which are alike; that they could not all be exhausted, though a Million millions of Writers should each write above a thousand Alphabets a-day for the space of a Million millions of years. What strength of Imagination can extend it self to embrace and comprehend such a prodigious

Tacqueti
Arithmet.
cap.
de Progressione.

digious Diversity? And it is as intallibly certain, that suppose any particular order of the Alphabet to be assigned, and the XXIII Letters to be cast at a venture, so as to fall in a Line; it is so many Million of millions odds to one against any single throw, that the assigned Order will not be cast. Let us now suppose, there be only a thousand constituent Members in the Body of a Man, (that we may take few enough) it is plain that the different Position and Situation of these thousand Parts, would make so many differing Compounds and distinct Species of Animals. And if only XXIII Parts, as before, may be so multifariously placed and order'd, as to make many Millions of Millions of differing Rows: in the supposition of a thousand parts, how immense must that capacity of Variation be? even beyond all thought and denomination, to be expressed only in mute Figures, whose multiplied Powers are beyond the narrowness of Language, and drown the Imagination in astonishment and confusion. Especially if we observe, that the Variety of the Alphabet consider'd above, was in mere Longitude only: but the Thousand parts of our Bodies may be Diversified by Situation in all the Dimensions of Solid Bodies: which multiplies all over and over

over again, and overwhelms the fancy in a new Abyfs of unfathomable Number. Now it is demonstratively certain, that it is all this odds to one, against any particular trial, That no one man could by casual production be framed like another; (as the Atheists suppose thousands to be in several regions of the Earth;) and I think 'tis rather more odds than less, that no one Female could be added to a Male; in as much as that most necessary Difference of Sex is a higher token of Divine Wisdom and Skill, above all the power of Fortuitous Hits, than the very Similitude of both Sexes in the other parts of the Body. And *again* we must consider, that the vast imparity of this Odds against the accidental likeness of two Casual Formations is never lessen'd and diminish'd by Trying and Casting. 'Tis above a Hundred to one against any particular throw, That you do not cast any given Sett of Faces with four Cubical Dice: because there are so many several Combinations of the six Faces of four Dice. Now after you have cast all the trials but one: 'tis still as much odds at the last remaining time, as it was at the first. For blind insensible Chance cannot grow cunning by many experiments; neither have the preceding Casts any influence upon those that come after.

So

so that if this Chance of the Atheists should have essayed in vain to make a Species for a Million millions of Ages, 'tis still as many Millions odds against that Formation, as it was at the first moment in the beginning of Things. How incredible is it therefore; that it should hit upon two Productions alike, within so short duration of the world, according to the Doctrine of our Atheists? how much more, that it should do so within the compass of a hundred years, and of a small tract of Ground; so that this Male and Female might come together? If any Atheist can be induced to stake his Soul for a wager, against such an inexhaustible disproportion; let him never hereafter accuse others of Easiness and Credulity.

(4) But fourthly, we will still make more ample Concessions, and suppose with the Atheist, that his Chance has actually formed all Animals in their terrestrial Wombs. Let us see now, how he will preserve them to Maturity of Birth. What Climate will he cherish them in, that they be not inevitably destroyed by Moisture or Cold? Where is that æquability of Nine Months warmth to be found? that uniform warmth, which is so necessary even in the incubation of Birds, much more in the time of gestation of Viviparous Animals.

Luc. 5.
Verum, ut
opinor,
habet no-
visatem
Summa,
recensq;
Natura
est mun-
di, neque
pridem
exordia
cepit.

E

Cesalpin.
Boerhaav.

nimals. I know, his Party have placed this great Scene in *Aegypt*, or somewhere between the two *Tropicks*. Now not to mention the Cool of the Nights, which alone would destroy the Conceptions; 'tis known that all those Countries have either incessant Rains every year for whole months together, or are quite laid under water by Floods from the higher Grounds; which would certainly corrupt and putrefy all the seeming Wombs of the Earth, and extinguish the whole brood of *Embryons* by untimely Abortions.

(5) But fifthly, we will still be more obliging to this Atheist, and grant him his petition, That Nature may bring forth the young Infants vitally into the World. Let us see now what Sustenance, what Nurses he hath provided for them. If we consider the present Constitution of Nature; we must affirm, that most Species must have been lost for want of fostering and feeding. 'Tis a great mistake that, that Man only comes weak and helpless into the world: whereas 'tis apparent, that excepting Fish and Insects (and not all of them neither) there are very few or no Creatures, that can provide for themselves at first without the assistance of Parents. So that unless they suppose Mother Earth to be a great Animal,

Animal, and to have nurtured up her young Offspring with a conscious Tenderness and providential Care; there is no possible help for it, but they must have been doubly starved both with hunger and cold.

(6) But sixthly, we will be yet more civil to this Atheist, and forgive him this Difficulty also. Let us suppose the first Animals maintain'd themselves with food, though we cannot tell how. But then what security hath he made for the Preservation of Humane Race from the Jaws of ravenous Beasts? The Divine Writings have acquainted us, that God at the beginning gave Mankind *Dominion* (an impressed awe and authority) *over every living thing that moveth upon the Earth*. But in the Atheists *Hypothesis* there are no imaginable means of Defence. For 'tis manifest, that so many Beasts of Prey, Lions, Tigres, Wolves and the like, being of the same age with Man, and arriving at the top of their Strength in one year or two, must needs have worried and devoured those forlorn Brats of our Atheists, even before they were wean'd from the *Foramina Terræ*: or at least in a short time after, seeing that all the Carnivorous Animals would have multiplied exceedingly by several Generations; before those Children that escaped at first, could come to the Age of Puberty. So that Men would always lessen, and their Enemies always encrease. Gen. 1.28.

But some of them will here pretend, that *Epicurus* was out in this matter; and that they were not born mere Infants out of those Wombs of the Earth; but Men at their full growth, and in the prime of their strength. But I pray what should hinder those grown lunny Infants, from breaking sooner those Membranes that involved them; as the Shell of the Egg is broken by the Bird, and the *Amnios* by the *Fetus*? Were the Membranes so thick and tough, that the *Fetus* must stay there, till he had teeth to eat through them, as young Maggots do through a Gall? *But let us answer these Fools according to their* Lucret. 5.

their Folly. Let us grant, that they were born with Beards, and in the full time of Manhood. They are not yet in any better condition: here are still many Enemies against few, many *Species* against One; and those Enemies speedily multiplying in the second and third and much lower generations; whereas the Sons of the First Men must have a tedious time of Childhood and Adolescence, before they can either themselves assist their Parents, or encourage them with new hopes of Posterity. And we must consider withall, that (in the notion of Atheism) those Savages were not then, what civilized Mankind is now; but *Mutum & turpe pecus*, without Language, without mutual Society, without Arms of Offence, without Houses or Fortifications; an obvious and exposed Prey to the ravage of devouring Beasts; a most sorry and miserable Plantation towards the Peopling of a World.

And now that I have followed the Atheists through so many dark mazes of Error and Extravagance: having to my knowledge omitted nothing on their side, that looks like a Difficulty; nor proposed any thing in Reply, but what I my self really believe to be a just and solid Answer: I shall here close up the Apostle's Argument of the Existence of God from the consideration of Humane Nature. And I appeal to all sober and impartial Judges of what hath been deliver'd; Whether those Noble Faculties of our Souls may be only a mere Sound and Echo from the clashing of senseless Atoms, or rather indubitably must proceed from a Spiritual Substance of a Heavenly and Divine Extraction: whether those admirable Fabricks of our Bodies shall be ascribed to the fatal Motions or fortuitous Shufflings of blind Matter, or rather beyond controversy to the Wisdom and Contrivance of the Almighty Author of all things, *Who is Wonderful in Counsel, and Excellent in Working.* To whom, &c. ✕

F I N I S.

A
Confutation of Atheism
FROM THE
Origin and Frame of the WORLD.

P A R T I.

A
S E R M O N

Preached at

S^t Mary-le-Bow,OCTOBER the 3^d. 1692.Being the *Sixth* of the Lecture Founded by
the Honourable **ROBERT BOYLE**, Esquire.By **RICHARD BENTLEY**, M.A.Chaplain to the Right Reverend Father in God,
EDWARD, Lord Bishop of Worcester.

L O N D O N,

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R^a. Barker, R^{mo} in Christo Patri
ac D^{no} D^{no} Johanni Archiep. Can-
tuar. à Sacris Domest.

LAMBETH,
Nov. 10. --92.

Acts XIV. 15, &c.

That ye should turn from these vanities unto the living God, who made Heaven and Earth and the Sea, and all things that are therein: Who in times past suffer'd all Nations to walk in their own ways. Nevertheless, he left not himself without witness, in that he did Good, and gave us Rain from Heaven, and fruitfull Seasons, filling our hearts with Food and Gladness.

ALL the Arguments, that can be brought, or can be demanded, for the Existence of God, may, perhaps not absurdly, be reduced to three General Heads: The *First* of which will include all the Proofs from the Vital and Intelligent portions of the Universe, the Organical Bodies of the various Animals, and the Immaterial Souls of Men. Which Living and Understanding Substances, as they make incomparably the most considerable and noble Part of the naturally known and visible Creation; so they do the most clearly and cogently demonstrate to Philosophical Enquirers

A 2

rers the necessary Self-existence, and omnipotent Power, and unsearchable Wisdom, and boundless Beneficence of their Maker. This first Topick therefore was very fitly and divinely made use of by our Apostle in his Conference with Philosophers and that inquisitive People of Athens: the latter *spending their time in nothing else but either to tell or to hear some New thing*; and the other to call in question the most evident Truths, that were deliver'd and received of Old. And these Arguments we have hitherto pursued in their utmost latitude and extent. So that now we shall proceed to the *Second Head*, or the Proofs of a Deity from the Inanimate part of the World; seeing that even Natural Reason, as well as the Holy Scripture, assures us, That *the Heavens declare the Glory of God, and the Firmament sheweth his Handiwork*; That *He made the Earth by his power, He hath established the World by his wisdom, and hath stretched out the Heaven by his understanding*; That *He commanded and they were created*; He *bath also established them for ever and ever*; He *covereth the Heaven with Clouds, He prepareth Rain for the Earth, He crowneth the Year with his Goodness*.

These

These Reasons for God's Existence, from the Frame and System of the World, as they are equally true with the Former, so they have always been more popular and plausible to the illiterate part of Mankind; in so much as the *Epicureans*, and some others, have observed, that mens contemplating the most ample Arch of the Firmament, the innumerable multitude of the Stars, the regular Rising and Setting of the Sun, the periodical and constant Vicissitudes of Day and Night and Seasons of the Year, and the other Affections of Meteors and Heavenly Bodies, was the principal and almost only ground and occasion, that the Notion of a God came first into the World: making no mention of the former Proof from the Frame of Human Nature, *That in God we Live and Move and have our Being*: Which Argument being so natural and intrinsical to Mankind, doth neverthelss (I know not how) seem more remote and obscure to the Generality of Men; who are readier to fetch a Reason from the immense distance of the starry Heavens and the outmost Walls of the World, than seek

Lucret. 5. Præterea calidationes ordine certo, Et varia annorum cernebant tempora verti: & lib. 6. Nam bene qui didicere Deos securum agere ævum, Si tamen interea mirantur, &c. Cic. de Nat. Deor. lib. 2. Quis hunc hominem dixerit, qui cum tam certos calii motus, tam ratos astrorum ordines, &c. Plutarch. de plac. phil. 1. 6. Οὐδ' ὁ ἔννοιας ἔχον ἀπὸ τοῦ φαινομένου ἀστέρων, ὁρῶντες τούτοις μεγάλῃς συμπαντικῆς ὄντας αἰτίας, καὶ τεταγμένως ἡμῶντες καὶ νόματα, χεῖμῶν τε καὶ θεῶν, ἀναπλάσσειν καὶ διατάσσειν.

Chap. 17. v. 2. rers the necessary Self-existence, and omnipotent Power, and unsearchable Wisdom, and boundless Beneficence of their Maker. This first Topick therefore was very fitly and divinely made use of by our Apostle in his Conference with Philosophers and that inquisitive People of *Athens*: the latter *spending their time in nothing else but either to tell or to hear some New thing*; and the other to call in question the most evident Truths, that were deliver'd and received of Old. And these Arguments we have hitherto pursued in their utmost latitude and extent. So that now we shall proceed to the *Second Head*, or the Proofs of a Deity from the Inanimate part of the World; seeing that even Natural Reason, as well as the Holy Scripture, assures us, That the *Heavens declare the Glory of God, and the Firmament sheweth his Handiwork*; That *He made the Earth by his power, He hath established the World by his wisdom, and hath stretched out the Heaven by his understanding*; That *He commanded and they were created*; He bath also established them for ever and ever; He covereth the Heaven with Clouds, He prepareth Rain for the Earth, He crowneth the Year with his Goodness.

Psal. 19. 1.

Jer. 51. 15.

Psal. 148. 5.

147. 8.

65. 2.

These

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Lucret. 5. Præterea cæli rationes ordine certo, Et varia annorum cernebant tempora verti: &c. lib. 6. Nam bene qui didicere Deos securum agere avum, Si tamen interea mirantur, &c. Cic. de Nat. Deor. lib. 2. Quis hunc hominem dixerit, qui cum tam certos cæli motus, tam ratos astrorum ordines, &c. Plutarch. de plac. phil. 1. 6. Θεὸν δὲ ἐννοῶν ἔργον ἀπὸ τῆς φαινομένην ἀστρον, ὁρῶντες τότε μεγάλης συμφωνίας ὄντας αἰτίες, καὶ τεταγμένους ἡμῶν καὶ νύκτα, χειμῶνα τε καὶ θερος, ἀναπλάσσει τε καὶ διασπᾷ.

one at home, within themselves, in their own Faculties and Constitutions. So that hence we may perceive, how prudently That was waved, and the Second here insisted on by *St. Paul* to the rude and simple Semi-barbarians of *Lycaonia*: *He left not himself without witness, in that he did good, and gave us Rain from Heaven, and fruitfull Seasons, filling our Hearts with Food and Gladness.* Which words we shall now interpret in a large and free Acceptation; so that this *Second* Theme may comprehend all the Brute Inanimate Matter of the Universe, as the *Former* comprised all visible Creatures in the World, that have Understanding or Sense or Vegetable Life. These two Arguments are the Voices of Nature, the unanimous Suffrages of all real Beings and Substances created, that are naturally knowable without Revelation. And if, Lastly, in the *Third* place, we can evince the Divine Existence from the Adjuncts and Circumstances of Human Life; if we find in all Ages, in all civilized Nations, an Universal Belief and Worship of a Divinity; if we find many unquestionable Records of Supernatural and Miraculous Effects; if we find many faithfull Relations of Prophecies punctually accomplished, of Prophecies so well attested,

attested, above the suspicion of Falshood, to remote and particular and unlikely to come to pass, beyond the possibility of good Guessing or the mere Foresight of Human Wisdom; if we find a most warrantable tradition, that *at sundry times and in divers manners God spake unto mankind by his Prophets and by his Son and his Apostles*, who have deliver'd to us in Sacred Writings a clearer Revelation of his Divine Nature and Will: if, I say, this *Third* Topick from Human Testimony be found agreeable to the standing Vote and Attestation of Nature, What further proofs can be demanded or desired? what fuller evidence can our Adversaries require, seeing all the Classes of known Beings are summoned to appear? Would they have us bring more Witnesses, than the All of the World? and will they not stand to the grand Verdict and Determination of the Universe? They are incurable Infidels, that persist to deny a Deity; when all Creatures in the World, as well spiritual as corporeal, all from Human Race to the lowest of Insects, from the Cedar of *Libanus* to the Moss upon the Wall, from the vast Globes of the Sun and Planets to the smallest Particles of Dust, do declare their absolute dependence upon the first Author and Fountain of all

all Being and Motion and Life, the only Eternal and Self-existent God ; with whom inhabit all Majesty and Wisdom and Goodness for ever and ever.

But before I enter upon this Argument from the Origin and Frame of the World ; it will not be amiss to premise some Particulars, that may serve for an illustration of the Text, and be a proper Introduction to our Discourse thereupon.

