

THE
THEOLOGICAL
WORKS
OF THE
HONOURABLE
Robert Boyle, Esq;
EPITOMIZ'D.

VOL. II.

By RICHARD BOWLTON, late
of Brazen-Nose College in Oxford.

LONDON,

Printed, and are to be sold by W. Taylor,
at the Ship in Pater-Noster-Row.

MDCCLXV.

John O'Brien

TO THE
Right Honourable
CHARLES
EARL of
ORRERY,

BARON Boyle of Marston, in
the County of Somerset;
One of the Knights of
the most Antient Order
of the *Thistle*, and One of
His Majesty's Most Ho-
nourable Privy Council,
&c.

May it please Your LORDSHIP,

TH E Honourable Mr. Boyle's
Theological Works, which
I Presume to lay before
Your Lordship, as well

The DEDICATION.

as the rest of his Worthy Writings, have obtained such Universal Applause and Esteem amongst all Learned Men, of what Rank soever, that I may the less doubt of Your *Lordship's* Favourable Reception. Nor can a Specimen of so much Vertue, Learning and Knowledg, be ungrateful to Your *Lordship*, who are so eminently endowed with those Excellent Qualities.

And what may in a great Measure render what I offer more acceptable, and excuse my Boldness, as well as bespeak Your *Lordship's* Patronage, is, That the Honourable Author, whose Works have sufficiently spoke His Praise, was not only one of the Greatest Ornaments of Vertue and Learning, but a Worthy Branch of Your *Lordship's* Noble Family, His Noble Extraction was enough to gain him Universal Esteem and Respect; and his Great Endowments of Mind, enriched with all the Shining and
Bright

The DEDICATION.

Bright Additions of Vertue and Universal Learning, were an Additional Honour to that of Quality.

Every Branch of his Family have Signaliz'd themselves by such Excellent Qualities, which were eminently conspicuous in this most Worthy Instance of Goodness, and Pattern of Vertue, that the Great Specimens and Products of his vast Genius, like a bright Star in the Firmament, added to the Lustre of a Glorious Constellation: and the Effects of his Great Knowledg, have not only Attracted the Admiration of all Men of Learning; but his Universal Improvements have made them the Wiser as well as the Better, being both a Great Philosopher and a Good Christian.

The DEDICATION.

And as Vertue and Learning have been constant Attendants, and flowed from every Branch of Your *Lordships* Family, and added to the Honour which was Transferred from a Noble Origin; so the Works of this Great Man, will be a lasting Monument to perpetuate his Memory.

The whole Family have always been remarkable for Vertue and Learning, as well as Loyalty, being Examples of Christianity beyond Common Patterns; both Faithful to their Princes, and Charitable to their fellow Christians. The Honourable Author had always a due Veneration and Regard for his Princes, and was as much esteemed by his Sovereigns; and his Goodness and Liberality, gained him the Prayers of a Multitude, and a Glorious Reward, where what he communicated secretly, is rewarded openly.

But

The DEDICATION.

But not to enlarge upon a Character which is so Extensive ; He had so much solid Learning, such penetrating and quick Thoughts, and so true and sound a Judgment ; and such a happy way of delivering his Thoughts in Writing, that the Improvements he made, though beyond the reach of common Capacities, were easily comprehended, within so large a Sphere of Understanding. Whatever he viewed, his Understanding beheld it in so clear a Light, that his Discoveries spoke his Soul to be something more than Human ; and it might be looked upon as a Wonder, that a Soul *through a Glass darkly* should discern so much. His Improvements in Natural Philosophy, were so great, that he hath left too little undone, for a Rival to parallel him ; and his Theological Works, not only shewed, what steps he took towards Heaven, but discovered to others the way to it.

The DEDICATION.

But so great a Character, is too large to be decyphered in a little Compass, and too bright to be confin'd to a little Room, so that I shall forbear to insist on it.

Nor shall I undertake to draw your *Lordship's* Character, which requires a better Pen, and one better skilled in those Excellent Qualities which adorn Your *Lordship*, and are lively Specimens of their Worthy Original. The Name of *Boyle*, so much esteemed throughout the World, contains a large Character, and the whole Family enlarges the Subject beyond my Capacity.

Your *Lordships* great Abilities, have qualified you to be serviceable to your Country, both in a Publick and Private Capacity; and your good Disposition to-
wards

wards the Government, and for the Publick Good, make you still more capable of serving them both.

But should I undertake to represent Your *Lordships* Excellences, whatever I could say, would be too faint to delineate so Worthy a Character, nor would Your *Lordship* be pleased, to hear those Vertues commended in your self, which you approve and admire in others.

The *Earl of Orrery*, and the Noble Character of Your whole Family, imprints such an *Idea* of Worth and Goodness, that no *Encomiums* can add to it; and it is no small Satisfaction to me, that whilst I represent in Abstract, what the Honourable Author hath communicated to the World at large, it may hope for Your *Lordship's*
Candid

The DEDICATION.

Candid Reception, which will recommend
to the World, both it, and,

My LORD,

Your HONOURS

Most Humble

Obedient Servant,

RICHARD BOULTON.

TO

T O T H E

R E A D E R .

THE Honourable Mr. Boyle's Theological Works, to which his Life is prefix'd, being Published in three Volumes; It is requisite to Advertise the Reader, that before the Bookseller thought it convenient to add his Life: The Epitomy of his Theological Works was Printed in two Volumes, whereof this is the First; but when the Preface to the First and Second Volumes were Printed, it was thought not unreasonable to add his Life to the First Volume, which was designed to be prefix'd to that, and therefore the Beginning of his Life was Printed immediately after the Preface which belongs to this Volum, with an Addition by way of Preface to his Life.

But finding, that his Life swelled the Volume to a greater Bulk than was Expected, and that it would be too thick and inconvenient to bind up both that and the First Volume together, as he first designed, he was obliged to separate his Life from it, contrary to his first Intentions, and Publish it in a Distinct Book; so that this Inconveniency, if any, consequently attended,

To the Reader.

attended, viz. That the Preface to this Volume could not be separated from that without the Extraordinary Charge of reprinting; so that the Preface which should have been before this is prefix'd to his Life.

And we are further to Advertise the Reader, that since this Division of the first Volume happens to fall out contrary to our Expectation; His Life with an Appendix containing an Abstract of one of his Theological Treatises, happens to Challenge the Title of the first Volume, and that which was designed as the First and Second, must consequently assume the Title of the Second and Third; the Whole being Published in three Volumes; so that the Preface belonging to this Second Volume is Styled the Preface to the first Volume, and the Preface belonging to the Third Volume (which is in it's proper place) is Styled the Preface to the Second, for the Reasons above-mention'd, which we have acquainted the Reader with, that he might not be surpriz'd with the Cause of these Accidents, which might otherwise be looked upon as Mistakes, I am,

The Readers,

Humble Servant

Richard Boulton.

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THE
THEOLOGICAL
WORKS

Of the HONOURABLE
ROBERT BOYLE, Esq;
EPITOMIZED.

BOOK I.

PART I.

CHAP. I.

*Containing the Christian Virtuoso, Shewing
that by being addicted to Experimental
Philosophy, a Man is rather assisted than
indisposed to be a good Christian.*

It hath commonly been looked upon as *Experi-*
very strange, that a diligent Cultivater *mental*
of Experimental Philosophy, should be *Philosophy*
a Zealous Embracer of the *Christian Re-*
ligion; and that a great Esteem of Experience, *and Religi-*
and a high Veneration for Religion, should *on compati-*
ble in the
some Per-
fection.

be compatible in the same Person; But from what we shall say, We hope it will appear, that if the Experimental way of Philosophizing contains any things which may Indispose a Man to assent to the Truth, and live according to the Laws of the *Christian Religion*, those few things are abundantly countervailed, by the peculiar Advantages, it affords a Man of a well disposed Mind towards making him a good *Christian*, *Viz.* One whose Qualifications of Mind inclines him to make pious Applications of the Truths he discovers.

But since the popular Prejudices of some Persons, more devout than well informed, may perhaps make them expect better proof than what we deliver may be capable of, we shall briefly promise some things, to clear the way for the principle Points in the following Discourse.

*Experi-
mental
Philosophy
grounded on
Reason and
Experience.*

And first, It may be requisite to take Notice, that the Philosophy which is most in request, and which by some is called the *New*, by others the *Corpuscularian*; by others, the *Real*; by others, the *Atomical*, and by others the *Cartesian*, or *Mechanical Philosophy*, is grounded upon two Foundations, *viz. Reason and Experience*; and although the Peripatetick and some other Philosophies, are also pretended to be grounded upon *Reason and Experience*, yet there is a different use made of these two Principles, by the School Philosophers, and by the *Virtuosi*. Those in forming their *Systems*, making but little use of Experience, and employing but few and obvious Experiments, and vulgar Traditions, usually uncertain, and often false: Their *Physicks* being almost wholly built upon
abstraction

abstracted Reason, or the Rational Faculty endowed only with it's own congenit, or common Notions and *Ideas*, and Popular Notices, common amongst Men that are any thing learned; whereas the *Virtuosi* who understand and cultivate Experimental Philosophy, make a much greater and better use of Experience, and consult it both more frequently and carefully; and instead of being content with the Spontaneous *Phænomena* of Nature, their Experience is enlarged by Experiments purposely contrived; conforming or reforming their Opinions, by proper Reflections on them: so that these *Virtuosi* are peculiarly distinguished by the Title of *Experimental Philosophers*.

Indeed, some who boast much of the Principles of the Corpuscular Philosophy, give themselves up to prophan Discourses and Licentious Lives; and when the knowledge of Nature falls into the hands of a resolved *Atheist* or a sensual *Libertine*, it may be misemployed to oppose the grounds, or discredit and discountenance the Practice of Religion: but if a Man of Probity and Ingenuity, free from Prejudices and Vice, have acquired an insight into Nature, it will dispose him to entertain and improve those Truths of Philosophy, which would naturally incline him to the Sentiments of Religion; for when a Man qualified with good Morals, and who is by them, disposed to apply his Knowledge of the Creatures to confirm his Belief, and increase his Veneration of the *Creator*, hath made a considerable progress in Real Philosophy, it will instead of alienating his Mind from Religious Acknowledgments, furnish him

Prophaneness and Immorality pervert the good Effects of Philosophy.

with weighty and uncommon Motives to confirm the Justness and Reasonableness of his Sentiments. And as one of the first and greatest Experimental Philosophers, Sr. *Francis Bacon* hath Judiciously observed, God Almighty never wrought a Miracle to convince *Atheists*, because his Visible Works were sufficient to them who would rightly apply them, and as *St. Paul* takes Notice, *Rom. i. 20. The visible things of God are clearly seen from the Creation of the World, as Tokens and Effects* (as the Particle *ἐκ τούτου* elsewhere signifies,) and that his *Divinity* and *Eternal Power*, are so evident in the things, that are made, that the *Gentiles* who were lead to the acknowledgment of the true God, only by the light of nature, were excusable for not following that Guide.

Philosophy leads us to the acknowledgment of a supreme Power.

And indeed Experimental Philosophy gives so clear a Discovery of the Divine Excellencies apparent in the Fabrick and Conduct of the Universe, and the Creatures it contains, as may prevent the Mind, from ascribing such admirable Effects to so incompetent and pitiful a Cause, as blind Chance, or the tumultuous Jostling of the Atomical Particles of Senseless Matter, and consequently disposes us to the Acknowledgment and Adoration of a most Intelligent Power and the benign *Author of Things*, to whom such excellent Productions may most reasonably be ascribed. And therefore, if Philosophy be perverted to countenance *Atheism*, it is the fault of the person, not the doctrine; which is to be censured by it's Natural Tendency, and not the ill use bad Men make of it, those prevaricating pretenders to Philosophy

as little understanding the Mysteries of Nature, as they believe those of Christianity ; which Character belongs to most of those *Atheistical* and *Prophane Men*, whose Sensualities, Lusts and Passions darken and seduce their Intellects. Their Immorality is the Original Cause of their Infidelity, nor were they inclined to Irreligion by Philosophy, but having got some smatterings of Philosophy, pervert them to countenance those Irreligious Principles, which they brought with them to the study of it.

But though the study of Philosophy be so innocent in it self, yet it sometimes occasions Young Students in it to converse with such as are *Atheistically* inclined, from whence some Contagious Infection may be feared ; but there will be the less danger of this, if we consider, that there are not so many speculative *Atheists* as some imagin. And I am apt to think, that Mens want of due information or their uncharitable Zeal, hath occasioned them to mistake or misrepresent many for deniers of a *Deity*, that are esteemed such, chiefly because they take uncommon methods in studying his Works and have different Thoughts of them, from those of vulgar Philosophers. But further those who have chosen their Religion not inconsiderately, but upon Mature Deliberation, need not fear those *Virtuosi* as formidable Adversaries, their Physical Arguments being not only very few, but easily answered ; and though some of the chief of them may puzzle such as are less versed in nice speculations, because they represent the assertion of a *Deity*, as a Doctrin encumbered with Inextricable difficul-

*Superficial
Knowledge
and ill
grounded
Principles
subject to
Atheism.*

ries, yet their Objections may be looked upon as not solidly grounded, since the same or not inferior Difficulties may be offered against those *Hypotheses* and Principles, which those *Atheists* do or must allow: And indeed most of those Difficulties, which the *Atheists* so much depend on, are not owing to any absurdity in the Tenets of the *Theists*, but the Nature of the Things; depending partly on the dimness and imperfections of our Human Understanding, and partly on the abstruse Nature that all objects may seem to have to such limited Intellects, especially such as have Infinity involved in the Conception of them; whether the Object be God or Atoms or Duration, or some other thing that is uncausable, finite Understandings being incapable of resolving such difficulties as required a clear Comprehension of what is really Infinite.

The advantages of Philosophy in respect of Christianity.

But to proceed to those particulars, that directly tend to the present Purpose and Scope of our Subject. The First Advantage, Experimental Philosophy affords towards making a Man a Christian, is, that the course of his studies contributes to confirm his belief of the *Existence* and several of the chief Attributes of a God, which is, the first Principle of that Natural Religion, which is previously requisite to confirm our Belief of revealed Religion in General, and consequently of that in particular which is received by Christians.

If we consider the Vastness, Beauty and regular Motions of Celestial Bodies, the admirable Structure of Animals and Plants, and a Multitude of other *Phænomena* of Nature, and how they are subservient to Mankind, they are sufficient to persuade a Rational Creature, That so vast beautiful and regular a *System*, and so admirably contrived a Structure as the *World*, owed it's Origin to an Author supremely powerful wise and good. The Generality of Philosophers and contemplative Men, in almost all Ages and Countries, considering the various *Phænomena* of the Universe, were persuaded of the Existence of a God; thinking it irrational to ascribe so wisely contrived a Fabrick to the accidental Cause of blind Chance, or any other than of a *Divine Being*.

And though God hath not left Himself without *Witness* sufficient to persuade Men, of a moderate degree of Understanding and Attention, to an acknowledgment of his *Being*, by the conspicuous Impressions of his Attributes on several of the more obvious parts of his Workmanship, yet the same objects are able to produce a much stronger Assent and Belief in one who shall carefully and diligently contemplate his Works. The Works of God retain on their very Surfaces the manifest Impressions of the Wisdom and Goodness of their Author, besides a great many more curious and excellent Tokens and Effects of his Divine Artifice in their more obscure and innermost Recesses; which are not to be discovered by the superficial and careless Inspection of unskilful Beholders, but require and deserve the utmost attention of a curious

To prove
the Ex-
istence of
God.

The more
Man knows
the more he
will disco-
ver the Ex-
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God's
Works.

and inquisite as well as skilful Inspector; and in one single Creature there are several admirable *Phænomenas*, which though they escape the Eyes of the Vulgar, may be apparently discerned by a true Naturalist, who besides Curiosity and Attention, hath acquired a competent Knowledge in *Anatomy, Opticks, Cosmography, Mechanicks and Chymistry*; for God Almighty hath comprized so many things in his visible Works, that the clearer the Light of a Man's Understanding is, the more he will be capable of discovering the Exquisiteness of those that are less Obvious; and will more distinctly and clearly discern the Qualities of what are more apparent; and the more wonderful discoveries he makes in the works of Nature and the several Parts of the Universe, he will be furnished and assisted with the stronger Proofs and Arguments to demonstrate *that there is a God*; which is so weighty and important a *Proposition*, that it ought to make us eager in the pursuit of whatever may confirm us in the belief of it, and furnish us with Motives to acknowledge and adore the *Divine Author* of the Universe.

Experi-
mental
more ad-
vantagi-
ous than
School Phi-
losophy.

How much Experimental Philosophy hath the advantage of *Scholasticks* in this matter will appear, if we consider that in the *Peripatetick Schools* the accounts of the Works of Nature are laid down in Abstruse and Mysterious Terms, or such as are esteemed Occult, being ascribed to substantial Forms, and real Qualities; Terms which are applicable on all occasions; and are so uninstruative, as neither to lead a Man into a deeper search into the Structure of Bodies, the manner of their Production, nor how they
operate

operate upon one another; and are consequently insufficient to illustrate the exquisite Wisdom of *the Omniscient Creator*, evident in the peculiar Fabrick of Bodies, their artfully regulated Motions, or their Constituent Parts, by which the Mind of an *Intelligent Contemplation* is furnished with the conviction of *the Being* of a *Divine Maker*, and the acknowledgment of *his admirable Wisdom*. It is but a slender account of the Instruments and Manner of Vision, or the Knowledge of *the Author who formed the Eye*, *Psal. 94. 9*. To say, that the Eye is an Organ of sight, performed by the *Visive Faculty* of the Mind, and will afford but mean Thoughts of the contrivance of the *Organ*, or the skill of the *Workman*, in comparison of the *Ideas* suggested to one who takes Pains to dissect the Eyes of Animals, or study the Books of *Mathematicians*, to understand Vision; it giving us a more Noble *Idea*, when an *Anatomist* separates the several Coats, Humours and Muscles, of which that excellent *Dioptrical Instrument* is made; especially if we consider, the Figure, Size, Consistence, Texture, Diaphaneity or Opacity, Situation and Connection of each of them, and the Coaptation of the whole; and further, if we consider, according to the Laws of *Opticks*, how this *Organ* is adapted to receive the incident Beams of Light, and to dispose them to represent the lively Figures of the Objects of Sight, almost infinitely various.

It is easy to say, *the World is wisely made*, and Men are inclined to say his Creatures are wisely formed, rather as they believe God to be a *Wise Agent*, than any Light received from the Right Accounts of particular Creatures given by the School Philosophy to evince the *Divine Wisdom* of the *Creator*; and though some impressions of God's Wisdom are so conspicuous as to convince a Superficial Philosopher, that the *Author* of such *Works* must be a *Wise Agent*, yet an Experimental Philosopher is better qualified to consider *how Wise*: For it is not a slight Survey, but a diligent and skilful Search into the Works of God, that will be sufficient to engage a Man by a Rational and Effectual Conviction to acknowledge with the *Prophet*, that the *Author of the Universe is Wonderful in Council and Excellent in Working*, Isa. 28. 29.

Experi-
mental hi-
stophy of
use to prove
the Immor-
talit; of the
Soul.

Next to the Existence of a God, the second grand Principle of *Natural Religion* is, *The Immortality of the Rational Soul* which respects the Belief and Expectation of a Future Everlasting State. To embrace this important Truth, several Arguments may be alledged to perswade a sober and well disposed Man; but the most Effectual Arguments to convince a Learned Man may be deduced from the Light of Nature, afforded by Real Philosophy; which gives us such true and distinct Notions of the Body and Mind, and the Essential Differences of their Attributes, that the same thing cannot be both. Which will be more distinctly evident by enumerating several Faculties of the *Rational Soul*, as to understand and form Conceptions of abstracted Things, of Universals, of Immaterial Spirits,
and

and of that most perfect one *God himself* ; also to conceive and demonstrate immensurable Lines and surd Numbers ; to reason and deduce powerful and concatenated Inferences about them ; to express intellectual Notions by Words or instituted Signs ; to exercise free Will and reflect on it's own Actions, both in respect of Intellect and Will. These peculiar Prerogatives of the Mind above those of the External Senses or Imagination, shew the *Rational Soul* to be of a higher Nature than Corporeal ; and consequently, that the Seat of the spiritual Faculties and Operation is a Substance distinct from the Body, and not subject to dye or perish with it.

In this Respect, an Experimental Philosopher hath the advantage of a *Peripatetick*, for knowing the true causes of Putrefaction and other kinds of Physical Corruptions ; and that the destruction of a Body depends on the avolition or recess of some necessary Parts, and such a depraved transposition of the Component Parts of Matter, as is different from the Essential Structure and Mechanical Modification of that Species of Bodies it belongs to, which causes of Destruction can have no place in a *Rational Soul*, which being an immaterial Spirit and a Substance indivisible, can neither admit of an Expulsion nor Transposition of Parts ; and thus being incapable of the Physical Causes of Corruption, ought to be of perpetual Duration, and as a Rational Creature, hath an Internal Power of acting, as appears by free Will ; except it please God to annihilate it ; whereas the modern *Peripateticks*, maintain substantial
Forms,

Forms, or as some of them style them *Semi-Substantia* which in *Apes, Elephants*, and other ingenious Creatures, which they ascribe such Faculties to, differ gradually from those of a *Rational Soul*; which Doctrine seems to weaken and enervate, that chief Physical way of Probation, which proves the Immortality of the Soul; for since those substantial Forms are educed out of the Power or Potentiality of Matter, and their Actions as well as Existence cannot subsist without it, but are destroyed and perish with it, or fall back into the Bosom of Matter, they give too much advantage to *Atheists* to oppose the Immortality of the Soul; for if a more Noble Being than Matter belongs to an *Ape* or *Brute*, that can actuate and inform it, and make it self the Architect of it's own Mansion, and perform all the Functions of a Vegetable Soul, and besides those, see, hear, taste, smell, imagin, infer, remember, love, hate, fear, hope, expect, &c. and yet be mortal and perish with the Body; it will encourage those Enemies of Religion, who are inclined to think the Soul Mortal, because their brutish Lives makes them wish it were, to fancy, human Minds are but somewhat more Noble, though not less Mortal Substantial Forms; as amongst Sensitive Souls, which they acknowledge to be equally mortal, there is a great difference in degrees, that of a Monkey being superior to that of an Oyster.

The Third main Principle of Natural Religion, and consequently of that which is revealed, is a Belief a Divine Providence, which a Man may be much confirmed in by Experimental Philosophy, both as it affords Inducements to the Acknowledgment of it; and on the contrary, of the Improbability of the main Grounds the Denial of Gods Providence is founded on.

*Experimental
Philosophy
useful to
prove di-
vine pro-
vidence.*

A Philosopher, who searches deep into the Nature of things, and observes the excellent Fabrick of the World, the variety of Creatures that compose it and the exquisite contrivance especially of his animated Parts; Their admirable Co-ordinations and Subordinations; The vastness, scarce conceivable swiftness, and yet constant regular and various Motions, of the *Sun, Moon*, and other *Celestial Bodies*; if he further consider, how the Magnetism of the Earth preserves it's poles, and disposes them to look the same way, notwithstanding the Motions of the fluid Parts of it's Vortex; how by it's Vertical Motion running round every twenty four hours, it receives the advantage of the Sun and it's Light, and of all the Constellations of the Firmament, as if the whole *Celestial Region* moved about it; how by the Situation of it, it continues the regular vicissitudes of Day and Night, Summer and Winter, &c. How the several Parts of the Sublunary World are subservient to each other, as well as to Mankind; how curiously the Bodies of Animals are contrived; what different and convenient Provision is made for different Animals, to subsist according to the Institution of Nature, by enabling them as their Natures differ; some being endowed with

Strength

Strength to take their food by force ; others with industry to procure it with subtlety ; some with arms, as horns &c. to defend themselves or offend their Enemies ; some with Wings or swiftness to fly from danger ; others with foresight to prevent them ; others with subtle craft to elude them ; how each is distinguished into two Sexes, and endowed with fit Organs to propagate their Species, and skill and kindness to nourish and train them up, till they are able to help themselves ; how wonderful and curious the progress is in the formation of a *Fœtus* ; how several Animals are endowed with different Instincts, which seem in their Effects to outdo the Efforts of Reason, though added to the Mechanical Structure of the Animal, and argue a respect to things remote from it, as to time, place or both, and perhaps to the grand Fabrick of the World, and the general Oeconomy of Nature ; If these things I say, are considered ; it will be reasonable to deduce from thence these three Conclusions.

*Proved by
three In-
ferences.*

First, That so immense, beautiful, well contrived and admirable a Machine as the World, cannot be the result of Chance and a tumultuous Concourse of *Atoms*, but must be produced by a Cause exceeding Powerful and Wise.

Secondly, That the wise Author of it, would not neglect so great a Work, but would still maintain and preserve it, regulating the swift Motions of such stupendious great Globes, and great Masses of Matter, lest by any Irregularity they should disorder the System of the Universe, and reduce it to a confused *Chaos*.

Thirdly,

Thirdly, As it is not out of the Power of the Divine Author to preserve and govern his own Works, so he thinks it not below his Dignity & Majesty to extend his Care to the meanest of his Creatures, providing not only for the Nourishment, but propagation of Spiders and Ants themselves. And since the Truth of the Assertion, *That God governs the World he hath made*, appears from the constancy, regular and rapid Motions of Celestial Bodies, as well as the artful and necessary propagation of all sorts of Animals, Gods Providence may well extend to the Noblest of his Works Mankind, since those that deny it as derogatory to his Majesty and Happiness, acknowledge, that at the first Formation of things, the great Author must not only extend his care to the System of the Universe in general, but also to contrive all the minute and various Parts not only of the greater and more perfect Animals, but such small and abject ones, as, Flies, Ants, Fleas, &c. which, being propagated from Eggs laid by the Female, cannot be thought the result of Putrefaction, whence it may reasonably be inferred, that it is not below the Dignity and Majesty of the Creator to be concerned for the Welfare of particular Animals.

And since it seems, that Man is the Noblest of *Other Animals* God's Works, and many of them seem to be *made for his Use*, he being as the Psalmist says, *Wonderfully made, and Curiously wrought*; and since God hath endowed him with a Rational Soul, and an Intellect to contemplate the Works of Nature, to convince him of the Existence of a God, and his several *Attributes*;

Attributes; and since God hath planted in him Principles and Notions to make him sensible, that he ought to adore God, the Supreme Lord and Governour of the World, the most perfect of Beings, and the Author of his own Nature, and all his Enjoyments; natural reason will dictate, that he ought to have a just veneration of the Excellencies of that *Divine Being*, and express a just Gratitude for his Benefits, by Humiliation in the presence of his Greatness and Majesty, by an Awe of his Justice. and a dependance on his power and goodness, when he constantly endeavours to serve and please him, and by several Acts of Natural Religion suitable and due to his several Divine Attributes, which it hath lead us to the knowledge of.

Two Arguments drawn from the Corpuscular Principles.

To what hath been already said, I shall add, that from the Corpuscular Principles, a double Argument may be drawn for Divine Providence.

And *First*, according to the *Cartesians*, all Local Motion is adventitious to Matter, being first produced and still continued immediately by God, so that *He* concurs to the Actions of each Particular Agent, and consequently his Providence extends to all of them.

And *Secondly*, since the *Cartesians* believe, the Rational Soul to be an Immaterial Substance distinct from the Body. We may infer, that Providence extends to each particular Man, since whenever an *Embryo* is duly organiz'd to receive a Rational Mind, God is pleased to create One, and unite it with that Body. In which action the Divine Power must directly be concerned, since it appears not how an Immaterial

material Substance can Physically be drawn into an *Embryo* though duly organized ; nor how by any Mechanical Tye an Immaterial Substance can be united so firmly with a Corporeal one, where there are no Organs for it to take hold of or to be detained by ; nor is it conceiveable, how a mere Body can occasion Pain, &c. by it's own action, or by endeavouring to act on an Immaterial Spirit. Nor will it elude God Almighty's Providence to say, that after the first formation of the Universe, all things are done by the settled Laws of Nature ; for besides the difficulty of accounting for the first formation, and that the Laws of Motion, did not necessarily arise from the Nature of Matter, but depended upon the Will of the Divine Architect ; a Law may be looked upon as a Moral not a Physical Cause, by which an Intelligent and free Agent is bound to regulate it's Actions ; but inanimate Bodies know not what a Law is, and therefore their Actions are produced by real Power, though an Agent, which is Intelligent, may regulate the Exertions of their Actions by settled Rules

But *Fourthly*, The Experimental Knowledge of God's Works may upon two other Accounts Other Arguments from Natural Philosophy. conduce to establish the Belief of a Providence.