Ver. 8. As the Apostles, *Barnabas* and *Paul*, were preaching the Gospel at *Lystra* a City of *Lycaonia* in *Asia* the Less, among the rest of their Auditors, there was a lame Cripple from his Birth, whom *Paul* commanded with a loud voice, To stand upright on his feet ; and immediately by a miraculous Energy he leaped and walked. Let us compare the present Circumstances with those of my former Text, and observe the remarkable difference in the Apostle's proceedings. No question but there were several Cripples at *Athens*, so very large and populous a City ; and if that could be dubious, I might add, that the very Climate disposed the Inhabitants to impotency in the Feet. *Attbide tentantur gressus, oculique in Achæis Finibus---* are the words of *Lucretius* ; which 'tis probable he transcribed from

from *Epicurus* a *Gargettian* and Native of *Athens*, and therefore an unquestionable Evidence in a matter of this nature. Neither is it likely, that all the *Athenian* Cripples should escape the sight of *St. Paul* ; seeing he disputed there in the Market daily with them Ver. 17. that met him. How comes it to pass then, that we do not hear of a like Miracle in that City ; which one would think might have greatly conduced to the Apostles design, and have converted, or at least confuted and put to silence the *Epicureans* and *Stoicks* ? But it is not difficult to give an account of this seeming Disparity ; if we attend to the Qualifications of the Lame person at *Lystra* : whom *Paul* stedfastly beholding, and perceiving that Ver. 9. he had Faith to be healed, said with a loud voice, Stand upright on thy feet. This is the necessary Condition, that was always required by our Saviour and his Apostles. And *Jesus* said Luke 18. 42. unto the blind man, Receive thy sight, thy Faith hath saved thee ; and to the Woman, that had the Issue of blood, Daughter, be of good comfort, thy Faith hath made thee whole, go in peace. 8. 48. 'Twas want of Faith in our Saviour's Countrymen, which hinder'd him from shedding among them the salutary Emanations of his Divine Vertue : And he did not many mighty Matt. 13. 58. Works

Mark 6. 5.

Works there, because of their Unbelief. There were many diseased persons in his own Country, but very few that were rightly disposed for a supernatural Cure. St. Mark hath a very observable Expression upon the same occasion: *And he could do no mighty Work there, save that he laid his hands upon a few sick folk, and healed them.* *Καὶ ἐν ἡδυνάτῳ ἐκεῖ σέθεναι δύνανται πάντας.* We read in St. Luke 5. 17. *And the Power (δύναμις) of the Lord was present to heal them.* And, chap. 6. ver. 19. *And the whole Multitude sought to touch him: for there went Vertue (δύναμις) out of him, and healed them all.* Seeing then that *ἡδυνάτω* and *δύναμις* are words of the same Root and Signification; shall we so interpret the *Evangelist*, as if our Saviour had not Power to work Miracles among his unbelieving Countrymen? This is the passage, which that impious and impure Atheist *Lucilio Vanino* singled out for his Text in his pretended and mock Apology for the Christian Religion; wickedly insinuating, as if the Prodiges of Christ were mere Impostures and acted by Confederacy: and therefore where the Spectators were incredulous, and consequently watchfull and suspicious, and not easily imposed on, he *could* do no mighty Work there; there his Arm was shortened, and

Vanini Dial.
p. 439.

and his Power and Vertue too feeble for such supernatural Effects. But the gross Absurdity is no less conspicuous, than the villainous Blasphemy of this suggestion. For can it be credible to any rational person, that St. Mark could have that meaning? that he should tax his Lord and Saviour, whom he knew to be God Almighty, with Deficiency of Power? He *could* do no mighty Works; that is, he *would* do none, because of their Unbelief. There's a frequent change of those words in all Languages of the World. And we may appeal with St. Chrysostom to the common Custom of Speech, whatever Country we live in. This therefore is the genuine Sense of that expression; Christ *would* not heal their infirmities, because of the hardness and slowness of their Hearts, in that they believed him not. And I think there is not one instance in all the History of the New Testament of a Miracle done for any ones sake, that did not believe Jesus to be a good person, and sent from God; and had not a disposition of Heart fit to receive his Doctrine. (For to believe he was the Messias and Son of God, was not then absolutely necessary, nor rigidly exacted; the most Signal of the Prophecies being not yet fulfilled by him, till his

Τὸ το δὲ ἐν
κοινῇ συνήθειᾳ
φυσικοῦσιν
ἰδοὶ τῆς ἀν.
So δύναμις is
volo, Acts 4.
20. John 7. 7.
and θέλω is
possum. Vid.
Bude Comm.
L. Gr.

See John ch. 9.
and Matt. 16.
14.

Luke 23. 8.

Mark 8. 12.

Matt. 17. 15.

15. 22.

Luke 8. 4.

Luke 22. 51.

Passion and Resurrection.) So *Herod hoped* in vain to have seen some Miracle done by him: And when the Pharisees sought of him a sign from Heaven, tempting him; they received this disappointing Answer, *Verily I say unto you, There shall no Sign be given to this generation.* And we may observe in the Gospels, That where the Persons themselves were incapable of actual Faith; yet the Friends and Relations of those Dead that were raised again to life, of those Lunatics and Demoniacs that were restored to their right minds, were such as sought after him and believed on him. And as to the healing of *Malchus's* Ear, it was a peculiar and extraordinary Case: For though the person was wholly unworthy of so gracious a Cure; yet in the account of the meek Lamb of God it was a kind of Injury done to him by the fervidness of *St. Peter*, who knew not yet what Spirit he was of, and that his Master's Kingdom was not of this World. But besides this obvious meaning of the Words of the Evangelist, there may perhaps be a sublimer Sense couched under the Expression. For in the Divine Nature *Will* and *Can* are frequently the self-same thing; and Freedom and Necessity, that are opposites here below, do in Heaven above most

most amicably agree and joyn hands together. And this is not a Restraint, or Impotency; but the Royal Prerogative of the most absolute King of Kings; that he *wills* to do nothing but what he *can*; and that he *can* do nothing which is repugnant to his divine Wisdom and essential Goodness. God *cannot* do what is unjust, nor say what is untrue, nor promise with a mind to deceive. Our Saviour therefore *could* do no mighty Work in a Country of Unbelievers; because it was not fit and reasonable. And so we may say of our Apostle, who was acted by the Spirit of God; that he could do no Miracle at *Athens*, and that because of their *Unbelief*. There is a very sad and melancholy Account of the success of his stay there. *Howbeit certain Men clave unto him and believed*; A more diminutive expression, than if they had been called *a few*. And we do not find, that he ever visited this City again, as he did several others, where there were a competent number of Disciples. And indeed, if we consider the Genius and Condition of the *Athenians* at that time, How vitious and corrupt they were; how conceited of their own Wit and Science and Politeness, that They had invented Corn and Oil and distributed them to

Types of ar-
dgers, c. 17. v. 34.

Cicero pro
Flacco. Ad-
funt Atheni-
enses, unde hu-
manitas, do-
ctrina, religio,
fruges, jura, le-
ges orie atque
in omnes rer-
as distributa
purantur. Mōc.
Paneg. D. d.
Sic. 13.

to the World; that They first taught Civility, and Learning, and Religion, and Laws to the rest of Mankind; how swollen and puffed up with the fulsome Flatteries of Philosophers and Sophists and Poets of the Stage: we cannot much wonder, that they should so little regard an unknown Stranger, that preached unto them an unknown God.

I am aware of an Objection, That for ought we can now affirm, St. Paul might have done several Miracles at Athens, though they be not related by St. Luke. I confess I am far from asserting, That all the Miracles of our Saviour are recorded in the Gospels, or of his Apostles in the Acts. But nevertheless, in the present Circumstances, I think we may conjecture, That if any Prodigy and Wonder had been performed by our Apostle among those curious and pragmatical Athenians; it would have had such a Consequence, as might have deserved some place in Sacred History, as well as this before us at Lystra:

Ver. 11. where when the people saw what Paul had done, they lift up their voices, saying in the speech of Lycaonia, The Gods are come down to us in the likeness of Men: and the Priest came with Oxen and Garlands, and would have sacrificed to them, as to Jupiter and Mercurius.

That

That this was a common Opinion among the Gentiles, that the Gods sometimes assumed Human shape, and conversed upon Earth as Strangers and Travellers, must needs be well known to any one, that ever looks into the ancient Poets. Even the Vagabond Life of Apollonius Tyanensis shall be called by a bigotted Sophist, *Ἐπιδημία ἐς ἀνθρώπους Οὐδὲ*, a Per-
Eunapius, cap. 2.
grination of a God among Men. And when they say, *ἑκὼς ἀνθρώπων*, in the shape of Men, we must not so understand it, as if they believed, that the Gods had other Figure than Human even in Heaven it self (for that was the received Doctrine of most of the Vulgar Heathen, and of some Sects of Philosophers too,) but that They, who in their own Nature were of a more august Stature and glorious Visage had now contracted and debased themselves into the narrower Dimensions and meaner Aspects of mortal Men. Now when the Apostles heard of this intended Sacrifice, they rent their cloaths and ran in among
Ver. 14.
the people, crying out, &c. St. Chrysostom upon this place hath a very odd Exposition. He enquires why Paul and Barnabas do now at last reprove the People, when the Priest and Victims were even at the Gates; and not presently, when they lift up their Voice and called them

See John 21.
25. and 2 Cor.
12. 12.

ἄλλ' ἐκ τῶν
τῶν ὑμῶν δὴ
λον, τῶν δὲ ὁ
κεί, φωνῶν ἐρ-
θῆγοντο· διὰ
τοῦτο ὅτιν αὐ-
τοῖς ἕλπον, ἐ-
πειδὴ δὲ ἔδοξεν
τὰ σῆμαλα,
τοῖς ὁμοῦλοις
τες διέφρησαν
τὰ ἱμάτια αὐ-
τῶν. Chrys. ad
loc.
Ephorus apud
Strab. lib. 14.
Steph. voce
Δέφρων.
 them Gods : for which he assigns this reason,
 That because they spoke *Λυκαονίᾳ*, in the *Lyca-
onian Tongue*, the Apostles did not then under-
 stand them : but now they perceived their
 meaning by the Oxen and the Garlands. In-
 deed it is very probable, that the *Lycaonian*
 Language was very different from the Greek ;
 as we may conclude from *Ephorus* and *Strabo*
 that cites him, who make almost all the Na-
 tions of *Asia Minor* to be *Barbarians* ; and
 from *Stephanus Byzantius*, who acquaints us,
 that *ἀγροῦρα*, a Juniper-tree, was called *δέλβρα*
 in the Speech of the *Lycaonians*, *ὡς τῇ τῷ λυκα-
ονεν φωνῇ*. But notwithstanding we can by no
 means allow, that the great Apostle of the
 Gentiles should be ignorant of that Language ;
 he that so solemnly affirms of himself, *I thank*
1 Cor. 14. 18. *my God, I speak with Tongues more than you all.*
 And yet at the first Effusion of this heavenly
Acts 2. Gift, the Dwellers in *Cappadocia*, in *Pontus* and
Asia, *Phrygia* and *Pamphylia* (some of them
 near Neighbours to the *Lycaonians*) heard
 the Apostles speak in their several Tongues the
 wonderfull Works of God. And again, How
Ver. 7. could they have preached the Gospel to the
Lystrians, if they did not use the common
 Language of the Country ? And to what
Ver. 15. purpose did they cry out and speak to them,

if

if the Hearers could not apprehend ? or how
 could they by those Sayings restrain the peo-
 ple from sacrificing ; if what they said was not
Ver. 15. intelligible ? But it will be asked, Why then
 were the Apostles so slow and backward in re-
 claiming them ? and what can be answer'd to
 the Query of *St. Chrysostom* ? When I consider
 the circumstances and nature of this affair, I
 I am perswaded they did not hear that dis-
 course of the people. For I can hardly con-
 ceive, that Men under such apprehensions as
 the *Lystrians* then were, in the dread Presence
 and under the very Nod of the almighty Ju-
 piter, not an Idol of Wood or Stone, but the
 the real and very God (as the *Athenians* made
 their Complement to *Demetrius Poliorcetes*)
 should exclaim in his sight and hearing : this,
 I say, seems not probable nor natural ; nor is
 it affirm'd in the Text : but they might buzz
 and whisper it one to another, and tacitly
 withdrawing from the presence of the Apostles,
 they then lift up their voices and noise it about
 the City. So that *Paul* and *Barnabus* are but just
 then informed of their idolatrous design, when
 they rent their Cloaths, & run in among them,
 and expostulate with them ; *Sirs, why do ye these*
Ver. 15. *things ? we also are Men of like passions with you*
 (*ὡς ἡμεῖς παθεῖς ὅμοιω*, *Mortal men like your selves*,
 as *Mortales sumus similes*

C

^{So} Ein m'aw,
if die,
^a common
Expression in
Gr. Writers.

Al d'ayay as
Eilaw d'Sava-
r d' ayu-
ga d' huata
na'la. Hem.

See Acts 4. 27.
14. 5. 26. 17.
Gal. 2. 14.

as it is judiciously render'd in the ancient Latin Version, otherwise the *Antithesis* is not so plain: For the Heathen Theology made even the Gods themselves subject to human passions and appetites, to Anger, Sorrow, Lust, Hunger, Wounds, Lameness, &c. and emptied them from nothing but Death and Old Age) and preach unto you, that ye should turn from these vanities (i. e. Idols) unto the Living God, which made Heaven and Earth and the Sea, and all things that are therein: who in times past suffered all Nations to walk in their own ways: *Πάντα τὰ ἔθνη*, not all Nations, but all the Heathen (the word Heathen comes from *ἔθνη*) all the Gentiles, distinguished from the Jews; as the same words are translated *Rom. 15. 11.* and *2 Tim. 4. 17.* and ought to have been so, *Rom. 1. 5.* and *16. 26.* but much more in our Text, which according to the present Version seems to carry a very obscure, if not erroneous, meaning; but by a true interpretation is very easie and intelligible; That hitherto God had suffer'd all the Gentiles to walk in their own ways; and excepting the Jews only, whom he chose for his own people and prescribed them a Law, he permitted the rest of Mankind to walk by the mere light of Nature without the assistance of Revelation: but that now in the

the fulness of time he had even to the Gentiles also sent salvation and open'd the door of faith, and granted repentance unto life. So that these words of our Apostle are exactly coincident with that so much controverted passage in his discourse to the Athenians: And the (past) times of this ignorance (of the Gentile World) God winked at (or overlook'd:) but now commandeth all men every where to repent. And nevertheless even in that gloomy state of Heathenism, he left not himself without witness, in that he did good (*ἀγαθοποιῶν ἔξ ἑσέως*, always doing good from Heaven, which seems to be the genuine punctuation, and is authorized by the Syriack Interpreters) and gave us Rain from Heaven and fruitfull Seasons, filling our hearts with food and gladness. Even the Gentiles might feel after him and find him; seeing that the admirable frame of Heaven and Earth and Sea, and the munificent provision of food and sustenance for his Creatures did competently set forth his Eternal Power and Godhead; so that (stupid Idolaters and) profane Atheists were then and always without excuse: which is the scope of these Discourses.

Our Adversaries have used the same methods to elude the present Argument from the Frame of the World, as they have done to evade

Acts 17. 30.

conversion.

כך סבר היה
להון טברא
מן שמיא
ומחיות
מטרא

So that they
read *ἔξ ἑσέως*, *ἔξ ἑσέως*, *ἔξ ἑσέως*. Horat.
Nec siquid mi-
risfaciat natu-
ra, Deos id
Tristes ex alto
caeli demittere
cocta

evade the former from the Origin of Mankind. Some have maintain'd, That this World hath thus exist'd from all Eternity in its present form and condition: but Others do as stiffly affirm, That the Forms of particular Worlds are generable and corruptible; so that our present System cannot have sustain'd an infinite Duration already gone and expired: but however that Body in general, the common Basis and Matter of all Worlds and Beings, is self-existent and eternal; which being naturally divided into innumerable little particles or atoms, eternally endued with an ingent and inseparable power of Motion, by their omni-farious concursions and combinations and coalitions, there emergeth successively (or at once, if Matter be infinite) an infinite number of Worlds; and among the rest arose this visible complex System of Heaven and Earth: and thus far they do agree, but then they differ about the cause and mode of the production of Worlds, some ascribing it to Fortune, and others to Mechanism or Nature. Indeed as for the Astrological Atheists, they will give us no trouble in the present dispute; because they cannot form a peculiar Hypothesis here, as they have done before about the Origin of Animals. For though some of them

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are so vain and senseless, as to pretend to a *Thema Mundi*, a calculated Scheme of the Nativity of our World: yet it exceeds even their absurdity to suppose the Zodiack and Planets to be efficient of, and antecedent to themselves; or to exert any Influences, before they were in Being. So that to refute all possible Explications that the Atheists have or can propose, I shall proceed in this following method.

I. First, I will prove it impossible, that the primary Parts of our World, the Sun and the Planets with their regular Motions and Revolutions, should have subsisted eternally in the present or a like Frame and Condition.

II. Secondly, I will shew, That Matter abstractly and absolutely consider'd, cannot have born an Infinite Duration now past and expired; as also that Motion cannot have coexisted Eternally, as an inherent Property and essential Attribute of the Atheist's God, Matter.

III. Thirdly, That, though we allow them, that Universal Matter hath endured from everlasting, divided into infinite Particles in the Epicurean way, and that Motion hath been coeval and coeternal with it: yet these

Parti-

Particles or Atoms could never of themselves, by omnifarious kinds of Motion, whether Fortuitous or Mechanical, have fallen or been disposed into this or a *like* visible System; though a supposed infinite Duration of the Atoms and their Motions should already be expired and gone.