And *First*, when we consider what Various, Strange and Admirable Structure, and Instincts &c. God hath furnished even Brutes and Plants with, to obtain and assimilate their food, and to defend, maintain, and secure their Lives, and propagate their Species, it will help to persuade
C us,

us, that so wise an Agent who can command so many Methods and Ways to accomplish his designs, and often employs them for the Preservation of Plants and Beasts, cannot want Methods to accomplish his wise and just designs in relation to Mankind, either to execute his Menaces, or to fulfil his Promises.

Secondly, If we consider the different ends to which God's Works, especially such as are animated, seem designed, with respect to their own Welfare, or their Usefulness to Man, and with how much Wisdom our Creator hath made them fit for those Respective Ends, we cannot think, so Wise and Benign a Being hath left so noble a Creature, destitute of means to procure his own Welfare and true ends, except it be his own neglect. And since Man is endowed with Reason to tell him, that God is both his Maker and continual Benefactor, and that consequently he may justly require and expect Worship and Obedience; and since the same Rational Faculty may tell him, that it may well become the Majesty and Wisdom of a God, as the Sovereign of the World, to prescribe Laws to his Creatures, who are Capable of Understanding as well as of Obeying them, and Glorifying their Author; and further since his own Mind, if not vitiated, will convince him that he owes a Veneration for the Author of his Being, and his continual Benefactor, and since his Conscience upon these accounts will convince him that he owes all the Duties of Natural Religion: And *Lastly*, Since his Reason will tell him, that his Soul is Immortal, and therefore capable as well as desirous to be ever-
lastingly

lastingly Happy, he must consequently be desirous of a Supernatural discovery of what God would have him believe or do. And therefore if he shall be informed by Supernatural Revelation, what manner of Worship and Obedience would be most acceptable to him, and God shall encourage him by promises of that Felicity, to both of them; he cannot but thankfully acknowledge such Proceedings, becoming the Transcendent Goodness of God, without any Derogation from his Majesty and Wisdom.

By such Reflections as these, a Philosopher who takes notice how Gods wonderful Providence is exercised for the Welfare of inferior and irrational Creatures, will have an advantage above the ordinary sort of Men unskilful in the Works of Nature, to confirm his belief, grounded upon Historical and the other Proofs of Christianity: That God, hath vouchsafed to Man an explicate and positive Law, threatening stubborn Transgressors with severe Penalties, and offering rewards to the sincere Obeyers of his Will, suitable to his own Greatness and Goodness. Thus the Consideration of God's Providence in his Dispensation of Corporeal Things may dispose a well disposed Contemplator, and be his Rational Guide, from Natural to revealed Religion.

From what hath been said it appears, that Experimental Philosophy may contribute to dispose a well prepared Mind to Natural Religion.

*A Philo-
sopher's tem-
per of mind
disposes
him to Chri-
stianity.*

But to proceed, an Experimental Philosopher may be further disposed to embrace Religion, since his Genius and the Course of his Studies are concerned in such abstracted Truths, as do but little gratify Mens Ambition, Sensuality, or other Inferiour Passions and Appetites, but only entertain his Understanding with Manly and Spiritual Satisfaction, the result of those clear and noble Truths which are it's genuine Objects and Delights; whereas those that are averse to Religion contemn and undervalue all such Truths as gratify not their Passions or Interests. For though Physical or Mechanical Truths are not of akin to Religion, yet they conduce to Establish or Illustrate Natural Theology; which Revealed Religion, and consequently that of Christians must be founded on. Besides, he that is accustomed to value Truths of an inferior kind, will be better inclined to value Divine Truths, which are of an Inestimable and Eternal Advantage.

*And the
Method of
his
Thoughts.*

And further both the Temper of Mind most proper for Philosophizing, and the Method of his Thoughts, dispose his Mind the better to the Entertainment of revealed Religion. Indeed in the vulgar Philosophy where men think it satisfactory to ascribe things to substantial Forms, Nature or some real Quality, whether manifest or occult, without proving, that there are such Causes, or explaining how they produce the *Phænomena*, it is natural for a Man to have a great opinion of his Knowledge and to be puffed up with it. But a Philosopher that cannot satisfy himself, nor hath the Vanity to impose upon others, an *Hypothesis*, which does
not

not Intelligibly declare the manner of the Operations of the Causes he assigns, will often find it difficult to do so, and will not only find, that he still wants further Information, but will be glad to seek and admit it, and think it welcome. Besides the litigious Philosophy of the Schools only furnishes it's Disciples with such Arguments as are not proper to satisfy the Person they are employed against, nor leave the Adversary without an Answer as probable as the Objection, upon which account Men that have more Wit than Love of Truth will be able to continue a discourse as long as they have a mind to do it. And if such a trivial way of arguing is not able to convince a Man of Judgment, nor himself that uses them, so if he disputes with a witty Adversary, they will be able to elude not only his Arguments, but leave their own as liable to Objections; for in the Aristotelian Philosophy, there are several Stated Questions, as, whether the Elements retain their distinct Nature in a mixed Body? Whether, Celestial Orbs are moved by Intelligences? Which have been disputed from Age to Age, and are like to continue as long as that Philosophy lasts. But a Philosopher that Reasons Mathematically, and uses the clear Testimony of his Senses, and is well vers'd in Experiments, discerns the Cogency of his Argument, and finds more satisfaction in Embracing demonstrated Truths, than in the vain-glory of disputing subtly against it, slighting Dialectical Subtleties, and School Tricks.

*The Pursuit
of Experi-
ments as
well as Spe-
culation
useful to
promote
Theology.*

The Studios Search of Truth by Experiments as well as Speculation may further dispose a Man for Theology, by making him willing and fit to search after deep and unobvious Truths. Whereas the most of our Libertines are of *Pilates* Humour (who when he had asked *what is Truth?* would not stay for an Answer :) and decline the search of such Truths as require a serious and settled Application of Mind, being a sort of superficial Wits that seek no further than the outside of things, and being easily tired with the Thoughts of one, pass quickly to another, which they as quickly forsake. Such sort of Men are most applauded, often because the greatest Number are as superficial as themselves, and as seldom make good Philosophers as good Christians; for though the Arguments that evince the Truth of Natural Religion are not abstruse, yet the chief Ones which prove the Existence and Providence of God, and the Souls Immortality, are of so Philosophical a Nature, if not Metaphysical, as not to be clearly understood by one unaccustomed to attentive and lasting Speculations. But a Man inured to the search of Truth, serious Meditations, and intricate and laborious Experiments will prosecute his End through the greatest Difficulties that attend the clearing of those Notions or Matters of Fact, on which solid Arguments for Natural or Revealed Religion are founded: whereas a superficial Wit is like an ordinary Swimmer, who can reach but such things as Float upon the Water; but an Experimental Philosopher like a skilful Diver will make his way to the Bottom and fetch up Pearls and other precious

pretious Things, which are concealed from other Mens reach and sight.

From what hath been said it appears, how serviceable Experimental Philosophy may be to Religion in general. And I must confess that the respect I pay to Experience conduces in a great Measure to the Assent I give to the Truth of Religion in particular, which is recommended by a great Number of Arguments improper to be insisted on in this Discourse, yet our design requires us to consider a few of them somewhat particularly.

And *First*, since the three grand Arguments which evince the Truth of the Christian Religion, are the excellency of it's Doctrine, worthy to have proceeded from God; the Testimony of Divine Miracles, wrought to recommend it; and the great Effects produced in the World by it. Two of which are grounded upon Matter of Fact, and most likely to prevail upon those that have a Veneration for Experience, and are disposed to frame such pious reflections as it Warrants and leads them to make. By which I mean neither, a Libertine, though ingenious, nor a Sensualist, though curious; nor an Empirick or Vulgar Chymist, who looks upon nothing as Experimental, wherein Chymistry, Mechanicks, &c. are not employed; and is more concerned in making Experiments than Reflections on them, aiming rather to produce Effects, than to discover Truth: But such a one as gains Experience both from his own Tryals, and other matters of fact and is disposed to make such reflections on them, as may confirm his sentiments of Natural Religion, and promote his submission and adherence to the Christian Religion.

*Experience
used in se-
veral sen-
ses.*

An Experimental Philosopher thus disposed, with the divine assistance, will in the two last Arguments proposed, find great Motives to the belief of Christianity. But before we proceed to any of these Topicks it may be requisite to represent, that the word Experience may admit of several Senses, whereof one is more comprehensive than another, and also of several Divisions and Distributions: Being sometimes used in contradistinction to Reason, comprehending not only those *Phænomena*, which Nature or Art offers to our outward senses, but those we perceive to pass within our selves, or all those ways we attain Knowledge without the help of abstracted Reason; but as it may serve our present design we shall propose such a Distribution of the Signification of it, as may clear the Extent of that Term, and divide it, for Distinctions sake, into *Immediate* and *Vicarious* Experience, or perhaps more commodiously into *Personal Historical* and *Supernatural* (which may also be styled *Theological*) referring the first of the three Members of this Distribution to *Immediate Experience* and the two others to *Vicarious*.

*Being Per-
sonal.*

That we call *Personal Experience*, which a Man acquires by his own Sensations, or the Exercise of his Faculties without the Intervention of External Testimony: by this we know that the Sun is bright, Fire hot, Snow cold, and white; that for want of Nourishment we are hungry; that we hope for future good; love what we Judge good, and hate what we think evil; and discern the difference betwixt a Circle and a Triangle.

By

By Historical Experience we mean such as is *Historical* conveyed to us immediately or mediately by ^{or}, the Relation or Testimony of others. By this we know, that there were such Men as *Julius Caesar*, and *William the Conqueror*, and that *Joseph* knew that *Pharoah* had a Dream, which the *Egyptian* Wise Men could not expound.

Theological Experience tells us, what, *sup-Theological* supposing there was some Divine Revelation, God is pleased to declare of himself his Attributes, his Actions, his Will or Purposes ; whether immediately as he did to *Job* and *Moses*, and constantly to our *Saviour*, or mediately by the Intervention of Angels, Prophets, Apostles, or inspired Persons, as he did to the *Israelites*, and the Primitive Christians, and to us by the Testimony of the Scriptures.

By Personal Experience we know, that there are Stars in the Heaven ; by Historical, that a new star was seen by *Tycho* and other Astronomers in *Cassiopea* in the Year 1572. And by Theological, that the stars were made on the Fourth Day of the Creation.

Having thus proposed the Distribution of *The Proof* Experience, we shall next apply it to Matters ^{of Experi-} of Fact which recommend the Credibility of the ^{ence in two} Christian Religion in the following ^{Propositions.} Propositions.

Prop. I. *We ought to believe divers things upon Prop. I. the Information of Experience, whether immediate or vicarious, which without that Information, we should Judge unfit to be believed or antecedently to it, did actually Judge Contrary to Reason.*

This

*As it re-
lates to
Persons.*

THis may be understood either of Persons or Things: And first as to Persons, we are frequently obliged to alter the Opinions we had entertained upon probable Reasons, of the Fidelity or Prudence or Justice or Chastity, &c. of this or that Person, which may be evinced by our own Observation, the Records of History or the Tribunals of Judges; where Persons looked upon, Intelligent Persons as honest, virtuous and holy, have been found false to their Friends, perfidious to their Princes, disloyal to their Husbands or Wives, unjust to their Neighbours, and guilty of Sacrilege, Perjury, &c. And in Courts of Justice, a great many are found guilty of Civil Transgressions, as Theft, Cheats, Forgery, False witness, Adultery, &c. who before they were strictly inquired into passed for honest; we also find some Guilty of Sins against Nature, as Sodomy, Murders of Parents by their Children, and the contrary, nay Self Murder too, contrary to the most universal and radicated Law of Nature *Self Preservation*. But to proceed to make good the proposition in the Sense we intended it, as it relates to things.

*As it re-
lates to
things.*

Did not Experience convince us, who would believe that such a black Powder, used in Guns or Mines, should throw down Stone Walls, blow up Castles and Rocks? or that two or three Grains of *Opium* should stupify a Human Body, force Sleep, and relieve violent Pains in the Cholick or Gout, in Persons of quite different Ages, Sexes and Constitutions, where the Distempers are occasioned by quite different Causes? who would think that so small a
Quantity

Quantity of Poyson as adheres to the Tooth of a Mad Dog, scarce discernable by Sense, should continue in the Body of a Person not only Days or Months but Years, after the slight hurt is quite healed up ; and though it had continued all that time without doing any hurt, yet it at the last should pervert the whole Oeconomy, and occasion that sort of Madness called *Hydrophobia*.

But besides those Truths which depend on Causes so disproportioned to the Effect, and would seem improbable if not evinced by Experience, there are several which would otherwise seem contrary to Reason. For since Gravity is the Principle that determines the Tendency of Bodies towards the Centre, one would think it reasonable to believe, that as one Body was heavier than another, it's Tendency should be quicker; hence the Peripateticks assert, that two Homogenous Bodies, one weighing ten Pounds & the other one, being let fall from an equal weight, the descent of the one should be ten times quicker than the other, whereas Experience teaches that Bodies of very unequal weights let fall together, will either fall together or so near, that no difference can be perceived.

It is commonly allowed, that as stronger Sounds may be heard at a greater distance, so if at equal distance the stronger passes through the Air with greater Velocity; but this appears otherwise by Experience, weaker Sounds being as swiftly transmitted through the Air as strong ones, the noise of a Musket at equal distance being heard as soon as that of a Canon: And in some Cases it hath been observed, that a smaller

ler Loadstone hath drawn away a peice of Iron from a larger and stronger. It is likewise looked upon as consonant to Reason, that Cold according to it's Degrees condenses Water, and that Ice is Water reduced into a less compass; but by Experience it appears that Ice is rather Water expanded, and takes up more Room.

*Arguments
from Historical
Experience.*

But to extend the Argument, as we designed, to that sort of Experience, which is not immediate but vicarious, that is, not Personally our own, but communicated by others; Modern Naturalists have admitted several Conclusions, which abstracted Reason never led them too, but were repugnant to plausible Arguments, and the received Notions and Axioms of Philosophers. It was unobserved before the time of *Aristotle*, as well as contradicted by his Arguments, that there was Generation and Corruption in the Heavens, yet I as well as others have observed great Spots on or near the Surface of the Sun, generated and dissipated again, which being unobserved by others must be taken on the Credit of those that have seen them, and much more must they do so, who believe Celestial Comets, though the Vulgar Philosophers teach, that all Comets were Sublunary; and the height of the famous Comet in *Cassiopeæ* observed by *Tycho*, is admitted and believed upon the Credit of his Veracity, and his Skill in observing the Motions of that Light, and particularly it's having no Parallax.

To Conclude, that great Experimental Philosopher Sr. *Francis Bacon*, dividing it into three Parts, calls the second Pretergeneration,
as

as Monsters, Prodigies, &c. which being but Accidents, those which happened in other times and places, must be believed on the Credit of others; yet these by affording new instances of Natures Power, and uncommon ways of working, and by overthrowing or limiting received Rules and Traditions, make a considerable and instructive Part of Natural History. But to proceed to,

Prop. II. *That we ought to have a great and particular regard to those things that are recommended to our belief, by what we have reduced to Real, though Supernatural Experience.* Prop. II.

FOR the most Rational Men have admitted upon Testimony, those things for Truths, which appeared not to be so from the Nature of the Things themselves, nay would rather seem strange irrational and unfit to be believed. And as in those Points, where Experience overrules what might seem agreeable to Reason in things Natural or Civil, where Reason is esteemed a proper Judge, many of the Points recommended by Supernatural Experience relate to things of a Superior Order, and which are not to be adequately estimated by the same Rules; and some as the Essence and Manner of Existence, and peculiar Attributes of the Infinite God, require such a Knowledge of what is infinite as exceeds our limited Intellects.

But further, as a Witness is better qualified for such, the greater Credit and stronger Assent is given to his Testimony, we ought to give the highest degree of Assent to what is taught

Arguments drawn from Theological Experience.

us by God, by those Persons that have been commissioned to declare his Mind : for the Knowledge of, and the Faithfulness in, delivering what is witnessed, being required in a Witness, Divine Testimony must be stronger than Human, being warranted by the Veracity of God and his boundless Knowledge: it being impossible for him to be deceived, or that he would deceive us. And as it hath often pleased God who is so wise an Agent to deliver his Testimony, by unpromising Persons as Instruments, it is worthy our Notice, that an Experimental Philosopher often increases his Knowledge by the Observations and Practice of mean or illiterate Persons, as Shepherds, Plowmen, &c. they being conversant with the Works of Nature, and therefore may not be against receiving the Doctrin of Revealed Religion, if taught by honest Men, who had the Opportunity of knowing what they delivered, though Fishermen or of another mean Profession.

*Improved
by an Expe-
rimental
Philoso-
pher.*

And an Experimental Philosopher will exercise his Diligence and Attention in reading the Writings of the Apostles, Prophets, and Evangelists, with as much Willingness and Advantage, notwithstanding the meanness of their Condition or of their secular Employments ; and will be instructed in the Grand and Catholick Articles of Religion, which are so necessary and useful : and instead of disdaining such Tutors, will strive to improve his Knowledge of Divine Things by those Hints and Passages which an ordinary Reader may overlook, and expect no Instruction from ; for as the Fruitfulness of the Scriptures are not discerned, when transi-
ently

ently handled by Sacred Writers, the Docility of a *Virtuoso* will incline him to put a great deal of Trust in the Testimony of inspired Writers, such as Christ and his Apostles, whether usually taken Notice of or not, when they relate to supernatural Objects; especially if God and his Purposes be comprized, since most of these things are only known by Revelation, and others best known by it: And to ground his Belief on such things on the Relation and other Testimonies of those that were *Eye Witnesses and Ministers*, Luke, 1. 2. will be reputed of such advantage in the Knowledg of Divine Things, as consulting with Navigators or Travellers will inform him of the State of *America*, or any other Foreign Country; for a Sailor or a Traveller, may give Information of a great many Things, which are not to be learned out of the Writings of a Philosopher or Geographer, and may not only inform him of many things consonant to their former received Notions, but assist him to correct several Errors, which before were looked upon agreeable to the Dictats of those Sciences. And as one that had a Friend intimate with *Columbus*, might depend more upon his Informations of the History of those Parts, than a hundred Scholastics who took their Knowledge from *Aristotle*, *Pliny*, *Ælian* and the like; so we may put more Confidence in the Accounts of Sacred Things, given by the Apostles, and constant Attendants of him, that lay in the *Bosom of God his Father*, John 1. 28. and Authorized them to declare to the World *the Councel of God*, Acts 20. 27. as far as he thought necessary for Man to know.

Indeed

*Theological
Experience
more useful
than Expe-
rimental
Philosophy.*

Indeed the Knowledge of the more imperfect ones may be rectified by the Tryals of ingenious Men, but though the innate Notions of the Attributes & Will of God received from Nature, ought to be esteemed, yet Theological Experience of such abstruse things is more excellent & compleat, for as the *Depths of God*, 1 Cor. 1. 10, are like the Depths of the Ocean, some of which are not to be Fathomed, or if they are, the Discovery is but of a little Gravel or Mud or Shells, which adheres to the Tallowed end of the Plummet, and but very imperfect Accounts to be given of the shallower Parts of the Sea, whereas a skilful Diver will tell us, whether the bottom be muddy, &c. and further will give a Topography of that Submarine Land, and of such surprizing Particulars, as would otherwise have lain undiscovered or thought of; and the Information given by a Plummet are not much shorter of that by a Diver, than Philosophical Informations of Divine things are, of those which are taken out of Holy Scriptures. And when I consider, what Convictions I have received from the Accounts of Divers, of some Opinions I had of Submarine Parts, my Opinions about Divine Matter, which before seemed Probable, have with less reluctancy, been rectified and altered, by fuller Discoveries made by Divine Preachers.

*Arguments
drawn from
Miracles
necessary to
prove the
Christian
Religion.*

To confirm what we have said, Arguments grounded upon the Miracles which might be offered to recommend the Christian Religion may be absolutely necessary to evince, that a Religion which Men believe to be Supernaturally Revealed, and consequently the Christian, really

really proceeds from God. For though the Excellency of the Christian Religion, and other concurring Motives may argue it likely and worthy to proceed from God, yet that the Doctrin comes from him by Supernatural Revelation is chiefly to be ascertained by the Miracles wrought by Christ and his Disciples, to confirm, that the Doctrin they were commissioned to Preach was his, being owned by him. But since, these were wrought in the First Ages of the Church, we at so great a distance can have no knowledge of them by our Senses or immediate Observation, but must believe them upon Historical Experience, transmitted by the Testimony of those *Eye Witnesses and Ministers*, of what they relate, *Luke 1. 2.* And for as much as we are not averse to believe strange Prodigies, as Celestial Comets, vanishing and re-appearing Stars, islands founded by Subterranean Fires in the Sea, darknings of the Sun for many Months together, Earthquakes extending several Miles in Length, &c. upon the Credit of Human History, that most Authentick Experience, which hath peculiar concurring Circumstances to recommend it; particularly the Death of the First Promulgators of it, who cheerfully suffered to attest the Truth of it, the spreading success also of those Miracles which authorized it. To which we may add, that it is much more likely, that the Author of Nature should make strange Alterations of it's Course, than that Nature her self should produce such Prodigies, by throwing her self out of her Course.

Since Miracles then are so necessary to the Confirmation of Revealed Religion, it may fur-

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*Philosophy
helps Men
to judge of
the Mira-
cles.*

ther dispose an Experimental Philosopher to receive the Christian Religion, that it helps him to judge right of those strange Miracles which are proposed and believed as such; for the Knowledge he hath of the Operations of Nature in Mathematicks, Mechanicks, and Chymistry, will help him to distinguish betwixt those things that are Strange and Surprizing, and those that are Miraculous: So that he will distinguish betwixt Natural Majick and the Effects of Divine Power; and will discover those subtle Cheats and Collusions of Impostors, which for want of the Knowledge of true Philosophy, have eluded a great Many, even Learned Men, and drawn them into Idolatrous, Superstitious, or other Erroneous Tenents and Practices.

On the other hand, a Philosopher knowing what may be expected from the Mechanical Powers of Matter, will discern that several things will not be produced without the Intervention of an Intelligent Superior Power; which will assure him that several Effects are truly Miraculous, which in the Vulgar Philosophy may be ascribed to other Causes, attributing Stupendious unaccountable Effects to Sympathy, Antipathy, *Fuga Vacui*, Substantial Forms, or an Infinitely Wise and Potent Power; which they call Nature; This is looked upon as a kind of Goodness, whose Power is almost boundless, *Galen* comparing it to that of God, saying he could not do such a thing, because Nature could not, censuring *Moses* for speaking as if he were of another Mind. *Gal de Usu part. Lib. 12. Chap. 14.* We might add several Pas-
sages

pages out of other Authors, who not knowing the Extent of the Powers of Matter and Motion, in the ordinary Course of things, ascribe such Effects to Natural Causes as are beyond their reach, without the Assistance of Agents of a Superior Order.

But to what we have said of the Dispositions, a Man may have by Experimental Philosophy to admit the Histories of Miracles, and to believe God's Ability to perform his Promises or execute his Menaces, it may be answered, that those who are so well acquainted with the Mysteries of Nature and her ways of Working, may be inclined to think that what other Men call Miracles are but the Effects of her Power. To answer which, it will be sufficient to observe, that to determine a particular performance Supernatural, it needs not surpass the whole power of Physical Agents, but only the power of that Cause, or Causes, from which the Effect must in Reason proceed, if purely Natural or Physical. As that a Fisherman should speak other Languages than his own, is not at all above the power of Nature, if he employs his time in Learning it; But that a Number of Illiterate Persons, should suddenly become Linguists, and in an hours time speak Intelligibly to a Variety of Nations in their respective Languages, as the Apostles and their Companions did on the day of Pentecost, see *Acts* 11. was a Gift in the Circumstances of Place, Time and Persons may be concluded Supernatural or Miraculous.

Having said thus much of Miracles as an Argument for Christianity, we shall proceed to

another afforded by Experience taken from the successful Propagation and Effects of Christianity in the World.

*The swift
Progress of
Religion
an Argu-
ment of its
Divinity.*

It is very well known, that in less than half an Age, the Christian Religion was spread over a great part of the known World ; so that in a few Years the Gentiles Apostle could tell the Roman, that their Faith *was spoke of throughout the whole World, Rom. 1. 8.* And Tertullian as well as other famous Writers in the Second Century, Witness, what numerous *Profelytes* the Gospel gained in several Kingdoms ; and the Narratives given by *Eusebins, Socrates, Scho-last.* and other Historians, give a Real Philosopher a more advantageous *Idea* of the Efficacy of that Excellent Doctrin, than the Eloquence of Orators The Mighty progress of this Religion thus ascertained by Experience, will be an Argument to perswade the belief of a Religion so prevalent, to an Experimental Philosopher, especially, if he consider, that the first Promulgators of it were but fishermen or illiterate Persons, having neither Force of Arms nor Power to compel Men to receive it, nor could they allure Men with the hopes of Riches, or Honour, nor influence their minds by Philosophical Subtlety ; they used no Ornaments of Rhetorick, but treated of the Sublimest and most abstruse Subjects, in a plain and unaffected style, like Lovers and Teachers of Truth. The force of this Argument will still be strengthened, if we consider the Nature of the Doctrin, being neither adapted to the natural Apprehensions, or received Opinions of Men ; and instead of complying with their corrupt Affections or

Temporal

Temporal Interest, prescribed such Mortifications and strict Rules of Virtue, as could neither be urged by the Power of a Legislator, nor the endeavours of a Philosopher ; yet the belief of it was attended with such Predictions of Hardships and Persecutions, as might rather fright them from, than allure them to receive it. It will be a further Argument to urge it's Divinity, if we consider it's Progress, notwithstanding the Opposition of the Heathens, engaged in Polytheism, Idolatry, Magical and Superstitious Rites, and shameless Debaucheries, which made Part of their Worship. The *Jews* likewise corrupted by the Leaven of the *Pharisees*, the Impious Errors of the *Sadducees*, and the general mistakes, concerning the Person, Office and Kingdom of the *Messias*, as well as their fondness of their vain Traditions and numerous Superstitions, were very unlikely to become *Proselytes* ; especially, since they could not be so, without being hated and despised, their Possessions confiscated, their Bodies imprisoned and tormented, as well as their Lives cruelly and ignominiously taken away. Nay further, the secular Magistrates did not only punish them, but their venerated Priests, subtle Philosophers and eloquent Orators, employed all their Learning and Wit to render this Religion Odious and Ridiculous, as well as the Embracers of it miserable. The *Martyrs* and other *Proselytes* were also represented as *Atheists*, guilty of Incest, and inhumanly shedding of the innocent Blood of Infants. If we reflect on these manifold difficulties, and the great Progress of Religion, notwithstanding

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this,

this, Historical Experience will be sufficient to convince a Philosopher that such disproportion'd Effects to the Visible means, could not be produced without the peculiar Assistance, & Extraordinary Blessing of God, who Commissioned those successful Preachers. And that the Christian Doctrin was promoted by a Divine and Supernatural Assistance will further appear from the Nature, Tendency and Effects of it, it teaching, that there was but one God; and that he alone is to be Worshipped; that Devils are wicked, malicious and miserable Apostates; Haters of Mankind, and hated by God; that their vitious Rites were abominable to God, and should be destroyed, the Worshipper of Christ casting the Devil out of his Temples, as well as Men's Bodies and their Veneration.