IV. And Fourthly, *à posteriori*, That the Order and Beauty of the Inanimate Parts of the World, the discernible Ends and Final Causes of them, the *τὸ Βέλτιον*, or a Meliority above what was necessary to be, do evince by a reflex Argument, That it is the Product and Workmanship, not of blind Mechanism or blinder Chance; but of an Intelligent and Benign Agent, *who by his excellent Wisdom made the Heavens and Earth: and gives Rains and fruitfull Seasons for the service of Man.*

I. And First, That the present or a *like* Frame of the World hath not subsisted from Everlasting. We will readily concede, that a thing may be truly Eternal, though its Duration be terminated at one End. For so we affirm Human Souls to be Immortal and Eternal, though *ἦν ἔτι ἐκ τινος*, there was a time when they were Nothing; and therefore their

their Infinite Duration will always be bound-
ed at one Extreme by that first beginning of Existence. So that, for ought appears as yet; the Revolutions of the Earth and other Planets about the Sun, though they be limited at one end by the present Revolution, may nevertheless have been Infinite and Eternal without any Beginning. But then we must consider, that this Duration of Human Souls is only *potentially* Infinite: for Their Eternity consists only in an endless capacity of Continuance without ever ceasing to be, in a boundless Futurity that can never be exhausted, or all of it be past and present: But their Duration can never be *positively* and *actually* Eternal; because it is most manifest, that no Moment can ever be assigned, wherein it shall be true, that such a Soul hath then actually sustain'd an Infinite Duration. For that supposed Infinite Duration will by the very Supposition be limited at two Extremes, though never so remote asunder; and consequently must needs be Finite. Wherefore the true Nature and Notion of a Soul's Eternity is this: That the future moments of its Duration can never be all *past* and *present*; but still there will be a Futurity and

and Potentiality of more for ever and ever. So that we evidently perceive, from this instance of a Soul, That what-ever successive Duration, shall be bounded at one end, and be all *past and present*, must come infinitely short of Infinity. Which necessarily evinceth, That the present or *a like* World can never have been Eternal; or that there cannot have been Infinite past Revolutions of a Planet about a Sun. For this supposed Infinity is terminated at one extreme by the present Revolution, and all the other Revolutions are confessedly past; so that the whole Duration is bounded at one end, and all *past and present*; and therefore cannot have been Infinite, by what was proved before. And this will shew us the vast difference between the false successive Eternity backwards, and the real one to come. For, consider the present Revolution of the Earth, as the Bound and Confine of them both. God Almighty, if he so pleaseth, may continue this Motion to perpetuity in Infinite Revolutions to come: because Futurity is inexhaustible, and can never be all spent and run out by *past and present* moments. But then, if we look backwards from this present

sent Revolution, we do apprehend the impossibility of infinite revolutions on that side: because all are already *past*, and so were once actually *present*, and consequently are finite, by the argument before. For surely we cannot conceive a Præteritnes (if I may say so) still backwards *in infinitum*, that never was present: as we can an endless Futurity, that never will be present. So that though one is potentially infinite; yet nevertheless the other is positively finite. And though this Reasoning doth necessarily conclude against the past infinite duration of all successive Motion and mutable Beings; yet it doth not all affect the eternal Existence of the adorable Divinity, in whose invariable nature there is no Past nor Future; who is Omnipresent not only as to Space, but as to Duration; and with respect to such Omnipresence it is certain and manifest, that Succession and Motion are mere impossibilities and repugnant in the very terms.

And *Secondly*, though what hath been now said, hath given us so clear a view of the nature of successive Duration, as to make more Arguments needless: yet I shall here briefly shew, how our Adversaries *Hypothesis* doth without any outward opposition destroy and confute it self. For let us suppose infinite

Revolutions of the Earth about the Sun to be already gone and expired: I take it to be self-evident; that, if None of those past Revolutions has been infinite ages ago, All the Revolutions put together cannot make up the duration of infinite ages. It follows therefore from this supposition, that there may be some one assignable Revolution among them, that is at an infinite distance from the present. But it is self-evident likewise, that no one past Revolution can be infinitely distant from the present: for then an infinite or unbounded Duration may be bounded at two extremes by two annual Revolutions; which is absurd and a contradiction. And *again*, upon the same supposition of an eternal past Duration of the World, and of infinite annual Revolutions of the Earth about the Sun; I would ask concerning the monthly Revolutions of the Moon about the Earth, or the diurnal ones of the Earth upon its own Axis, both which by the very *Hypothesis* are coæval with the former; whether these also have been finite or infinite? Not finite to be sure; because then a finite number would be greater than an infinite, as 12 or 365 are more than an Unit. Nor infinite neither; for then two or three Infinities would exceed one another;

as a Year exceeds a Month, or both exceed a Day. So that both ways the Supposition is repugnant and impossible.

And *thirdly*, the Arguments already used, from the gradual Increase of Mankind, from the known Plantations of most Countries, from the recent Invention of Letters and Arts, &c. do conclude as forcibly against the Eternity of the World, as against infinite Generations of Humane Race. For if the present Frame of the Earth be supposed eternal; by the same notion they make Mankind to have been coeternal with it. For otherwise, this eternal Earth, after she had been eternally barren and desolate, must at last have spontaneously produced Mankind, without new cause from without, or any alteration in her own texture: which is so gross an absurdity, that even no Atheist hath yet affirmed it. So that it evidently follows, that if Mankind had a beginning; the present Form of the Earth, and therefore the whole System of the World had a beginning also.

Which being proved and established; we are now enabled to give answers to some bold Queries and Objections of Atheists; That seeing God is described as a Being infinitely powerfull and perfectly good; and that these

Attributes were essential to him from all Eternity; why did not he by his Power for the more ample communication of his Goodness create the World eternally, if he created it at all? or at least, many Millions of Ages ago before this short span of duration of five or six thousand Years? To the first we reply, That, seeing we have discover'd an intrinsecal and natural impossibility, that a successive Duration should be actually eternal; it is no less than a contradiction to it self, that the World should be created from everlasting: and therefore it is no affront to the divine Omnipotence, if by reason of the formal incapacity and repugnancy of the thing, we averr that the World could not possibly have been made from all Eternity, even by God himself. Which gives an answer to the Second Question, why created so lately? For if it be impossible to have been created eternally; there can no instant be assigned for its Creation in Time, though never so many Myriads and Millions of years since, but the same Query might be put, Why but now, and why so late? For even before that remoter period God was eternally existent, and might have made the World as many Myriads of Ages still backwards before That: and consequent-

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ly this Objection is absurd and unreasonable. For else if it was good and allowable, it would eternally hinder God from exerting his Creative Power: because he could never make a World so early, at any given Moment; but it might truly be said, He cou'd have created it sooner. Or if they think that there may be a Soonest Instant of possible Creation: yet seeing that all Instants have an equal pretence to it in humane apprehension, why may not this recent production of the World, according to Sacred Authority, be supposed to be that Soonest? at least it may make that Claim to it, that cannot be baffled by such Arguments, as equally conclude against all Claims, against any conceivable Beginning of the World.

And so when they profanely ask, Why did not this supposed Deity, if he really made the Heavens, make them boundless and immense, a fit and honourable Mansion for an infinite and incomprehensible Being? or at least vastly more ample and magnificent, than this narrow Cottage of a World? we may make them this answer; First, that it is impossible and a contradiction, that a created World should be immense; because

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it is the nature of Space and Motion; that they can never be actually and positively infinite: they have a power only and a capacity of being increased without end; so that no Space can be assigned so vast, but still a larger may be imagin'd; no Motion so swift or languid, but a greater Velocity or Slowness may still be conceived; no positive Duration of it so long, than which a more lasting may not be supposed. From whence secondly it follows; that, though the World was a million of times more spacious and ample, than even Astronomy supposes it; or yet another million bigger than that, and so on in infinite progression; yet still they might make the same Exception world without end. For seeing that God Almighty can do all that is possible; and Space hath always a possibility of being enlarged indefinitely: he could never create so ample a World, but still it would be true, that he could have made a bigger; the facundity of his Creative Power never growing barren nor being exhausted. Now what might always be an exception against all possible Worlds, can never be a just one against any whatsoever.

And

And when they scoffingly demand, Why would this imaginary Omnipotence make such mean pieces of workmanship? what an indigent and impotent thing is his principal Creature Man? would not boundless Beneficence have communicated his divine Perfections in the most eminent degrees? they may receive this reply, That we are far from such arrogance, as to pretend to the highest dignity, and be the chief of the whole Creation; we believe an invisible World and a Scale of Spiritual Beings all nobler than our selves: nor yet are we so low and base as their Atheism would depress us; not walking Statues of Clay, nor the Sons of brute Earth, whose final Inheritance is Death and Corruption; we carry the Image of God in us, a rational and immortal Soul; and though we be now miserable and feeble, yet we aspire after eternal happiness, and firmly expect a great exaltation of all our natural powers. But farther we affirm, That whatsoever was or can be made, whether *Angels or Archangels, Cherubims or Seraphims*, whether *Thrones or Dominions or Principalities or Powers*, all the glorious Host of Heaven, must needs be finite and imperfect and dependent Creatures: and God out of

Plorat. Carm.
l. 12.

of the *exceeding greatness of his power* is still able, without end, to create higher Classes of Beings. For where can we put a stop to the Efficacy of the Almighty? or what can we assign for the Highest of all possible finite perfections? There can be no such thing or notion, as an *almost Infinite*: there can be nothing Next or Second to an omnipotent God: *Nec viget quicquam simile aut secundum*; as the Heathen Poet said excellently well of the supposed Father of Gods and Men. The infinite Distance between the Creator and the noblest of all Creatures can never be measured nor exhausted by endless addition of finite degrees. So that no actual Creature can ever be the most perfect of all possible Creation. Which shews the folly of this Query, that might always be demanded, let things be as they will; that would impiously and absurdly attempt to tie the Arm of Omnipotence from doing any thing at all, because it can never do its Utmost.

II. I proceed now to the Second Proposition, that neither Matter universally and abstractly consider'd nor Motion can have endured a past Eternity. And to this I shall speak the more briefly; not only because it is *na*
abstruse

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abstruse and metaphysical Speculation; but also of far less moment and consequence to us than the others: seeing that without this we can evince the Existence of God from the Origin and Frame of the Universe. For if the present or a like System of the World cannot possibly have been eternal, by the first Proposition; and if without God it could neither naturally nor fortuitously emerge out of a Chaos, by the third Proposition: We must necessarily have recourse to a Deity, as the Contriver and Maker of Heaven and Earth; whether we suppose he created them out of Nothing, or had the Materials ready eternally to his hand. But nevertheless, because we are verily persuaded of the truth of this Article, we shall briefly assign some reasons of our Belief in these following Particulars.

First, It is no Contradiction, that Matter should be produced out of Nothing. It is urged as an Universal Maxim; that nothing can proceed from Nothing. Now this we readily allow; and yet it will prove nothing against the possibility of Creation. For when they say, Nothing from Nothing; they must so understand it, as excluding all Causes, both material and efficient. + In which sense it is most evidently and infallibly true: being equivalent to this proposition; that nothing can make it self, or, Nothing cannot bring its no-self out of non-entity into Something. Which only proves thus much, That Matter did not produce it self, or that all Substances did not emerge out of an Universal Nothing. Now who ever talked at that rate? We do not create the World from Nothing and by Nothing; we assert an eternal God to have been the Efficient Cause of it. So that a Creation of the World out of Nothing by Something; and by that Something, that includes in its Nature a necessary Existence and perfection of Power; is certainly no Contradiction; nor opposes that common
E Maxim.

Maxim. Whence it manifestly follows, That seeing God may do any thing, that implies not a Contradiction; if there be such an Essence as God, he *may* have created Matter out of nothing, or given That an Existence, that had no Being before.

Serm. II.

Secondly, Some Things have been *actually* created out of Nothing. In a former Discourse we have proved sufficiently, that Human Souls are not mere modification of Matter, but real and spiritual Substances, that have as true an Existence, as our very Bodies themselves. Now no man in his wits can seriously think, that his own Soul hath existed from all Eternity; not the Stuff or Matter of it, for it is no compound Being; not the Personality of it, as I appeal to Common Sense; and if a man could believe, that his personal Soul hath been from everlasting, such an Opinion would be as destructive to Atheism, as to concede the contrary now. So that the spiritual Souls of Men have confessedly been produced out of Nothing. † But if God hath *actually* created those intelligent Substances, that have such Nobility and Excellency above brute senseless Matter; 'tis pervicaciousness to deny, that he created Matter also: unless necessary Existence be included in the very Essence and Idea of Matter.

Thirdly, Matter doth not include in its Nature a necessity of Existence. Human Souls, as is proved before, have been actually created, and consequently have not necessary Existence included in their Essence. Now can I believe, that my spiritual Soul, that understands and judges and invents, &c. hath notwithstanding a dependent and precarious Being; while the Particles of this dead Ink and Paper have been necessarily eternal and uncreate: 'tis against natural reason; and no one while he contemplates an individual Body, can discern such a necessity. But men have been taught to believe, that Extension

sion or Space, and Body are the self-same thing: so that because they cannot imagin, how Space can either begin or cease to exist; they presently conclude, that extended infinite Matter must needs eternally have a Being. But I shall fully prove hereafter, that Body and Space or Distance are quite different things, and that a Vacuity is interspersed among the Particles of Matter, and such a one as hath a vastly larger extension, than all the Matter of the Universe. Which now being supposed; they must abstract their Imagination from that false infinite Extension, and conceive one Particle of Matter surrounded on all sides with vacuity, and contiguous to no other Body. So that all other Matter is divided and distinct from it, by the very supposition. And hence it appears, that whereas formerly they fancied an immense boundless Space, as an homogeneous One; which great Individual they believed might deserve the Attribute of necessary Existence: Now the whole Question is about one solitary Atom, that hath no dependence on the rest of the World; and is no more sustained in Being by other Matter, than it could be created by it; whether this poor Atom, sluggish and unactive as it is, doth involve Necessity of Existence (the first and highest of all perfections) in its particular nature and notion? I dare presume for the Negative in the judgments of all serious men. And I observe the *Epicureans* take much pains to convince us, that in natural corruptions and dissolutions Atoms are not reduced to Nothing; which surely would be needless, if the very Idea of Atoms imported Self-existence. And yet if one Atom do not include so much in its Notion and Essence; all Atoms put together, that is, all the Matter of the Universe does not include it. So that upon the whole matter, seeing that Creation is no contradiction, that God hath certainly created nobler Substances than Matter, and that Matter is not necessarily eternal;

Serm. VII.

Lucret. lib. 1.

nal; it is most reasonable to believe, that the Eternal and Self-existent God created the Material World also, and produced it out of Nothing.

And Fourthly, it will be allowed as true, by all those that can reach these Speculations; That whatsoever hath not necessarily an eternal self-existence included in its very Nature and Definition, (which we have proved Matter hath not) cannot have been *actually* self-existent from Eternity: so that finally there is not only a great inducement from its probability and reasonableness, but a downright Necessity of admitting the Creation of the World.

And then Fifthly, as to Motion, that we may wave some Metaphysical Arguments, which demonstrate that Local Motion cannot be positively eternal; we shall only observe in two Words; That if Matter be not essentially eternal, as we have shewed before; much less can Motion be, that is but the adjunct and accident of it. Nay though we should concede an Eternity to Matter; yet why must Motion be coeval with it? which is not only not inherent and essential to Matter; but may be produced and destroyed at the pleasure of free Agents: both which are flatly repugnant to an eternal and necessary Duration. I am aware, how some have asserted that the same quantity of Motion is always kept up in the world; which may seem to favour the Opinion of its infinite Duration: but that Fancy doth solely depend upon an absolute *Plenum*; which being refuted in my next, it will then appear how absurd and false that conceit is, how easily disproved from the Motive power of Souls embodied, and the gradual increase of Men and other Animals, and many Arguments besides. Therefore let this also be concluded, That Motion cannot have subsisted in an infinite past Duration: Which was the thing to be proved.

F I N I S.

A
Confutation of Atheism
 FROM THE
Origin and Frame of the WORLD.

PART II.

A
S E R M O N

Preached at

St. Martin's in the Fields,

NOVEMBER the 7th. 1692.

Being the *Seventh* of the Lecture Founded by
 the Honourable ROBERT BOYLE, Esquire.

By RICHARD BENTLEY, M. A.

Chaplain to the Right Reverend Father in God,
 EDWARD, Lord Bishop of Worcester.

L O N D O N,

Printed for H. Mortlock at the *Phoenix* in
 St. Paul's Church-yard. 1693.

Acts XIV. 15, &c.

That ye should turn from these vanities unto the living God, who made Heaven and Earth and the Sea, and all things that are therein: Who in times past suffer'd all Nations to walk in their own ways. Nevertheless, he left not himself without witness, in that he did Good, and gave us Rain from Heaven, and fruitfull Seasons, filling our hearts with Food and Gladness.

When we first enter'd upon this Topic, the demonstration of God's Existence from the Origin and Frame of the World, we offer'd to prove four Propositions.