*The Truth
of the Chri-
stian Reli-
gion confir-
med by the
Prophets.*

And that which further adds to the Confirmation of the Christian Religion, is, that the quick Progress and Success of it was foretold both by the Prophets in the Old Testament, as well as the Author and Promulgators of the New. Whence it appears, that the wonderful Success of the Gospel was not the Effect of Chance, but determined before-hand by Divine Providence, as a Work which God thought worthy to be accomplished in a Wonderful manner by his peculiar assistance. That the Triumphs of the Gospel were fore-told by the Old Prophets, appears from their Writings, several of which are referred to, by the Writers of the New Testament, inspired with the same Prophetick Spirit. And if we consult, *Gen.* 49. 11. *Isa.* 11. 2. *Psal.* 2. 8. *Mal.* 1. 11. It will appear, that those Antient Writers foresaw

foresaw the Conversion of the Gentiles of several Nations, to the Worship of the true God of *Israel*, in the time of the *Messiah*. And though God did not think fit, that the Predictions of the Heathen as well as the Jewish Nation's Conversion to the Christian Religion, should be set forth in a conspicuous and pompous manner; yet several Passages in the New Testament, though not so evidently, foretel the wonderful Progress of the Gospel, and the large Extent of the Kingdom of the *Messias*. Thus Christ foretels, that his Apostles should be Witnesses not only in *Judea* and *Samaria*, but to the utmost parts of the Earth. And in the 24. *Mat.* 14. which refers to the end of the World or rather the destruction of *Jerusalem*, it is foretold, that before *the End* (of the Policy of the *Jews*, as well as the Mosaick Oeconomy) *the Gospel of the Kingdom* (of the *Messias*) *should be Preached in the Whole World*, in the sense of the term *World*, *πάντα τὴν οἰκουμένην*, which was then in use, and made use of by the Evangelist *St. Luke* 11. 1. to signify the Roman World or Empire. To which we may add, that ten or twelve Fishermen were very unlikely to convert all Nations to the Worship of a Crucified Person, if their Master, who Commissioned them, had not foreseen the Success as well as the Truth of the Doctrin he sent them to Preach. The quick Propagation of the Christian Religion from such despicable Beginnings, is intimated sufficiently by what he hath said of a little Leaven hid in a great Quantity of Meal, & the Mustard-seed that soon grows to a considerable bigness & height in the hot and firtle Country of *Judea*; which

*Why the
Propagation
of the
Gospel
ought to be
subjoyned
to that Ar-
gument
drawn from
Miracles.*

Parables were soon manifestly fulfilled; and it may add to the Authority of the Predictions, that at the time when they were made, there appeared but small Probability of their being made good. There was small Probability that what a poor Virgin betrothed to a Carpenter pronounced, *viz.* that *all Ages should call her Blessed*, should come to pass. And when *Mat. 26. 13.* a private Woman in a Village was foretold, that a censured Action of Hers should be reported throughout the World to Her praise, such a promise could scarce be ventured upon by a sober Person, who would be loath to expose his Credit, except assured of the Truth of the Event, by a Spirit of Prophecy. But since such improbable Events have come to pass, it may be sufficient to convince any unprejudiced Man, that the Authors of such Predictions, had the Spirit of Prophecy; and that such Events were the Effects of Providence, and not of Chance or Policy. Which Prophecies of unlikely Events; fulfilled by improbable Means, may be looked upon as Supernatural; and may have a peculiar advantage above other Miracles, since the Proofs of such Predictions still continue, and are as visible as the extent of the Christian Religion, and are still more and further accomplished by the Conversion of Multitudes of Infidels in several Regions of *America*.

So that, if such Miracles, as the Turning Water into Wine; or darkning the sun, when the Moon was full, at the Crucifixion of Christ, may be looked upon as *Transient* Miracles; Predictions which are accomplished may be looked upon as

Permanent

Permanent ones; and their difference set forth by the different States of the Mosaick Manna, *Exod.* 16. 14. 21. 26. 33 for though both that which fell in the Wilderness, and that which was preserved in a Pot before the Testimony, were produced Supernaturally; yet the former continued not above two or three Days, whereas the latter remained a visible Miracle for many Ages.

From what we said, it appears, why the Propagation of the Gospel may be subjoyned to the Argument drawn from Miracles; which will appear further Reasonable, since the Preachers of it appeal to Miracles, as Proofs of their Doctrin: nor is it likely, that such Persons should expect to preach their Doctrin successfully against so many powerful disadvantages, were it not confirmed by Miracles: or, if such an uneasy and persecuted a Religion should be propagated without Miracles, the Propagation would be a Miracle it self, and as fit as another to confirm the Religion so admirably propagated.

From what hath been said it may appear, that a Philosopher may be furnished with better Arguments, for the proof of the Christian Religion than another, who is unskilful, being grounded on the Miracles and wonderful Success of it in the World. But since Moral Demonstration is necessary for the Proof of Revealed Religion; and it is requisite, that the Arguments be not only good in their kind, but some Qualifications in the Minds of those that are to be convinced are also required.

We

Experi-
mental
Philosophy
disposes
Mens minds
to receive
the Christi-
an Religion.

We shall therefore proceed to shew, that Experimental Philosophy disposes the Minds of Men to receive due Impressions from such Proofs as Miracles, &c. afford the Christian Religion; for by being accustomed to give clear Explications of the *Phænomena* of Nature, and discovering the weakness of Superficial Solutions, a great and ingenuous Modesty of Mind will be gradually acquired; by which Intellectual as well as Moral Virtue, he will be both inclinable to, and desirous of, further Information, about such things as are obscure and obscure; and will be unapt to esteem that for a standard of Truth, which is so imperfectly informed and narrowly limited as abstracted Reason. And though a Vulgar Philosopher, who is wont to ascribe the Obscurest Things in Nature to Substantial Forms, Real Qualities, Sympathy, Antipathy, &c. and other Terms, which may be applied without being understood, and by which he pretends to explain all things in Nature, may think he is so wise, as to understand every thing, and that he must neither hope, nor desire to learn from Men below the Rank of his first Teachers, and that whatever is disagreeable with his Philosophy cannot be true or cannot be done; yet an Experimental Philosopher, who is sensible of what difficulties remain in the most clear Conceptions and Explications of Corporeal things, will not, by thinking his Knowledge about Supernatural Things is already sufficient, refuse or neglect, whatever Informations may increase his Knowledge which frame of Mind is requisite for a Student in Theology, where

Docility

Docility is of as much Advantage for the Discovery of Truth, as Caution is requisite for the avoiding of Errors : Since the Goodness as well as Knowledge of the Divine Teacher is such as may easily afford Instructions to a Mind qualified to receive genuin Informations, which the Scripture liberally offers, and will not deceive him who employs fervent Prayers and due Care not to mistake them.

An Assiduous Conversation with the Works of God, so exquisitely framed and admirably contrived, will assist a skilful considerer to discover so many things reasonable or true, which upon the Grounds of less competent Reasons, seemed false or unpracticable ; that he will gradually acquire such a Habit of receiving Opinions, unfriendly to Religion, upon such Terms, as to reform or discard them upon further Information. And as he is disposed to submit to such, when he meets with it, so he will be inclined to expect or receive Conviction, upon subsequent Information, being accustomed to mend or lay aside his former Opinions, though they seemed agreeable to his Judgment, when he first entertained them. As though it seems visible, that the *Discus* of *Venus* is totally Luminous, in every respect to the Sun, yet when by the Telescope, he discovers her to have her Full and Wain like the Moon, this further Observation will convince him of the Error of his first Observation by the Naked Eye. And it may be doubted, whether Mathematical, and other Demonstrative Parts of Philosophy, advantage the Mind more, by a Customary Assistance in strictly examining things offered
as

as Truths, and to prove the Truth of what Man knows, to others, or by enabling him to discern the force of a good Argument, and assent to Truths when clearly evinced, which before appeared not to be so.

Strong prejudices against Truth the Cause of Infidelity.

But to apply this to our present Purpose, is evident from several passages in Scripture that Multitudes continue in a Criminal Infidelity, through a great conceit of their own Knowledge, and a Disposition to be influenced rather by prejudices, than the strongest Arguments to remove them. And that this Docility will dispose a Philosopher the better to receive Truths in respect of revealed Religion, is probable, since the things he is accustomed to be convinced of his Ignorance in, lye within the Sphere of Nature and Philosophy; where several things which Revealed Religion contains, as the Decrees, Purposes and Promises of God, and his manner of Existence and Working, are Sublimier and more Abstruse and of a higher Nature than Physical Ones, and cannot be attained too sufficiently by the Light of Nature. And though a Naturalist may examine more strictly the particular Proofs offered for Revelation, that is no disadvantage to the Christian Religion, which is true; The real Truth not requiring Credulity but Docility. To illustrate this, if a peice of Gold be offered to an Ordinary Man, and to a Refiner the latter will examine it more strictly, and instead of acquiescing in the Stamps, Colour Sound, &c. will try it by the Touch-Stone Cupel, *Aqua Fortis*, &c. yet when he finds it stand these Proofs, he will readily acknowledge

it good, and be more fully convinced than the other Person, whose want of Skill will still make him distrust; and though he may more easily be perswaded, yet he will be harder to be fully convinced. So an Experimental Philosopher, though he may more strictly examine Miracles, Prophecies, and other Supernatural Proofs, alledged to prove Revealed Religion; yet discerning the Characteristics of Truth, he will be more fully convinced than an unskilful Person, who for want of good Judgment will be diffident still, and afraid of being imposed upon.

If to what hath been said of the Usefulness of Natural and Supernatural Experience, it be objected, that by ascribing so much to that, nothing is left for Reason to do, but to Obey. To this it may be answered, that though Reason cannot Act as an Interested Party, yet it may as an Unbyassed Judge; Rational Philosophers altering or renouncing their Opinions as good Reason shall incline them, finding their Opinions contradicted by Experience, or conformable to it. And though *Aristotle* was the first of the Antient Philosophers, that perverted Physicks by making them comply with Logical and Metaphysical Fancies, yet he allows, that in the Knowledge of Nature, Reason ought to concur with the *Phænomena*, and the *Phænomena* with Reason; and that plausible Ratiocinations without sensible Observations is a weakness of Mind. To clear the late Objection further, whether the Understanding be like Blank Paper, and receives all it's Knowledge through the Senses, or not, it is plain that

*How far
Reason may
be Service-
able.*

that the Notions, which are either Congenit with the Understanding, or so soon and easily acquired, that several Philosophers think them innate, are but few, in respect of those which are required to judge right, of any thing that occurs in Natural Philosophy or Theology. For in Divine Nature, besides Power, Wisdom & other Attributes, there are a World of Contrivances, Laws, and other things, that exceed the Number and Variety, which the dim and limited Intellect of Man could extend to by forming or compounding of *Ideas*, not to mention the Patterns afforded by the Works and Declarations of God.

And as the Prerogative of Divine Knowledge is so great, it must needs follow, that Men's Opinions and Notions of the Works and Mind of God, suggested by abstracted Reason, must frequently be very deficient, and often Erroneous. The Old Philosophers, though Men of strong Natural Parts, were led, by the misuse of Reason, to maintain such things about the Works and Author of Nature; as we, by the help of Experience and Revelation, discern to be false or extravagant.

The Insufficiency of abstracted Reason.

And here it may not be amiss to subjoin, that abstracted Reason is but of a narrow Sphære; and extends to but a few of those things which are knowable, whether human or divine, by the help of further Experience or Supernatural Revelation; for the Knowledge of abstracted Reason is so narrow & deceitful, that he who seeks for Knowledge only in himself, will be Ignorant of the greatest part of things, and hardly escape being mistaken in a great part of those things he knows. Yet

Yet Reason is to be allowed it's just Prerogatives; and Experience is a kind of Assistant to Reason, since it supplys the Understanding with Informations; yet the Understanding is still the Judge, and hath the right to examine and make use of Testimonies presented to it. The outward Senses are Instruments of the Soul, by which Objects are received, but not judged of by them. Nor do Philosophers trust their Eyes to teach them the Nature of Visible Objects, but only use them to perceive what they exhibit, and the Changes that happen to it self by the Action of it. And as the Senses may deceive us, as when a Square Tower appears, at a Distance, round; and a Stick, half emersed in Water, crooked, through a double Medium; our Reason is to judge, whether none of the requisites of Sensation be wanting; which is not to be always to be distinguished by Reason, but requires Philosophy; and even then Reason is to judge, what Conclusions are to be deduced from the Information of the Senses and Experience: So that Reason is said to be corrected by Experience, though Reason it self upon the Information of Experience corrects the Judgment she had made before.

*The just
Prerogative of
Reason.*

To Illustrate the Use of Reason, we may consider, that as a Judge, who comes to hear Causes in a strange Country, brings general Notions and Dictates of Justice and Equity with him; but before he hears & examines Witnesses, hath but an Imperfect Knowledge of many things requisite to make a right Judgment, and may be apt to entertain Prejudicate Opinions;

ons; but when the Matter and Circumstances are cleared, he is able to pass his Judgment, according to the Light of Reason: where the Witnesses gave him the Information, which might occasion him to lay aside any Prejudicated Opinions. And what is said of Natural Experience with Relation to the Understanding, may be applicable to Supernatural Revelation; where the Understanding is to Judge, whether the Testimony be Divine, and how far it ought to be believed. So that Reason is not robbed of her Prerogative of Judging, tho' her own Dictates are Assisted by Natural or Supernatural Experience, which she is obliged to make Use of, and by receiving a fuller Account of those things by Information, to rectify, if there be occasion, her former less mature Judgments.

So that when Abstracted Reason is esteemed sufficient in It self, it is only exalted in Words. But when Reason is addressed to Physical and Theological Experience, and directed to consult them, and take Informations from them, it is exalted in Effect; the former flattering it, whilst the latter takes the right way to improve it.

CHAP.

CHAP. II.

Containing Reflections upon a Theological Distinction according to which it is said, that some Articles of Faith are above Reason, but not against Reason.

THE Distinction of things which are *above Reason, but not against it*; hath hitherto been so obscurely made, as not both to prevent the Exceptions of Infidels, or render them more groundless, or to obviate the Surmises of those, who have looked upon it only as an Evasion to elude some Objections, which are made against the Mysteries of the Christian Religion.

To obviate the Difficulties which may arise about so important a Distinction we shall endeavour. 1. To shew in what Sense the Distinction is to be understood. 2. That it is not an Arbitrary Distinction, but grounded upon the Nature of Things.

But *First*, It may be requisite to declare in what sense we understand it. By such things then as are said to be above Reason, we mean such Notions as Reason, without the Assistance of Supernatural Reason, would never discover; whether comprehensible to our finite Capacities or not. And by things *contrary to Reason*, I mean such Conceptions as are both undiscov-
In what Sense the Distinction is to be understood.
 erable by mere Reason; and also, when understood, evidently appear repugnant to some Principle or Conclusion of right Reason. To
E
illustrate

illustrate this we shall propose the following Comparison. If then a Diver should ask you, what you can see on a deep Sea? you would answer, you could see the depth of some Yards and no further; if he should ask further, whether you could see what lay at the bottom of the Sea? you would answer no. If then the Diver should bring up Muscles or Oysters with Pearls in them, you must acknowledge they lay beyond your Sight, and consequently must argue a Common though not Personal Imperfection, and that the Pearls have the genuine Colour and Lustre of such Gems; but if the Diver should pretend each of these Pearls, as big as a Tennis Ball, or larger than the shell it was inclosed in; not Round, but Cubical; and not White or Orient, but Black or Scarlet, you would conclude his Assertion undiscernable by your Eyes, and contrary to the Testimony of your Eyes, and would therefore deny what he asserted, because it would argue your Sight imperfect and False, though the Organ was qualified to receive it's proper Object.

Things above Reason of two kinds.

But to illustrate the matter more perfectly, the things that are said to be above Reason are not all of one sort, but of two different kinds; some of which Reason by it's own Light cannot discover, others which it cannot comprehend when proposed.

And *First*, There are several Truths in the Christian Religion, which Reason alone would never have found out, nor thought of, such as depend on the free Will and Ordination of God; as that the World was made in Six days; that Christ should be born of a Virgin, and

and his Person united in two such distant Natures, as Divine and Human ; that the Bodies of good Men should be raised, and changed, becoming glorified and equal to Angels. I might reckon more Truths of this kind, and some which we want Mediums to discover, which might be intelligible if duly proposed ; for as by the different Lengths of Telescopes more and more Stars may be discovered, no doubt but there are several more, beyond the reach of our discovery for want of more reaching Telescopes.

But besides these Mysterious Truths, which are too remote to be detected by Human Reason, there are some which may be said to be above Reason. As several Truths delivered by Revelation, which would not only lye undiscovered by Reason, but when proposed in the most proper Terms, surpass our dim and bounded Reason ; either as they are not clearly conceivable by our Understanding, as the Infiniteness of the Divine Nature, and it's Perfections ; or inexplicable by us, as how God Creates a Rational Soul, or how an Immaterial Substance can act on a human Body, and be acted on by it ; or asymmetrical, which cannot be reconciled with other things, which are, or are esteemed true ; as the Divine Prescience of future Accidents, and the Liberty of Mans Will.

But as of Things above Reason there are *Different* two kinds, so there may be difference in the *Degrees of* degrees of their Abstruseness ; some things sur- *those kinds.* passing our Understandings, at the first sight, or before they are attentively looked into ; as

whatever is infinite in Extent or Number. Others, the Notions of which, at first considered in gross and indefinitely, do not perplex our Understandings, but may be intelligibly employed in ordinary Discourse, yet upon a deeper Inspection, if we prosecute the utmost successive Inferences, we fall into inextricable differences, if not repugnances. As when we discourse of Place, Time, and Motion, we have general indeterminate conceptions of them, by which we understand one another, if we speak of them; yet if we attentively consider the difficulties discovered by such an Inspection, we shall argue our selves into a Number of as great difficulties, which will equally oppress the Reason of each Adversary.

From what hath been said, it may appear, that if any Theological Proposition, be granted to surpass our Reason, we cannot pretend to believe it, without discovering, that we do not sufficiently consider what we say: Since we Exercise an Act of Understanding, in embracing what we do not understand, nor have a Notion of: Whence it appears, that in several Cases, Men may have Notions of things very different, some being more Obvious and Superficial, and others more Philosophical and Accurate. Of these two different kinds of Conceptions, we have offered some Instances of the Notions Men have of Time and Place; which though familiar Objects, are each of them so abstruse, that *Aristotle* himself complains of the difficulty of giving a clear and unexceptionable Notion of Place, and St. *Austin* confesses his disability to explicate the Nature
of

of Time. And the same difficulties will hold as to the Divisibility of Quantity; as to Local Motion, and some other Primary things, which differ as to kind, though not in their abstruseness. From whence it appears that we may speak of some things we acknowledge to be above our Reason, on some Account or other; the imperfect Notions we have of those things, tho' dim, yet may be of Use, and somewhat Intelligible, though what they relate to in another respect, transcends our Understanding, since an Attentive Considerer may find something not clearly comprehensible, or that surpasses our Reason.

But to proceed, to what we have made this Digression from; any one Opposite Instance may serve to shew, that a Mystery or any other Article of Faith is above Reason, but not contrary to it; for if there be one Truth acknowledged as such, yet not distinctly comprehensible, it cannot be pretended that the distinction is not intelligible, or is absurd; and it will further justify the Expression if it appear neither Impertinent nor Arbitrary; but grounded upon the Nature of Things; for though we admit two sorts of things to be above Reason, yet they need not be always contrary to Reason.

As for the first sort of things said to be above Reason, Men may be unable without better Instruction to discover some Truths, and yet, when discovered by a more knowing Instructor, be able to understand the disclosed Propositions by their own Reason, and approve them to be true. The Intellect of Man being furnished with no greater share of Knowledge than it's

The Distinction shewn to be grounded on the Nature of Things.

Of the first sort of things above Reason.

own Endeavours give it, or acquire, it would be a great unhappiness to Mankind, if they should reject as repugnant to reason, what was not discovered by our own Natural Light, and deny our selves the advantage of Communications from more discerning Intellects, even amongst Rational Souls of the same Nature; for though a Man but little acquainted with Geometry would of himself never discover, *that the Diamater of a Square is commensurable with the Sides*; yet when a skilful Methematician proves it by Demonstration, his Disciple by his new Instructed Reason will understand it, and give his assent, since as *Plato* said, *he was rather a Beast than a Man, that would deny it.* And indeed it would be very unreasonable to pronounce a Proposition repugnant to Reason, it being Extrinsiccal and Accidental to a Proposition's Truth or Falsehood, that we never heard of it, or did not find it out our selves, but had the Knowledge communicated by another. But tho' we are unable to find a thing out our selves, yet it hinders not our Reason to understand it when proposed, nor to discern it agreeable to the Dictates of right Reason. Nay these Intellectual Assistances may not only enlighten the Mind, but gratify it, by affording such Informations as agree with and compleat former imperfect Notions. As when an Antique Medal is shewn an unskilful Scholar, that cannot read the whole Inscription, part being consumed by Time or Rust, so that he cannot understand it, if a skilful Medalist instructs him he may know some Letters he could not read before, and understanding the Sense of the Inscription,

Inscription, may approve it genuin and congruous to what it is suitable to. And though some Philosophers are startled at the Name of *Mystery*, and suspect some Illusion under that obscure Term, yet several things relating to the Old Testament, are called Mysteries in the New, because so under the Mosaick Dispensation, yet they are so no longer, since they are explained by the Apostles. The calling of the Jews into the Church of God is called a Mystery by their Apostle, because it *had been hid from Ages and Generations*, Col. 1. 26. but now *it's made manifest to his Saints*, Eph. 4. 5, 6. And the same tells the *Corinthians*, 1 Cor. 15. 1, 51, 52. that he *shews them a Mystery*, which he explains by telling them, that all Pious Believers shall not die, because that those *that shall be found alive at the coming of Christ shall not sleep, but be changed*: as the other *Dead shall be raised incorruptible*. Which Doctrin, because neither discovered by the Light of Nature, nor the Writings of the Old Testament, he calls a Mystery, yet no longer so to us, when told & declared. Other Instances may be seen, *Mat. 13. 1. Ephes. 5. 31.*

But to confirm what hath been formerly intimated. *Viz.* That several things in Scripture, beyond what was known or discerned by the Light of Nature, are not against Reason by being above it, and ought to recommend the Scriptures to a Rational Mind, agreeing with, as well as improving doubtful Notions we had of things before, which may help us to discover that some Things above Reason, and which at the first sight seem to be against it, are reconcilable to it, by the assistance of

Revelation. This may be illustrated by observing, that when *Gallileo*, by the help of a Telescope said, that Planets moved about *Jupiter*, other Astronomers could not discern it to be true, nor could they prove it false; and when some Revelations not only transcend Reason, but clash with it, we are to consider, whether that Doctrine is repugnant to any Catholick Rule of Reason; or only something depending on the Measure of acquired Information we then make use of, which, tho' we think it irrational, yet we are not certain, that what our Judgment is grounded on is sufficiently manifest. Thus when *Gallileo* affirmed *Venus* sometimes horned like the Moon, though it was contrary to the Vulgar Doctrine of Astronomers, the Testimony of whose Eyes was against it; yet they could not oppose it, their Eyes not giving them sufficient Information about it; So when *Gallileo* asserted Hills, Valleys and Shaddows in the Moon, it was not suddenly to be rejected, but received upon an Implicit Faith, upon his Authority; for since he had a way of discovering Celestial Objects, which they were not acquainted with, and therefore could not be competent Judges of, and though they could not discern in the Moon what he did, their different Ideas might proceed from the Imperfection of their unassisted Sight, especially since what he observed of the differing Constitution of what is Analogous to Sea and Land, rather corrected and improved, than overthrew their former Notions. For he allowed the Spots to be darker Parts of the Moon, and assigned Causes of them, which

which their Eyes could give them no Knowledge of. And the Mountainous Parts of the Moon, not appearing to the naked Eye, might well be ascribed to the great Distance ; since at a far less, square Towers appear round.

But to make an Application of the Distinction hitherto discoursed of, and confirm the Grounds on which it may be Justified, we are to consider, that for an Opinion to be *above Reason* is somewhat extrinsecal to it's being true or false ; for to be above Reason, is not absolute, but respective, with respect to the Measure of Human Understanding, which it is said to transcend ; and therefore may not be *above Reason* in relation to a more enlightened Intellect, in Beings of an higher Order, as Angels ; much less in that most perfect Being God. Whence it appears, that a Superior Intellect may comprehend what we cannot, and find them congruous to the Eternal Ideas of Truth, and agreeable to one another, which our short sight may think false or inconsistent. But to prove further, that things which are said to be above Reason, may nevertheless be true, though subject to Objections not readily to be answered ; amongst things above Reason, there are some, which, though contradictory to each other, may be maintained by such Arguments as the Opposite Disputant cannot readily answer, as in the Case of the Infinite Divisibility of Quantity, as of a streight Line, several Mathematicians as well as Naturalists maintaining the Negative. Yet *Aristotle*, and several Geometricians besides, evidently maintain the contrary. Yet in Reality these two

Opinions

The Distinction confirmed and illustrated.

pinions must be contradictory ; Since a straight Line, must at least be mentally divisible, and the Parts divided be further divisible, or otherwise, and the Subdivisions must come to a Stop, and one of the Opinions must be true, yet it is plain to those that examine the Controversie Impartially, that either side is subject to Difficulties and Objections, which may puzzle and perplex the Reason of those that strive to defend it.

The Important use of it.

We have the longer insisted on the Explaining and Justifying this Distinction, since it may be of Importance in defending some Mysteries of the Christian Religion, as well as some Important Articles of Natural Theology it self; for though Natural Religion taught several Heathen Philosophers such Truths; as the Production of the Rational Soul; the Formation of the World out of Universal Matter, that Action requiring an Immaterial Substance to give Motion to a Body; That God knows Mens Thoughts and Intentions, though they endeavour carefully to hide them; and knows the Events of Mens future Actions, who are not yet Born; before the Gospel was Preached. Yet if we consider, how difficult it is to Imagine the *Modus* of these things, and how they might be performed; as also how some of the Divine Attributes, as Eternity, Omnipresence, &c. belong to God; and how some Actions, as the moving of Bodies, and the Creation of Human Minds, endowed with all their Noble Faculties, are exercised by him; when we consider such things it is enough to convince us, that there

there are some Doctrins discovered by the Light of Nature, so subject to Objections from Physical Principles, and the fixed order of Corporeal things, as will oblige those that are ingenious to acknowledge their Intellects imperfect, and disproportionable to the Sublimest and most Mysterious Truths; which they cannot comprehend, nor clear of the Difficulties that incumber them; though obliged to admit them for some positive Reasons, that recommend those Heteroclite Truths to their Assent.

But some will Object, that if the Questioned Distinction be allowed, it may be of bad Consequence, under whose shelter, an Enthusiast or conceited Philosopher may insinuate strange things under the Title of a Mystery, above the Sphere of Reason; and that the admitting of it, would not strengthen the Proof of any disputed Article of the Christian Religion. To which it may be answered, that though the distinction be liable to be misemployed; that is common to all other Distinctions, which are nevertheless admitted, because useful; yet are they not rejected, because they are liable to be made an ill use of. And therefore we ought to stand upon our Guard, and examin, how far the Notion proposed as a Mystery is intituled to the Benefit of this Distinction. And as for the Distinction amounting to a positive Proof, that is not to be expected; for though it be extrinsecal to an Abstruse Notion to be or not be above Reason, yet commonly that Abstruseness gives less credit to a Conception, and makes it more likely to be mistrusted. Nor are Christians

The ill Effects of this Distinction misapplied considered.

stians so fond in believing, that being above Reason may pass for Proof, but that it ought to be believed though above Reason, if otherwise well proved.

*An Argument in favour of My-
steries.*

In Favour of those, who believe those Abstruse Articles revealed in Scripture, on the Account of Divine Revelation, we shall add, that, as it appears, from the Contradictory Opinions of the Divisibility of Quantity, some Doctrin must be true, though attended with Difficulties above the reach of our Reason; and since, Gods perfect Knowledge can distinguish which of those Opinions is true and can declare that to Men; It would be a precarious ground to reject a revealed Article, because attended with Difficulties and liable to Objections.

And that a Truth may be assented to, upon positive Evidence as important to Religion in General, and the Christian in Particular, though witty and ingenious Men may make Objections not easily answered, may appear from the following Instance. And *First* by our walking and moving from Place to Place, we are convinced that there is Local Motion; though *Zeno* and his Followers urged Arguments against it, which puzzled and nonplus'd the Antient Philosophers, as well as those Moderns, that have pretended to give clear Solutions of them.

An Inference with respect to the Distinction.

From what hath been said upon this Subject, we may draw this Conclusion, *viz.* That it is not necessary, that every Proposition delivered in the Scripture, which surmounts our Reason, must therefore be Contradictory to it. And if the Christian Religion be true,
and

and it's Mysteries Divinely revealed, it is not sufficient to confute them, to reject the Distinction, that it's above Reason, but not contrary to it, as if it were unintelligible or groundless. For though it will not prove the Truth of a Mystery, that being to be established upon proper Grounds and Arguments; yet it will prevent them from being thought absurd or false, because above Reason: Since to do that may be applied indifferently to a Chymical Notion and a Mystrious Truth. And if it be used to Justify a pretended Mystery only, the Error will lye not in the Distinction but the Application.

C H A P. III.

Of Greatness of Mind promoted by Christianity.

IT is asserted by some Atheistical and Sensual Persons, that such Principles are more friendly to a Noble Frame of Mind, than the Doctrin of Christianity. To determin this, we shall first enumerate the chief things, that in the esteem of intelligent Men, make up Magnanimity or Greatness of Mind, which is composed of a great many elevated and radiant Qualities; and then we shall shew, that the Christian Religion is at least consistent with each of them, if it does not promote it. In the enumeration of which Qualities, we shall take in some, which are not essential to Greatness of Mind, but rather Accessions to it. And as

The Introduction of the following Discourse.

a Jeweller and not a Mason is fit to judge of the Genuineness and value of pretious Stones, we shall take the Notion and Measure of Greatness of Mind, not from the Injudicious Vulgar, but the Estimates of Reason, improved by Philosophy, and Enlightned by Natural Theology.

*The Vulgar
Notion of
Greatness
considered.*

The Vulgar whose Judgment is rather lodged in the Eye, than the Brain, when they think of Greatness of Mind, fancy something like the Coronation of a King, attended, with Pomp and Splendor, a great Number of Gazers, and the clamorous Acclamations of the People. And they think, that an Heroick Soul can be lodged no where, but in a great Commander, like a Roman Emperor, or a *Tartarian* General, who Commands and Conquers Armies, makes Countries desolate, and leaves them Peopled only with dead Bodies. But Reason and Religion, which respect human Things, without those glittering Varnishes which dazles the Eyes of the vulgar, distinguish easily betwixt Greatness of Fortune & Greatness of Mind, and Christianity teaches that God, who is no respecter of Persons, *Act. 10. 34. 2 Sam. 14. 14. sees not Persons as Men sees them*; & that *a thing that is Sublime amongst Men, may be an abomination to him*. But a Philosopher may easily distinguish real *Greatness* inherent in a Man, from that Pompous One annexed by Fortune. And though peculiar Honour and Respect is due to Virtue in Sovereigns, more than Subjects, as it is more diffusive in the former and beneficial, and cannot continue without resisting stronger Temptations, yet we know, that an Emperor, though never so great,

can

*What No-
tions a
Philosopher
may have.*

can neither find nor make a Soul. And if dignities are attained by mean Submissions or Actions, this Extrinsic Greatness adds no more to the Greatness of a mean Soul, than a pair of Stilts to the Stature of a Dwarf in making him a proper Man. Perhaps some, who make a great Bustle and Noise in the World, may flatter themselves, or be thought by the Vulgar to have great Spirits, but, as worthless Gnats, are considerable for nothing, but their Noise and Stings with which they disturb Mens Rest.

That Lucky Monarch who conquered Countrys as fast as he could travel over them, and a great part of the known World, hath this Character given by a Roman Historian, *That he durst well despise Despicable things*, and the following Elogy by a Roman Poet.

*Felix Terrarum Prado non utile Mundo
Editus Exemplum.*

And if such Persons shewed so little respect to their Lawful Sovereign, what Liberty may a Philosopher take, who little values those, who are only great as they are Favourites of Fortune. The prosperous Usurper *Phocas* was placed on a Throne, by her own fondness and the applause of a Multitude; by Philosophers, being as well doomed to a Scaffold, as by Religion to Hell.

True Greatness of Mind resides in the Soul, and is perfective of it. But neither Fortune nor outward Greatness can make a Soul Great, though they may afford Opportunities of shewing
ing

ing it so ; And the Submission and Respect which Men shew, through Custom, Fear or Interest, to such as are only great by their Titles, Places or Power, adds as little to the Worth of those Persons, as standing for more in Account does to a Brass Counter, that value turning it neither into Silver nor Gold. And as the same Skill in Arithmetick is requisite to Multiply a Thousand Farthings, as a Thousand Shillings or Guineas : so the disposing of things according to the best Rules, and manner they are capable of, argues as much greatness of Mind in a Private Person, as those Actions, which attract the Eyes, and busie the Tongues of Nations, in a great Monarch. And as there is more Art in making a small Watch, than a Town Clock, the advantage the latter hath of the former being the greatness of the Matter that is wrought, and not the Skill of the Workman ; so those Productions of Virtue argue a greater Soul, which make a far less shew and noise. *Socrates* in his private and necessitous Condition, when *Greece* was the Theatre of generous Minds, was preferred by the Oracle to all the *Grecians* ; and that of *Delphos* declared the Widdows Mind and Circumstances, and her Mite as greater Liberality, than all the Rich Man bestowed upon the Corban, *Mark* 12. 43. and the same Sentence was pronounced by *Solomon*, *Prov.* 16. 32.

We are not therefore to take our Estimate of so Sublime and Extraordinary a Quality, as greatness of Mind, from the mean Notions of the Vulgar, nor the fond Opinions of common Souls ; since they approve and applaud a great many

many things, which deserve but little Esteem, if condemned by the Wise; no more than a piece of Brass, which hath long passed current amongst the Vulgar, ought to be valued as Gold, when condemned by the Refiners for Counterfeit.

If then it should be asked, what is truly to be esteemed Greatness of Mind, I should answer, that a Man may be said to have a great Mind, who employs his utmost Moral Diligence, to find out what Actions he had best pursue, and then prosecutes them, without being deterred by Dangers or discouraged by Difficulties, with Resolution and Steadiness of Mind, as far as his Ability and Opportunities will permit, and out of an Internal Principle of Love to God and Man, and with a sincere aim to Glorify the one and Benefit the other.

*Wherein
Greatness
of Mind
consists.*

But before we proceed to Particulars, we shall endeavour to shew it probable, that the Christian Religion is a great help to true Magnanimity; since the Aspects of the Author, as well as the Rules, Aims or Scopes and Rewards of Virtue, have a direct Tendency to elevate the Mind and make it Heroick.

*The Christi-
an Reli-
gion a pro-
moter of
Magnani-
mity.*

And *First*, the Author of the Gospel being God himself, who perfectly knows, and is a Lover of Mankind, *Tir.* 3. 4. hath delivered such Doctrins and Laws, confirmed by Miracles, as are honoured with the Title of *the Everlasting Gospel*, *Revel.* 14. 6. and were not to be succeeded by a more perfect Institution, being adapted to advance solid and sublime Virtue, and to render Mankind more perfect than any other Institution.

*By the Sub-
limeness of
the Institu-
tion.*

F

Secondly,

The Excellency of the Rules.

Secondly the Counsels and Rules of Christianity tend to extraordinary Degrees of Virtue, the Divine Legislator having suited his Laws principally to the Hearts of Men. Those comprehensive and grand Principles of Virtue *the Loving God with all our Hearts, with all our Minds, &c. and our Neighbours as our selves,* being the Summary of the Moral Law and adopted into the Gospel. *The cleansing of our selves from all Filthiness both of Flesh and Spirit : and the abstaining from all kind or appearance of Evil,* are the Negative Parts of the Christian Duty ; the positive Terms being, *that unless our Righteousness exceeds that of the Scribes and Pharisees we shall not enter into the Kingdom of Heaven, Mat. 5. 20.* We are encouraged to *grow in Grace, to add to our Faith Virtue,* and a great many more excellent Qualities, with this final Exhortation, *Finally my Brethren, whatsoever things are true, &c. Phil 4. 8.* a more aspiring Path of Virtue is still proposed to us, *viz. to tread in the Steps of our Saviour, that Divine Person never committing any Sin, nor was Guile found in his Mouth, 1 Pet. 1. 22.* the Supreme Judge God himself, approving both his Person and Doctrine by a Voice from Heaven, *this is my beloved Son in whom I am well pleased, hear ye him.* His spotless Life, like a Living Law, out-did the Examples as well as Precepts and Ideas of the Heathen Moralists and Philosophers ; and it so far engages one, who would be a serious Disciple of so Perfect and Divine a Teacher to forsake his former Vices. that St. Paul Rom. 13. 14. dissuading the Romans from other Vices, instead of enumerating the contrary Virtues, bids

bids them, *to put on the Lord Jesus Christ*, comprehending all the Virtues belonging to their Duty.

Thirdly, Though he enjoyns such high Degrees of Virtue, yet they are such as may be attained. For though Philosophy wisely forbears things disproportionate to Human Infirmitics; yet Religion may engage us to more than Human Virtues; since if we seek it, we may have the Divine Assistance to enable us to acquire and practice them. Of his *Fulness* we have all received, and *Grace for Grace*, says St. John 1. 16. in proportion as a Childs Mind is to a perfect Man, or *Grace upon Grace*, by the Assistance of which, St. Paul says, *Phil. 4. 13. That he could do all things through Christ that strengthened him*, his commands being attended with the Gift of enabling an honest and willing mind, to tread in the Paths he prescribes; effecting that by his Spirit, which he once did by his Power, enabling as well as commanding the Paralytick to rise, take up his bed, and walk. When, *Mat. 14. 29.* he commanded St. Peter to walk to him upon the Sea, he enabled him to tread securely upon the Waters. Our Saviours command enabling to proceed to Action, though a Miracle were necessary to his Assistance.

Fourthly, The Rewards of Virtue and Piety, both in respect of this Life, and the next, help to animate and raise the mind of Man. The present rewards of Virtue, are the Praise of Good Men and the Applause of a Man's own Conscience. The first may as well be attained by a Christian Hero as another, Virtue neither

*Command-
ing nothing
but what
we are able
to perform.*

*Rewards of
Virtue
animate
the Mind.*

loosing it's Worth nor Amiableness by being baptized ; and though the lesser degrees of it may sometimes, and in some places, be disregarded ; yet it's greater degrees will invite and gain Mens Esteem. The Exemplary Lives and Constancy of the Primitive Christians, amongst the *Roman* Persecutors made it a Proverb, *That such a Man was a good Man, saving that he was a Christian*, and *Soli Christiani Mortis contemptores*, was an Expression of the Heathens. There is so much Loveliness, and Native Qualities in the Christian Institution, *that he that* exercises himself in them, is both acceptable to God, and approved by Men. *Rom.* 14. 18. Nor did the great *Constantine's* Virtues, whilst a Gentile, lose their Lustre ; or diminish the just Veneration he had obtained, by his turning Christian ; his designs being greater than to satisfy himself or to please his People

*A Good
Conscience
helps to ele-
vate a ge-
nerous
Mind.*

The Reward of a good Conscience, which encouraged *Hercules*, as well as other Gentile *Heroes* to undergo their Labours, affords great Improvements to those whose Virtues flow from Religion ; the Applauses of a good Conscience being more acceptable to him than all the Musick, which solemnized the Dedication of *Nebuchadnezzar's* Golden Image, *Dan.* 3. 7. Since, a Christian Conscience does not only act the Part of a Judg, but of a Delegate from God himself. And it's Absolutions are more welcome, as Pledges of Gods acceptance, and the reward in the World to come, than barely as the Approbations of Reason ; The Rewards of Heaven being a nobler recompence of Virtue, and Incitement to the Practise of it,

than

than a Heathen *Moralist* or Philosopher hath to Heroick Virtues; for the greatest Men amongst the Heathens speak very doubtfully about a future State and Happiness, as appears from *Socrates*, *Cyrus*, *Seneca* and others, who rather wished or hoped, than believed a future Happiness. And those who expected a future Happiness, and Rewards, entertained their hopes but with mean Suggestions and *Ideas* of fortunate Islands and *Elysian* Fields, which are not so transcendent, as to make a diffident Man forwards to quit the Gardens of *Epicurus* for such doubtful Enjoyments. But a Christian is excited to Heroick Virtue by an entire Confidence of future Felicities, as much beyond the Joys of an *Elysium* as an Empire is to a Garden; a place of Happiness far beyond my Power to describe; made up of a Confluence of all things which Reason can desire; for as the Scripture says, *Eye hath not seen, nor Ear heard, nor the Heart of Man conceived, what God hath laid up for them that fear him*, 1 Cor. 3. 9.

But we shall, according to our present purpose, chiefly take notice of such things as Heroick Souls are wont to aspire to, as a good Name, Honour and Dignity. *What Heroick Souls aspire to.*

A Good Name, for Good Actions, must be very desirable; the Applause of Wise and Good Men, being a loud Eccho, to confirm the Approbation of the Conscience within. Which, tho' Virtuous and Worthy Actions are the most likely to acquire it, yet it is not a certain one; Ignorance, Malice and Envy, being apt to misrepresent a Man. The Sublimity, Brightness and regular Motions of the Stars hath not exem-

pled them from the Names of the Lyon, the Eagle, or of more contemptible Creatures, as the Dog, the Goat, &c. And though Innocency, like Lightning, may break out at the last, yet it often happens that Malice and Envy are Dead first, because the maligned Person is so; so that he lives not to know he is justified, nor may those misinformed Persons live to be undeceived, whose good Opinion he aimed at. Though a Christian may be traduced by Calumny, and represented as the Heathens did the Martyrs, in the skins of Beasts, to make them hideous and hateful, yet it affords him satisfaction, that his oppressed Innocency shall shine forth and triumph, and his Good Name, as well as Body, have a Glorious Resurrection, and be justified before his Enemies and Slanderers, as well as those that were milled by them. For at that great Assize, there will be a far greater confluence, than the *Assyrian Monarch* drew to the Plains of *Babylon*, *Dan. 3.* Where the Disciples of the Apostles may say upon happier terms than they did here below, we are made a *Spectacle to God, to Angels, and to Men*, *1 Cor 4.9.* And in that Illustrious Assembly of the *First Born whose Names are written in Heaven*, the Vizards shall be taken off, and the traduced Saints welcomed with the Title *Good and Faithful Servants*, *Mat. 25. 21.* and acquitted by the Sentence of an Infinite and Supreme Judge, *that Searches the Hearts and Reins and cannot be deceived or bribed.* Where the injured Saint shall come off with Honour, and instead of Calumny, receive a Crown.

This

This Celestial Crown employs the other part of Christian Rewards, which Heroick Souls aim at, Honour and Dignity, much to be preferred before the Crowns of Monarchs here below; for *First*, Earthly Crowns may be the Reward of Worth and Virtue, but are not the Proofs of them. Sometimes they are the Gifts of Nature, or of Fortune; and, which is pitty, the Acquits of Crimes. But Celestial Crowns proclaim the Worth of the Receiver, being the Rewards of previous Graces and Virtues in those that are found qualified for *the Inheritance of the Saints in Light, Col. 1. 12.*

Besides an Earthly Crown may be obtained without Merit, and Possessed without Happiness; and when Crimes are Steps to a Throne, they are like Thorns, and render him that sits on them, a more Illustrious, but not a less tormented Malefactor; the height of a Throne, no more than of a Scaffold, abating the Sense of Inflicted Punishment. The Throne and glittering Habit of *Herod Agrippa, Acts 12. 21.* which attracted the Acclamations of the dazzled Multitude, could not defend him from the incensed Justice of a more powerful King; so that whilst some looked upon him as a God, he was the most Miserable of Men, and obliged to hasten from a Seat, which though it occasioned his Impiety, could not protect it. But a Crown of Righteousness being the Reward of Virtue, is an inseparable Blessing and Happiness. An Earthly Crown being Hereditary, cannot preserve the Possessor from Death; whilst the other is called *a Crown of Life, Rev. 11. 10.* of which we may say, in respect of other Crowns,

*Honour and
Dignity.*

as Solomon said of Wisdom, *Viz: The Excellency of it is, that it gives Life to the owners of it*, Eccl. 7. 12. And though Earthly Crowns are Transitory Things, so that the four Monarchs of the World were represented to *Nebuchadnezzar* as Parts of Dreams ; that of Christ is *a Kingdom that cannot be moved*, Heb. 12. 28. as the Crowns of Believers are said to be, in Opposition to the Laurels the Roman Emperors were Crowned with, *unwithering Crowns of Glory*, 1 Pet. 5. 4. as if it flourished on a Christians Head better than on the Tree.

But the greatest Prerogatives of a Celestial Crown, is, that it confers on the Person, both a relative Preeminence, and an Essential Excellency, adorning him with Incorruptibility. Preferments here below, exalt a Man, without raising him above himself. A Man is not the taller for standing on a Ladder, nor a Vane less base Metal, for being placed on the top of a steeple ; that height neither changing it into Silver or Gold, but as it is a weather-cock, makes it the Sport of every Wind. The Heavenly Coronation like *Saul's* Unction, enabled him to *Prophecy*, & *he was turned into another Man*, 1 Sam. 10. 6. And Christ is said to have made his redeemed, *Kings and Priests to God and his Father*, Rev. 1. 6. the sacred Character of Priest-Office, being added to that of Kings, and St. Peter, 1 Pet. 11. 9. calls *Christians a Royal Priesthood*, the understanding, Will and Affections, being refined, as well as the Body Spiritualiz'd; which Glorified State must be very splendid, since the Angels who appeared to Men were very Cautious of frightening them; and yet ap-
peared

peared with a Majestick Splendor. The Angel which appeared in our Saviour's Sepulchre, *Mark 16. 5.* is described as a Man cloathed in a *Long White and Shining Garment*, *Luke 24. 4.* and in a future state, *St. Paul, Phil. 3. 21.* says, *our vile Bodies shall be transformed, into the likeness of his Glorious Body.* And how Glorious a State it is in Heaven we may guess, by his Transfiguration here on Earth, *for his Face did shine as the Sun*, *Mat. 17. 2.* and *Moses and Elias*, when they came to speak to him concerning his Death; *they also appeared in Glory.* And since those, that shall be accounted worthy of that state, *Mat. 22. 30.* and that the *Righteous shall shine like the Sun in the Kingdom of their Father*, *Mat. 13. 43.* who knows, but the Glorified Body of a Saint may be as Glorious a sight, as the Angel standing in the Sun *Revel. 19. 17.* and amongst other Prerogatives our Saviour promises those Believers that persevere, *that he will give them Power over the Nations, and to rule them with a Rod of Iron*, *Revel. 2. 26, 27.* and Lastly, *to him that overcometh will I grant to sit with me on my Throne, even as I overcame, and am sat down with my Father in my Throne*, *Rev. 3. 22.* Which Expressions, though they are not to be understood in a Literal Sence; yet if we consider the Power and Goodness of God, and that he may have Dominions and Different Sorts of Creatures without Number, that we know not of. Gods Attributes and our Saviours Expressions may give us Reason to hope for extraordinary things; being both able and willing to do *above what we can ask, &c.* *Ephes. 3. 20.* or think. From whence it appears, that the
Christian

Christian Religion by proposing such Glorious Rewards, affords greater Motives to Heroick Virtue, than Morality or Philosophy.

*The Genu-
in Marks
of Great-
ness of
Mind.*

To what we have said, we shall add : that to aim at high and Noble Designs, is both a Genuin Mark and Effect of greatness of Mind; and though Ambition be but a Depravation of it, yet so much imposes upon some Men, as to pass for Magnanimity; and Noble Attempts, though they fail of Success, yet they gain Esteem;

— *Magnis tamen excidit ausis*

Was designed an Encomium on him that said it. And it was reckoned a Glorious thing of *Hannibal*, that he resolved, to besiege *Rome*, though his Army never came within sight of it's Walls. And as to have a Noble design is the chief sign of an Heroick Temper of Mind, so none can have Sublimier Aims, than those which a Christian is encouraged to, which is *to please and glorify God, to promote the good of Mankind, to improve as much as possible his Personal Excellencies in this Life, and to secure to himself for ever a Glorious and Happy Condition in the next.*

*The ill Ef-
fects of bad
Examples
to be re-
sisted.*

It is a great Virtue to conquer those Difficulties which occur, in resisting the Temptations of vicious Customs and Examples; and though the Scandal given by bad Examples, is so obvious a Temptation, yet it is one of the most dangerous; for Interest, Bashfulness, and Complaisance, in well bred or good Natured Persons, makes them rather comply with the
Sentiments

Sentiments and Practises of the Persons they live with, than Offend or Disoblige them; and many have been debauched with the Company and Examples of the vitious, whose frowns or threats could not Effect. But these Temptations are guarded by the Precepts and Precedents of Religion. *Thou shalt not follow a Multitude to do Evil*, was the Command of the *Mosaick Law*. *Say not thou a Confederacy to all, to whom the People shall say a Confederacy* was the Command of God to his Prophets: Our Saviour to prevent an anxious Sollicitude amongst his Disciples, uses this Argument: that after all *these things the Gentiles seek*. And in the same Sermon on the Mount, he perswades them against vain Repetitions in Prayer. And the *Heroick Conqueror of Canaan*, unwilling to contradict a Multitude told the *Victorious Jewish Nation*, they might worship whom they thought fit, either the Gods of their Fathers, or those of the Neighbouring Nations, but *as for me and my House we will serve the Lord*. Be ye not conformed to the World says *St. Paul*. And the Apostle *John*, 1 *John*. 5. 9. Passionately tells the Christians of his time, *We know that we are of God, and the Whole World lies in Wickedness*.

But Religion furnishes us with Precedents as well as Precepts to disobey Customs. The first is that of *Lot*, who lived in a very impious Place, where Plenty and unbounded Libertinism made it very Populous, so that there could not be found ten good amongst them, being fallen from Virtue, and even common Honesty; yet when their Sins called for Fire and Brimstone

Precedents to disobey Customs.

stone from Heaven, it disturbed his quiet without destroying his Innocence, the Apostle assuring us, *that that just Man* was but vexed with the filthy conversation of the Wicked. The next Example is the three Friends of *Daniel* at the Solemnity of the Dedication of *Nebuchadnezzar's* Golden Image, who notwithstanding the Kings Command and the Example of a Multitude of several Nations of Quality and Dignity, though Courtiers themselves, and accustomed to bow their Knees as well as Consciences to their Master, and could not depart the Temple without exchanging it for a fiery Furnace, yet they bravely withstood the Tyrants Menaces. The third is that of *Noah*, for tho' *Gen. 6. 22. All Flesh had corrupted his ways upon the Earth, that every Imagination of the Thoughts of Mans Heart was only evil continually,* yet when God received *Noah* into the Ark he says, *Thee have I seen Righteous in this Generation, Gen. 7. 1.* Such a Multitude of ill Examples for six score Years being not able to shake his Constancy nor Integrity.

*Patience in
Afflictions
a sign of an
Heroick
Mind.*

Another Virtue of a Great Mind is constancy in Afflictions, which is so Noble a Quality, that it gains Esteem when exercised by Malefactors, for though their Actions are inexcusable, yet their Manner of Suffering for them must be commended. Calmness of Mind in the midst of Storms looks so handsomely, that neither Crimes nor their Punishments can hide it, nor hinder the Person from being pitied and applauded. And that the Christian Religion contributes to this Quality and part of Greatness of Mind, will appear from what it contributes to

to Patience and Constancy, under outward Calamities, by Precepts, Examples and Arguments.

Humility is a Virtue, which at the first sight seems different from greatness of Mind; yet in Conjunction with other Qualities, which make up greatness of Mind, it adds to their Number, and though not so bright as some of them, yet it adds Loveliness to the rest. Nor will it seem a Wonder, if we consider, that if Wealth, Honour, and other Blessings exalt a Mans Condition, to be humble amidst such advantages, argues a Mind elevated above the presents of Fortune, & great enough to undervalue, what others admire; and which some Men accounted great make the Objects of their Ambition and Pride, when they have obtained them. And if the Person be famous for great Virtues and Actions, his Humility shews he hath a Noble Idea of Virtue, and valuing himself not upon such ordinary Attainments, still pursues a greater degree of Heroick Excellency. And if a Laudable Practise, which is difficult, is a sign of a great Soul, Humility must have that Character; it being more Difficult to Excellent, than Ordinary Souls. And it is more Heroick, to overcome Virtues when they Act united, than to contend only with Vices, Passions, or open Enemies; which a Man must do to be Humble: for though other Virtues assist one another, they all conspire to overthrow Humility; for Pride is so strange an Adversary, that sometimes by being foyled, it overcomes; for when we use the best Arguments against it, the success tempts the Master of them to be Proud; nor will I swear, that at this time I exalt our
Heroes

*Humility
an Argument of
greatness of
Mind.*

Heroes Humility, without diminishing my own. Towards attaining an Eminent Degree of this Virtue, the Gospel is very Conducive, containing express Injunctions, and other Motives, as Directions, Rewards, Noble Patterns, and perfect Examples.

From what hath been said of the Qualities that make up Greatness of Mind, there is none but what appears consistent with Christianity, and are manifestly promoted by it.

But it may be objected: by some, that there are some Qualities suggested by Religion, which directly depress the Mind, and hinder it from aspiring or attaining high things; but if we compare the Advantages with them, they so far surmount them, that it will easily appear, that Greatness of Mind is not incompatible with Christianity, but rather promoted by it.

THE

THE
THEOLOGICAL
WORKS

Of the HONOURABLE
ROBERT BOYLE, Esq;
EPITOMIZED.

BOOK I.

PART II.

CHAP. I.

*Containing a free Enquiry into the Received
Notion of Nature.*

AS the Soul is a true and positive Being,
it is apt to form *Ideas* of all other things,
as Positive Being also, even some of which are
Chimerical, or such as are only Negations or
Privations, as Death, Ignorance Blindness, &c.
Since then we are Naturally inclined to this
Propensity to Error, we ought to be very Cau-
tious

tious we are not imposed upon in our Notions of Nature; for since this is the Parent of other Notions, as Nature is said to be of the Creatures of the Universe, we ought to examine very warily a Notion of such Importance before we entertain it.

Some Scruples considered about the vulgar Notion of Nature.

We ought therefore to enquire, whether Nature be *almost* so Divine a thing, as some esteem it, and whose Works we are; or a Notional thing, to be reckoned amongst our Works, as owing it's Being to Human Intellects. To clear the Way for what we shall offer on this Subject, we shall take Notice of two Scruples. And *First*, It may be thought ingrateful to dispute against Nature, which some take to be the Author of all things; but I think my Gratitude is rather Due to that Deity, whose Wisdom and Goodness designed to make me a Man, and to enjoy those Blessings he hath bestowed upon me; and also contrived the World, and all it's inanimate Creatures incapable of intending to gratify me, for my Use and Service. The *Persians* and other Worshipers of Celestial Bodies, accused the Antient Philosophers and Primitive Christians, of Impiety and Ingratitude to the Sun, whose Existence and Beneficence to Mankind is more unquestionable, than that there is a Semi-Deity called Nature, it being not so evident, that Nature is my Parent, as that Men are my *Brothers*, and the *Offspring of God*; *Acts* 17. For τὸ θεὸν γενεῶς ἐσμεν of *Aristus* is adopted by St. *Paul*, and therefore I shall prefer doing of them Service, before a Ceremonial Respect to Nature; especially since the Vulgar Notion of Nature seems both injurious to the
Glory

Glory of God, and a great Impediment to the useful Discovery of his Works.

And *First*, It seems to detract from the Honour of the Author and Governour of the World, to ascribe things to Nature, which they do not know what to make of; and tho' some allow it to be a thing of his making and subordinate to him; yet several never look after another Cause, ascribing things to Nature; and whatever their Words are, they seldom have the Agency of God in their Thoughts, which does not a little darken the Excellency of the Divine Author, when they interpose Nature as the Cause of what happens to be done; whereas it would much more illustrate Gods Wisdom to have formed things so at the first, as never to want the extraordinary Interposition of his Power; and as it is a greater Argument of the skill of an Engineer, to contrive an Engin, that should perform it's Operations without the Assistance of one to prevent it frequently from being out of order; so it sets forth the Wisdom of God more to form so vast a Machine as the Universe, to continue what he designed, by settled Laws of Local Motion, than to want the Assistance of Nature, which some suppose to be an Intelligent Overseer, to regulate the Motions of it's Parts. And the later Poets, justly reprehended their Prodecessors, for bringing some Deity [*Θεὸς ἀνὰ μηχανήν*] upon the Stage to help them out, as if they wanted skill in laying the Plots of their Plays.

The Common Notion of Nature prejudicial to the Notion of a Deity.

Nec Deus interfit nisi dignus vindice nodus,

And though *Aristotle* might not design the Mischiefs his Doctrin did; yet his Authority and Errors have been used by the Grand Enemy of God's Glory to detract from it. For as *Aristotle* by allowing the Eternity of the World, denied him the Production of it; so by ascribing the Works of God to Nature, he seems to deny him the Government of it, and indeed several Opinions of *Aristotle* seem more pernicious to Religion than those of other Heathen Philosophers.

What is usually ascribed to Nature asigned to Gods Wisdom in the Creation.

But perhaps some may say, that to deny the received Notion of Nature is to deny Providence, of which Nature is the Grand Instrument. But my Opinion hinders me not from Acknowledging God the Author of the Universe, and the continual Preserver of it, which the *Peripateticks*, who allow the World Eternal, will not admit; and what they ascribe to the Agency of Nature, I ascribe to the Wisdom of God in the Creation, the Fabrick of the Universe being so admirably contrived, that if it continues it's ordinary concourse, there is no occasion for him to play after Games, or to ascribe such Exigences which may happen, to Nature, since such Conjunctions of Circumstances might be occasioned by the Catholick Laws of Matter in Motion; but if we allow their Opinion of Gods Agency in the World, we must Imagin the World to be like a Puppet, which wants an Artist to guide and over-rule every particular Motion, whereas we suppose it like

like a true Clock, so skilfully contrived, that if it be once set in Motion, it pursues the design of the Artist, without the Interposition of any Intelligent Agent to continue it's Motions. The Modern *Aristotelians* would not be charged as pernicious to Divine Providence, though they ascribe the Motions of the Planets to the Ordinary Course of Nature, which *Aristotle* assigned to the Guidance of Intelligent and Immaterial Beings, as Movers of the Celestial Orbs. And as for those Anomalies which happen in the World, it seems more consonant to our Opinion of Divine Providence, as God is a Free and a Wise Agent, and may have Ends unknown to us, to suppose them to be the Genuin Consequences of the Order the World was settled in, by whose Laws the Grand Agents of the Universe were determined to act according to their Respective Natures, though repugnant to particular Portions of the Universe, than to allow, that God hath appointed an Intelligent and Powerful Being, called Nature, as his Vice-Gerent, to over-see and watch for the Welfare of the World, or Particular Parts of it; yet without Power to prevent such Anomalies, as often prove Destructive to several of his Noblest Creatures, as the Plague, and sometimes prejudicial to greater Parts of the Universe, as Earthquakes, Eclipses, Spots on the Sun, Eruptions of *Vulcan*, or Comets and new Stars; for if we should allow such a Subordinate Power as Nature, she might be said to act too blindly and impotently to be intrusted with the charge assigned to her Care.