1. That this present System of Heaven and Earth cannot possibly have subsisted from all Eternity.


2. That Matter consider'd generally, and abstractly from any particular Form and Concretion, cannot possibly have been eternal: Or, if Matter could be so; yet Motion cannot have coexisted with it eternally, as an inherent property and essential attribute of Matter. These two we have already established



Imprimatur.

Ra. Barker, R^{mo} in Christo Patri
ac D^{no} D^{no} Johanni Archiep. Cantuar. à Sacris Domest.

LAMBHITH,
Novemb. 10.
1692.



the preceding Discourse; we shall now
new in the third place,

3. That, though we should allow the Atheists, that Matter and Motion may have been from everlasting; yet if (as they now suppose) there were once no Sun nor Starrs nor Earth nor Planets; but the Particles, that now constitute them, were diffused in the mundane Space in manner of a Chaos without any concretion and coalition; those dispersed Particles could never of themselves by any kind of Natural motion, whether call'd Fortuitous or Mechanical, have conven'd into this present or any other like Frame of Heaven and Earth.

I. And first as to that ordinary Cant of illiterate and puny Atheists, the *fortuitous* or *casual* *concourse of Atoms*, that compendious and easy Dispatch of the most important and difficult affair, the Formation of a World; (besides that in our next undertaking it will be refuted all along) I shall now briefly dispatch it, from what hath been formerly said concerning the true notions of Fortune and Chance. Whereby it is evident, that in the Atheistical Hypothesis of the World's production, Fortuitous and Mechanical must be the self-same thing. Because *Fortune* is no real entity nor physical essence, but a mere relative signification, denoting

noting only this; That such a thing said to fall out by Fortune, was really effected by material and necessary Causes; but the Person, with regard to whom it is called Fortuitous, was ignorant of those Causes or their tendencies, and did not design nor foresee such an effect. This is the only allowable and genuine notion of the word Fortune. But thus to affirm, that the World was made *fortuitously*, is as much as to say, That before the World was made, there was some Intelligent Agent or Spectator; who designing to do something else, or expecting that something else would be done with the Materials of the World, there were some occult and unknown motions and tendencies in Matter, which mechanically formed the World beside his design or expectation. Now the Atheists, we may presume, will be loth to assert a fortuitous Formation in this proper sense and meaning; whereby they will make Understanding to be older than Heaven and Earth. Or if they should so assert it; yet, unless they will affirm that the Intelligent Agent did dispose and direct the inanimate Matter, (which is what we would bring them to) they must still leave their Atoms to their mechanical Affections; not able to make one step toward the production

Scim. V.
p. 12, 13.

duction of a World beyond the necessary Laws of Motion. It is plain then, that *Fortune*, as to the matter before us, is but a synonymous word with Nature and Necessity. It remains that we examin the adequate meaning of *Chance*; which properly signifies, That all events called Casual, among inanimate Bodies, are mechanically and naturally produced according to the determinate figures and textures and motions of those Bodies; with this negation only, That those inanimate Bodies are not conscious of their own operations, nor contrive and cast about how to bring such events to pass. So that thus to say, that the World was made *casually* by the concurrence of Atoms, is no more than to affirm, that the Atoms composed the World mechanically and fatally; only they were not sensible of it, nor studied and consider'd about so noble an undertaking. For if Atoms formed the World according to the essential properties of Bulk, Figure and Motion, they formed it *mechanically*; and if they formed it mechanically without perception and design, they formed it *casually*. So that this negation of Consciousness being all that the notion of Chance can add to that of Mechanism; We, that do not dispute this matter with the Athe-

ists,

ists, nor believe that Atoms ever acted by Counsel and Thought, may have leave to consider the several names of *Fortune* and *Chance* and *Nature* and *Mechanism*, as one and the same Hypothesis. Wherefore once for all to overthrow all possible Explications which Atheists have or may assign for the formation of the World, we will undertake to evince this following Proposition:

II. That the Atoms or Particles which now constitute Heaven and Earth, being once separate and diffused in the Mundane Space, like the supposed *Chaos*, could never *without a God by their Mechanical affections* have convened into this present Frame of Things or any other like it.

Which that we may perform with the greater clearness and conviction; it will be necessary, in a discourse about the Formation of the World, to give you a brief account of some of the most principal and systematical *Phænomena*, that occur in the World now that it is formed.

(1.) The most considerable *Phænomenon* belonging to Terrestrial Bodies is the general action of *Gravitation*, whereby All known Bodies in the vicinity of the Earth do tend and press toward its Center; not only such as are sensibly

sensibly and evidently Heavy, but even those that are comparatively the Lightest, and even in their proper place, and natural Elements, (as they usually speak) as Air gravitates even in Air and Water in Water. This hath been demonstrated and experimentally proved beyond contradiction, by several ingenious Persons of the present Age, but by none so perspicuously and copiously and accurately, as by the Honourable Founder of this Lecture in his incomparable Treatises of the *Air* and *Hydrostaticks*.

(2.) Now this is the constant Property of *Gravitation*; That the weight of all Bodies around the Earth is ever proportional to the Quantity of their Matter: As for instance, a Pound weight (examin'd Hydrostatically) of all kinds of Bodies, though of the most different forms and textures, doth always contain an equal quantity of solid Mass or corporeal Substance. This is the ancient Doctrine of the *Epicurean* Physiology, then and since very probably indeed, but yet precariously asserted: But it is lately demonstrated and put beyond controversy by that very excellent and divine Theorist Mr. *Isaac Newton*, to whose most admirable sagacity and industry we shall frequently be obliged in this and the following Discourse.

Matter
Physic
e and sp.
of Air
Hydro-
statics
and
aerobics.

Isaac
Newton

Newton
Philos.
Natur.
Princ.
Math. lib.
3. prop. 6.

I

I will not entertain this Auditory with an account of the Demonstration; but referring the Curious to the Book it self for full satisfaction, I shall now proceed and build upon it as a Truth solidly established, *That all Bodies weigh according to their Matter*; provided only that the compared Bodies be at equal distances from the Center toward which they weigh. Because the further they are removed from the Center, the lighter they are: decreasing gradually and uniformly in weight, in a duplicate proportion to the Increase of the Distance.

(3.) Now since Gravity is found proportional to the Quantity of Matter, there is a manifest Necessity of admitting a *Vacuum*, another principal Doctrine of the *Atomical* Philosophy. Because if there were every where an absolute plenitude and density without any empty pores and interstices between the Particles of Bodies, then all Bodies of equal dimensions would contain an equal Quantity of Matter; and consequently, as we have shewed before, would be equally ponderous: so that Gold, Copper, Stone, Wood, &c. would have all the same specifick weight; which Experience assures us they have not: neither would any of them descend in the Air, as we all see they do; because, if all Space was Full, even the Air would be as dense and specifically as

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heavy

heavy as they. If it be said, that, though the difference of specifick Gravity may proceed from variety of Texture, the lighter Bodies being of a more loose and porous composition, and the heavier more dense and compact; yet an athereal subtle Matter, which is in a perpetual motion, may penetrate and pervade the minutest and inmost Cavities of the closest Bodies, and adapting it self to the figure of every Pore, may adequately fill them; and so prevent all Vacuity, without increasing the weight: To this we answer; That that subtle Matter it self must be of the same Substance and Nature with all other Matter, and therefore It also must weigh proportionally to its Bulk; and as much of it as at any time is comprehended within the Pores of a particular Body must gravitate jointly with that Body: so that if the Presence of this athereal Matter made an absolute Fullness, all Bodies of equal dimensions would be equally heavy: which being refuted by experience, it necessarily follows, that there is a Vacuity; and that (notwithstanding some little objections full of cavil and sophistry) mere and simple Extension or Space hath a quite different nature and notion from real Body and impenetrable Substance.

(4.) This

(4.) This therefore being established; in the next place it's of great consequence to our present enquiry, if we can make a computation, How great is the whole Summ of the Void spaces in our system, and what proportion it bears to the corporeal substance. By many and accurate Trials it manifestly appears, that Refined Gold, the most ponderous of known Bodies, (though even that must be allowed to be porous too, being dissoluble in *Mercury* and *Aqua Regis* and other Chymical Liquors; and being naturally a thing impossible, that the Figures and Sizes of its constituent Particles should be so justly adapted, as to touch one another in every Point,) I say, Gold is in specifick weight to common Water as 19 to 1; and Water to common Air as 850 to 1: so that Gold is to Air as 16150 to 1. Whence it clearly appears, seeing Matter and Gravity are always commensurate, that (though we should allow the texture of Gold to be intirely close without any vacuity) the ordinary Air in which we live and respire is of so thin a composition, that 16149 parts of its dimensions are mere emptiness and Nothing; and the remaining One only material and real substance. But if Gold it self be admitted, as it must be, for a porous Concrete, the proportion of Void to Body in the texture of common Air will be so much the greater.

Mr. Boyle
of Air and
Porosity
of Bodies.

Mr. Boyle
ibid.

And thus it is in the lowest and densest region of the Air near the surface of the Earth, where the whole Mass of Air is in a state of violent compression, the inferior being press'd and constipated by the weight of all the incumbent. But, since the Air is now certainly known to consist of elastick or springy Particles, that have a continual tendency and endeavour to expand and display themselves; and the dimensions, to which they expand themselves, to be reciprocally as the Compression; it follows, that the higher you ascend in it, where it is less and less compress'd by the superior Air, the more and more it is rarified. So that at the height of a few miles from the surface of the Earth, it is computed to have some million parts of empty space in its texture for one of solid Matter. And at the height of one Terrestrial Semid. (not above 4000 miles) the Æther is of that wonderfull tenuity, that by an exact calculation, if a small Sphere of common Air of one Inch Diameter (already 16149 parts Nothing) should be further expanded to the thinness of that Æther, it would more than take up the Vast Orb of *Saturn*, which is many million million times bigger than the whole Globe of the Earth. And yet the higher you ascend above that region, the Rarefaction still gradually increases without stop or limit: so that,

Newton
Philos.
Nat. Prin-
cipia.
Math.
p. 503.

that, in a word, the whole Concave of the Firmament, except the Sun and Planets and their Atmospheres, may be consider'd as a mere Void. Let us allow then, that all the Matter of the System of our Sun may be 50000 times as much as the whole Mass of the Earth; and we appeal to Astronomy, if we are not liberal enough and even prodigal in this concession. And let us suppose further, that the whole Globe of the Earth is intirely solid and compact without any void interstices; notwithstanding what hath been shewed before, as to the texture of Gold it self. Now though we have made such ample allowances; we shall find, notwithstanding, that the void Space of our System is immensely bigger than all its corporeal Mass. For, to proceed upon our supposition, that all the Matter within the Firmament is 50000 times bigger than the solid Globe of the Earth; if we assume the Diameter of the *Orbis Magnus* (wherein the Earth moves about the Sun) to be only 7000 times as big as the Diameter of the Earth (though the latest and most accurate Observations make it thrice 7000) and the Diameter of the Firmament to be only 100000 times as long as the Diameter of the *Orbis Magnus* (though it cannot possibly be less than that, but may be vastly and unspeakably bigger) we must pronounce, after such large concessions

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on that side and such great abatements on ours, That the Summ of Empty Spaces within the Concave of the Firmament is 6860 million million times bigger than All the Matter contain'd in it.

Now from hence we are enabled to form a right conception and imagination of the supposed Chaos; and then we may proceed to determin the controversy with more certainty and satisfaction; whether a World like the Present could possibly without a Divine Influence be formed in it or no?

(1.) And *first*, because every Fixt Star is supposed by Astronomers to be of the same Nature with our Sun; and each may very possibly have Planets about them, though by reason of their vast distance they be invisible to Us: we will assume this reasonable supposition, That the same proportion of Void Space to Matter, which is found in our Sun's Region within the Sphere of the Fixt Starrs, may competently well hold in the whole Mundane Space. I am aware, that in this computation we must not assign the whole Capacity of that Sphere for the Region of our Sun; but allow half of its Diameter for the *Radii* of the several Regions of the next Fixt Starrs. So that diminishing our former number, as this last consideration requires; we may safely affirm from certain

tain and demonstrated Principles, That the empty Space of our Solar Region (comprehending half of the Diameter of the Firmament) is 8575 hundred thousand million million times more ample than all the corporeal substance in it. And we may fairly suppose, that the same proportion may hold through the whole Extent of the Universe.

(2.) And *secondly* as to the state or condition of Matter before the World was a-making, which is compendiously express'd by the word *Chaos*; they must suppose, that either All the Matter of our System was *evenly* or well-nigh evenly diffused through the Region of the Sun, this would represent a particular Chaos: or All Matter universally so spread through the whole Mundane Space; which would truly exhibit a General Chaos; no part of the Universe being rarer or denser than another. Which is agreeable to the ancient Description of it, That ** the Heavens and Earth had μίαν ἰδέαν, μίαν μορφήν, one form, one texture and constitution: which could not be, unless all the Mundane Matter were uniformly and evenly diffused.*

This is indifferent to our Dispute, whether they suppose it to have continued a long time or very little in the state of Diffusion. For if there

* Diod. Sicul. lib. 1. Καὶ τὴν ἕξ ἀρχῆς τῶν ὅλων συστάσιν μίαν ἔχεν ἰδέαν ὁμογενεῖ τε καὶ ὅμῳ, μιμηγμένης αὐτῶν τῆς φύσεως. Apoll. Rhodius lib. 1. Ἦενδ' αἶς γαῖα καὶ ἕρην δαΐδα δαλασσι, το πρὶν ἢ π' ἀλλήλοισι μὴ συναρμῆς-τα μορφήν.

there was but one single Moment in all past Eternity, when Matter was so diffused: we shall plainly and fully prove, that it could never have convened afterwards into the present Frame and Order of Things.

(3.) It is evident from what we have newly proved, that in the Supposition of such a Chaos or such an even diffusion either of the whole Mundane Matter or that of our System (for it matters not which they assume) every single Particle would have a Sphere of Void Space around it 8575 hundred thousand million million times bigger than the dimensions of that Particle. Nay further, though the proportion already appear so immense; yet every single Particle would really be surrounded with a Void sphere Eight times as capacious as that newly mention'd; its Diameter being compounded of the Diameter of the Proper Sphere, and the Semi-diameters of the contiguous Spheres of the neighbouring Particles. From whence it appears, that every Particle (supposing them globular or not very oblong) would be above Nine Million times their own length from any other Particle. And moreover in the whole Surface of this Void sphere there can only Twelve Particles be *evenly* placed (as the Hypothesis requires) that is, at equal Distances from the Central one and each other. So that
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if the Matter of our System or of the Universe was equally dispersed, like the supposed Chaos; the result and issue would be, not only that every Atom would be many Million times its own length distant from any other: but if any One should be moved Mechanically (without direction or attraction) to the limit of that distance; 'tis above a hundred million millions Odds to an unit, that it would not strike upon any other Atom, but glide through an empty interval without any contact.

(4.) 'Tis true, that while I calculate these Measures, I suppose all the Particles of Matter to be at absolute rest among themselves, and situated in an exact and mathematical evenness; neither of which is likely to be allowed by our Adversaries, who not admitting the former, but asserting the eternity of Motion, will consequently deny the latter also: because in the very moment that Motion is admitted in the Chaos, such an exact evenness cannot possibly be preserved. But this I do, not to draw any argument against them from the Universal Rest or accurately equal diffusion of Matter; but only that I may better demonstrate the great Rarity and Tenuity of their imaginary Chaos, and reduce it to computation. Which computation will hold with exactness enough, though we allow the Particles
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cles of the Chaos to be variously moved, and to differ something in size and figure and situation. For if some Particles should approach nearer each other than in the former Proportion; with respect to some other Particles they would be as much remoter. So that notwithstanding a small diversity of their Positions and Distances, the whole Aggregate of Matter, as long as it retain'd the name and nature of Chaos, would retain well-nigh an uniform tenacity of Texture, and may be consider'd as an homogeneous Fluid. As several Portions of the same sort of Water are reckon'd to be of the same specifick gravity; though it be naturally impossible that every Particle and Pore of it, consider'd Geometrically, should have equal sizes and dimensions.