*Consistent
with his
Divine
Provi-
dence.*

Besides the Notion we have of the Course of things and their Causes is much more consistent with the Extraordinary and Supernatural Interpositions of Divine Providence ; for when God Almighty is pleased to over-rule the Ordinary Course of things by his Omnipotent Hand, such things may more easily be acknowledged Miraculous, by those who allow the Effects of Matter and Motion, which Men may Judge of, than by attributing those Effects to that Semi-Deity Nature, whose Skill and Power cannot be estimated, nor can they Judge of it's Extent. The Miracles done by our Saviour, and his Apostles in confirmation of the Christian Religion, have been differently Judged of by *Corpufcularian* Infidels, and those who admit a Soul of the World, or thought, that the Universe was governed by Intellectual Beings, distinct from that supream Being God, The latter endeavouring to explain what we call Miracles by Astral Operations, whereas the *Epicureans* have actually denied Matters of Fact, discerning that such things could not be by Matter and Motion Mechanically, and must therefore be denied or allowed to be Miraculous.

*The Vulgar
Notion of
Nature pre-
judicial to
the discovery
of God
Almighty's
Works.*

But the vulgar Notion of Nature is not only prejudicial to the Glory of God, in respect of his Wisdom, Power and Goodness, but also to the Discovery of his Works ; for whilst we allow so easy a way of accounting for difficult things, as to ascribe them to Nature, shame will prevent a more industrious Scrutiny into the Nature of Things ; and Curiosity will be the less encouraged ; as in the Ascension of Wa-
ter

ter in Pumps, &c. where the true Phisical Causes had never been found out, had the Moderns acquiesced in the Opinion of the Antients, that Nature Governed the World, and abhorred a *Vacuum*. Indeed there are several things, as the Number and Scituation of the Stars, the shapes and sizes of Animals, &c. of which we pretend not to give the Physical Reasons, but ascribe them to the Power of the Author of the Universe. To which we may add, that the Veneration had to the Excellency of Nature's Effects, hath much lessened the Empire, that Man hath over the Inferior Creatures of God, It being looked upon impossible as well as impious to attempt to remove the Boundaries of Nature, settled amongst her Productions; it being a Scruple of Conscience to emulate her Works much more to excel them.

But to proceed to the Second Scruple proposed to be removed, which is, that I venture to contradict the Sense of the Generality of Mankind; but in Philosophical Enquiries, a Naturalist ought not to be so solicitous, what hath been, or is believed, as what ought to be so; nor ought the Sense of the Generality of Mankind sway us, in some Cases. But that which much inclines Men to receive this vulgar Notion of Nature is their Propensity to make Men think, they know more than they do, and to be apt to think so of themselves, the urging Nature for a Cause being an Expedient upon any Occasion, for us to seem to know, what we can give no good Reason of. But we shall further add, that the General Custom of Mankind to

General Opinions no Arguments against further Enquiries.

esteem things real and positive Beings, and to attribute much to it, will be but of small force, if we consider, that though Fortune be not a Physical thing, but an undetermined Notion, referable to the Class of *Non Entia*, yet the Gentiles made it a Goddess ;

Nos te facimus, Fortuna, Deam, celos; locamus,

which many of them Worshipped ; and both Antient and Moderns commonly talk of it, as if it were a kind of Anti-Christ, and usurped a share in the Government of the World, ascribing a great deal to it as well as to Nature. And tho' Poets, Moralists and Divines tell us of the Power of Ignorance and Vice, which are but Moral Defects, the Generality of Mankind are wont to ascribe a great deal to the Power of Death, which is neither a substance, nor a positive Entity, but a meer Privation ; which if we consider we shall less fear the Consequences ascribed to Nature, which is but a supposed Physical Agent.

*What is
proposed in
our Enqui-
ry about
Nature.*

But to proceed to our Enquiry after Nature, we shall endeavour to do these six things. *First*, We shall consider the great Ambiguity of the Word Nature, as it hath various Acceptations. *Secondly*, We shall shew, that the Definition that *Aristotle* gives of Nature, is neither clear nor satisfactory. *Thirdly*, We shall deduce the Received Notion of it, from the several things attributed to it, which cannot be taken from the word, because of it's Ambiguity. *Fourthly*, We shall offer the Reasons, which may be urged against the Received Notion. *Fifthly*, We shall shew

shew upon what insufficient Grounds the common Notion of Nature hath been received. *Sixthly*, We shall offer some of the chief Axioms made use of in respect of Nature, and shew in what Sense they ought to be admitted or not. But before we proceed to these Particulars, we shall observe, and note, that when we speak of *Aristotles* Opinions, we assign not all the Mistakes of his followers to him, some having much mistaken his true meaning; nor have we been anxious to enquire his true meaning, either about the Origin of the Universe or less Important Points; his Expressions being not only dark and ambiguous, but in some Cases inconsistent, it will be sufficient for our present Purpose, to examin his Opinions as they are generally received by his Commentators and Followers, who are to be blamed, if he be misrepresented. *Secondly*, We shall Note, that as the Rational Soul, is an Immaterial Spirit distinct from the Sensative, it is a Substance of so *Heroclite* a kind in respect of mere Bodies different from it, that it can neither promiscuously be treated of with the Corporeal Works of God; nor can we speak worthily of it, without frequent Exceptions and Interruptions, which would either render the discourse Intricate, or Troublesom to the Reader; for which Reason we shall wave the consideration of it in this Treatise, especially since all other Parts of the Universe are accounted Works of Nature, and will afford sufficient Matter for our Consideration. Though we shall at the present, only consider the World as a great System of Corporeal Bodies, in the State it was in about

the sixth Day of the Creation, when God had compleated all the rest of his Works, but had not yet Created Man.

Of the Various Ac-
ceptions
of the Word
Nature.

That Men have had various Notions of the Word Nature, will appear if we consider, that it is applyed to several things which have little dependance on, or no connection with one another. *Aristotle* in his *Metaphysicks* enumerates six several Senses of the Word φύσις, which is rendered Nature; and in English it hath more Numerous significations. Sometimes it is taken for the Author of Nature and called by the Schoolmen, *Natura Naturans*, as when they say Nature hath made Man, partly Corporeal and partly Immaterial. Sometimes it is used to signify the *Essence* or what the Schoolmen call the *Quiddity* of a thing, or the *Attribute* of *Attributes*, whether the thing be Corporeal or not; as when we define the Nature of an Angle, or Triangle, or a fluid Body. Sometimes we confound, what a Man receives from Nature with what he acquires by Birth; as a Man is Noble by Nature; or a Child is said to be forward, sickly, or frightful Naturally. Sometimes, Nature is used to signify an Internal Principle of Motion, as when a Stone falls towards the Centre, or Fire Naturally tends upwards. Sometimes Nature is taken for the established Course of things, as Respiration is said to be Natural to the Life of Man; and that Nature makes the succession of Night and Day. Sometimes Nature is taken for an Aggregate of Powers, as when Physicians say, Nature is weak, or spent, or strong, or that Nature left to her self will do the Cure. Sometimes

sometimes Nature is taken for the Universe, as when it is said of a *Phoenix* or *Chimera*, there is no such thing in Nature. And sometimes by Nature is meant a strange kind of Being, such as we are examining the Notion of. But besides these Significations the word Nature hath several others, being sometimes set in Opposition or Contradistinction to other things, as when a Stone descends, it is said to do it by Natural Motion; but it's Motion upwards is said to be violent. So Vitriol is distinguished into Natural and Fictitious, which is made by Art; and Water suspended in a Pump, is said to be out of it's Natural Place. Again, Wicked Men are said to be in a State of Nature; but in a State of Grace when Regenerate. Cures wrought by Medicines are said to be Natural, in Contradistinction to those Supernatural Ones wrought by our Saviour and his Apostles. To these we might add a great many more Instances of the Ambiguity of the Word Nature. Amongst Latin Authors we have found it in fourteen or fifteen different significations; from whence it appears, how easy it is for Men, especially those that write of Natural things, to impose on themselves and others, by misemploying a Word of so ambiguous a Signification; how prejudicial it hath been when used without attending the different Significations, in Physick and Philosophy may appear, since when it is promiscuously used, their Expressions are unintelligible, improper or not true; for you shall scarce meet with any discourses of Physical or Medicinal Subjects, which do not frequently make use of the Word Nature, or of those Phrases it makes
a

a principal part of; but if Philosophers would make use of some more Significant and less Ambiguous Terms and Expressions instead of the Word Nature, or explain in what Sense they use it, to avoid those Mistakes Men are used to fall into about it; such ambiguities of Words and Names, having occasioned many Disputes, Managed with much heat, but to little purpose.

How Nature in it's several Senses may be expressed otherwise.

But though the Ambiguity of this Word without a particular Explication may make the Use of it prejudicial in Physiological Discourses, and it were to be wished, that some more significant Words might be used in the room of it, yet I must confess, that it is a hard Matter to discourse long of such Subjects without being obliged to make use of it; besides, it several times expresses that, which otherwise could not be spoke without a troublesome Circumlocution. But since we have proposed the using of other Expressions to avoid ambiguity, we shall briefly consider the several Senses, it hath been used in, as above noted, and endeavour to propose other Terms or Forms of Speech to express them in.

How Nature may be otherwise expressed in the first Sense.

Instead of the Word Nature, in the Sense of *Natura Naturans*, we may make use of the Term *God*, discarding the other Expression as needless, and below the Reverence we owe to Divine Majesty, making him little less than a Created Being, if not an Imaginary One.

In the Second Sense.

The Second Sense, which respects the *Essence*, on which Account a thing is what it is, and is so called; we may venture to use the Word *Essence*, which is of an adequate Import, and sometimes *Quiddity* may be made use of, which

is comprehensive enough, and free from Ambiguity.

The Third Sense may be otherwise expressed, (*viz. what belongs to a living Creature at it's Nativity, or accrues to it by it's Birth,*) by saying it was *Born* so, or *Generated* such, or that it was qualified so by it's Original Temperament and Constitution. *In the Third Sense.*

For the Fourth Sense of the Word Nature, as it means an *Internal Principle of Local Motion*, we may say, *it moves as it were, or seems to move Spontaneously*, upwards or downwards; or is determined to this or that Motion, by the Concourse of proper Causes. *In the Fourth.*

For the Fifth Signification, *viz. the established course of things Corporeal*, we may use this; *Viz. the established Order, or solid Course of things.* *The Fifth.*

Instead of the Word in the Sixth Sense, *viz. an Aggregate of the Powers belonging to a Body, especially a Living one*, we may use the Constitution, Temperament, Mechanism, or complex of Essential Qualities or Properties, or the Condition, Structure or Texture of that Body; and in Respect of the greater Parts of the World, we may say, *Fabrick of the World, System of the Universe, or Cosmical Mechanism.* *The Sixth.*

When it is used in the Seventh Sense, for the *Universe or System of the Corporeal Works of God.* *The Seventh.* The Word *World or Universe*, and instead of *Phænomena of Nature*, we may say *Phænomena of the Universe, or of the World.*

As for the Eighth Sense of the Word Nature, instead of using it, as a *Goddeſs or Semi-Deity*, it ought not, for several Reasons to be used in that Sense at all. *The Eighth.*

But

*The Use of
the word
Nature o-
therwise to
be avoided.*

*Helmont's
Opinion.*

But the Use of the Word Nature may be avoided by other variable Expressions, besides these just now substituted. And though two of the before mentioned Terms, Quiddity and Cosmical Mechanism, seem Barbarous or Ungenteel; and others shorter than the Word Nature; yet a harsh Term in a determinate Sense or a Paraphrastical Expression, is much more excusable, than ambiguous Words liable to greater Inconveniences.

But some Learned Men take the Nature of a thing to be the Law it receives from the Creator, according to which it Acts; much like *Helmont's* Opinion, who rejecting the *Aristotelian* Hostility of the Elements, believes every Body Acts as it is commanded: which Opinion though neither Clear nor Comprehensive seems to admit of a fair Construction, the orderly and regular Motions of inanimate Bodies sometime resembling the Actions of Agents conformably to Laws. And sometimes I scruple not to call the Laws of Motion and Rest, as established amongst things corporeal, the Laws of Nature, having explained, in what Sense those Expressions are to be understood. But strictly speaking, to say the Nature of a Body, is the Law of God prescribed to it, is an improper Expression, and but figurative, For it not only gives a Defective Idea of Nature, omitting the general Fabrick of the World, and the Contrivance of particular Bodies, which are as necessary to the Production of particular Effects and *Phænomena*, as local Motion; but as a Law is a National Rule of acting according to the declared Will of a Superior, nothing but an intellectual

Intellectual Being can receive, or act by a Law. But it may easily be understood, how God might at the first determine the Motion of the Parts of Matter, and guide them, as he thought fit, for the Primordial Constitution of things; and that by his Concourse, he should maintain those Powers given to the Parts of Matter, to transmit their Motions to one another, and act according to determinate Ends; which inanimate Bodies are incapable of, as under the Power of Laws, which they cannot understand, and consequently cannot pursue; for we see in Artificial things, several Motions orderly performed, predesigned for particular Ends; as the Motions of a Watch are so regulated, that the Hand upon the Dial moves with a great deal of Regularity, and moderates it's Motion to determine the hour a minute sooner or later than it should do. And though an Arrow moves towards the Mark as if it designed to hit it, yet it cannot be said to move by a Law, but by an External well directed Impulse.

But to proceed to consider *Aristotles* Definition of Nature, which we shall recite in Latin, since it seems difficult to be intelligibly rendered in English without Circumlocution, 2 *Phys.* 1. L. 3. he says, *Natura est Principium & Causa Motus & quietis ejus, in quo inest, primo per se, & non secundum Accidens.* Where, since according to him the whole World is but a System of the Works of Nature, the Definition of a thing so important in Natural Philosophy ought to be clearly and accurately delivered, yet this seems so dark, as to be far from giving a satisfactory

*Aristotle's
Definition
of Nature
considered.*

factory Notion of Nature ; what is not intelligible it self being unlikely to give an Accurate Account of what is explained by it. And as for his Interpreters, they seem to be so puzzled, that they seem rather to vindicate him from Tautologies and Contradiction, than to make out the Definition good and instructive ; being not able to justify it without strained Interpretations ; and though they seem to justify it in Gross, yet they make so many Objections against particular Parts of it, that their own Arguments are sufficient to disapprove it.

But to shew the Insufficiency of it, we shall first observe, that this Definition contains not several things commonly received, as belonging to the *Idea* or Notion of Nature, as whether the Principle or Cause is a Substance or an Accident ; and if a Substance, whether Corporeal or Immaterial ; as also whether Nature acts wisely, and by the most compendious ways without missing her Ends, and that she watches strictly to prevent a Vacuum for the good of the Universe.

Why the Use of the Word Nature is so little used.

But before we proceed to shew the Defects of this Definition further ; we shall endeavour to remove some Prejudice, which Learned and some Pious Men may conceive about Religion, in our declining so much the Use of the Word Nature, according to the Vulgar Notion of it. Which is, because it is a Word of so much Ambiguity, and being unwarily employed, occasions Darkness and Confusion in Mens Writing and Discourses.

Besides,

Besides, the Veneration I have for Religion makes me decline the Use of a Term inconvenient in Philosophy; nor does it appear, that the *Israelites*, the only People and Church of God, made Use of the Word in the Vulgar Notion of it, nor does *Moses* in the whole History of the Creation once mention it, where it might have been proper to bring in this first of Second Causes; and though Philosophers assign the Formation of Plants and Animals out of Universal Matter to her Power, Divine History ascribes these Effects to God Almighty's Fiat, *Gen. 1. 11. And God said, let the Earth bring forth Grass, and the Herb yielding Seed, and the Fruit Tree yielding Fruit after his kind, &c. And Verse 24. God said let the Earth bring forth Living Creatures after it's kind, &c. Verse 25. And God made the Beast of the Earth after it's kind, without any mention of Nature.* Nor do I find it mentioned in any Part of the Old Testament. And though *Job*, *David* and *Solomon* and other *Israelitish* Writers mention the Corporeal Works of God, yet they never so much as mention Nature, which our Philosophers esteem as his Vice-Gerent; and though the late *Rabbi Menasseh Ben Israel* hath written of Numerous Problems, touching the Creation, yet he employs not the Word Nature in the received Notion of it, to give an Account of any of Gods worldly Creatures; and when *St. Paul* wrote to the *Corinthians*, and spoke of the Production of Corn out of the Seed sown, he attributes it not to Nature, but when he mentions a grain of *Wheat* or some other Seed, put into the Ground, *1 Cor. 15. 37, 38.* he says,

The Word Nature not mentioned in the Mosick Creation.

Nor in the Israelitish Writings.

God

God gives it such a Body as he pleases, and to every Seed it's own Body. And if God so cloathed the Grass of the Field, &c. says a greater than St. Paul, *Mat. 6. 28, 29, 30.* And the Celebrations *David, Job, &c.* made on the occasion of the Works of the Universe, address themselves to God and not to Nature. To which we shall add, that the Psalmist says, *That God hath made us, to enter into his Gates with Thanksgiving, and into his Courts with Praise, Psal. 100. 3.* And again, *Let the Heavens and the Earth praise God,* as *David* elsewhere says to the great Creator of the Universe, *All thy Works shall praise thee, O Lord, and thy Saints shall bless thee, Psal. 145. 10.* And elsewhere he says, *Thou hast covered me in my Mothers Womb, I will praise thee, for I am fearfully and wonderfully made, marvelous are thy Works, and that my Soul knoweth full well. Psal. 139. 13, 14.*

How far
Angels
have a Sub-
ordinate
Govern-
ment of
the World.

On this occasion we shall add, that if a Subordinate Power was to be employed in the management of the World, Angels might be more proper to be employed than Nature; for the Celestial Part of the Universe, being above ten Thousand times bigger than the Sublunary World, the Heathen *Aristotelians*, as well as the Christian School Philosophers allow the Celestial Orbs to be guided by Intelligents or Angels, And that Angels have often been employed in the Government of the Sublunary World, is evident out of the Book of *Daniel*, and an Angel *Rev. 16. 5.* is styled *the Angel of the Waters*, whose Office several Learned Interpreters have thought to be to preserve the Waters, and *Rev. 14. 18.* an Angel is mentioned, having *Power, Authority*

ity or Jurisdiction (ἐξουσία) over the Fire. And though Grotius gives another Conjecture of the Title given the Angel of the Waters; yet in his Notes on *Vers* 7. there was, he says, an Angel to preserve the Saints under the Altar. And if the Angels were Guardians of the Waters, as the Romans had Officers to guard their Aqueducts, it may be worthy our Notice, that St. John is introduced praising his fellow Creatures great Creator; an Act of Religion which none of the Naturalists ever assigned Nature to have done. But perhaps it may be alledged, that *Subordinata non pugnant*, and if Nature be Vice-Gerent, her Works are Gods: but till such a Vice-Gerent be proved, we shall with *Moses*, *Job* and *David* admire the Visible Works of God, and give him the Praise, not to Nature, to whom it is not due; since before the *Israelites* were corrupted with Idolatrous Nations, no mention was made of Nature. And I think it much safer to speak in the Language of the People of God, than of the Heathen Poets and Philosophers, who ascribed Divinity to his Creatures, and sometimes to their own. From whence it appears, that whether the Scriptures are designed to teach more necessary Truths than those which relate to Bodies, and are to be discerned by the Light of Reason, it's Expressions favour our Hypothesis more than that of *Natures*.

But to examin the received Notion of Nature, the best way will be to consider what *Effata* or Axioms are drawn from the common Notion of her by *Aristotle* and his Followers, and what

Epithites
and *Axi-*
oms of Na-
ture.

Titles and Epithites are commonly given her ; the principle of which are the following.

Natura est sapientissima, adeoq; opus Natura, est opus Intelligentiæ.

Natura nihil facit frustra. Arist. de Cælo. l. I. c. 11.

Natura sine suo nunquam excidit.

Natura semper facit quod optimum est. Arist. de Cælo. l. II. c. 5. it. de Gen. l. II. c. 10. §. 22.

Natura semper agit per vias brevissimas.

Natura neq; redundat in superfluis, neque deficit in necessariis.

Omnis Natura est conservatrix sui.

Natura est Morborum Medicatrix.

Natura semper invigilat, conservationi Universi.

Natura vacuum horret.

How the
Vulgar No-
tion of Na-
ture may
be expres-
sed.

From which Particulars it appears, that the Vulgar Notion of Nature may be thus expressed, *Viz.* That Nature is a Wise Being ; never misses her Ends: always does what is best to be done, the most direct and convenient ways, without doing any thing superfluous or deficient, teaching and inclining her Works to preserve themselves ; and as in the *Microcosm* she cures Diseases, so in the *Macrocosm*, she abhors a Vacuum for the Preservation of the Universe, making Bodies act contrary to their Inclinations for the Publick Good of the whole.

The true
Notion il-
lustrated.

What we think of the Panegyrick of Nature shall be offered in it's proper place: If it should be expected, that I should substitute a Definition of Nature of my own, I have often doubted, whether Nature be a thing or real
existent

existent Being, or a Name or Fictitious Term, contrived compendiously to express several things by one Name. As the Concocting Faculty of the Stomach is not designed to mean an Entity distinct from a Human Body, as it is an Engin made up of solid and fluid Parts; but as that action is carryed on by the fitness of the Teeth, Tongue, Spittle, Fibres and Membranes of the Gullet and Stomach, the Natural Heat and Ferment or Menstruum, which by their concurrent Actions convert the Nourishment into Chyle, that complex of Causes and Train of Actions is known by the Summary Appellation of the concocting Faculty. And thus, when Nature is said to do this or that, or it is done by Faculty, or that Nature or Faculty does this or that, Men ascribe that to a Notional thing, which is performed by real Agents; as when we say, the Law punishes Murther with Death, protects the innocent, releases a Debtor, that Law is only a Notional Rule; the Action being performed by Judges, Officers, &c. Acting according to that Rule. Again, when Custom is said to do this or that, proper Agents only act conformably to those Customs. So several Events are ascribed to Fortune or Chance, which is no Physical Cause of any thing, but only denotes, that such Effects were produced by proper Agents. As if when a Man shoots a Deer, the Arrow should glance off the Beast, and wound a Man behind him, out of the Archers sight, the Arrow acts by virtue of it's Fabrick and Motion; yet Men will be apt to say, that the Deer was wounded according to the Course of Nature, but the Man was wound-

ed by Chance. And though several of the Atomical Philosophers, pretending to account for the Origin of things, without having recourse to a Deity, affirmed the World to be made sometimes by Nature and sometimes by Chance, making use of those Terms promiscuously, they designed not to denote any Physical Cause, but Conceptions Men have of the manner of acting of true and proper Agents. And when the *Epicureans* taught, that the World was made by Chance, they did not esteem that, the true Archichætonick Cause, but that all things were made by the Convention of *Atoms* without any design of constituting such Bodies as the Sun, Stars, Earth, &c.

By Similies. And though the Expression, that Nature does a thing may be used by some as a Compendious way of speaking, yet it helps not to explain, how it is done; for it appears, that whatever is done in the World, except when the Rational Soul intervenes, is performed by Corporeal Causes or Agents, according to the Laws of Motion settled by the Omniscient Author of all things. When a Man knows the particular Structure of a Watch, and how it's several parts contribute to make it perfect, he will be well enough satisfied without knowing, whether a Philosopher call it *Ens per se*, or *Ens per Accidens*, and whether it performs it's Operation by Virtue of a Spring, or an external appended weight: and as one that knows not the Mechanical Affections of the Parts of Matter, nor how to explicate *Phænomena* by them, will not know, how the Effect was produced by being told, that Nature did it; so when he can explain

plain it Mechanically, he hath no more need to say, that Nature did it, than one that observes the Motions of a Clock hath to say, that Art shews the Hour of the day, when without that instructive Term, the particular Structure of the Clock, that produced that Effect was sufficiently known.

And as when the end of a Tube is immersed in Milk, and the other end is applyed to the Mouth, upon drawing Breath, the Milk flows into the Mouth, we are told, Nature does it to avoid a Vacuum, and this way of raising it is called Suction, so when the word Nature is used to express a Concourse of Causes in other things, it does but what Suction does in this case, neither Term explaining how the Liquor is raised in the Tube. But those that know, how the External Air gravitates and presses more upon the Liquor without, than the Internal Air in the Tube does within, being rarified by the dilating Thorax, will readily conceive, that the smaller pressure will be over-powered by the greater, and will consequently give way to the Ascent of the Liquor which is pressed up the Tube by the External Air into the Mouth. So that one unacquainted with Natures abhorrence of a Vacuum, or the Notion of Suction, would understand the Reason of the *Phenomenon*, and would think it as needless and erroneous to ascribe it to Nature; and that the Theory of Suction could only afford a Compendious Term to express the Concourse of Causes or Agents, which made the Milk ascend.

Another Instance.

The Princip-
pal Notion of
Nature offer-
ed more
fully.

But to propose the Principal Notion of Nature, by which several Expressions and Axioms relating to it may be explained; we shall distinguish betwixt the Universal and Particular Nature of things; As for the Universal, we shall propose the following, *Viz.* That *Nature is the Aggregate of the Bodies, that make up the World, framed as it is, considered as a Principle, by Virtue whereof, they act and suffer according to the Laws of Motion, prescribed by the Author of things.* Which Description may be illustrated by the following Paraphrase, *Viz.* That *Nature is the result of the Universal Matter or Corporal Substance of the Universe, considered as it is contrived into the present Structure and Constitution of the World, whereby all the Bodies that compose it, are enabled to act upon, and fitted to suffer from one another, according to the Settled Laws of Motion.* And this will make way for the other subordinate Notion, the Particular Nature of an Individual Body, consisting in the General Nature, applyed to a distinct Portion of the Universe. Or rather, supposing it to be framed by God in a World like ours. It consists in a *Convention of the Mechanical Affections* (as the Bigness, Figure, Order, Scituation, Contexture, and Local Motion) of it's Parts, convenient or sufficient to constitute or entitle to it's particular Species or Denominations, the particular Body they make up, as the Course of all these is considered, as the Principle Motion, Rest and Changes in that Body. But to use more Compendious Expressions, what we call *General Nature* may be termed, *Cosmical Mechanism*, comprizing all the Mechanical Affections of Matter in the Universe. And to denote

the

the Nature of a Particular Body, we shall call it the *Individual Mechanism*, or the *Mechanism only*, or *Essential Modification*, containing all the Mechanical Affections of that particular Body.

Some perhaps may wonder, that we make the present Fabrick of the Universe, the Notion we have of Nature, since Philosophers call them the Works of Nature, and their Effects the *Phænomena* of Nature; but I, for my Part, allow no other *Plastick Power* but God, antecedent to the formation of the World. The Peripateticks looking upon the World to be Eternal, might esteem it the Province, but could not as the Works of Nature, which according to them is it's Guardian, but not it's Architect. The Epicureans referring all things to Nature, cannot make it Antecedent to the first Formation; for whilst their Atoms roved in an Infinite Vacuity, they had nothing but Bigness, Figure, and Motion, by a Convention of which the World was formed; so that according to them, not Nature but Chance formed the World, which afterwards by Virtue of it's Structure, and the innate motive Power of Atoms, continued things in the same State, which Course casually happening, and continued without Design, according to them, may be called Nature.

But as we have observed before, there is no Foundation in Scripture to acknowledge such a Being, antecedent to the Formation of the World; for in the History of the Creation, God in the Beginning made the Heaven and the Earth, and when he reviewed the Parts of the Universe, Gen. 1. 31. God saw every thing that

And Author of the Universe.

he had made, and Gen. 1. 3. *He Blessed and Sanctified the Seventh Day, because in it or just before it* (as the Hebrew Particle is elsewhere used) *he had rested from all his Works, which God created and made.* And though a Passage in Job. 38. 4, 6, 7. seems to Argue the Angels existing at the beginning of the First Days Work, or before it, yet they were only Spectators and Applauders, but not Instruments assisting in the Creation.

*The manner
of it's for-
mation pro-
posed.*

But since the present is a Philosophical Enquiry only, we shall only at the present consult the Light of Reason in the Formation of the World, which might probably be after the following manner. The Great and Wise Author of things, first forming the Universal undistinguished Matter, put it's several Parts into various Motions, by which they must needs be divided into innumerable Particles of different Bulks, Figures, and Situations; guiding and overruling the Motions of those Parts by his Wisdom and Power, so as to dispose them into that beautiful and orderly Frame we call the World; some being so contrived, as to form Seeds or the Seminal Principles of Plants and Animals. Besides he settled such Laws or Rules of Local Motion, amongst the Parts of Matter, that by his Ordinary Concourse, the Parts of the Universe once compleated, should continue the Oeconomy of the Universe, and Propagate the Species of Living Creatures, so that Gods Omnipotent Power and his Infinite Wisdom concurred to compleat the Form of the Universe, according to those compleat *Ideas* he had wisely determined them to conform to. So that it
seems

seems a mistake to suppose that the Nature of a Body is comprised wholly in it's own Matter or Essential Form, from whence all it's Operations must flow; for an Individual Body being placed amongst other Parts of the Automaton, will want the Assistance or Concourse of other Bodies, as External Agents, to perform several of it's Operations; for if an Animal or an Herb could be moved into those Imaginary Spaces beyond the World, or the Epicurean *Intermundia*, or Intervals betwixt the Worlds, they would as much want the Assistance of External Agents as of the Sun, *Æther* and Air, to perform their Operations, as a Mill would stand in need of Wind or Water to grind Corn; for it appears, that by an Exclusion of the Air, by an Air-Pump, Bodies placed in a large Glass can neither live, nor Flame burn, nor Syringes draw Water, nor Insects fly, or crawl, nor Gunpowder take fire. According to the forementioned *Hypothesis*, the World may be considered as a great Automaton, like a Ship furnished with Pumps, &c. being an Engin consisting of several lesser Engins. This compound Machine, being preserved by the Laws of Local Motion and God's Providential Assistance still continued, is like a complex Principle, whence the Second Order of Corporeal things results. Now whatever happens according to this Course may be said to be done Naturally, or according to Nature; but whatever is done otherwise is preternatural, and contrary to Nature. And indeed, whatever is done amongst things inanimate must be by the Laws of Motion; Particular Bodies Mechanically affecting one another, by

by which affections the Body is differently modified, according to the difference of the Agent or the Patient.

*The Vulgar
Notion of
Nature pre-
judicial to
Religion.*

Having thus shewn, how much the Vulgar Notion of Nature is esteemed and Deified by it's Votaries, I shall proceed to offer some Reasons, why I am dissatisfied with the Notion as well as the Name it self; and why I differ in my Opinion from those Learned Men or others, who think the Common Notion of Nature friendly to Religion. To shew then, what Malevolent Aspect the Vulgar Notion of Nature may have on Religion, we shall consider, what have been the fundamental Errors, that misled the Heathen's People as well as Philosophers.

*How the
Heathens
were misled.*

And *First*, The looking upon inanimate and mere Corporeal Things, as if endowed with Life; Sense and Understanding, and the ascribing to Nature and other Beings, things that belong to God, have been some of the great Causes of Polytheism and the Idolatry of the Gentiles. The most Antient Idolatry and the earliest was the Worship of the Celestial Lights; especially the Sun and Moon. That kind of *Aboda Zara*, being the most Natural Worship, having glorious Bodies, immortal, always regularly moved, and very beneficial to Men, for it's Objects. There is a Passage in holy Scripture, reputed at least as Antient as *Moses*, which argues, that the Worship of the two great Luminaries was practised in his time, and looked upon as punishable by the Civil Magistrates. It says *Job*, *I behold the Sun when it shined, or the Moon walking in brightness; And my Heart hath been secretly enticed; or my Mouth hath kissed my Hand,*

*Idolatrous
Practises in
Job's time.*

Hand, &c Job 31. 26, 27. And that this Idolatry was used in the time of Moses, appears from the following. And lest thou lift thy Eyes unto Heaven, and when thou seest the Sun and the Moon and the Stars, even all the Host of Heaven, shouldst be driven to Worship them and serve them, &c. Deut. 4. 19 The Sabeans, or as some Criticks call them, the Zabeans, by some Learned Men are esteemed the most early Idolaters. More Nevoch. Lib. III. cap. 30. So that Abraham was put to dispute against them, and Maimonides the ablest of the Jewish Rabbies further observes, that their superstitions had so far overspread the East in the time of Moses, that several of the Jews Ceremonial Laws were Instituted to oppose the Idolatrous Opinions and Magical Rites of the Zabeans. Who is seconded by the Famous Selden and the Learned Hottinger Histor. Orientalis, Lib. I. cap. 8. These Zabeans Worshipped the Sun and Moon as Gods, esteeming them as intelligent Beings concerned in the Government of the World. And Maimonides, Lib. III. cap. 36. asserts, the Zabeans to have adored the Sun and Moon and the Host of Heaven, 2 Kings 17. and 16. 2 Chron. 33. and 3. as true Gods. And the same Learned Author Mor. Nevoch. Lib. III. cap. 25. informs us, that these Zabeans or Chaldeans, made Statues of Silver for the Sun, and of Gold for the Moon, which consecrated by Ceremonial Rites and Ceremonies, did attract the Spirits of these Stars into those shrines which would acquaint them what things were profitable, and predict things to come. And the Terepbim which Leban esteemed as Gods, Gen. 31. and 19. ver. 30. are by Learned Criticks

*Idolatries
used by the
Sabeans.*

ticks supposed to be such speaking Images ; such as *Rachel* stole from her Father lest they should tell him, which way her Husband and his Company took their flight. And the same *Rabbi* tells us of several Books of the *Zabeans* Superstitions, which treated of speaking Images. And from these *Zeno* the Founder of the Stoick Sect, as *Stoben* tells us, taught that the Sun, Moon and Stars were endowed with Understanding and Prudence. And *Seneca de benef. Lib. VII. cap. 21.* reprehends *Epicurus* and *Anaxagoras*, because they believed the Sun to be a burning stone, or a Congeries of Casual fires rather than a God.

Hippocrates
misled and
Galen.

And the great *Hippocrates* in his Book *de Principiis & Carnibus* seems involved in the same Error. *Videtur sane mihi id, quid Θεγγδον* callidum vocamus immortale esse, & cuncta intelligere, & videre audire & scire omnia, tum presentia tum futura, upon which Notion he attempts to give an Account of the Origin of the World, and how the Parts of a human Body came to be formed. Which Attempt ought to be commended, since so great a Naturalist could not acquiesce in I know not what Faculties, but endeavours to give some Intelligible account. And it is a great instance of this Truth, that a satisfactory Account of the Production of the greater or lesser World cannot be given without recourse to a God ; though *Hippocrates* Idolized Θεγγδον could not account for it. And *Galen*, who was acquainted with *Moses* Writings, and lived where Christianity was propagated, in his Book *de usu partium*, where he excellently celebrates the wise Author of things, was so transported with the Errors
of

of the Heathen Philosophers, that he fancied the Earth had a Soul imparted to it by Superior Bodies, which, (*Galen. de usu part. Lib. 17. apud Lacunam in Epitome Oper. Galen.*) he says, is so conspicuous in the Sun, next in the Moon, & then in the Stars; that the Contemplator will be induced to think it Reasonable, that the purer the Substance is, it is inhabited with a purer Mind than that of Terrestrial Bodies. And mentioned the Reasoning Nature of *Plato, Aristotle, Hipparchus, Archimedes*, &c. he makes this inference. *Si igitur in tanta Colluvie (quo enim alio nomine quis appellet id quod ex carne, sanguine, pituita, ac bile utraq; est conflatum) mens gignatur, adeo eximia & excellens; quantam ejusdem putandum est, esse Excellentiam in Sole, Luna, aliisq; etiam Sideribus?* to which he adds, *mibi quidem, dum hac mecum voluto, non exigua quedam Mens talis, per ipsum etiam nos Aerem Ambientem, esse extensa videtur; fieri enim non potest, quum lucis ipsius solis sit particeps, quin vim etiam ab ipso assumat.*

But this Error of the Divinity of Celestial Bodies did not cease with the *Zabeans*, and Greek Philosophers; for by those who have conversed with the *Chinese* Doctors, it appears, that they believe the Heavenly Bodies to be truly Divine, and are Worshipped, because they bestow on Mankind, Light, Heat, Rain, &c. and the consequent Productions of these. Which they thought more Reasonable to worship than a Deity, as the *Europeans* do, who had neither Shape, Colour, nor Motion, nor Efficacy on Sublunary things; which agrees with the Opinion of the Antient Greeks, who, as *Origen*

The Errors of the Chinese.

gen testifyes, *Origen cont. Cels.* l. v. called the Sun, Moon and Stars, ἐμπαντες Θεοὶ καὶ αἰδντῆς, conspicuous and sensible Gods. And *Eusebius* tells us, that the Ægyptian Theologers looked upon the Sun and Moon, whom they Worshiped by the Name of *Osiris* and *Isis* (which they borrowed from the *Chaldeans*) not only as Gods, but Makers and Governours of a great Part, if not of the rest of the Universe. *Preparat.* l. 7. c. 4. *Damascus apud Photium vita Isidori: Colunt præ cæteris Deis Ægyptii Osirim & Isin, i. e. Solem & Lunam, illum omnia condere, & figuris numerisque materiam adornare arbitrati.*

Whether the Heathen Philosophers, besides the Stars and other Beings, believed a Supream Deity, we shall not enquire, but it is evident both from their Discourses and Worship, that they ascribed to sensible inferior Beings, Attributes peculiarly belonging to God, and worshipped the *Creature* *magis* besides, or *more than* the *Creator*, *Rom.* 1. 25. who by *Moses*, the Prophets, and the Apostles declared his dislike of it, in that most excusable kind of way in use amongst the ten Tribes, who directed their Worship to one Supream God, the God of *Israel*.

Not only
Jews but
Christians
Corrupted
by the Er-
rors of An-
tient Ido-
laters.

That the Sun, Moon and Stars were endowed with Intelligent Minds, spread it's Contagion so much, as to seduce the Emperor *Julian* from Christianity to Heathenism, (so that he gave the Sun thanks for his Advancement to the Empire,) and several Learned Jews and Christians. As the most Famous and Judicious *Rabbi Maimonides* who asserted, *More Nevachim* l. 3. c. 29. (*ni fallor*) that the Sun and Moon
were

were animated and endowed with Understanding and Will. And the Chief and most Learned *Menasseh Ben Israel*, in his *Problems de Creatione*, Pag. M. 98. says, *Quod de Intelligentiis tradunt id vero mera Fabula est ; nam Cœli secundum Rabbi Mosem, & rei veritatem, habent animas proprias rationali vita præditas, sicut alibi à me demonstrabitur.* And *Origen contra Celsum*. l. 5. though a Christian says, *Siquidem etiam Cœlestes Stellæ Animalia sunt Rationalia, virtute prædita, illustrata Cognitionis Lumine, à Sapientia illæ quæ est Splendor æterni Luminis,* and *Origen contra Cels.* lib. 8. says, *The Christians sing Hymns to God the Lord of all, and God the Word, no otherwise than do the Sun, Moon and Stars, and the whole Heavenly Host, since all these being a Heavenly Quire, do with just Men celebrate the Supreme God, and his only begotten Son,* which may not so much be wondered at, since *Aristotle* and the Schools, had so long taught, that the Celestial Orbs had peculiar Intelligences, viz. Rational, Immortal and Powerful Active Beings. It's true the Errors amongst the Christians, was corrected and overpowered by their Orthodox Principles; yet it is dangerous for those, who would be Loyal to a *Jealous God*. *Exod.* 20. to receive Principles which have misled great Men, and whence Philosophers have drawn Consequences repugnant to Religion. And indeed, amongst us, a Sect of Men, who profess Christianity as well as pretend to Philosophy, much resemble the Antient Heathens; for though they talk of God, they mean such a one, as is little different from the animated and intelligent Universe, and very unlike the true God, which Christians

Worship,

Worship, and though they are looked upon as witty Discoverers of Unheard of Mysteries in Physicks and Natural Theology; yet their *Hypothesis* seems not to be new, as appears from the above cited Passages, to which we shall add the following out of *Lucan*;

*Estq; Dei sedes, ubi Terra, & Pontus, & Aer,
Et Cœlum, & Virtus: Superos quid quarimus ultra?
Jupiter est quodcunque vides, quocunque moveris.*

*What Effects the
Belief of a
Soul of the
World had
on the Gen-
tiles.*

And since the *Soul of the World*, talked of by the Antients, is not unlike what they call *Nature*, we shall further observe, how the Belief of that *Soul* influenced the Gentiles in respect of Religion; since they believed this *Soul* of the World to be not only a Living but an Intelligent, Wise, Active Being, as appears from *Diogenes Laertius's* Lives of the Philosophers, especially that of *Zeno*. And the accurate Sceptick *Sextus Empericus*, reciting a long Ratiocination of *Zenophon*, thus concludes, *Est ergo Mundus mente præditus & intelligens, &c. Sext. Emperic. adversus Methamat. lib. 8.* which Assertion he thus proposes of his own Opinion, *Si non esset aliqua mens in Mundo, neque ulla Mens in te esset. Est autem in te Mens aliqua, ergo est etiam in Mundo. Et ideo Mundus est Mente & Intelligentia præditus.* And the same introduces *Zeno Citius* thus discoursing, *quod immittit semen ejus quod est particeps Rationis, est ipsum quoque Rationis particeps. Mundus autem emittit semen ejus, quod est particeps Rationis, est ergo Mundus Rationis particeps.* And the same Author tells us, that the Stoicks held the World to be an Animal.

And

And that the Antients believed, the World to be endowed with a Rational Soul, as well as how this Opinion led them to the Worship of another than the true God, will further appear from what follows. *Sextus Empericus* infers from the Worlds being intelligent, that it is also a Divine Being. *Est ergo Mundus Mente præditus & Intelligens — & ideo Deus.* And repeating the defence of this Argument of *Zenophon* against an Objection, he concludes: *Ideo Mundus est Mente & Intelligentia præditus: Cum autem sit Mente & Intelligentia præditus, est etiam Deus.* And *Pharmutus* the Philosopher says, *Quemadmodum nos anima Gubernamur, sic & Mundus animam habet, quæ vindicet illum ab interitu, & hæc vocatur Jupiter.* And *Cicero* in his *Academic Questions*, *Mundum esse Sapientem, & habere Mentem, quæ seipsam fabricata sit, & omnis moderator regat.* And to the same Purpose, *St. Augustin.* *de civit. Dei Lib 7. cap. 2.* speaking of the Stoicks says, *dicunt omnia sidera partes fore vis esse, & omnia vivere & Rationales animas habere, & ideo sine Controversia Deos esse.* And *Socrates* introduces *Aristophanes* thus,

O Rex, O Imperator, Aer vastæ, quæ terram continet suspensam,

Nec non splendide Æther.

To which we shall add the Confession of the Poet *Manlius.*

Qua pateat, Mundum Divino Numine virti,

Atq; ipsum esse Deum.

To all which we shall subjoyn this Passage of the Elder, *Plin. Nat. Hist. Lib. 2. cap. 1.* *Mundum & hoc quod alio nomine Cælum appellare libuit; cuius circumflexu teguntur omnia, numen esse credi*

The Opinion of the Soul of the World prejudicial to the Worship of the true God.

par est, aeternum, immensum, neque genitum, neque interitum unquam. Sacer est, aeternus, immensus, totus in toto, vero ipse totum, finitas & in finito similis, extra, intra, cuncta complexus in se, idemq; Natura opus, & rerum ipsa Natura.

The Soul of the World and Nature used promiscuously.

We have cited these Passages of the Soul of the World, since the Antients confounded that and Nature together, having mentioned no other Universal Nature, than that; and since their Opinion of the Universe, which they allow to be endowed with Life, Understanding and Providence misled them into their Errors, Christians ought to be jealous of admitting such a being, which Men commonly Venerate under the Name of *Nature*, ascribing as many Prerogatives to it as the Idolators did to their *Mundane Soul*. And that the Being they call *Nature* hath been made as ill use of as the Soul of the World, will appear from the following, *Non Jovem qualem in Capitolio Colimus, fulmina mittere, sed custodem rectoremq; Universi, Animum ac Spiritum Mundani hujus operis Dominum & Artificem, cui nomen omne convenit; Seneca. Nat. Quest. lib. 2 cap. 45.* to which he adds, *Vis illam Naturam vocare? Non peccabis, est enim ex qua nata sunt omnia cujus Spiritu vivimus. Vis illam vocare Mundum? Non falleris, ipse enim est totum quid, totus suis partibus inditus, & se sustinens vis sua.* And the same Author, *de Benef. lib. 4. cap. 7.* says, *nihil Natura sine Deo est, nec Deus sine Natura, sed idem est uterq;* and another of the Roman Writers hath the following, *Natura est igitur quae continet Mundum omnem, eamq; tuetur & quidem non sine sensu ac ratione.* And *Lactantius* thus delivers the Opinion of one of the

the Stoicks, *Isti uno Natura nomine res diversissimas comprehenderunt ; Deum & Mundum, Artificem & Opus, dicuntq; Alterum sine altero nihil posse, tanquam Natura sit Deus Mundo permistus. Nam interdum sic confundunt, ut sit Deus ipsa mens Mundi, & Mundus sit Corpus Dei quasi vero simul esse caperunt Mundus & Deus.* And to prove that we have not, in this Discourse sometimes styled *Nature* a *Semi-Deity* or *Goddeſs*, without Reason as if Men Idolized her, we shall add the following *Hymn* from *Orpheus*,

ὦ φύσις πανμήτερος Θεῶν, &c.

Which is thus rendered in Latin;

O Natura omnium mater Dea, artificiosa admodum Dea,

Suscitatrix honorabilis, multa creans, Divina Regina,

Omnidomans, indomita Gubernatrix, ubique Splendens,

And a little after,

Aethera, Terrestris, & Marina Regina, &c.

And *Aristotle* and his Commentators come little short of it when they say, *Natura est Sapientissima ; Natura fine suo nunquam excidit ; Natura semper quod optimum est facit.* Nor are the *Works of God* distinguished from the *Works of Nature*, when *Aristotle* himself says, *de Cælo lib. 11. cap. 5. Deus & Natura nihil prorsus faciunt frustra, esteeming the Creator and the Creature coequal, and two subordinate Governours.*

vernours. To which we may add the Expression of *Ovid*,

Hanc Deus & melior litem Natura diremit,

Some Consideration
on the above quoted
Citations.

It might be easy to refute these precarious and improbable Opinions of the Heathens, were it necessary. Those Philosophers, who asserted the Sun to be Fire, could not find that flame with fuel. And those Chaldeans, who made the World an Animal endowed with a Living Soul, Understanding and Will, would be as much puzzled to find Nourishment for it, and Parts Organized to prepare that Nourishment, it being 160 times bigger than our Globe of the Earth. If we allow the Cartesian Principles, the World would be far from being Intelligent or a Living Body; and it would be no difficulty to propose an *Hypothesis*, which might shew, how the Sun might be an Igneous Body, and supplied with fuel much nearer than from the Sea or Earth; but not to mention this, Understanding and Prudence can scarce be attributed to Planets, especially the Moon, so rude and mountainous a Body, which by Speculative Men can scarce be thought capable of exercising the Functions of a Sensative Soul, being a Lump of Matter, unfitly Organized for a Living and Sensative Soul. And though Philosophers speak much of the Quintessential Nature of the Celestial Bodies; yet they give no Physical Reasons for their Opinions, but have received them, because agreeable with *Aristotle's* Opinion of the Divinity of Celestial Bodies, *lib. 11. c. 3. de Colo*, neither consistent with true Philosophy

lofophy nor Religion. Indeed in his Book *de Calo l. 11. cap. 33.* he observes, that the Pythagoreans believed our Earth to be a Planet, which moved about the Sun, which was placed in the Centre of the Planets; and this *Hypothesis* hath been received by *Copernicus, Keplerus, Galileo,* and *Gaffendus,* and received by *Des Cartes* and others; which *Hypothesis* seems much more Reasonable than *Ptolomy's* System, and agreeable to the *Phænomena* in the Order and Consistence of the Heavens. Now if we consider the Nature of our Globe, composed of very heterogeneous Substances, unlikely to be Organical, and to be a Living Animal, endowed with a Rational Soul, we shall scarce attribute Understanding, Providence and Divine Nature to other Stars; the Moon appearing by a Telescope, to be a Craggy, Mountainous Body, composed of Parts of different Textures; and hath no manifest Light, but what it borrows from the Sun, and perhaps from the Earth.

As for the Immortality of Celestial Bodies, not to mention the Paralax of some Comets above the Moon, that may reasonably be called in Question, by the sudden Generation, Changes and Destruction of the Spots in the Sun. On the 8th of *May 1660,* we observed by a Telescope, a spot in the Morning, which in the Evening was quite dissipated, though the extent of it's surface appeared to be equal to all *Europe.* And as for the Constancy of the Motions of the Celestial Bodies, the Motion of the Earth seems to be as regular as of any other, which yet we know is inanimate. And though the Earth were not a Planet, yet within it self we observe, the

The Immutability of Celestial Bodies disproved, &c.

Regular Motions of Tides, ebbing and flowing twice a day, and Spring Tides twice a Month, and that a Vast Tract of Water is observed to shine. And though Light is the Noblest of Sensible Qualities, yet it is no proof of the Planets being divine, it appearing, by Telescopes, that the Gods of the *Zabeans* and *Chaldeans*, except the Sun, shine only by a borrowed Light, *Venus* appearing sometimes horned like the Moon, some time after her change. And the Earth is a Light Body receiving it's Light from the Sun, whether it be a Planet or not. And though the Sun communicates more Light to the Moon, than it receives from her, which is argued from the Light upon her surface in some Eclipses; and though when the Pupil of the Eye is enlarged in the Night, the Moon appears to shine very bright, yet the Earth perhaps may be brighter than the Moon; for I have observed a small Cloud in the West, about Sun-set, which though a loose Opacous Body, reflected the Light as brightly as the Moon, both appearing like white Clouds; yet when the Sun descended below the *Horizon* the Moon grew more Luminous. And if we speak of Light Indefinitely, whether it be externally received from another Body, or proceeds from any Principle within, it is so far from proving it's Divinity, that a burned stone, as that of *Bolonia*, will afford more borrowed Light than one of the Planets. And such object Creatures as Insects, as the winged *Cucupias* of *Hispaniola* and creeping Insects called glow worms, nay inanimate Bodies, as rotten Wood, stinking Whifflings, and other putrified Fish, will afford Light.

But

But further, how the *Zabeans* could suppose, the Connection, Symmetry and Subordinate Dependence of several Parts of the World, made up of so many different Beings, endowed with Animal Souls, and also distinct Understandings and Wills, and several also of a Divine Nature. And further, what a strange Monster, rather than a Deity, those Philosophers must make the Universe, who taught it to be but one, yet were of *Stobæus* his paradoxical Opinion, I shall not now examine. In the Beginning of his *Physical Eclogues* he says. Ζῆυς ἔστω, &c. i. e. *Jupiter quidem totus Mundus est, Animal ex animalibus, Numen ex Numinibus compositum.*

From what hath been said it appears, how dangerous it is to allow any other Creatures Intelligent and Rational, except Angels and Men, or to allow them an Architectonick, Provident or Governing Power. And though there is no danger, that Christians should Worship *Nature* as Heathens did. Yet it is dangerous to entertain Opinions, which misled several Philosophers, which may induce some Learned Men to have too great a Veneration for Nature, and Worship the Creature, above or besides the Creator, who is the true God, and not the World, nor the Soul of it. And though those Sticklers for the received Notion of *Nature*, seem not to endanger Religion; yet it is a fault that they blame those for, that ascribe not as much to Nature, as they do themselves, Representing their Notion not only Innocent, but Useful if not Necessary to Religion.

The first
Reason a-
gainst the
vulgar No-
tion of Na-
ture.

But to proceed to the Reasons, why we have rejected the vulgar received Notion of Nature. The *First* is, that *Nature* according to the Vulgar Notion, is asserted and assumed without sufficient Proof; for in Philosophy we ought not to give our Assent without Positive Arguments to prove it, though we have no particular Arguments against it, and more especially, when it relates to such a Catholick Agent, that others are but Instruments of it, or Subordinate to it, and which having an Agency in so many *Phænomena*, it may be supposed Demonstrable by several of them; whereas there are no Demonstrative Physical Arguments to prove the Existence of this *Nature* we discourse of. And though Holy Scripture should be admitted in Philosophical Controversies, yet where the Corporeal Works of God are treated of, Nature is not so much as mentioned; and therefore we may freely question by Reason, what is not offered as a Matter of Belief by Revelation; and though general Opinions are popular, they are no Physical Arguments, nor ought to influence Philosophers though they do the Vulgar.

The Second
Reason.

The *Second* Reason why we entertain it not is, That it is not necessary, there should be such a *Nature*, Philosophers having reduced their Principles to as small a Number as they can without making them insufficient; for if we suppose the common Matter of all Bodies, to be first divided into innumerable minute Parts, by the wise Author of things, and that these were so disposed as to form the World, as now constituted; and further, if we suppose the Universal Laws of Motion to be established, and that by their Conventions,

the

the Seminal Principles of various things were contrived, by the Local Motion of Matter, skilfully guided at the beginning, and that Gods ordinary and general Concourse contributed to perfect the Universe and continue it so, there is no need of any Distinct, Powerful, Intelligent Being to assist him, as Nature is represented; since the *Phænomena* which occur, will flow from the meer Fabrick and Constitution of the World. For the motion of the Sun and Moon being once settled, it will follow consequently, that the Moon will have several Phases every Month, and that they shall sometimes have a Trine or a Quadrant Aspect, and that sometimes the one and sometimes the other should be Eclipsed; yet these things have been, and are still looked upon by some as Supernatural things; and even *Aristotle* and his Followers thought, such things could not be maintained, without an Assistant Intelligence, which he assigned to each particular Orb. But if we consider the Unsearchable Wisdom of the Divine Architect, or *Δημιουργος*, *Heb.* 11. 10. his penetrating Eyes could discern all the Motions of the *Automaton*, and what might happen according to the Laws of Motion, so that nothing could happen, but what was agreeable to the Constitution he thought fit to allow, and foresaw without the Interposition of a Miracle.

Nor is the Notion of Nature more useful, than necessary, to explain those *Phænomena*, where it is employed; nor is it allowable; for to give the Nature of a thing for a Cause of a particular Quality or Operation, is to leave the Matter as obscure as before; or argues, that a Philosopher

Philosopher can assign no better Causes than an Ordinary Man, who never learned Natural Philosophy; for when Philosophers give such blind Causes of things, it shews, that the Cause of that dark Phænomenon is not yet known. So that this Indefinite Notion of Nature, being applicable to the resolving of all Difficulties, serves only to delude him that asks the Question, or to hide the Ignorance of the Answerer.

The Third
Argument.

The *Third* Argument against the Notion of Nature is, that it is so dark & unintelligibly proposed, that those that use it, know not what to make of it. For it appears not whether they mean a Corporeal or an Immaterial Substance by it, or whether betwixt both; as Substantial Forms and Real Qualities are, which severe Schoolmen hold separable from all Matter. If Corporeal, it appears not how it can be so Wise and Omniscient an Agent; besides it may be asked what kind of Substance it is, and how, disallowing penetration of Dimensions, it pervades all other Bodies in the World. If it be a *Semi-Substantia* as some call Substantial Forms and Real Qualities, we have elsewhere shewn in a *Chymico Physical* Discourse of Salt-Peter how Chimerical and Unintelligible the Principles of the Peripateticks are. If then this *Nature* be a positive Being it must be Immaterial; but to make use of such a Cause as a Physical Agent, and the grand Determiner and Author of Motion; and that, in familiar *Phænomena*, as the ascension of Water in Pumps, or the suspension of it in Watering Parts, & the running of it thro' Syphons, and to explain their Accidents is very difficult to conceive. But of this more hereafter,

ter, we shall only add, that the *Naturalists* avoid defining of what they call Nature and covet to talk darkly, that they may be less liable to Objections, since this Notion helps them to pretend Knowledge and disguise Ignorance.

The *Fourth* Reason why I dislike the Notion of Nature, is, because it is dangerous to Religion and consequently to Christianity; for Men ascribing to *Nature* as an Intelligent Being the wonderful Effects they see the World instead of God, they rob him of the Veneration and Gratitude that is due to him, and praise her for the Wonderful and Useful things they receive from God. And though Nature in that Sense is never to be met with in the Scriptures, yet in the Books of Philosophers nothing is more frequent than fine Titles and Encomiums of *Nature* and her Effects. Besides as the *Aristotelians*, from whence the Notion of Nature is taken, make the World Eternal, and ascribe all the Transactions of it to Nature, they exclude God from being concerned in the Creation, and from being concerned much in the Administration of the Sublunary World; so that a Goddess *Nature* is substituted instead of a true God.