We have now represented the true scheme and condition of the Chaos; how all the Particles would be disunited; and what vast intervals of empty Space would lye between each. To form a System therefore, 'tis necessary that these squander'd Atoms should convene and unite into great and compact Masses, like the Bodies of the Earth and Planets. Without such a coalition the diffused Chaos must have continued and reign'd to all eternity. But how could Particles so widely dispersed combine into that closeness of Texture? Our Adversa-

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ries can have only these two ways of accounting for it. *Either* by the Common Motion of Matter, proceeding from external Impulse and Conflict (without attraction) by which every Body moves uniformly in a direct line according to the determination of the impelling force. For, they may say, the Atoms of the Chaos being variously moved according to this catholic Law, must needs knock and interfere; by which means some that have convenient figures for mutual coherence might chance to stick together, and others might join to those, and so by degrees such huge Masses might be formed, as afterwards became Suns and Planets: or there might arise some vertiginous Motions or Whirlpools in the Matter of the Chaos; whereby the Atoms might be thrust and crowded to the middle of those Whirlpools, and there constipate one another into great solid Globes, such as now appear in the World. + Or *secondly* by mutual Gravitation or Attraction. For they may assert, that Matter hath inherently and essentially such an intrinsic energy, whereby it incessantly tends to unite it self to all other Matter: so that several Particles placed in a Void space at any distance whatsoever would without any external impulse spontaneously convene and unite together. And thus the Atoms of the Chaos,

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though never so widely diffused, might by this innate property of Attraction soon assemble themselves into great spherical Masses, and constitute Systems like the present Heaven and Earth. This is all that can be proposed by Atheists, as an efficient cause of a World. For as to the *Epicurean* Theory, of Atoms descending down an infinite space by an inherent principle of Gravitation, which tends not toward other Matter, but toward a *Vacuum* or Nothing; and verging from the Perpendicular * *no body knows why nor when nor where*; 'tis such miserable absurd stuff, so repugnant to it self, and so contrary to the known Phenomena of Nature (yet it contented supine unthinking Atheists for a thousand years together) that we will not now honour it with a special refutation. But what it hath common with the other Explications, we will fully confute together with Them in these three Propositions. +

(1.) That by Common Motion (without attraction) the dissever'd Particles of the Chaos could never make the World; could never convene into such great compact Masses, as the Planets now are; nor either acquire or continue such Motions, as the Planets now have. +

(2.) That such a mutual Gravitation or spontaneous Attraction can neither be inherent and essential to Matter; nor ever supervene to it, unless

* *Lucret.*
Nec regi-
one loci
certa, nec
tempore
certo.

unless impress'd and infused into it by a Divine Power.

(3.) That though we should allow such Attraction to be natural and essential to all Matter; yet the Atoms of a Chaos could never so convene by it, as to form the present System: or if they could form it, it could neither acquire such Motions, nor continue permanent in this state, without the Power and Providence of a Divine Being.

I. And first, that by Common Motion the Matter of Chaos could never convene into such Masses, as the Planets now are. Any man, that considers the spacious void Intervals of the Chaos, how immense they are in proportion to the bulk of the Atoms, will hardly induce himself to believe, that Particles so widely disseminated could ever throng and crowd one another into a close and compact texture. He will rather conclude, that those few that should happen to clash, might rebound after the collision; or if they cohered, yet by the next conflict with other Atoms might be separated again, and so on in an eternal vicissitude of Fast and Loose, without ever consociating into the huge condense Bodies of Planets; some of whose Particles upon this supposition must have travell'd many millions of Leagues through the gloomy regions of Chaos,

os, to place themselves where they now are. But then how rarely would there be any clashing at all? how very rarely in comparison to the number of Atoms? The whole multitude of them, generally speaking, might freely move and rove for ever with very little occurring or interfering. Let us conceive two of the nearest Particles according to our former Calculation; or rather let us try the same proportions in another Example, that will come easier to the Imagination. Let us suppose two Ships, fitted with durable Timber and Rigging, but without Pilot or Mariners, to be placed in the vast *Atlantick* or the *Pacifique* Ocean, as far asunder as may be. How many thousand years might expire, before those solitary Vessels should happen to strike one against the other? But let us imagin the Space yet more ample, even the whole face of the Earth to be covered with Sea, and the two Ships to be placed in the opposite Poles: might not they now move long enough without any danger of clashing? And yet I find, that the two nearest Atoms in our evenly diffused Chaos have ten thousand times less proportion to the two Void circular Planes around them, than our two Ships would have to the whole Surface of the Deluge. Let us assume then another Deluge ten thousand times larger than *Noah's*. Is it not now utterly incredible,

credible, that our two Vessels, placed there Antipodes to each other, should ever happen to concur? And yet let me add, that the Ships would move in one and the same Surface; and consequently must needs encounter, when they either advance towards one another in direct lines, or meet in the intersection of cross ones; but the Atoms may not only fly side-ways, but over likewise and under each other: which makes it many million times more improbable, that they should interfere than the Ships, even in the last and unlikeliest instance. But they may say, Though the Odds indeed be unspeakable that the Atoms do not convene in any set number of Trials, yet in an infinite Succession of them may not such a Combination possibly happen? But let them consider, that the improbability of Casual Hits is never diminished by repetition of Trials; they are as unlikely to fall out at the Thousandth as at the First. So that in a matter of mere Chance, when there is so many Millions odds against any assignable Experiment; 'tis in vain to expect it should ever succeed, even in endless Duration. Serm. V.
P. 32.

But though we should concede it to be simply possible, that the Matter of Chaos might convene into great Masses, like Planets: yet it's absolutely impossible, that those Masses should acquire such revolutions about the Sun. Let

us suppose any one of those Masses to be the Present Earth. Now the annual Revolution of the Earth must proceed (in this Hypothesis) *either* from the Summ and Result of the several motions of all the Particles that formed the Earth, *or* from a new Impulse from some external Matter, after it was formed. The *former* is apparently absurd, because the Particles that form'd the round Earth must needs convene from all points and quarters toward the middle, and would generally tend toward its Center; which would make the whole Compound to rest in a Poise: or at least that overplus of Motion, which the Particles of one Hemisphere could have above the other, would be very small and inconsiderable; too feeble and languid to propell so vast and ponderous a Body with that prodigious velocity. And *secondly*, 'tis impossible, that any external Matter should impell that compound Mass, after it was formed. 'Tis manifest, that nothing else could impell it, unless the Æthereal Matter be supposed to be carried about the Sun like a *Vortex* or *Whirlpool*, as a Vehicle to convey It and the rest of the Planets. * But this is refuted from what we have shewn above, that those Spaces of the Æther may be reckon'd a mere Void, the whole Quantity of their Matter scarce amounting to the weight of a Grain. 'Tis refuted also from

from Matter of Fact in the Motion of Comets; which, as often as they are visible to Us, are in the Region of our Planets; and there are observed to move, some in quite contrary courses to Theirs, and some in cross and oblique ones, in Planes inclined to the Plane of the Ecliptick in all kinds of Angles: which firmly evinces, that the Regions of the Æther are empty and free, and neither resist nor assist the Revolutions of Planets. But moreover there could not possibly arise in the Chaos any *Vortices* or *Whirlpools* at all; either to form the Globes of the Planets, or to revolve them when formed. 'Tis acknowledged by all, that inanimate unactive Matter moves always in a streight Line, nor ever reflects in an Angle, nor bends in a Circle (which is a continual reflexion) unless *either* by some external Impulse, that may divert it from the direct motion, *or* by an intrinsic Principle of Gravity or Attraction, that may make it describe a curve line about the attracting Body. But this latter Cause is not now supposed: and the former could never beget *Whirlpools* in a Chaos of so great a Laxity and Thinness. For 'tis matter of certain experience and universally allowed, that all Bodies moved circularly have a perpetual endeavour to recede from the Center, and every moment would fly out in right Lines, if they were not

Newton
ibidem
p. 480.

not violently restrain'd and kept in by contiguous Matter. But there is no such restraint in a Chaos, no want of empty room there; no possibility of effecting one single Revolution in way of a *Vortex*, which necessarily requires either an absolute Fulness of Matter, or a pretty close Contipation and mutual Contact of its Particles.

And for the same reason 'tis evident, that the Planets could not *continue* their Revolutions about the Sun; though they could possibly acquire them. For to drive and carry the Planets in such Orbs as they now describe, that *Æthereal* Matter must be compact and dense, as dense as the very Planets themselves: otherwise they would certainly fly out in Spiral Lines to the very circumference of the *Vortex*. But we have often inculcated, that the wide Tracts of the *Æther* may be repated as a mere extended Void. So that there is nothing (in this Hypothesis) that can retain and bind the Planets in their Orbs for one single moment; but they would immediately desert them and the neighbourhood of the Sun, and vanish away in Tangents to their several Circles into the Abyss of Mundane Space.

II. Secondly we affirm, that mutual Gravitation or spontaneous Attraction cannot possibly be innate and essential to Matter. By *Attrac*

traction we do not here understand what is improperly, though vulgarly, called so, in the operations of drawing, sucking, pumping, &c. which is really Pulsion and Trusion; and belongs to that Common Motion, which we have already shewn to be insufficient for the formation of a World. But we now mean (as we have explain'd it before) such a power and quality, whereby all parcels of Matter would mutually attract or mutually tend and press to all others; so that (for instance) two distant Atoms *in vacuo* would spontaneously convene together without the impulse of external Bodies. Now we say, if our Atheists suppose this power to be inherent and essential to Matter; they overthrow their own Hypothesis: there could never be a Chaos at all upon these terms, but the present form of our System must have continued from all Eternity; against their own Supposition, and what we have proved in our Last. For if they affirm, that there might be a Chaos notwithstanding innate Gravity; then let them assign any Period though never so remote, when the diffused Matter might convene. They must confess, that before that assigned Period Matter had existed eternally, inseparably endued with this principle of Attraction; and yet had never attracted nor convened before, during that infinite duration: which is

Vide Sermon VI. & Sermon VIII.

so monstrous an absurdity, as even They will blush to be charged with. But some perhaps may imagin, that a former System might be dissolved and reduced to a Chaos, from which the present System might have its Original, as that Former had from another, and so on: new Systems having grown out of old ones in infinite Vicissitudes from all past eternity. But we say, that in the Supposition of innate Gravity no System at all could be dissolved. For how is it possible, that the Matter of solid Masses like Earth and Planets and Stars should fly up from their Centers against its inherent principle of mutual Attraction, and diffuse it self in a Chaos? This is absurder than the other: That only supposed innate Gravity not to be exerted; This makes it to be defeated, and to act contrary to its own Nature. So that upon all accounts this essential power of Gravitation or Attraction is irreconcilable with the Atheist's own Doctrine of a Chaos. And secondly 'tis repugnant to Common Sense and Reason. 'Tis utterly unconceivable, that inanimate brute Matter (without the mediation of some Immaterial Being) should operate upon and affect other Matter without mutual Contact; that distant Bodies should act upon each other through a *Vacuum* without the intervention of something else by and through which
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the action may be conveyed from one to the other. We will not obscure and perplex with multitude of words, what is so clear and evident by its own light, and must needs be allowed by all, that have any competent use of Thinking, and are initiated into, I do not say the Mysteries, but the plainest Principles of Philosophy. Now mutual Gravitation or Attraction (in our present acception of the Words) is the same thing with This; 'tis an operation or vertue or influence of distant Bodies upon each other through an empty Interval, without any *Effluvia* or Exhalations or other corporeal Medium to convey and transmit it. This Power therefore cannot be innate and essential to Matter. And if it be not essential; it is consequently most manifest (seeing it doth not depend upon Motion or Rest or Figure or Position of Parts, which are all the ways that Matter can diversify it self) that it could never *supervene* to it, unless impress'd and infused into it by an immaterial and divine Power.†

We have proved, that a Power of mutual Gravitation, without contact or impulse, can in no-wise be attributed to mere Matter: or if it could; we shall presently shew, that it would be wholly unable to form the World out of Chaos. But by the way; what if it be made appear, that there is really such a Power of Gravity

Gravity perpetually acting in the constitution of the present System? This would be a new and invincible Argument for the Being of God: being a direct and positive proof, that an immaterial living Mind doth inform and actuate the dead Matter, and support the Frame of the World. I will lay before you some certain *Phænomena* of Nature; and leave it to your consideration from what Principle they can proceed. 'Tis demonstrated, That the Sun, Moon and all the Planets do reciprocally gravitate one toward another: that the Gravitating power of each of These is exactly proportional to their Matter, and arises from the several Gravitations or Attractions of every individual Particle that compose the whole Mass: that all Matter near the Surface of the Earth, for example, doth not only gravitate downwards, but upwards also and side-ways and toward all imaginable Points; though the Tendency downwards be prædominant and alone discernible, because of the Greatness and Nearness of the attracting Body, the Earth: that every Particle of the whole System doth attract and is attracted by all the rest, All operating upon All: that this *Universal Attraction or Gravitation* is an incessant, regular and uniform Action by certain and established Laws according to Quantity of Matter and Longitude of Distance:

Distance: that it cannot be destroyed nor impair'd nor augmented by any thing, neither by Motion nor Rest, nor Situation nor Posture, nor alteration of Form, nor diversity of Medium: that it is not a Magnetical Power, nor the effect of a Vortical Motion; those common attempts toward the Explication of Gravity: These things, I say, are fully demonstrated, as matters of Fact, by that very ingenious Author, whom we cited before. Now how is it possible that these things should be effected by any Material and Mechanical Agent? We have evinced, that mere Matter cannot operate upon Matter without mutual Contact. It remains then, that these *Phænomena* are produced either by the intervention of Air or *Æther* or other such medium, that communicates the Impulse from one Body to another; or by Effluvia and Spirits that are emitted from the one, and pervene to the other. We can conceive no other way of performing them Mechanically. But what impulse or agitation can be propagated through the *Æther* from one Particle entombed and wedged in the very Center of the Earth to another in the Center of Saturn? Yet even those two Particles do reciprocally affect each other with the same force and vigour, as they would do at the same distance in any other Situation imaginable. And because the

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the Impulse from this Particle is not directed to That only ; but to all the rest in the Universe, to all quatters and regions, at once invariably and incessantly : to do this mechanically; the same physical Point of Matter must move all manner of ways equally and constantly in the same instant and moment ; which is flatly impossible. But if this Particle cannot propagate Motion; much less can it send out Effluvia to all points without intermission or variation ; such multitudes of Effluvia as to lay hold on every Atom in the Universe without missing of one. Nay every single Particle of the very Effluvia (seeing they also attract and gravitate) must in this Supposition emit other secondary Effluvia all the World over ; and those others still emit more, and so *in infinitum*. Now if these things be repugnant to human reason ; we have great reason to affirm, That Universal Gravitation, a thing certainly existent in Nature, is above all Mechanism and material Causes, and proceeds from a higher principle, a Divine energy and impression.

III. Thirdly we affirm ; That, though we should allow, that reciprocal Attraction is essential to Matter ; yet the Atoms of a Chaos could never so convene by it, as to form the present System ; or if they could form it, yet it could neither acquire these Revolutions, nor subsist

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in the present condition, without the Conservation and Providence of a Divine Being.

(I.) For first, if the Matter of the Universe, and consequently the Space through which it's diffused, be supposed to be *Finite* (and I think it might be demonstrated to be so ; but that we have already exceeded the just measures of a Sermon) then, since every single Particle hath an innate Gravitation toward all others, proportionated by Matter and Distance : it evidently appears, that the outward Atoms of the Chaos would necessarily tend inwards and descend from all quarters toward the Middle of the whole Space (for in respect to every Atom there would lie through the Middle the greatest quantity of Matter and the most vigorous Attraction) and would there form and constitute one huge spherical Mass ; which would be the only Body in the Universe. It is plain therefore, that upon this Supposition the Matter of the Chaos could never compose such divided and different Masses, as the Starrs and Planets of the present World.