And that an Error in such an Important Point, may tend to undermine the Principles of Religion is reasonable to expect; for since the greatest Argument to convince us of a God and his Providence, may be taken from the Wise and Benign Conduct of what we see in the Visible World; to ascribe such things to Nature must weaken that Argument, and not only take away the Necessity of acknowledging a Deity, but
the

the administration of things, which are by them ascribed to *Nature*, to whom they have recourse in explaining all *Phænomena*. And though when pressed to declare, they are ashamed to affirm, that God and Nature are the same thing, yet their Practice gives the Praise to Nature, not to God ; as in respect of the Sun and Moon, though the Latter receives her Light from that Fountain the Sun, yet since the Motions of Ebbing and Flowing depend on the Moon, they attribute these Effects to the Latter ; thus tho' Men acknowledge Nature Subordinate to God, yet they regard *Her* more than *Him*. And as the respect shewn to Nature hath made some deny God, so it hath made others forget him. And if other Principles hindered not, the Erroneous *Ideas* of Nature might not only shake, but subvert the Foundations of Religion, misleading those that are inclined to deny the Necessity, if not to Question or Deny the Existence of a God.

*The Fifth
Argument
against the
received
Notion of
Nature.*

The *Fifth* Argument against the received Notion of Nature, is, that several *Phænomenas* do not agree with it; for if there were such an intelligent, wise and vigilant Being, several things would not be done which are. And since Nature's Providence and Power is extended to every thing, and Inanimate Bodies as well as Living Bodies, the Instances we make Use of shall be taken from the Former, their Structure and Qualities being more easily understood and discoursed of, than of Organized Bodies.

And

And *First*, Since Natures Care for the good of the Universe is urged from her Vigilancy to prevent a *Vacuum* or to replenish it, we shall shew the contrary from the *Phænomena* that happen about a Vacuum. In great Pumps it is said, that Nature lifts up the Water, contrary to it's Tendency, to prevent a Vacuum; and that in an Inverted Pipe, neither Water nor Quicksilver which is fourteen times heavier, will fall down, lest it should leave a Vacuum behind. But if a Glass Pipe be but a Foot longer than 34 or 35, or an inverted Tube filled with Quick-silver be but a Fingers Breadth longer than 30 Inches, the Water in One, and the Quicksilver in the other will subside, the one leaving a Foot, and the other an Inch of disserted Space; where it argues Nature to have but little Power, or little Knowledge of it, that she does not take care to prevent this Vacuum. So when a Glass Bubble is blown very thin at the flame of a Lamp, and sealed Hermetically, whilst hot, the Reason why it breaks when Cold, is assigned, because Nature does it, lest the Air rarified by heat, should occasion a Vacuum, when condensed; but if the Glass be stronger, Natures Power is lost, and the Glass remains unbroke. But the true Reason is, that whilst the Air was rarified, the agitation of the expanded Air strengthened it's Spring, and enabled it to assist the Glass to resist the Force of the Airs External Pressure; but when that Expansion ceases, the Glass it self being too weak to resist, yields to the Force of the incumbent Air, a Pillar of the Atmosphere pressing upon a Bubble two Inches Diameter, weighing an hundred pound weight. But

Of a Vacuum and Natures power to prevent it.

But when the Bubble is stronger, it resists the force of External pressure; yet it may be made of such a thickness that it's strength will be so Equipollent to the Pressure of the Air, that by the addition of a small Weight laid upon it, it will fly into pieces, and break with Noise. In both which Cases, Nature is either wanting in her Power or Care.

An Argument against Nature from the Tendency of Bodies that are heavy, &c.

Another grand Instance of Natures Care and Wisdom, is to implant an innate Disposition in Bodies to tender to the Centre, as Heavy, or upwards, as Light; but the prepollent Gravity of some, being sufficient to give comparative Lightness or Gravity to Bodies, we must deny Nature this Prerogative. If a piece of Wood be let fall in so light a Medium as the Air, it's Specifick Gravity makes it tend towards the Centre; but if it be let go under Water, it will ascend to the Top; which cannot be assigned to positive Levity, since it descended in the Air by it's Gravity. But not to dispute the Appetite, which Nature hath implanted in Bodies to tend to the Centre, which is but a point and not able to contain one of them; we shall further consider, that if a Ball be let fall upon the Ground, it will make several rebounds before it be at Rest. Where it may be asked, why if it's tendency proceeded from Natures innate Appetite, it should rise up again contrary to Natures design; and it is not only very indiscreet and an Argument of Natures Foolishness, when it falls, to suffer it to go with a greater force than was requisite to pursue her Design, and which should occasion it to fly so often back from the place she designed it to go to,

to; where Nature must be very weak, that she cannot manage what a Child can direct as he pleases. Nor is it less contradictory to Natures Power and Wise Designs, to suffer a *Pendulum* by so many Vibrations, to move contrary to it's perpendicular Tendency; which Motion notwithstanding proceeds from it's Gravity.

But not to mention those greater Anomalies in the vaster Bodies of the Universe, as Earthquakes, Deluges, Celestial Comets, Spots in the Sun, &c. which are Arguments against the Character, which is given Nature of her Care and Vigilancy; it may perhaps be urged, that the Exceptions we have made against the Proceedings of Nature, may as well be urged against Providence and exclude him from the Government of the World. But to this I answer, that the Question is about Mens Notion of Nature, not God's Providence; which may easily be established upon proper and solid Grounds; as the infinite Perfections of Divine Nature, which enables him to govern the World, he hath made and supports; The exquisite Contrivance of Mens Bodies, requiring stupendious Wisdom; The Supernatural Revelations made of himself, and his care of his Creatures, by Prophecies, Apparitions and Miracles, above the Power, and contrary to the Laws of Motion in Matter. But to our present Purpose; it seems not the design of Providence to prevent those Anomalies and Defects, which they assign as *Natures* Duty; as to keep the Universe in order, that all things be carried on in the best and most regular way. Besides nature is reputed but a Deputy, whose Diligence and Vigilancy

An Objection answered in relation to Gods Providence.

Vigilancy ought not to suffer things to be done, which God himself may permit, being Supreme Lord of the whole Creation; whence *Melchisedec* and *Abraham* styled him, not only the most High God, but Possessor of Heaven and Earth, and who when he settled the Laws of Motion, gave them to Matter, not himself. And being obliged to no Benefactor, he was not obliged to make things after the best manner he could, for their own Good; for which Reason, those that are capable ought to praise and thank him for what he hath done, having no Right to find Fault, because he hath done no more. And as he hath a Sovereign Right to dispose of his Works as he pleases, so he hath other Attributes, which he may exercise as he pleases, and expect to be glorified for his Goodness to Inferior Creatures; his Wisdom appearing both to Men and Angels by the great variety of his Contrivances in his works, more than if he had made them all of the most excellent kind; as Shadows in Pictures, & Discords in Musick skilfully ordered, recommend the Painter and the Musitian. And perhaps the violating the Course of things, and the mischievous Consequences of such exorbitances, manifests the goodness of God, in preserving the orderly Course of things. Again, as God is a most absolute and free Being, so he is Omniscient, and as by his Supream Dominion over his Works, he may dispose of them for his own Glory; so his Wisdom, which is so much past finding out, may have designs in the Anomalies, which happen in the World, which we cannot discern; and he may exercise as much Wisdom and Providence

dence in receding from the Laws of Nature, as in establishing of them. Whereas the Duty of Nature is to preserve the order of things in their respective Conditions, so that we can better discern, when she misses her aim by not performing her Part. We are further to consider, that God is not only independent but free & wise, so he is a just Agent, and may occasion several Irregularities to punish what Men are guilty of. And as Nature is said to respect Men, not in a Moral but a Physical Capacity, God declares in Scripture, that he *Cursed the Ground or Earth, for Man's sake, Gen. 3. 17, 18.* and that there is no penal evil in the City, which is not owing to him, *Amos. 3. 6.* Besides he is not over-ruled as Nature is, by the Motions of Matter, but over-rules the established Rules of Motion to execute his Justice; as in Earthquakes, Plagues, Inundations, &c. to deprive Wicked Men of that Life and those Blessings, which their Sins have made them unworthy of. Which shews, that what may be esteemed a fault in Nature, and unsuitable to what she is represented to be, may be consistent enough when attributed to Divine Providence.

But here perhaps may arise a Question, whether the World, and the Creatures that compose it, are as perfect as they could be made? which is very difficult to answer, the Extent of the Divine Power and Wisdom being not known to me. However, we shall briefly consider the Question, the sense of it being; whether God could make the material World, and the Creatures it consists of better than they are? Or, whether the Particular kinds or orders of Crea-

*A Question
proposed
and answered.*

tures may be made more perfect or better than they are? As to the first Part of the Question, it seems not safe to deny God Almighty, who is Omniscient, and full of Perfections, beyond what we can comprehend, the Power to exercise his Perfections, and Create a Work more perfect than this World. And if we consider his immense Power, and Wisdom, it will not follow, that though this World is an excellent piece of Workmanship, that he could not make it better, or that, because God is able to make one more exquisite, that this is not admirably made. As for the Sense of the Question in the Second Sense, if we consider the several Species of visible Creatures, without respect to the System of the Universe, or the particular designs of the Creator, it seems evident, that several Creatures, might be more perfect than they are, since some are more compleat than others, as an Oyster, which can neither see, hear, swim, nor fly, &c. is more imperfect than an Eagle or an Elephant: of this Inequality in the Perfection of Creatures, we might enumerate several Examples. If it should be asked, whether God could make more perfect Creatures than he hath made, it evidently appears he could, since he hath done it. But whether the Creatures were not so skilfully made, that they scarce could possibly be made better, with respect to the ends he designed them for will be a hard Matter to answer, and to prove the Negative; for supposing a Man should come into a Watchmakers Shop. and see a plain Watch, fit only to shew the Hour of the day; another that strikes the Hour; another fitted with an Alarm; another

ther that shews the Day of the Month ; and another that shewed the Motions of the Tydes, Sun, Moon and Planets, &c. he would think one more curious than the other ; yet each might be perfect in it's kind, and the one answer the design of the Maker as well as the other. And thus a Writing Master, who writes several Hands, though they may be all excellent in their kinds, yet the one may seem more Beautiful than the other, and if the Master should add Beauty and Ornament to a Text hand to make it as fair as a Roman Hand, that flourishing would spoil the Text, and argue want of Judgment.

And that Divine Providence had several Ends, in making the World, and the several Creatures that Compose it, some of which are hid to us and others known, is evident, some being made for the Manifestation of the Glory of God, others the Usefulness of Man, or the Maintainance of the System of the World, with respect to particular Creatures or the propagation of their kinds.

*Providence
had several
ends in
forming his
Creatures.*

But Gods design for the welfare of Man and other Creatures is to be understood in a twofold Sense or Limitation. And *First*, though Men and other Animals are furnished with Faculties requisite to preserve themselves, and to provide their own Necessaries, yet it is with respect to what regularly and most usually happens to that Species of Beings they belong to ; but not such as are irregular, or contingent. Thus it is convenient, when a Woman is brought to Bed, that her Breasts should be filled with Milk, to suckle her Child ; but if the Child dye in the Delivery, it would be better she had not,

*Of the Distribution of
Providence.*

it being troublesome and sometimes Dangerous. Again, a Head of Hair is frequently serviceable to the Person, yet it often is prejudicial and ordered by the Physicians to be cut off. As the Instinct in Hens to Hatch their Eggs and take care of their young ones, is not only useful, but necessary to preserve the Species, yet they sometime brood upon Duck Eggs, and bring forth Ducklings instead of Chickens. Thus it is convenient, that a Man should loath those things that are nauseous and of a ill Taste or Smell; Because those things, which are chiefly designed for his Nourishment, are either well or not ill tasted; and yet in Sicknes that Disposition to refuse or vomit up Nauseous Purges and other distastful Medicines, is prejudicial, and an Impediment to the Recovery of Health: and thus Passions of the Mind are designed for Man's Good, and are of advantage when well used, yet when unruly and ill managed, they commonly prove the Cause of Diseases, and are mischievous to the Person.

Gods Providence principally respects the Universal Good of his Works.

But *Secondly*, the Omniscient Author of things, who in his boundless Understanding once comprehended the whole System of his Works, did not only design the Welfare of Particular Creatures, but Subordinated that to his Universal Care of the Primitive System of his Works, especially those Catholick Rules of Motion, which he first settled amongst the Parts of Matter. So that when such a Concourse of Circumstances happens, that a Particular Body must suffer, or some usual and General Course of Things, must be altered, the Welfare of Man or inferior Creatures must give

give way to things of more Important concern. Thus when God Established the Rules of Motion for the Sun and Moon, he foresaw that by that constant Course, Eclipses would happen, which might have occasioned worse consequences otherwise, had those been avoided. Thus a Foot-ball or blown Bladder rebounds upwards, contrary to the Rules of Gravity, lest the Catholick Laws of Motion, by which the Springiness of Bodies, and their Reflection are settled, should be violated. Thus God Thought not fit to allow Sheep Paws, Tusks, Swift-ness, Craft or Animosity, to defend and secure themselves from Foxes and Wolves. And tame Birds, as Hens, seem designed for the Food of Hawks, &c. being unfurnished with any thing for their Defence. Thus Oysters have neither Eyes nor Ears, and Silk-Worms live not above half a Year, being less provided with the Requisites of long Life, than the Generality of Birds, Beasts and Fishes.

From hence it appears, that we ought not presently to deny or censure Divine Providence, though all his Creatures are not equally provided for their safety, or some less than they might be; and though some Anomalies are permitted, which are esteemed Mischievous Irregularities; for the good of some particular Creatures being not the Principal End of God's Creation, it is not to be expected, that he should regard the Welfare of some Particular Creatures, before the good of Creatures of a Superior Order. So that some things, which seem incongruous to Providence, do not only agree with it, but tend to accomplish it's Designs.

*Not easily
to be con-
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denied.*

Some Instances of Providence.

But to proceed to some Instances of Providence; several Persons have been choaked with a Hair, which they could neither cough up, nor swallow down. This Effect is occasioned by an unusual Irritation in the Throat, which occasions violent Convulsions to expel it, in the Organs of Respiration, which obstructing the continual Circulation of the Blood, occasions Death. Where it seems to reflect much upon the Providence of Nature, whose Business they make it to preserve the Life of Animals; for a hair is so slender a thing, as neither to hinder the Passage of Meat and Drink into the Stomach, nor Air into the Lungs, and therefore Nature had better let the Hair stay there, till dissolved or removed by Accident, than by such passionate and blind Violence, like a fury, instead of throwing out the Hair, to expel the Life of the Person. But if we reflect upon the usefulness of Deglutition, and in some Cases of Coughing and Vomiting, it is requisite, that the Parts should be irritated, by the sudden Sense of unusual things, this being consistent with God's Providence, who in making Provision for the Welfare of Animals, regards more what usually befalls them, according to the regular Course, than Extraordinary Cases or unusual or less frequent Accidents.

It hath frequently happened, that Women have Miscarried, upon the smell of an extinguished Candle, which at another time would not have offended the same Persons; when Nature seems very careless to suffer such Transports by an Odour, and instead of taking extraordinary Care, at a time, when it is not

wanted

wanted, suffers such ill Accidents, which often prove Fatal to both the Mother and Child. Besides Nature seems to do her Work very weakly and erroneously, notwithstanding the Skill and Wisdom that is attributed to her in the Production of Monsters, whose Variety and Number is as great as their Deformity and Irregularity. And though it is excused by those, who espouse Nature's Excellencies, that the Stubbornness of the Matter is the occasion of it, yet since they esteem her as a Goddess, it is strange she should not be able to Fashion so small and tractable a Portion of Matter as forms an Embrio, when they allow her to be able to raise whole Tuns of Water to prevent a *Vacuum*; and in Mines, throws Houses, Walls and Castles into the Air, to allow fired Powder Room for Expansion. More of such like Instances may be seen in the following Discourse.

But to proceed to the Reasons, we conceive, may have induced Philosophers to depend on the received *Notion of Nature*. The first Argument may be taken from the Observation of Divers Bodies, as Earth, Water, &c. which have their Natural Place in the Universe; from whence, if any part of an Element, or mixed Body, where that Element predominates, happens to be moved, it incessantly covets to return to it again, where, as the Schoolmen say, it neither Gravitates, nor Levitates, being in a place where Nature is qualified to preserve it, according to the *Axiom, Locis conservat Locatum*.

The first Reason that may have introduced the Notion of Nature.

Answered. To which it may be answered, that since there is such a Quantity of Bulky Bodies in the World, it is requisite they should have place adequate to their Bigness, the Wise Architect of the Universe thinking it fit, that they should not all be mixed together, but be disposed in distinct and convenient Places; yet since inanimate Bodies have no Sense nor Perception they cannot be concerned to be in one place more than another, and therefore a Portion of an Element being moved from it's proper place, can have no Appetite to return; for who can tell it, that it's in a proper Place, or the contrary? or where that place is, and which is the way to it? but other Philosophers seeing the weakness of this Argument, have endeavoured to strengthen it, by supposing, that when any thing falls in a direct Line towards the Centre of the Earth, it falls not with an Appetite to descend to the Centre of the Earth, but to the Mass of Connatural Bodies. This Opinion though not liable to all the Objections with the former, yet it is to other weighty ones.

No tendency in Matter to join connatural Matter.

The *First* Argument offered against the former will also hold good against this, it not being possible inanimate Bodies should have a Disposition to join Homogeneous Bodies, knowing neither their Situation nor Distance.

Secondly, All Bodies have not an Appetite of joining themselves to greater Masses of Connatural Matter; for if you file the End of a Bar of Iron or Silver, the filings will not stick to their own Mass, though it be put so near as to touch them, and much less will they leap to it

it at a Distance; the like may be observed of all other Bodies, except Iron and a Loadstone.

Thirdly, We may observe, that it is a general Agent, that makes Lumps of Earth fall through the Air to the Earth, the Wise Author of the Universe, determining the Motion of heavy Bodies the shortest way permitted, towards the Central Part of the Globe, whether of the like or a different Nature from the Aggregate Mass. So if you hold a Chip over the side of a Ship, so that a perpendicular Line will not be intercepted by the Ship from the Chip to the Water; when you let it fall, it will tend directly to the Water, and not to that Bulk of Wood the Ship is composed of. So if a Man stands on the shore and holds a Glass of Water, so that a perpendicular will fall near the Edge of the Water over the Sand, that Water in the Glass, when poured out, will not deviate from the Perpendicular to fall into the Water, but will fall into the Sand.

And as to that part of the Argument, we are to answer, that Water does not weigh in Water, because in it's Natural Place, according to the Maxim, *Elementa in proprio loco non gravitant*, the contrary of this we have proved by several Experiments; for though it does not pregravitate, nor cannot descend, as having an equal Collateral Pressure, yet it presses upon the Basis that it lies upon. See *Hydrostat. Paradox.*

And as for the Maxim, *Locus conservat Locatum*, not to insist, that it hath been asserted without Proof, the Natural Place of a Body cannot

cannot be inferred from it's Natural Tendency, besides when a Seaman falls from the Main Yard into the Sea, does it preserve or destroy him? And when Soot falls out of a Chimney upon the Hearth and there burns, must we believe the Soot had an Appetite given by Nature to hasten to the fire, as a Bulk of Connatural Matter or a Place of Conservation.

We are told further, that when a Bubble rises from the Bottom of a Vessel, that the reason of it's haste proceeds from it's Appetite to Joyn the Air at the top of the Water, and to quit that Preternatural Place, yet it is detained at the Top by a thin Skin of that Water; where it is strange that the Air which forced it's way through so much incumbent Water cannot break so small a Skin of Water as makes a Bubble, and pursue it's Appetite to joyn the External Air, since Natural Motions grow quicker, the nearer they come to the place of rest; the Appetites of Bodies increasing, as they approach the designed good; as Stones increase the quickness of their descent as they come nearer the Earth. But not to mention the Air's Appetite, it is easy to explain, why Bubbles ascend slower, the nearer to the Waters surface, and why they are detained there, the pressure of the Water there being so small, as not to be sufficient to resist the Tenacity, and weight of that Film of Water; but when Bubbles rise upon Spirit of Wine, which is less Tenaceous and Viscid than Water, they are soon broke and vanish. And it may be observed, that a great many Particles of Air are in Water, in a Natural State, though the External Air is incumbent

bent, yet this pretended Appetite disposes them not to joyn it: and that such Particles of Air are in Water, is evident, if it be put into a Pneumatick Engine; for when the Air is exhausted, the Air contained in the Water will gradually rise and form Bubbles, as that Air is exhausted and it's Pressure taken off by the Pump. And if some of this Water be put into a convenient shaped Glass and exactly inclosed, with a little Air at the Top of the Vessel, and set in a quiet place, the Particles of Air will gradually insinuate themselves into the Water; being not averse to mix with it; and so far from an Appetite to make it's escape, and fly from it, though the difference, in Specifick Gravity, when Air is under Water, makes the latter press the other up.

Another Argument in Favour of the Notion of *Nature* may be drawn from the Appetite Bodies have to recover their Natural state, when out of it, and in a preternatural One. As Air Compressed in a Blown Bladder, will return to it's first Dimensions, when the compress is taken off. And the Blade of a Sword being bent, as soon as the Force is removed, returns to it's former straightness. And Water when hot, hastens to return it's former Coldness.

In answer to this, we shall first offer, that inanimate Bodies being void of Sense and Knowledge, cannot covet to be in one state more than another. But as they are indifferent to all places, continue in that place or state, which the Action or Resistance of other Bodies, especially those contiguous, determine them.

As

*A Second
Argument
in favour
of the No-
tion of Na-
ture.*

Answered.

As to Waters returning to it's Natural degree of coldness, before this should be offered as an Argument, it ought to be ascertained, what Degree of Coldness is Natural to Water, which will be difficult to do; though the Parts of Water are in a less agitation, than those of the Juices in a Mans Body; but whether it be cold to Fishe, whose Blood is cold to our Sense, cannot easily be proved. Besides, the Water varies it's Temper according to the Nature of contiguous Bodies, especially the temper of the Air; upon which Account the Water will be of different Tempers at different times of the day as well as year, as the Sun acts upon it according to it's regular Course. Hence Boats equally laden will not sink so deep in Winter, as in Summer, the Water being heavier when cold and condensed. And as it's temper differs according to the different times of the day or year, so it varies according to the difference of Climates; in *Africk*, the Natural Temper of it is hot; but in *Siberia* the most Northern Province belonging to the *Zar*, the Natural Temper of the Water is so cold, that it continues congealed like Ice, two or three Foot beneath the Surface of the Ground, all the Year long.

The Air chiefly Contributes to bring Water to it's Natural Temper.

And I am of Opinion, that the Air contributes more than any thing else to bring Water to it's due temper; for though, if your Hand be immerfed in Water, it seems much colder than the Air; yet that may happen, because the Water consists of Parts which are more flexible and apter to insinuate themselves into the Pores of the Skin, than Air which is made of Long Parts not so flexible; besides the warm Parts
of

of the Juices are not only more easily affected by them, which occasions a Sensation of Cold, those Parts being less agitated than before they were checked by Cold, but the agitated Parts of the Juices are communicated to, and spent in the Water; thus a sweating Hand put into Water may feel it Cold, whereas if a Hand that is cold be put into the same Water, it may feel it warm; for having put a sealed Weather Glass of Liquor, of the same Temper with the Air, under Water, which was kept in the same Air, it would not appear so Cold as one would expect. And I have tryed, that when Water was made Cold by dissolving *Sal. Armoniac* in it, in the Summer, it hath soon recovered it's Natural Warmth again; but having tryed the same Experiment in Winter, it did not return to the same Degree of Coldness; that being uncertain and depending on the Temper of the Air, though *Sal. Armoniac* made it colder than the Air was then.

As to the restitution of the Air compressed, to it's Dimensions of Expansion; and the restitution of a Blade forceably bent; it evidently appears, that there is no Air here below which is not in a Preternatural State, the Lower Parts of the Atmosphere being constantly compressed with the Upper; and as for the Springiness of Metal, if you take a long Plate of Silver, which hath been heated red hot, and suffered to cool leisurely, it will continue bent which way you will; but if it be hammered it will, by that change, become springy; and so will Copper, but Lead will scarce at all. Now if *Nature* restored Springy Bodies to their Position,

The Nature of Springiness considered.

tion, why does she not do it, before it is hammered ; and why should she not be as careful of other Metals as Lead or Gold ; and why when the other Metals are put into the Fire again, they lose their Power of Restitution, quite forsaken by Nature, is unaccountable, Nature taking Care of none but hammered Metals ; nay, Sword Blades which Nature is so Sollicitous for, if they be kept bent too long, they loose their Power of Restitution, Nature easily forgetting her Care.

An Axiom
of Natural
and Pre-
ternatural
Motion ex-
amined.

There is a Maxim, *Nullum Violentum est durable*, which favours this Notion of Nature, what is violent being contrary to Nature, and therefore not likely to last long. This by some Philosophers is applyed to Local Motion, and used to distinguish Natural Motions from those that are Preternatural : the former being perpetual ; but the latter checked by the Renitency of Nature, gradually decay. But in this Case it may be Reasonably Questioned, whether the Motion of Inanimate Bodies may be called violent, since all Motions, without the Intervention of an Intelligent Spirit, are according to the Mechanical Laws of Motion. But the Peripateticks ought not to countenance this Opinion, since they allow the Firmament and all the Planetary Orbs to be moved about from East to West in four and twenty Hours, contrary to their Natural Tendency, by the *Primum Mobile*, and that this violent and rapid Motion hath lasted as long as the World it self. And the Ebbing and Flowing of the Sea, which is supposed to proceed from the Motion of the Moon or some External Cause ; hath lasted for
some

some thousands of Years, and probably may as long as the System of the World continues; Besides, the *Atmosphere* consists of thousands of Corpuscles, which are constantly kept in a violent state, being Elestick Bodies, and the lower still compressed by the weight of the higher. And even to make a Body Springy, it must be forcibly bent or stretched, and have such a perpetual Tendency to fly open, as soon as the External Force that hindered it is taken away. Besides, for a Bodies Being Natural or not, it will not follow that it is durable or not; for Leaves and Blossoms, that wither and fall off in a little time, are Natural Bodies as well as the Trees that bear them. And even Water whether congealed or not, ceases not from being a Natural Body, because it undergoes those Changes; and whether it's Congelation or the Change it undergoes, when thawed, be violent, both Effects are produced by Natural Causes. And Mists, Hail, and Lightning, are Natural Bodies, though not lasting, as well as Glass, where sand and fixed Salts are brought together by the violence of the Fire: And the Power a Plate of Glass or a slender Wire hath to return to it's former Position, when bent, is an Effect of the same Violence of the Fire; and so is the Indissolubleness of the Alcalifate Salt, one of the Ingredients of Glass, which might easily be dissolved in Water, or even Air.

There is a Distinction of Local Motion, into Natural, and Violent, which seems implicitly to contain an Argument for the Existence of what they call *Nature*, supposing it to be a manifest

The Distinction of Local Motion considered as Natural or Violent

nifest thing, on which a distinction may be grounded; but the Terms, wherein the Distinction is usually employed, are so ambiguous, as to be somewhat difficult to clear. Some define Natural Motion to be a Principle in the Moving Body, and violent Motion, that which is occasioned by an External Agent; whereas *Aristotle* says, *quicquid movetur ab alio movetur*, according to which Axiom, all Motion may be called violent, since it proceeds from an External Agent; and thus the Motions of the immense Firmament and all the Planets must be so, since they are hurried about the Centre of the World in twenty four Hours by the *Primum Mobile*.

And as the Principle of Motion being within the Natural Body in Motion, when Bodies are once in Motion, whatever was the Cause of it, they are moved by an Internal Principle; as an Arrow which flies towards a Mark, moves by a Principle residing within it self, it's Motion then depending not on the Bow, since it would continue, if the Bow was broke; nor does it depend on the Medium, which rather resists it's progress than promotes it, and therefore it's Motion may be continued, if the Air was annihilated. When the Spring of a Watch endeavours to unbend, or the Spring of a Bow is broken, the Spring or Woody Part of the Bow, returns to a less crooked Line, and tho' these Motions are occasioned by External Agents, yet their Motions are by an Internal Principle, till they have acquired their due Position. Some perhaps may say that a Squibb or Rocket, though Artificial, or a falling Star, move

move by an Internal Principle; but it may be observed, that External Agents are required to many Motions, esteemed Natural, as, not to mention the budding and flourishing of Plants, as Onions, &c. hung up in the Air, by the Heat of the Sun, If several Insects are placed in a Pneumatick Engine as Bees, Flies, &c. and the Air be exhausted they will lye as if dead without Motion for several hours, whilst they want Air: But as soon as the Air is let in again they revive and recover their Motion, as if they were like a Wind-Mill, which wants Air to put it's Wings in Motion.