But allowing our Adversaries, that The Planets might be composed : yet however they could not possibly acquire such Revolutions in Circular Orbs, or (which is all one to our present purpose) in Ellipses very little Eccentric. For let them assign any place where the Planets were formed. Was it nearer to the Sun, than the present distances are ? But that is notoriously absurd : for then

they must have ascended from the place of their Formation, against the essential property of mutual Attraction. Or were each formed in the same Orbs, in which they now move? But then they must have moved from the Point of Rest, in a horizontal Line without any inclination or descent. Now there is no natural Cause, neither Innate Gravity nor Impulse of external Matter, that could beget such a Motion. For Gravity alone must have carried them downwards to the Vicinity of the Sun. And that the ambient Æther is too liquid and empty, to impell them horizontally with that prodigious celerity, we have sufficiently proved before. Or were they made in some higher regions of the Heavens; and from thence descended by their essential Gravity, till they all arrived at their respective Orbs; each with its present degree of Velocity, acquired by the fall? But then why did they not continue their descent, till they were contiguous to the Sun; whither both Mutual Attraction and Impetus carried them? What natural Agent could turn them aside, could impell them so strongly with a transverse Side-blow against that tremendous Weight and Rapidity, when whole Worlds are a falling? But though we should suppose, that by some cross attraction or other they might acquire an obliquity of descent, so as to miss the body of the Sun, and to fall on one side of it: then indeed the force of their Fall would carry them quite beyond

beyond it; and so they might fetch a compass about it, and then return and ascend by the same steps and degrees of Motion and Velocity, with which they descended before. Such an eccentric Motion as this, much after the manner that Comets revolve about the Sun, they might possibly acquire by their innate principle of Gravity: but circular Revolutions in concentric Orbs about the Sun or other central Body could in no-wise be attain'd without the power of the Divine Arm. For the Cause of the Planetary Motions is this. Let us conceive all the Planets to be formed or constituted with their Centers in their several Orbs; and at once to be impress'd on them this Gravitating Energy toward all other Matter, and a transverse Impulse of a just quantity in each, projecting them directly in Tangents to those Orbs. The Compound Motion, which arises from this Gravitation and Projection together, describes the present Revolutions of the Primary Planets about the Sun, and of the Secondary about Those: the Gravity prohibiting, that they cannot recede from the Centers of their Motions; and the transverse Impulse withholding, that they cannot approach to them. Now although Gravity could be innate (which we have proved that it cannot be) yet certainly this projected, this transverse and violent Motion can only be ascribed to the Right hand of the most high God, *Creator of Heaven and Earth.*

But finally, though we grant, that these Circular Revolutions could be naturally attained; or, if they will, that this very individual World in its present posture and motion was actually formed out of Chaos by Mechanical Causes: yet it requires a Divine Power and Providence to have conserved it so long in the present state and condition. We have shewed, that there is a Transverse Impulse impress'd upon the Planets, which retains them in their several Orbs, that they be not drawn down by their gravitating Powers toward the Sun or other central Bodies. Gravity we understand to be a constant Energy or Faculty (which God hath infused into Matter) perpetually acting by certain Measures and (naturally) inviolable Laws; I say, a *Faculty* and Power: for we cannot conceive that the *Act* of Gravitation of this present Moment can propagate it self or produce that of the next. But 'tis otherwise as to the Transverse Motion; which (by reason of the Inactivity of Matter and its inability to change its present State either of Moving or Resting) would from one single Impulse continue for ever equal and uniform, unless changed by the resistance of occurring Bodies or by a Gravitating Power; so that the Planets, since they move Horizontally (whereby Gravity doth not affect their swiftness) and through the liquid and unresisting Spaces of the Heavens (where either no Bodies at all or inconsiderable ones do occur) may

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preserve the same Velocity which the first Impulse impress upon them, not only for five or six thousand years, but many Millions of Millions. It appears then, that if there was but One Vast Sun in the Universe, and all the rest were Planets, revolving around him in Concentric Orbs, at convenient Distances: such a System as that would very long endure; could it but naturally have a Principle of Mutual Attraction, and be once actually put into Circular Motions. But the Frame of the present World hath a quite different structure: here's an innumerable multitude of Fixt Starrs or Suns; all of which are demonstrated (and supposed also by our Adversaries) to have Mutual Attraction: or if they have not; even Not to have it is an equal Proof of a Divine Being, that hath so arbitrarily indued Matter with a Power of Gravity not essential to it, and hath confined its action to the Matter of its own Solar System: I say, all the Fixt Starrs have a principle of mutual Gravitation; and yet they are neither revolved about a common Center, nor have any Transverse Impulse nor any thing else to restrain them from approaching toward each other, as their Gravitating Powers incite them. Now what Natural Cause can overcome Nature it self? What is it that holds and keeps them in fixed Stations and Intervals against an incessant and inherent Tendency to desert them? Nothing could hinder, but that the Outward Starrs with their

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their Systems of Planets must necessarily have descended toward the middlemost System of the Universe, whither all would be the most strongly attracted from all parts of a Finite Space. It is evident therefore that the present Frame of Sun and Fixt Starrs could not possibly subsist without the Providence of that almighty Deity, *who spake*
Mat. 148. *the word and they were made, who commanded and they were created; who hath made them Fast for ever and ever, and hath given them a Law, which shall not be broken.*

(2.) And secondly in the Supposition of an *infinite* Chaos, 'tis hard indeed to determin, what would follow in this imaginary Case from an innate Principle of Gravity. But to hasten to a conclusion, we will grant for the present, that the diffused Matter might convene into an infinite Number of great Masses at great distances from one another, like the Starrs and Planets of this visible part of the World. But then it is impossible, that the Planets should naturally attain these circular Revolutions, either by intrinsec Gravitation or the impulse of ambient Bodies. It is plain, here is no difference as to this; whether the World be Infinite or Finite: so that the same Arguments that we have used before, may be equally urged in this Supposition. And though we should concede, that these Revolutions might be acquired, and that all were settled and continued in the present State and Posture of Things;

yet,

yet, we say, the continuance of this Frame and Order for so long a duration as the known ages of the World must necessarily infer the Existence of God. For though the Universe was Infinite, the Fixt Starrs could not be fixed, but would naturally convene together, and confound System with System: for, all mutually attracting, every one would move whither it was most powerfully drawn. This, they may say, is indubitable in the case of a Finite World, where some Systems must needs be Outmost, and therefore be drawn toward the Middle: but when Infinite Systems succeed one another through an Infinite Space, and none is either inward or outward; may not all the Systems be situated in an accurate Poise; and, because equally attracted on all sides, remain fixed and unmoved? But to this we reply; That unless the very mathematical Center of Gravity of every System be placed and fixed in the very mathematical Center of the Attractive Power of all the rest; they cannot be evenly attracted on all sides, but must preponderate some way or other. Now he that considers, what a mathematical Center is, and that Quantity is infinitely divisible; will never be persuaded, that such an Universal Equilibrium arising from the coincidence of Infinite Centers can naturally be acquired or maintain'd. If they say; that upon the Supposition of Infinite Matter, every System would be infinitely, and therefore equally attracted on all sides; and consequently

frequently would rest in an exact Equilibrium, be the Center of its Gravity in what Position soever: This will overthrow their very Hypothesis; at this rate in an *infinite Chaos* nothing at all could be formed; no Particles could convene by mutual Attraction; for every one there must have Infinite Matter around it, and therefore must rest for ever being evenly balanced between Infinite Attractions. Even the Planets upon this principle must gravitate no more toward the Sun, than any other way: so that they would not revolve in curve Lines, but fly away in direct Tangents, till they struck against other Planets or Stars in some remote regions of the Infinite Space. An equal Attraction on all sides of all Matter is just equal to no Attraction at all: and by this means all the Motion in the Universe must proceed from external Impulse alone; which we have proved before to be an incompetent Cause for the Formation of a World.

And now, O thou almighty and eternal Creator, *having consider'd the Heavens the work of thy fingers, the Moon and the Stars which thou hast ordained,* with all the company of Heaven we laud and magnify thy glorious Name; evermore praising thee and saying; Holy, Holy, Holy, Lord God of Hosts, Heaven and Earth are full of thy Glory: Glory be to thee, O Lord most High.

F I N I S.

A
Confutation of Atheism
 FROM THE
Origin and Frame of the WORLD.

The Third and Last PART.

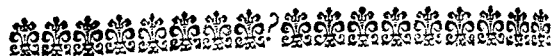
A
S E R M O N
 Preached at
S^t Mary-le-Bow,

DECEMBER the 5th 1692.

Being the *Eighth* of the Lecture Founded by
 the Honourable ROBERT BOYLE, Esquire.

By RICHARD BENTLEY, M. A.
 Chaplain to the Right Reverend Father in God,
 EDWARD, Lord Bishop of Worcester.

L O N D O N,
 Printed for H. Mortlock at the Phoenix in
 St. Paul's Church-yard. 1693.



Imprimatur.

Ra. Barker, R^{mo} in Christo Patri
ac D^{no} D^{no} Johanni Archiep. Can-
tuar. à Sacris Domest.

LAMBHITH,
Maij 30. 1693.



Acts XIV. 15, &c.

That ye should turn from these vanities unto the living God, who made Heaven and Earth and the Sea, and all things that are therein: Who in times past suffer'd all Nations to walk in their own ways. Nevertheless, he left not himself without witness, in that he did Good, and gave us Rain from Heaven, and fruitfull Seasons, filling our hearts with Food and Gladness.

HAVING abundantly proved in our Last Exercise, That the Frame of the present World could neither be made nor preserved without the Power of God; we shall now consider the structure and motions of our own System, if any characters of Divine Wisdom and Goodness may be discoverable by us. And even at the first and general View it very evidently appears to us (which is our FOURTH and Last Proposition,) That the Order and Beauty of the Systematical Parts of the World, the Discernible Ends and Final Causes of them, the *τι βελτιον* or Meliority above what was necessary to be, do evince by a reflex Argument, that it could not be produced by Mechanism or Chance, but by an Intel-

Intelligent and Benign Agent, *that by his excellent Wisdom made the Heavens.*

But before we engage in this Disquisition, we must offer one necessary Caution; that we need not nor do not confine and determin the purposes of God in creating all Mundane Bodies, merely to Human Ends and Uses. Not that we believe it laborious and painfull to Omnipotence to create a World out of Nothing; or more laborious to create a great World, than a small one: so as we might think it disagreeable to the Majesty and Tranquillity of the Divine Nature to take so much pains for our sakes. Nor do we count it any absurdity, that such a vast and immense Universe should be made for the sole use of such mean and unworthy Creatures as the Children of Men. For if we consider the Dignity of an Intelligent Being, and put that in the scales against brute inanimate Matter; we may affirm, without over-valuing Humane Nature, that the Soul of one vertuous and religious Man is of greater worth and excellency than the Sun and his Planets and all the Starrs in the World. If therefore it could appear, that all the Mundane Bodies are some way conducible to the service of Man; if all were as beneficial to us, as the Polar Starrs were formerly for Navigation: as the Moon is for the flowing and ebbing of Tides, by which an inestimable

mable advantage accrues to the World; for her officious Courtesy on dark Winter nights, especially to the more Northern Nations, who in a continual Night it may be of a whole month are so pretty well accommodated by the Light of the Moon reflected from frozen Snow, that they do not much envy their *Antipodes* a month's presence of the Sun: if all the Heavenly Bodies were thus serviceable to us, we should not be backward to assign their usefulness to Mankind, as the sole end of their Creation. But we dare not undertake to shew, what advantage is brought to Us by those innumerable Starrs in the Galaxy and other parts of the Firmament, not discernible by naked eyes, and yet each many thousand times bigger than the whole body of the Earth: If you say, they beget in us a great Idea and Veneration of the mighty Author and Governor of such stupendious Bodies, and excite and elevate our minds to his adoration and praise; you say very truly and well. But would it not raise in us a higher apprehension of the infinite Majesty and boundless Beneficence of God, to suppose that those remote and vast Bodies were formed, not merely upon Our account to be peeped at through an Optick Glass, but for different ends and nobler purposes? And yet who will deny, but that there are great multitudes of lucid Starrs even beyond the reach of the best

best Telescopes; and that every visible Starr may have opaque Planets revolve about them, which we cannot discover? Now if they were not created for Our sakes; it is certain and evident, that they were not made for their own. For Matter hath no life nor perception, is not conscious of its own existence, nor capable of happiness, nor gives the Sacrifice of Praise and Worship to the Author of its Being. It remains therefore, that all Bodies were formed for the sake of Intelligent Minds: and as the Earth was principally designed for the Being and Service and Contemplation of Men; why may not all other Planets be created for the like Uses, each for their own Inhabitants which have Life and Understanding? If any man will indulge himself in this Speculation, he need not quarrel with revealed Religion upon such an account. The Holy Scriptures do not forbid him to suppose as great a Multitude of Systems and as much inhabited, as he pleases. 'Tis true; there is no mention in *Moses's* Narrative of the Creation, of any People in other Planets. But it plainly appears, that the Sacred Historian doth only treat of the Origins of Terrestrial Animals: he hath given us no account of God's creating the Angels; and yet the same Author in the ensuing parts of the Pentateuch makes not unfrequent mention of the *Angels of God*. Neither need we

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be solicitous about the condition of those Planetary People, nor raise frivolous Disputes, how far they may participate in the miseries of *Adam's* Fall, or in the benefits of *Christ's* Incarnation. As if, because they are supposed to be *Rational* they must needs be concluded to be *Men*? For what is Man? not a *Reasonable Animal* merely, for that is not an adequate and distinguishing Definition; but a Rational Mind of such particular Faculties, united to an Organical Body of such a certain Structure and Form, in such peculiar Laws of Connexion between the Operations and Affections of the Mind and the Motions of the Body: Now God Almighty by the inexhausted fecundity of his creative Power may have made innumerable Orders and Classes of Rational Minds; some higher in natural perfections, others inferior to Human Souls. But a Mind of superior or meaner capacities than Human would constitute a different Species, though united to a Human Body in the same Laws of Connexion: and a Mind of Human Capacities would make another Species, if united to a different Body in different Laws of Connexion: For this Sympathetical Union of a Rational Soul with Matter, so as to produce a Vital communication between them, is an arbitrary institution of the Divine Wisdom: there is no reason nor foundation in the separate natures of

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of either substance, why any Motion in the Body should produce any Sensation at all in the Soul; or why This motion should produce That particular Sensation, rather than any other. God therefore may have join'd Immaterial Souls, even of the same Class and Capacities in their separate State, to other kinds of Bodies and in other Laws of Union; and from those different Laws of Union there will arise quite different affections and natures and species of the compound Beings. So that we ought not upon any account to conclude, that if there be Rational Inhabitants in the *Moon* or *Mars* or any unknown Planets of other Systems, they must therefore have Human Nature, or be involved in the Circumstances of Our World. And thus much was necessary to be here inculcated (which will obviate and preclude the most considerable objections of our Adversaries) that we do not determin the Final Causes and Usefulness of the Systematical parts of the World, merely as they have respect to the Exigencies or Conveniences of Human Life.

Let us now turn our thoughts and imaginations to the Frame of our System, if there we may trace any visible footsteps of Divine Wisdom and Beneficence. But we are all liable to many mistakes by the prejudices of Childhood and Youth, which few of us ever correct by a serious scrutiny

tiny in our riper years, and a Contemplation of the *Phænomena* of Nature in their Causes and Beginnings. What we have always seen to be done in one constant and uniform manner; we are apt to imagin there was but that one way of doing it, and it could not be otherwise. This is a great error and impediment in a disquisition of this nature: to remedy which, we ought to consider every thing as not yet in Being; and then diligently examin, if it must needs have been at all, or what other ways it might have been as possibly as the present; and if we find a greater Good and Utility in the present constitution, than would have accrued either from the total Privation of it, or from other frames and structures that might as possibly have been as It: we may then reasonably conclude, that the present constitution proceeded neither from the necessity of material Causes nor the blind shuffles of an imaginary Chance, but from an Intelligent and Good Being, that formed it that particular way out of choice and design. And especially if this Usefulness be conspicuous not in one or a few only, but in a long train and series of Things, this will give us a firm and infallible assurance, that we have not pass'd a wrong Judgment.

I. Let us proceed therefore by this excellent Rule in the contemplation of Our System. 'Tis evident that all the Planets receive Heat and Light from the body of the Sun. Our own Earth in particular would be barren and desolate, a dead dark lump of Clay, without the benign influence of the Solar Rayes; which without question is true of all the other Planets. It is good therefore, that there should be a Sun to warm and cherish the Seeds of Plants, and excite them to Vegetation; to impart an uninterrupted Light to all parts of his System for the Subsistence of Animals. But how came the Sun to be Luminous? not from the necessity of natural Causes, or the constitution of the Heavens. All the Planets might have moved about him in the same Orbs and the same degrees of Velocity as now; and yet the Sun might have been an opaque and cold Body like Them. For as the six Primary Planets revolve about Him, so the Secondary ones are moved about Them, the Moon about the Earth, the Satellites about *Jupiter*, and others about *Saturn*; the one as regularly as the other, in the same Sesquialteral proportion of their Periodical motions to their Orbs. So that, though we suppose the present Existence and Conservation of the System, yet the Sun might have been a Body without Light or Heat of the same kind with the
Earth

Earth and *Jupiter* and *Saturn*. But then what horrid darkness and desolation must have reign'd in the World? It had been unfit for the Divine purposes in creating vegetable and sensitive and rational Creatures. It was therefore the contrivance and choice of a *Wise and Good Being*; that the Central Sun should be a Lucid Body, to communicate warmth and light and life to the Planets around him.

II. We have shewed in our Last, that the concentric Revolutions of the Planets about the Sun proceed from a compound Motion; a Gravitation toward the Sun, which is a constant Energy infused into Matter by the Author of all things, and a projected transverse Impulse in Tangents to their several Orbs, that was impress'd at first by the Divine Arm, and will carry them around till the end of the World. But now admitting that Gravity may be essential to Matter; and that a transverse Impulse might be acquired too by Natural Causes, yet to make all the Planets move about the Sun in circular Orbs; there must be given to each a determinate Impulse, these present particular degrees of Velocity which they now have, in proportion to their Distances from the Sun and to the quantity of the Solar Matter. For had the Velocities of the several Planets been greater or less than they are now, at the same di-
stances

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stances from the Sun; or had their Distances from the Sun, or the quantity of the Sun's Matter and consequently his Attractive Power been greater or less than they are now, with the same Velocities: they would not have revolved in concentric Circles as they do, but have moved in Hyperbola's or Parabola's or in Ellipses very Eccentric. The same may be said of the Velocities of the Secondary Planets with respect to their Distances from the Centers of Their Orbs, and to the Quantities of the Matter of those Central Bodies. Now that all these Distances and Motions and Quantities of Matter should be so accurately and harmoniously adjusted in this great Variety of our System, is above the fortuitous Hits of blind material Causes, and must certainly flow from that eternal Fountain of Wisdom, the Creator of Heaven and Earth, who *always acts Geometrically*, by just and adequate numbers and weights and measures. And let us examin it further by our Critical Rule: Are the present Revolutions in circular Orbs more beneficial, than the other would be? If the Planets had moved in those Lines above named; sometimes they would have approached to the Sun as near as the Orb of Mercury, and sometimes have exorbitated beyond the distance of Saturn: and some have quite left the Sun without ever returning. Now the very con-

§ 20. d. 2.
et p. 20. d. 2.
7. § 1. Plat.

stitution

stitution of a Planet would be corrupted and destroyed by such a change of the Interval between it and the Sun: no living thing could have endured such unspeakable excesses of Heat and Cold: all the Animals of our Earth must inevitably have perished, or rather never have been. So that as sure as it is *good, very good*, that Human Nature should exist; so certain it is that the circular Revolutions of the Earth (and Planets) rather than those other Motions which might as possibly have been, do declare not only the Power of God, but his *Wisdom and Goodness*. Gen. 1.

III. It is manifest by our last Discourse, that the Æthereal Spaces are perfectly fluid; they neither assist nor retard, neither guide nor divert the Revolutions of the Planets; which rowl through those Regions as free and unresisted, as if they moved in a *vacuum*. So that any of them might as possibly have moved in opposite Courses to the present, and in Planes crossing the Plane of the Eccliptic in any kind of Angles. Now if the System had been fortuitously formed by the convening Matter of a Chaos; how is it conceivable, that all the Planets both Primary and Secondary, should revolve the same Way from the West to the East, and that in the same Plane too without any considerable variation? No natural and necessary Cause could so determin their motions; and

and 'tis millions of millions odds to an unit in such a Cast of a Chance. Such an apt and regular Harmony, such an admirable Order and Beauty must deservedly be ascribed to Divine Art and Conduct. Especially if we consider, that the smallest Planets are situated nearest the Sun and each other; whereas *Jupiter* and *Saturn*, that are vastly greater than the rest and have many Satellites about them, are wisely removed to the extreme Regions of the System, and placed at an immense Distance one from the other. For even now at this wide interval they are observed in their Conjunctions to disturb one anothers motions a little by their gravitating Powers: but if such vast Masses of Matter had been situated much nearer to the Sun or to each other (as they might as easily have been, for any mechanical or fortuitous Agent) they must necessarily have caused a considerable disturbance and disorder in the whole System.

IV. But let us consider the particular Situation of our Earth and its distance from the Sun. It is now placed so conveniently, that Plants thrive and flourish in it, and Animals live: this is matter of fact, and beyond all dispute. But how came it to pass at the beginning, that the Earth moved in its present Orb? We have shewed before, that if Gravity and a Projected Motion be

fully

fully proportion'd, any Planet would freely revolve at any assignable distance within the Space of the whole System. Was it mere Chance then, or Divine Counsel and Choice, that constituted the Earth in its present Situation? To know this; we will enquire, if this particular Distance from the Sun be better for our Earth and its Creatures, than a greater or less would have been. We may be mathematically certain, That the Heat of the Sun is according to the density of the Sun-beams, and is reciprocally proportional to the square of the distance from the Body of the Sun. Now by this Calculation, suppose the Earth should be removed and placed nearer to the Sun, and revolve for instance in the Orbit of *Mercury*; there the whole Ocean would even boil with extremity of Heat, and be all exhaled into Vapors; all Plants and Animals would be scorched and consumed in that fiery Furnace. But suppose the Earth should be carried to the great Distance of *Saturn*; there the whole Globe would be one *Frigid Zone*, the deepest Seas under the very Equator would be frozen to the bottom; there would be no Life, no Germination; nor any thing that comes now under our knowledge or senses. It was much better therefore, that the Earth should move where it does, than in a much greater or less Interval from the body of the Sun. And if you place it at any

Newton
ibidem,
p. 415.

any other Distance, either less or more than Saturn or Mercury; you will still alter it for the worse proportionally to the Change. It was situated therefore where it is, by the Wisdom of some voluntary Agent; and not by the blind motions of Fortune or Fate. If any one shall think with himself, How then can any thing live in Mercury and Saturn in such intense degrees of Heat and Cold? Let him only consider, that the Matter of each Planet may have a different density and texture and form, which will dispose and qualify it to be acted on by greater or less degrees of Heat according to their several Situations; and that the Laws of Vegetation and Life and Sustenance and Propagation are the arbitrary pleasure of God, and may vary in all Planets according to the Divine Appointment and the Exigencies of Things, in manners incomprehensible to our Imaginations. 'Tis enough for our purpose, to discern the tokens of Wisdom in the placing of our Earth; if its present constitution would be spoil'd and destroy'd, if we could not wear Flesh and Blood, if we could not have Human Nature at those different Distances.

V. We have all learnt from the Doctrine of the Sphere, that the Earth revolves with a double motion. For while it is carried around the Sun in the *Orbis Magnus* once a year, it perpetually wheels about

about its own Axis once in a day and a night: so that in 24 hours space it hath turn'd all the parts of the Equinoctial to the rayes of the Sun. Now the Uses of this vertiginous motion are very conspicuous; for this is it, that gives Day and Night successively over the face of the whole Earth, and makes it habitable all around: without this Diurnal Rotation one Hemisphere would lye dead and torpid in perpetual Darkness and Frost, and the best part of the Other would be burnt up and depopulated by so permanent a Heat. It is better therefore, that the Earth should move about its own Center, and make these useful Vicissitudes of Night and Day, than expose always the same side to the action of the Sun. But how came it to be so moved? not from any necessity of the Laws of Motion or the System of the Heavens. It might annually have compassed the Sun, and yet never have once turned upon its own Axis. This is matter of Fact and Experiment in the motion of the Moon; which is carried about the Earth in the very same manner as the Earth about the Sun, and yet always shews the same face to Us, not once wheeling upon her own Center. — She indeed, notwithstanding this, turns all her globe to the Sun by moving in her menstrual Orb, and enjoys Night and Day alternately, one day of Hers being equal to about 14 Days and

and Nights of Ours. But should the Earth be deprived of its Diurnal Motion; one half of it could never see the Day, but must eternally be condemned to Solitude and Darknefs. That the Earth therefore revolves about its own Center, is another eminent token of the Divine Wisdom and Goodnefs. †

VI. But let us compare the mutual proportion of these Diurnal and Annual Revolutions; for they are distinct from one another, and have a different degree of Velocity. The Earth rows once about its Axis in a natural day: in which time all the parts of the Equator move something more than 3 of the Earths Diameters; which makes about 1100 in the space of a year. But within the same annual time the Center of the Earth is carried above 50 times as far once round the *Orbis Magnus*, whose wideness we now assume to be 20000 Terrestrial Diameters. So that the annual motion is more than 50 times swifter than the Diurnal Rotation, though we measure the latter from the Equator, where the Celerity is the greatest. But it must needs be acknowledged, since the Earth revolves not upon a material and rugged but a geometrical Plane, that their proportions may be varied in innumerable degrees; any of which might have happen'd as probably as the present. What was it then that prescribed this

*Enquet
de Circu-
lorum vo-
lutioni-
bus.*

this particular Celerity to each Motion, this proportion and temperament between them both? Let us examin it by our former Rule: if there be any *Meliority* in the present constitution; if any considerable Change would be for the worse. We will suppose then, that the *Annual* Motion is accelerated doubly; so that a periodical Revolution would be performed in 6 Months. Such a Change would be pernicious; not only because the Earth could not move in a Circular Orb, which we have consider'd before; but because the Seasons being then twice as short as they are now, the cold Winter would overtake us, before our Corn and Fruits could possibly be ripe. But shall this Motion be as much retarded, and the Seasons lengthen'd in the same proportion? This too would be as fatal as the other: for in most Countries the Earth would be so parched and effete by the drought of the Summer, that it would afford still but one Harvest, as it doth at the present: which then would not be a sufficient store for the consumption of a double Year. But let us suppose, that the *Diurnal* Rotation is either considerably swifter or slower. And first let it be retarded; so as to make (for example) but 12 Circuits in a year: then every day and night would be as long as Fifteen are now, not so fitly proportion'd neither to the common affairs of Life, nor to the exigencies

cies of Sleep and Sufenance in a constitution of Flesh and Blood. But let it then be accelerated; and wheel a thousand times about its Center, while the Center describes one circle about the Sun: then an Equinoctial day would consist but of four Hours, which would be an inconvenient Change to the inhabitants of the Earth; such hasty Nights as those would give very unwelcome interruptions to our Labours and Journeys and other Transactions of the World. It is better therefore, that the Diurnal and Annual Motions should be so proportion'd as they are. Let it therefore be ascribed to the transcendent Wisdom and Benignity of that God, *who hath made all things very good, and loveth all things that he hath made.*

VII. But let us consider not the Quantity and Proportion only but the Mode also of this Diurnal Motion. You must conceive an imaginary Plane, which passing through the Centers of the Sun and the Earth extends it self on all sides as far as the Firmament: this Plane is called the Ecliptic; and in this the Center of the Earth is perpetually carried without any deviation. But then the Axis of the Earth, about which its Diurnal Rotation is made, is not erect to this Plane of the Ecliptick, but inclines toward it from the Perpendicular in an Angle of 23 degrees and a half. Now why is the Axis of the Earth in this particular

cular posture, rather than any other? did it happen by Chance, or proceed from Design? To determine this question, let us see, as we have done before, if This be more beneficial to us, than any other Constitution. We all know from the very Elements of Astronomy, that this inclined Position of the Axis, which keeps always the same Direction and a constant Parallelism to it self, is the sole cause of these gratefull and needfull Vicissitudes of the four Seasons of the Year, and the Variation in length of Days. If we take away the *Inclination*; it would absolutely undo these Northern Nations; the Sun would never come nearer us, than he doth now on the tenth of *March* or the twelfth of *September*. But would we rather part with the *Parallelism*? Let us suppose then that the Axis of the Earth keeps always the same inclination toward the body of the Sun: this indeed would cause a variety of Days and Nights and Seasons on the Earth; but then every particular Country would have always the same diversity of Day and Night and the same constitution of Season without any alternation: some would always have long Nights and short Days, others again perpetually long Days and short Nights: one Climate would be scorched and swelter'd with everlasting Dog-days; while an eternal *December* blasted another. This surely is not quite so good as the present Order of

of Seasons. But shall the Axis rather observe no constant inclination to any thing, but vary and waver at uncertain times and places? This would be a happy Constitution indeed. There could be no health, no life nor subsistence in such an irregular System; by those surprizing Nods of the Pole we might be tossed backward or forward from *January to June*, nay possibly from the *January of Greenland* to the *June of Abessinia*. It is better therefore upon all accounts that the Axis should be continued in its present posture and direction: so that This also is a signal Character of Divine Willdom and Goodness.

But because several have imagin'd, that this skue posture of the Axis is a most unfortunate and pernicious thing; that if the Poles had been erect to the Plane of the Ecliptic, all mankind would have enjoyed a very Paradise upon Earth; a perpetual Spring, an eternal Calm and Serenity, and the Longævity of *Methuselah* without pains or diseases; we are obliged to consider it a little further. And first as to the *Universal and Perpetual Spring*, 'tis a mere Poetical Fancy, and (bating the equality of Days and Nights, a thing of small value) as to the other properties is naturally impossible, being repugnant to the very form of the Globe. For to those People that dwell under or near the Equator, this Spring would be a most pestilent and

and insupportable Summer; and as for those Countries that are nearer the Poles, in which number are our own and the most considerable Nations of the World, a Perpetual Spring will not do their business; they must have longer Days, a nearer approach of the Sun, and a less Obliquity of his Rayes; they must have a Summer and a Harvest-time too to ripen their Grain and Fruits and Vines, or else they must bid an eternal adieu to the very best of their sustenance. For it is plain, that the Center of the Earth must move all along in the *Orbis Magnus*; whether we suppose a Perpetual Equinox, or an oblique Position of the Axis. So that the whole Globe would continue in the same Distance from the Sun, and receive the same quantity of Heat from him in a Year or any assignable time, in either Hypothesis. Though the Axis then had been perpendicular; yet take the whole Year about, and we should have had the same measure of Heat, that we have now. So that here lies the question; Whether is more beneficial, that we should have the same Yearly quantity of Heat distributed equally every day, or so disposed as it is, a greater share of it in Summer and in Winter a less? It must needs be allowed, that we have no Heat to spare in Summer; 'tis very well if it be sufficient for the maturation of Fruits. Now this being granted; 'tis as certain and manifest, that

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1204th Exam.
of Burnetts Theory
p. 70.

an even distribution of the same Yearly Heat would never have brought those Fruits to maturity, as this is a known and familiar experiment, That such a quantity of Fuel all kindled at once will cause Water to boil, which being lighted gradually and successively will never be able to do it. / It is clear therefore, that in the constitution of a Perpetual *Æquinox* the best part of the Globe would be desolate and useless: and as to that little that could be inhabited, there is no reason to expect, that it would constantly enjoy that admired *Calm and Serenity*. If the assertion were true; yet some perhaps may think, that such a Felicity, as would make Navigation impossible, is not much to be envied. But it's altogether precarious, and has no necessary foundation neither upon Reason nor Experience. For the Winds and Rains and other affections of the Atmosphere do not solely depend (as that assertion supposeth) upon the course of the Sun; but partly and perhaps most frequently upon Steams and Exhalations from subterraneous Heat, upon the Positions of the Moon, the Situations of Seas or Mountains or Lakes or Woods, and many other unknown or uncertain Causes. So that, though the Course of the Sun should be invariable, and never swerve from the Equator; yet the temperament of the Air would be mutable nevertheless, according to the absence or presence

absence or various mixture of the other Causes. The ancient Philosophers for many ages together unanimously taught, that the Torrid Zone was not habitable. The reasons that they went upon were very specious and probable; till the experience of these latter ages evinced them to be erroneous. They argued from celestial Causes only, the constant Vicinity of the Sun and the directness of his Rayes; never suspecting, that the Body of the Earth had so great an efficiency in the changes of the Air; and that then could be the coldest and rainiest season, the Winter of the Year, when the Sun was the nearest of all, and steer'd directly over mens heads. Which is warning sufficient to have deterred any man from expecting such eternal Serenity and Halcyon-days from so incompetent and partial a Cause, as the constant Course of the Sun in the *Æquinoctial Circle*. What general condition and temperament of Air would follow upon that Supposition, we cannot possibly define; for 'tis not caused by certain and regular Motions, nor subject to Mathematical Calculations. But if we may make a conjecture from the present Constitution; we shall hardly wish for a Perpetual *Æquinox* to save the charges of Weather-glasses: for 'tis very well known, that the Months of *March* and *September*, the two *Æquinoxes* of Our year, are the most windy and tempestuous,

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the most unsettled and unequable of Seasons in most Countries of the World. Now if this notion of an uniform Calm and Serenity be false or precarious; then even the last supposed advantage, the *constant Health and Longevity* of Men must be given up also, as a groundless conceit: for this (according to the Assertors themselves) doth solely, as an effect of Nature, depend upon the other. Nay further, though we should allow them their Perpetual Calm and Æquability of Heat; they will never be able to prove, that therefore Men would be so vivacious as they would have us believe. Nay perhaps the contrary may be infer'd, if we may argue from the present experience: For the Inhabitants of the Torrid Zone, who suffer the least and shortest recesses of the Sun, and are within one step and degree of a Perpetual Equinox, are not only shorter lived (generally speaking) than other Nations nearer the Poles; but inferior to them in Strength and Stature and Courage, and in all the capacities of the Mind. It appears therefore, that the gradual Vicissitudes of Heat and Cold are so far from shortning the thread of man's Life, or impairing his intellectual Faculties; that very probably they both prolong the one in some measure and exalt and advance the other. So that still we do profess to adore the Divine Wisdom and Goodness for this variety

riety of Seasons, for *Seed-time and harvest, and cold and heat, and summer and winter.* + Gen. 8.

VIII. Come we now to consider the Atmosphere, and the exterior Frame and Face of the Globe; if we may find any tracks and footsteps of Wisdom in the Constitution of Them. I need not now inform you, that the Air is a thin fluid Body, endued with Elasticity or Springiness, and capable of Condensation and Rarefaction. Neither Can you be ignorant, that if the Air should be much more expanded or condensed than it naturally is, no Animals could live and breath: it is probable also, that the Vapors could not be duly raised and supported in it; which at once would deprive the Earth of all its ornament and glory, of all its living Inhabitants and Vegetables too. But 'tis certainly known and demonstrated, that the Condensation and Expansion of any portion of the Air, is always proportional to the weight and pressure incumbent upon it: so that if the Atmosphere had been either much greater or less than it is, as it might easily have been, it would have had in its lowest region on the Surface of the Earth a much greater density or tenuity of texture; and consequently have been unserviceable for Vegetation and Life. It must needs therefore be an Intelligent Being that could so justly adapt it to those excellent purposes. 'Tis

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See Mr.
Boyle of
the Air.

concluded by Astronomers, that the Atmosphere of the Moon hath no Clouds nor Rains, but a perpetual and uniform serenity: because nothing discoverable in the Lunar Surface is ever covered and absconded by the interposition of any clouds or mists, but such as rise from our own Globe. Now if the Atmosphere of Our Earth had been of such a Constitution; there could nothing, that now grows or breaths in it have been formed or preserved; Human Nature must have been quite obliterated out of the Works of the Creation. If our Air had not been a springy elastical Body, no Animal could have exercised the very function of Respiration: and yet the ends and uses of Respiration are not served by that Springiness, but by some other unknown and singular Quality. For the Air, that in exhausted Receivers of Air-pumps is exhaled from Minerals and Flesh and Fruits and Liquors, is as true and genuine as to Elasticity and Density or Rarefaction, as that we respire in: and yet this factitious Air is so far from being fit to be breathed in, that it kills Animals in a moment, even sooner than the very absence of all Air, than a Vacuum is self. All which do inferr the most admirable Providence of the Author of Nature; who foreknew the necessity of Rains and Dews to the present structure of Plants, and the uses of Respiration

Mr. Boyle's
Second
Continuation
of
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to Animals; and therefore created those correspondent properties in the Atmosphere of the Earth.

IX. In the next place let us consider the ample provision of Waters, those inexhausted Treasures of the Ocean: and though some have grudgeth the great share that it takes of the Surface of the Earth, yet we shall propose this too, as a conspicuous mark and character of the Wisdom of God. For that we may not now say, that the vast *Atlantick Ocean* is really greater Riches and of more worth to the World, than if it was changed into a fifth Continent; and that the Dry Land is as yet much too big for its Inhabitants; and that before they shall want Room by increasing and multiplying, there may be *new Heavens and a new Earth*: We dare venture to affirm, that these copious Stores of Waters are no more than necessary for the present constitution of our Globe. For is not the whole Substance of all Vegetables mere modified Water? and consequently of all Animals too; all which either feed upon Vegetables or prey upon one another? Is not an immense quantity of it continually exhaled by the Sun, to fill the Atmosphere with Vapors and Clouds, and feed the Plants of the Earth with the balm of Dews and the fatness of Showrs? It seems incredible at first hearing, that all the Blood

*Lucret.
Et mare,
quod late
terrarum
distincto-
ras.*

in.

in our Bodies should circulate in a trice, in a very few minutes: but I believe it would be more surprizing, if we knew the short and swift periods of the great Circulation of Water, that vital Blood of the Earth which composeth and nourisheth all things. If we could but compute that prodigious Mass of it, that is daily thrown into the channel of the Sea from all the Rivers of the World: we should then know and admire how much is perpetually evaporated and cast again upon the Continents to supply those innumerable Streams. And indeed hence we may discover not only the *Use* and *Necessity* but the *Cause* too of the vastness of the Ocean. I never yet heard of any Nation, that complained they had too broad or too deep or too many Rivers, or wished they were either smaller or fewer: they understand better than so, how to value and esteem those inestimable gifts of Nature. Now supposing that the multitude and largeness of Rivers ought to continue as great as now; we can easily prove, that the extent of the Ocean could be no less than it is. For it's evident and necessary, if we follow the most fair and probable Hypothesis, that the Origin of Fountains is from Vapors and Rain, that the Receptacle of Waters, into which the mouths of all those Rivers must empty themselves, ought to have so spacious a Surface, that as much Water
may

may be continually brushed off by the Winds and exhaled by the Sun, as (besides what falls again in Showers upon its own Surface) is brought into it by all the Rivers. Now the Surface of the Ocean is just so wide and no wider: for if more was evaporated than returns into it again, the Sea would become less; if less was evaporated, it would grow bigger. So that, because since the memory of all ages it hath continu'd at a stand without considerable variation, and if it hath gain'd ground upon one Country, hath lost as much in another; it must consequently be exactly proportioned to the present constitution of Rivers. How rash therefore and vain are those busy Projectors in Speculation, that imagin they could recover to the World many new and noble Countries, in the most happy and temperate Climates, without any damage to the old ones, could this same Mass of the Ocean be lodged and circumscribed in a much deeper Channel and within narrower Shores! For by how much they would diminish the present extent of the Sea, so much they would impair the Fertility and Fountains and Rivers of the Earth: because the quantity of Vapors, that must be exhaled to supply all these, would be lessened proportionally to the bounds of the Ocean; for the Vapors are not to be measured from the bulk of the Water but from the space of the Surface. So
that

Phil. 104.

that this also doth inferr the superlative Wisdom and Goodness of God, that he hath treasured up the Waters in so deep and spacious a Storehouse, the place that he hath founded and appointed for them.

*Nequequam nobis divinitus esse creatam
Naturam rerum, tanto stat prædita culpa.
Præcipiti, quantum celi tigit impetus ingens,
Iussu arctam partem montes Sylvasq; ferarum
posidere, tenent rupes, celsæq; paludes,
Et mare, quod late terrarum distinet oras.
Lucret. lib. 5.*

X. But some men are out of Love with the features and meen of our Earth; they do not like this rugged and irregular Surface, these

Precipices and Valleys and the gaping Channel of the Ocean. This with them is Deformity, and rather carries the face of a Ruin or a rude and indigested Lump of Atoms that casually convened so, than a Work of Divine Artifice. They would have the vast Body of a Planet to be as elegant and round as a factitious Globe represents it; to be every where smooth and equable, and as plain as the *Elysian Fields*. Let us examin, what weighty reasons they have to disparage the present constitution of Nature in so injurious a manner. Why, if we suppose the Ocean to be dry, and that we look down upon the empty Channel from some higher Region of the Air, how horrid and ghastly and unnatural would it look? Now admitting this Supposition; Let us suppose too that the Soil of this dry Channel is covered with Grass and Trees in manner of the Continent, and then see what would follow. If a man could be carried

asleep

asleep and placed in the very middle of this dry Ocean; it must be allowed, that he could not distinguish it from the inhabited Earth; for if the bottom should be unequal with Shelves and Rocks and Precipices and Gulfs; these being now apparel'd with a vesture of Plants, would only resemble the Mountains and Valleys that he was accustomed to before; but very probably he would wake in a large and smooth Plain: for though the bottom of the Sea were gradually inclin'd and sloping from the Shore to the middle: yet the additional Acclivity, above what a Level would seem to have, would be imperceptible in so short a prospect as he could take of it. So that to make this Man sensible what a deep Cavity he was placed in; he must be carried so high in the Air, till he could see at one view the whole Breadth of the Channel, and so compare the depression of the Middle with the elevation of the Banks. But then a very small skill in Mathematicks is enough to instruct us, that before he could arrive to that distance from the Earth, all the inequality of Surface would be lost to his View: the wide Ocean would appear to him like an even and uniform Plane (uniform as to its Level, though not as to Light and Shade) though every Rock of the Sea was as high as the *Pico of Teneriff*. But though we should grant, that the dry Gulf of the

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Ocean

Ocean would appear vastly hollow and horrible from the top of a high Cloud: yet what a way of reasoning is this from the freaks of Imagination, and impossible Suppositions? Is the Sea ever likely to be evaporated by the Sun, or to be emptied with Buckets? Why then must we fancy this impossible dryness; and then upon that fictitious account calumniate Nature, as deformed and ruinous and unworthy of a Divine Author? Is there then any physical deformity in the Fabric of a Human Body; because our Imagination can strip it of its Muscles and Skin, and shew us the scragged and knotty Backbone, the gaping and ghastly Jaws, and all the Skeleton underneath? We have shewed before, that the Sea could not be much narrower than it is, without a great loss to the World: and must we now have an Ocean of mere Flats and Shallows, to the utter ruin of Navigation; for fear our heads should turn giddy at the imagination of gaping Abysses and unfathomable Gulfs? But however the Sea-shores at least should have been even and uniform, not crooked and broken as they are into innumerable Angles and Creeks and In-lets and Bays, without Beauty or Order, which carry the Marks more of Chance and Confusion, than of the production of a wise Creator. This would be a fine bargain indeed; to part with all our commodious Ports and

and Harbours, which the greater the In-let is, are so much the better, for the imaginary pleasure of an open and streight Shore without any retreat or shelter from the Winds; which would make the Sea of no use at all as to Navigation and Commerce. But what apology can we make for the horrid deformity of Rocks and Crags, of naked and broken Cliffs, of long Ridges, of barren Mountains; in the convenientest Latitudes for Habitation and Fertility, could those rude heaps of Rubbish and Ruins be removed out of the way? We have one general and sufficient answer for all seeming defects or disorders in the constitution of Land or Sea; that we do not contend to have the Earth pass for a Paradise, or to make a very Heaven of our Globe, we reckon it only as the Land of our *peregrination*, and aspire after a better, Heb. 11. and a *celestial Country*. 'Tis enough, if it be so framed and constituted, that by a careful Contemplation of it we have great reason to acknowledge and adore the Divine Wisdom and Benignity of its Author. But to wave this general Reply; let the Objectors consider, that these supposed irregularities must have necessarily come to pass from the establish'd Laws of Mechanism and the ordinary course of Nature. For supposing the Existence of Sea and Mountains; if the Banks of that Sea must never be jagged and torn by the

Gen. 1.

impetuous assaults or the silent underminings of Waves ; if violent Rains and Tempests must not wash down the Earth and Gravel from the tops of some of those Mountains, and expose their naked Ribbs to the face of the Sun ; if the Seeds of subterraneous Minerals must not ferment, and sometimes cause Earthquakes and furious eruptions of *Volcano's*, and tumble down broken Rocks, and lay them in confusion : then either all things must have been over-ruled miraculously by the immediate interposition of God without any mechanical Affections or settled Laws of Nature, or else the body of the Earth must have been as fixed as Gold or as hard as Adamant and wholly unfit for Our habitation. So that if it *was good* in the sight of God, that the present Plants and Animals, and Human Souls united to Flesh and Blood should be upon this Earth under a settled constitution of Nature : these supposed Inconveniences, as they were foreseen and permitted by the Author of that Nature, as necessary consequences of such a constitution ; so they cannot infer the least imperfection in his Wisdom and Goodness. And to murmur at them is as unreasonable, as to complain that he hath made us Men and not Angels, that he hath placed us upon this Planet, and not upon some other in this or another System which may be thought better than Ours. Let them
also

also consider, that this objected Deformity is in our Imaginations only, and not really in the Things themselves. There is no Universal Reason (I mean such as is not confined to Human Fancy, but will reach through the whole Intellectual Universe) that a Figure by us called Regular, which hath equal Sides and Angles, is absolutely more beautifull than any irregular one. All Pulchritude is relative ; and all Bodies are truly and physically beautifull under all possible Shapes and Proportions ; that are good in their Kind, that are fit for their proper uses and ends of their Natures. We ought not then to believe, that the Banks of the Ocean are really deformed, because they have not the form of a regular Bulwark ; nor that the Mountains are misshapen, because they are not exact Pyramids or Cones ; nor that the Starrs are unskillfully placed, because they are not all situated at uniform distances. These are not Natural Irregularities, but with respect to our Fancies only ; nor are they incommodious to the true Uses of Life and the Designs of Man's Being on the Earth. Let them consider, that these Ranges of barren Mountains by condensing the Vapors and producing Rains and Fountains and Rivers, give the very Plains and Valleys themselves that Fertility they boast of. Let them consider, that those Hills
and

and Mountains supply Us and the Stock of Nature with a great variety of excellent Plants. If there were no inequalities in the Surface of the Earth, nor in the Seasons of the Year; we should lose a considerable share of the Vegetable Kingdom: for all Plants will not grow in an uniform Level and the same temper of Soil, nor with the same degree of Heat. Let them consider, that to those Hills and Mountains we are obliged for all our Metals, and with them for all the conveniencies and comforts of Life. To deprive us of Metals is to make us mere Savages; to change our Corn or Rice for the old *Arcadian* Diet, our Houses and Cities for Dens and Caves, and our Cloathing for Skins of Beasts: 'tis to bereave us of all Arts and Sciences, of History and Letters, nay of Revealed Religion too that inestimable favour of Heaven, by making the whole Gospel a mere Tradition and old *Cabala* without certainty, without authority. Who would part with these Solid and Substantial Blessings for the little fantastical pleasantness of a smooth uniform Convexity and Rotundity of a Globe? And yet the misfortune of it is, that the pleasant View of this imaginary Globe, as well as the deformed Spectacle of the true one, is founded upon impossible Suppositions. For this equal Convexity could never be seen and enjoyed by any man

man living. The Inhabitants of such an Earth could have only the short prospect of a little Circular Plane about three Miles around them; tho' neither Woods nor Hedges nor artificial Banks should intercept it: which little too would appear to have an Acclivity on all sides from the Spectators; so that every man would have the Satisfaction of fancying himself the lowest, and that he always dwelt and moved in a Bottom. Nay, considering that in such a constitution of the Earth they could have no means nor instruments of Mathematical Knowledge; there is great reason to believe, that the period of the final Dissolution might overtake them, ere they would have known or had any Suspicion that they walked upon a round Ball. Must we therefore, to make this Convexity of the Earth discernible to the Eye, suppose a man to be lifted up a great height in the Air, that he may have a very spacious Horizon under one View? But then again, because of the distance, the convexity and gibbousness would vanish away; he would only see below him a great circular Flat, as level to his thinking as the face of the Moon. Are there then such ravishing Charms in a dull unvaried Flat, to make a sufficient compensation for the chief things of the ancient Mountains, and for the precious things of the last-
ing Hills? Nay we appeal to the sentence of Mankind;

Deut. 33.
15.

vide *Æli-*
an. var.
H. B. lib.
III.

kind; if a land of Hills and Valleys with an infinite Variety of Scenes and Prospects, besides the Profit that accrues from it, have not more of Beauty too and Pleasantness than a wide uniform Plain; which if ever it may be said to be very delightful, is then only, when 'tis viewed from the top of a Hill. What were the *Tempe* of *Theffaly*, so celebrated in ancient story for their unparalleled pleasantness, but a Vale divided with a River & terminated with Hills? Are not all the descriptions of Poets embellish'd with such Ideas, when they would represent any places of superlative Delight, and blisfull Seats of the Muses or the Nymphs, any sacred habitations of Gods or Goddesses? They will never admit that a wide Flat can be pleasant, no not in the very *Elysian*

**Virg. Æn. 6. At pater Anchises penitus convalle iuventi.*
& *ibid. Hoc superate jugum, & ib. Et tumulum capis.*

† Flours worthy of Paradise, which not nice Art
In Beds and curious Knots, but Nature boon
Pow'd forth profuse on Hill and Dale and Plain.

Paradise Lost, lib. 4.

‖ For Earth hath this variety from Heaven
Of Pleasure situate in Hill and Dale.

Ibid. lib. 6.

Let this therefore be another Argument of the Divine Wisdom & Goodness, that the Surface of the Earth is not uniformly Convex (as many think it would naturally have been, if mechanically formed by a Chaos) but distinguished

stinguished with Mountains and Valleys, and furrowed from Pole to Pole with the Deep Channel of the Sea; and that because of the *τὸ βέλτιον*, it is better that it should be so.

Give me leave to make one short Inference from what has been said, which shall finish this present Discourse, and with it our Task for the Year. We have clearly discovered many Final Causes and Characters of Wisdom and Contrivance in the Frame of the inanimate World; as well as in the Organical Fabrick of the Bodies of Animals. Now from hence ariseth a new and invincible Argument, that the present Frame of the World hath not existed from all Eternity. For such an usefulness of things or a fitness of means to Ends, as neither proceeds from the necessity of their Beings, nor can happen to them by Chance, doth necessarily infer that there was an Intelligent Being, which was the Author and Contriver of that Usefulness. We have formerly demonstrated, that the Body of a Man, *Scilicet* 5. which consists of an incomprehensible variety of Parts all admirably fitted for their peculiar Functions and the Conservation of the Whole, could no more be formed fortuitously; than the *Æneis* of *Virgil* or any other long Poem with good Sense and just Measures could be composed by

the Casual Combinations of Letters. Now to pursue this Comparison; as it is utterly impossible to be believed, that such a Poem may have been eternal, transcribed from Copy to Copy without any first Author and Original: so it is equally incredible and impossible, that the Fabrick of Human Bodies, which hath such excellent and Divine Artifice, and if I may so say, such good Sense and true Syntax and harmonious Measures in its Constitution, should be propagated and transcribed from Father to Son without a first Parent and Creator of it. An eternal usefulness of Things, an eternal Good Sense, cannot possibly be conceived without an eternal Wisdom and Understanding. But that can be no other than that eternal and omnipotent God; *that by Wisdom hath*
PROV. 3. *founded the Earth, and by Understanding hath established the Heavens:* To whom be all Honour and Glory and Praise and Adoration from henceforth and for evermore. *AMEN.*

F I N I S.