But since Motion does not belong to Matter, as Divisibility and Impenetrableness do, the Motion of all Bodies, especially in the beginning, was impressed on them, either by an External Agent, God; or some other Parts of Matter acting on them. And though Aristotle makes Motion one of the Principal Parts of his Definition of Nature, *Natura est Principium quoddam & Causa, cur id moveatur & quiescat, in quo inest, &c. Arist. auscult. lib. 2. cap. 1.* Yet such Motions are called *Natural*, as are hard to be distinguished from what they call violent. As when Water falls to the Ground, they say this Motion is Natural, because it is heavy, yet when it is spurted up into the Air, they say that is contrary to Nature, but if one sucks it into his Mouth through a long Pipe held perpendicular, they call this Motion Natural, though upwards. So when a Foot-ball or Bladder falls down and rebounds, both the Descent and Ascent are said to be Natural; so if a Ball of Oak-

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Wood

*An External Agent
the Cause
of Motion.*

Wood be let fall into Water, it will descend a good way by a Natural Motion ; yet it's contrary Motion when it ascends ought not to be esteemed violent, since being lighter in species than Water, it ought to ascend to the Top of that Liquor ; yet from these Tendencies to Opposite Points, Motions of Bodies are called Natural or Violent. And since insensible Bodies cannot covet one place more than another, all Motions are in one Respect Natural, and in another Violent ; for as many Bodies move by the force of External Impellents, and in that respect their Motions may be said to be violent, so the generality of impelled Bodies move that way they find their Motion least resisted, which Impulse and Tendency being according to the General Laws of Nature, the Motions may be said to be Natural.

According to the *Cartesians* every indivisible Corpuscle hath actual Motion essentially belonging to it, as an Atom : and all sensible Bodies, according to them, being Coalitions of Atoms, they need no other Principle of Motion, than the inseparable Endeavours of the Atoms that compose them ; the most numerous or predominant Corpuscles being determined one way.

How reasonably Critical Discharges are attributed to Nature.

From what hath been said it may appear, that the Distinction of Motion into Natural and Violent is not clear and well grounded enough to oblige us to believe such a Being as the Naturalists assert. We shall next consider the Arguments drawn from the Critical Discharges or Evacuations, which happen in Diseases and what strange shifts Nature is put to, to make such Discharges,

ges: for in hot Countries, it is evident what Critical Conflicts happen in some time of the Disease, as in continual Fevers, after which the Morbifick Matter is discharged strange ways, to the Relief or Cure of the Person.

We are therefore to consider, that the wise Author of Things so skillfully contrived the Body of Man, that were there in it, an Intelligent Principle of self Preservation, things could not be better contrived for it's Preservation, than they are, so that we Question not the Wisdom and Providence exercised in such Crises's, but upon what account they are performed: most Physicians think, the Intelligent Principle Nature, being careful of the Patients welfare, watches an opportunity of expelling it, distressed with the Quantity of Morbifick Matter. But we attribute it to the Wisdom and Providence of God, exerting his Power Mechanically, partly by the help of the great Machine the World, and partly by the smaller Engine a human Body.

But to offer the Reasons, why we deny the common Notion of Crises's. *First*. Crises's happen commonly and chiefly in acute Fevers, which are determined in a little time; but not in Chronick Distempers, which shews Nature is not so careful as some imagin, since she employs not those Critical Discharges to relieve Chronick Diseases, which are as dangerous and often Mortal as the other acute Diseases. *Secondly*, Critical Evacuations may be made by the Mechanism of a Body only; for the fibres of the Parts being distended or vellicated, by

*The common
Notion of
Crises's de-
nyed why.*

the Quantity or Acrimony of the Morbifick Matter, will by that means, be disposed to contract themselves, and throw out the Matter that offends the Parts, those ways it can most conveniently be discharged. Thus when a Man finds his Stomack oppressed, with Victuals or Drink, by putting his finger into his Throat, he promotes a Discharge, without waiting for Nature to make a Crisis, which perhaps she might forget. And Crises's often happen by Bleeding at the Nose; yet it hath been observed, that some have bled after Death, where nature could not be concerned for the Preservation of Life, but the Accident depended on the Turgency and Acrimony of the Humours.

*Her Care
not concern-
ed in Cri-
tical Dis-
charges.*

Indeed, if in all Crises's the Morbifick Matter were discharged, and the Person relieved by them, they might be urged as the Effects of Nature's Vigilancy; but Experience tells us, that as some Crises's are Salutary, others are Mortal, and though some do not directly kill the Patient, yet several of them leave the Patient as bad, or worse than before; for which Reason Physicians take notice of true signs of a good Crisis, to distinguish it, from what is not to the advantage of the Patient. And as there are two ways of making a Crisis. *viz.* either by an Expulsion of the Morbifick Matter, or when it is lodged somewhere within, neither of which are always successful, Crises's are divided into perfect and imperfect ones, and Salutary and Mortal. The signs of a good Crisis are, a good Digestion of the peccant Matter; that the Discharge or Translation be manifest
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and copious enough : That it is made on a Critical Day ; that it leaves no part behind, which may occasion a relapse ; and that it be not attended with ill Symptoms ; and that it may be agreeable with the Nature of the Disease and the Patient. But Nature is not so Careful, but that she is content with very indifferent ones, and often bad ones ; attempting such at unseasonable times and before signs of concoction appear. But these Attempts are brought on by the Acrimony and Importunity of the Morbifick Matter ; which shews Nature very imprudent to suffer her self to be thus provoked to the disadvantage of the Patient ; and therefore Physicians do very prudently sometimes to moderate and check the rash and immoderate Evacuations Nature, who they esteem so wise, is apt to make. And in those Crises which are made by Translations, some, though if not Salutary, are as dangerous as external Discharges, and often occasion Imposthumes, or external Tumours, in Parts that are noble, or have such connection or sympathy with others as makes them Dangerous.

Yet some Physicians esteem it a great Argument of Natures Providence and Skill, that she should watch the Concoction of the peccant Matter, and force a Crisis ; But what they mean by Concoction of the Humours, is not so evident, yet they seem to mean, that it hath acquired such a Degree of Tenuity, or such a Disposition as may render it more apt to be discharged out of the Body. So in a Cold, where the Lungs are affected, in a few Days, the Phlegm is made more fluid, and what is Lodged

ged in the Lungs is brought up more easily. And that Cloud in the Urin, which is looked upon as a sign of Concoction seems to consist of Part of the Peccant Matter, seperated from the Blood and discharged that way, which whilst it is warm continues mixed with it, but, when cold, appears in the form of a Cloud or Sediment. But whatever they mean by Concoction, it appears, that in several Cases, Nature does not wait for it, but often forms a Crisis unseasonably, and not without Danger.

*What a
Crisis chiefly
depends
upon.*

But it is said, that *Nature* often discharges the Morbifick Matter very wonderfully, and by ways unusual and unexpected, (no doubt but Divine Providence may as well interpose his Mercy in removing, as his punishments in inflicting Men with Diseases) but the Performances of Nature in common Crises's may be referred, partly to the condition of the Matter to be expelled, and partly to the Primitive Fabrick of the Parts of the Body; or some accidental Alteration in their Structure; which Accidents, not being evident to us, we ascribe the success of such Crises's to the Providence of Nature. This may be illustrated by observing, that when an Artificial Crisis is endeavoured by Medicines, that which would or might be expected to work by Stool, by the peculiar disposition of a Man's Stomach may prove an Emetick; which may likewise differ in their gratefulness to the Stomach, as they are prescribed in different forms, some having an Aversion to Potions, and others to Pills. &c. And Mercury, which is used to Salivate, in some Persons is

is apt to work violently downwards, or occasion some other strange Evacuation ; and I have seen some who would not be Salivated by the strongest Medicines ; which Disposition may be acquired as well as native. For some Persons will Nauseate and Vomit up Medicines, which at the first were grateful enough and agreeable, and even sudorificks sometimes prove Diuretick, and sometimes Vomit or Purge ; so that the Qualities of Medicines as well as the Dispositions of the Persons may occasion Discharges at strange Places. I have seen Instances of Periodical and Critical Evacuations, at very unusual Vents ; some have had their Menstrua at their Eyes, sometimes at the Navel, and sometimes at their Mouth ; which must depend on some Unusual Structures of the Parts. And the Crises's made these unusual ways prove not always lucky, but sometimes unfortunate. And in some Translations of Matter, the ways it was conveyed to noble Parts may be as difficult to find out perhaps, as how it was otherwise luckily discharged.

If it should be disliked in this Discourse, that I refer most of the *Phænomena* of the Corporeal Part of the World to Mechanical Laws. I shall answer, that most Modern Naturalists as well as Divines, endeavour to explain the *Phænomena* of the vast Celestial Bodies, by Local Motion and the Consequences of them, as also to give Statical, Hydro-Statical and other Mechanical Explications of several *Phænomena*, which formerly were ascribed to the wonderful Providence of Nature, to hinder a Vacuum. And though it is my Opinion, that the wise Author

God's Providence over-rules Mechanical Laws.

of things seldom recedes from the settled Course of the Universe, and the Catholick Laws of Motion, yet his Divine Prudence is often conversant in a peculiar manner about the Actions of Men, and the things that happen to them; and where Men, whom he hath endowed with free Will are nearly concerned, he hath not only acted in a Supernatural way, by signal and manifest Interpositions we call Miracles; but as Sovereign Lord and Governour of the World, several times, by the Intervention of Rational Minds, either united or not united to Human Bodies, gives such determinations to the Motion of Parts in those Bodies, which meerly by Laws Mechanical would not have been, and thus Produces either Good or Bad Crises's.

Proved.

That Divine Providence interposes in Case of Life and Death, appears in Scripture, which proposes long Life to obedient Children as a Reward; *Exod. 20.* and threatens *Bloody and Deceitful Men*, *Psal. 5. 6.* Shall not live out half their Days, *Psal. 4. 23.* And an Impious King of *Israel* had his disease made Mortal, by having recourse to the God of *Eckron*, *2 Kings 1. 16.* and on the contrary, upon *Hezekiah's* Prayers and Tears, God was pleased to add fifteen Years to his Life. To which Instances several out of the New Testament may be added, as *St. James* exhorts the sick to seek for Recovery by Prayer, *James 5. 25.* and *St. Paul* tells the *Corinthians* of their unworthy receiving of the Sacrament, *for that Cause divers were become sick & weak amongst them, & divers also died.* Whence it appears, that though God hath left to the Will

of Man, the Power to direct many Local Motions in the Parts of his own Body, yet the Mechanical Laws, on which the Course of Things depends, do both regulate and determine the Motions of Bodies. And if Man hath the Power in some Cases to alter the Course of Things, why may not the Latent Interposition of Men, or Angels, or other Causes be employed to the like ends, by the wise Author of Things, who is the absolute Governour of the World and of Men. But though God Almighty may interpose his Power in altering the Course of things and in the Crises's of Distempers, yet we are not presently to have recourse to his Providence, if a Mechanical Account can be given according to the ordinary Course of Things.

And here in reference to the Accidents, that happen in Crises's, and the seeming irregular *Phænomena* of the Universe, we shall represent, that when we consider the Physical Changes, with reference to divine Wisdom and Providence, the Arguments for the Affirmative ought to be of more force than the Negative: It being more allowable, to argue a Providence, from the Structure and Symmetry of the World, and the Regular Subordination and Train of Causes, than to infer the contrary from some Physical Anomalies. For the Characters of his Wisdom in the Fabrick, and regular Train of Things, cannot be referred to blind Chance, but a most Intelligent Agent; whereas on the contrary, the Anomalies are incomparably fewer than the Regular Productions; besides God Almighty being a free Agent, whose Intellect is infinitely superior to ours, may have ends unknown to us,

*Anomalies
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us, which those Anomalies are requisite to bring about. As when a Man looks upon a Geographical Globe, and sees Countries and their Confines exactly set down with their apt Situation, true Distance and Bearings, he must conclude, what he sees to be the Work of an Artist. And though he sees further on the same Globe, the *Tropick*, *Zodiack* and *Meridian* Circles, he will not, if he considers, think these were made by Chance, because he knows not the Reason or Use of them; or because those Curve Lines called Rumbs do oddly intersect them; but will rather acknowledge, that he who had skill enough to represent the Globe of the Earth and Water in so small a Compass, had Art enough likewise to draw those Lines, with some Design worthy the same Artist, tho' not discerned by those unacquainted with them.

*Seeming
Anomalies
no irregu-
larities.*

But it is not impossible, that an Artificer so comprehensive as the Maker of the World, may have so ordered things, that several of them may break out abruptly and unexpectedly, at great Distances of time and place, and for that Reason be thought Irregular, which were preordained, and have such a Connexion of Causes, if we could discern them, that might convince us they were neither the Effects of Chance nor Irregular. Which may be illustrated thus. Supposing the Jesuits when they first came to *China* presented the King with a curious striking Watch, and that he who looked after it, had wound up the Alarm, to strike a little after one; suppose further, that the Chinese looked upon it as some European Animal, and that when the Index pointed at particular

particular Hours, it should strike the same, they would think these Noises Regular; but when the Alarm unexpectedly made a Noise, they would think the Animal Sick or Disordered, yet that Alarming Noise as properly depended on the Structure of the Watch, and the designs of the Artist, as the Regular Noises.

But perhaps it may be said, that except we allow such a Being as *Nature*, to contrive and manage things Corporeal, and to direct them regularly to their respective Ends, there would be no proof or steps of Divine Wisdom. But the contrivance of the Universe and its Parts, and the Regular Course of things with their Tendency to determinate Ends, being Matters of Fact, depend not upon the Supposition of such a Being, but are the Effects of God Almighty's Wisdom and Power.

But to proceed to the last part of this Discourse, as we proposed, *viz.* That the most general and received *Effata* and Axioms concerning Nature, employed in the Writings of Philosophers, may be accounted for, according to the *Hypothesis* we have proposed, though some of them suppose or support the received Notion of Nature. But,

Before we proceed to particular *Effata* concerning the Operations of Nature, it may not be improper to consider in what Sense *Nature* may or may not be said to act at all, or to do this or that. It seems to be apparent, that whatever is done in the Material World, is done by particular Bodies, acting according to the settled Rules of Motion, Rest, &c. where

Nature

*The Effata
or Axioms
of Nature
accounted
for by our
Hypothesis.*

*The Notion
and Sense
of the Word
Nature
further
considered.*

Nature seems rather a Notional thing than a Physical Efficient distinct or separate; like one of those Intelligences, presumed to be the Movers of the Celestial Orbs. But Men express themselves so ambiguously, when they say Nature does this or that, or that she acts thus or thus, that it is scarce possible to translate their Expressions, into intelligible Forms of Speech, adequate to the Original; therefore though we have said something to this Purpose before, we shall here more fully consider what Men do, or may mean, when they speak of Natures acting, or of a thing being Naturally performed, by giving their Words sometimes one Interpretation and sometimes another.

*The first
Sense of the
Word Na-
ture.*

And First, Sometimes, When Nature is said to do this or that, it is not so proper to say, it is done by Nature, as that it is done according to Nature; Nature in this Sense, not being accounted a distinct or separate Agent, but a Rule, or a System of Rules. according to which, those Bodies are determined to act or suffer, by the great Author of things. Thus Nature is said to raise the Water in a Pump to prevent a Vacuum, though no such separate Agent as Nature is concerned, that being done by the Pressure of the Atmosphere, acting according to Statical Rules, or the Laws of *Equilibrium* amongst Liquids, settled by God Almighty, whether those fluids be visible or pneumatical; so when the Peripateticks say, the Celestial Orbs are moved about the Earth in twenty four hours, by a violent Motion, and that each Orb hath another Natural Motion, which

which is quite contrary, tending from West to East, the Word Natural must be used according to *Aristotle* in the Sense we assign it by our Observation, since he says, the Celestial Orbs are moved by external separate Agents as Spiritual Intelligences. We may further Illustrate our Observation by other usual forms of Speech; as when we say, the Law takes care of Infants and Lunatics, that their indiscreet Actions should not damnify their Inheritances, and that the Law hangs Men for Murther, and only burns them in the Hand for less Faults, by which it is meant, that Magistrates and Ministers of Justice, acting according to the Laws of the Land, do these things. And it may be to our present Purpose, to take Notice further, that those things are commonly ascribed to Art, which are performed by Artists, according to the Rules of Art; thus Geometry is said to Measure Land; Astrology to foretel Changes of the Weather and future Accidents; Architecture to make Buildings; and Chymistry to prepare Medicines.

Secondly, Sometimes, when several things, as *The Second.* the Growth of Plants, Maturation of Fruits, &c. are said to be done by the Course of Nature, the meaning is, that such Effects proceed from their proper immediate Causes, according to their usual Series, or order of their Actings. Thus by the Course of Nature, the Summer Days are said to be longer than the Winter Days; and that when the Moon is in Opposition to the Sun, that part of her Body is more enlightened by the Sun, than at either
of

of her Quadratures ; and that when she enters into the Conical Shaddows of the Earth more or less, she suffers a partial or total Eclipse ; yet these *Phænomena* may be explained, without such a Being as the Aristotelian Nature, if we consider the situation and usual Motions of the Sun or Earth, and the Moon, with respect to each other, and to the Terrestrial Globe. But further, sometimes it may be useful to distinguish betwixt the Laws of Nature, and the Customs of Nature, or between the fundamental and general Constitutions amongst Corporal things, and the Municipal Laws, belonging to this or that particular sort of Bodies ; as when Water falls to the Ground, it may be said to do so, by the Custom of Nature, it being usual for that Body to fall down, if not hindered externally ; but when it ascends in a Pump, that Motion is made by a more Catholick Law of Nature, the greater Pressure of incumbent Air, surmounting the lesser Gravity of the Water, which therefore ascends in the Pump. These Observations may be further illustrated, by considering, what sense Men speak of things in, which we call Preternatural or Contrary to Nature ; for by their Expressions, Nature is taken for the Particular and Subordinate, or Municipal Laws established amongst Bodies ; thus Water is said to be in a Preternatural State, when hot, because unusual to it, and which does not regularly belong to it, though the Fire or Sun which puts it into this State, is a Natural Agent, and thought to act according to Nature. Thus when a Spring is bent, it is said to be in a State contra-

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ry to it's Nature, it incessantly endeavouring to remove the compressing Body; yet this State, whether Preternatural or contrary to Nature, ought to be thought such, only in respect of the Springy Body; for it is otherwise as agreeable to the Grand Laws of things Corporeal, that the Springy should remain bent by the force that keeps it so, as that it should extend, and resist a force that is less able to resist it. And though a Disease be accounted a Preternatural thing, or a State contrary to Nature, yet that is to be understood with respect to what commonly happens to human Bodies. Since excessive cold Winds, immoderate Rains, sultry Air, and other usual Causes of Diseases, act as Natural Agents, and agreeable to the Catholick Laws of the Universe, when they produce Diseases, as well as when they condense the Clouds into Rain or Snow, blow Ships into a Harbour, make Rivers overflow, ripen Corn and Fruit, and do other things either prejudicial or beneficial to Men. And thus, when Monsters are looked upon as Preternatural things, it is with regard to that Species of Bodies, the Monster varies from, though the Causes of that Deviation, act according to the General Laws of things Corporeal. And to this we shall add, that when Nature is sometimes said to do this or that, we are to suppose the Effect produced by proper Physical Causes or Agents; looking upon Nature either as a Relative thing, or a Term employed to denote a Notional thing, in respect of which Physical Causes are considered as acting after some peculiar manner, by which we may distinguish their Operations

The Third.

rations from those produced by other Agents, or perhaps by the same considered as acting in another way. This may be illustrated by other forms of Speech or received Expressions. As when Philosophers have said, things are brought fatally to pass, they did not mean, that Fate was a distinct Agent, but that Physical Agents performed the Effect as they had a necessary dependance on one another in acting, or an inviolable Connection, that Linked them together. On the other Hand, when they say, that *Fortune* or *Chance* ἡ τύχη or τὸ αὐτόματον hath done this or that, (*Aristotle* and his Followers distinguishing them, assigning to the former what happens to Designing, and to the latter, what happens to Inanimate Beings.) Considerate Philosophers do not account Fortune or Chance, a distinct Physical Cause, but a Notional thing, denoting that the Effect was produced by proper Agents, without their designing to do so. And here we shall observe, that many things are attributed to time, as when they say it ripens Fruit, makes things moulder and decay; that it produces great Alterations in Mens Affairs, Dispositions and their Bodies, as if it were the Cause of several things, where it is either an Adjunct or a Concomitant of the Effect, being produced by other Agents, which are it's proper Efficients.

Sometimes, when Nature is said to do this or that, the Effect is not to be supposed to proceed from a separate Being; but the Word Nature is to be supposed to signify a Convention of all the Properties, or necessary Qualities belonging

belonging to a Body of that Species the Agent is of, or to more Bodies respectively, if they concur to the Production of the Effect. In this sense, we are to understand forms of Speech usually employed by Physicians, when they speak of what Nature does in respect of Diseases, or the Cure of them; where Nature is not to be considered, as a principal and distinct Agent, but a sort of Compound Accident, resulting from several Qualities, and Properties, belonging to the true Agents. To explain what we mean by a Compounded Accident, we shall observe, that as some Qualities or Accidents may be called Simple, as roundness, heat, gravity, &c. so others may be called Compound, as they are made up of several Qualities united in one Subject; as Greenness is made up of Blew and Yellow mixed exquisitely together, and Beauty is made up of apt Colours, good Features, a just Stature, Shape, graceful Motions, and other Accidents of a human Body and it's Parts. And the Expressions which are on divers occasions employed in reference to such kind of Beings, incline me to think, that what is called Nature hath a great Affinity, at least in reference to those Occasions; and as, when they say, that Health makes a Man Eat well, Digest, Sleep, &c. considering Health is not looked upon as a separate and distinct Cause of these Effects, but as a Compound Accident, or a complex of all the genuine Causes of Appetite, Sleep, &c. Health being not so much the Cause of these, as their Effect or Result; so in several things Nature is said to do, we may suppose the Effects produced,

ced, by Physical Bodies and Qualities or other proper Causes, which concurring produce the same Effect, by that compendious Term called Nature.

*An Axiom
considered.*

But to proceed to that part of our Task proposed, which is to expound those Axioms employed by those, who in different Expressions say, Nature does this or that, and acts thus and thus. And *First*, we shall consider that received Axiom. *Omnis Natura est Conservatrix sui.* Where by the Word Nature, we understand, a Natural Body; which Axiom may admit of a twofold Interpretation, signifying either that no Body tends to it's own Destruction, or that there is a Principle called Nature in every Body, which is vigilant and industrious to preserve it's Natural State, and to defend it from the violence of other Bodies. The former of these Senses is consistent with our Hypothesis, inanimate Bodies having neither Appetites, nor Hatred or any other Affections of Intelligent Beings, and consequently have no Appetite of destroying themselves. But the Latter Sense imports, that every Body hath within it self a Principle, by which it is inclined to endeavour and secure it's own Preservation, which sense of the Axiom we shall examin. We suppose then, that the Wise Creator of Things did at the first so form the World, and settle the Laws of Motion of it's Parts, that by the Assistance of his General Concourse, the Parts of the Universe, especially the greater and more noble, are lodged in such Places, and endowed with such Powers, that by the Assistance of his Providence, they may have their Beings continued and

and maintained as long as the Course of Corporal Things he thought fit to establish, requires; so that there will be no need to have recourse to an imbred Knowledge or Appetite for their Preservation, since the Original frame of things and the Laws of Motion will determine Bodies to act as if they had an aim at their self Preservation; for if a blown Bladder be compressed, the compressed Air will endeavour to extend itself, and thrust off that force that pressed it together, where it finds the weakest resistance, though neither the Air nor Bladder have any Appetite to maintain their particular Figures or Dimensions. Thus it is equal to a piece of Dough, what form your Hands give it, continuing in that shape it was last put in, without endeavouring to return to the shape it was in before. And a piece of Wax will receive the Impression of a Wolf as soon as of a Lamb, as the Seal that is pressed upon it gives it the form. And the same may be said of Wood, Marble, or other Metals, as they are shaped by the Statuaries Art and Tools: to which we shall add, that the Mariners Compass, before it is touched upon a Loadstone, will have no more Propensity to one part of the Heaven than another; yet afterwards it will be determined towards the North, and the other end towards the South; so that if the Lilly be drawn aside to the East or West, it will presently return again to it's former Position and respect the North. But if the Needle be duly touched upon the Contrary Pole of the same Loadstone, the Lilly will forget it's former Inclination, and respect the Southern Pole; and if it be drawn

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aside

aside towards the East or West, it will respect the same Pole again.

Another
Axiom ac-
counted for.

The next Axiom we shall examin is, that Nature never fails of her End, *Natura fine suo nunquam excidit*. This Proposition is so ambiguous, that it is hard to know the sense of it. If by Nature they mean what they call *Natura Naturans*, we allow that Nature never misses her end; for the Almighty having once framed the World, and established the Laws of Motion, which he constantly maintains; no Irregularities can happen which God did not foresee and think fit to permit, those Accidents which we think Anomalies being Consequences of the first Instituted Order of Things; as appears from the Instances we have given of Eclipses of the Sun and Moon; to which we shall add the Inundations of *Nilus*, which contribute to the Health and Plenty of the Country. And though sometimes the Order of Things hath been violated, as when the Sun stood still in *Joshua's* time, or when the red Sea was divided for the Passage of the *Israelites*; yet these things were done by the Intervention of the first Cause overruling the Motions of Secondary Agents: Where God rather accomplishes than frustrates his Ends by such Exorbitances. But if by Nature, a Subordinate Principle is meant, the Axiom must be, in many Cases false; for though the Course of Things is so ordered, that Corporeal Agents seem to produce their Effects, as if they were designed, yet it happens several times otherwise; for when a Woman is with Child, though Nature's Aim may be to produce a perfect *Fetus*, yet she often produces Monsters. And

in the Crises's of Distempers we see, that they often happen on improper Days, and instead of obtaining her End, she often happens to miscarry in her Endeavours. So sometimes Nature's Aim is frustrated by the Endeavours of an Artist in Grafting, the Sap designed for the Nourishment of a White Thorn, supplying a Graft of another kind. And when Barley sprouts with a design to make Mault, Nature's design was to make Stalks and Ears. But further, we are told, that Nature endeavours to assimilate Bodies, every Agent endeavouring to Convert the Patient into a similar substance; thus fire endeavours to turn Wood into fire; but she is frustrated in her Design, when in Chymical Furnaces the Bricks, Crucibles or Cupels or other things, as Metals, though red-hot and in fusion are not assimilated; and even in Wood, but a small Quantity is turned into fire. And though Nature is said to raise Water in Pumps to prevent a Vacuum; yet if it exceed thirty five or forty Foot, she is disappointed in her aim; for tho' the Air is exhausted, the Water will rise no higher.

The next Axiom we shall consider is, that Nature always acts by the most compendious Ways. *Natura semper agit per vias brevissimas.* Third Axiom considered. Which ought to be limited before it is received, for inanimate Bodies being without Knowledge to moderate or govern their own Actions, there are several Occurrences, where they act otherwise than by the shortest Ways, to particular Ends, when others are more congruous to the General established Laws. As in Gravity, which is ascribed to an Imbred Power or Propensity.

Thus if a Stone is let fall in the open Air, it will directly tend towards the Centre, but if in the Way it falls upon an inclining plain, it will follow that plain, though it still pursues the nearest way it can towards the Centre: this and such obvious *Phænomena* might perhaps encourage Men to form this Common Axiom. But if a Ballet of Marble or Steel, falls upon an Horizontal Plain of Marble, or some hard Stone, it will rebound several times before it rest as near as it might to the Centre of Heavy Bodies; whereas if this Maxim were true it would not rebound at all, but rest when it fell to the Ground or Plain, as the nearest place it could obtain to the Centre of the Earth. Likewise, when a Ballet or Pendulum is fixed to the end of a string equal to the Horizon, if it be let fall, it will not stop at the Perpendicular Line of Direction which tends towards the Centre, but will vibrate too and again before it settles, tho' each Vibration it ascends, and acts contrary to the innate Propensity pretended to. So in a Sea Compass, where the Needle points North and South, if by placing a Loadstone on one side, the Lilly is drawn on one side, when the Loadstone is removed, the Lilly will make several Vibrations each way before it settle under the Meridian, whereas by the Rule of this Axiom it ought to stop there the first time; so that inanimate Bodies act without Knowledge or Design, and cannot stop or moderate their own Actions, but move according to the Catholick Laws of Motion; the Impetus acquired by falling overpowering it's Tendency, by Virtue of Gravity, towards the Centre. And something not un-
like

like happens in Levity; for if a conveniently shaped piece of Light-Wood, be thrust to the bottom of standing Waters, it will not only, when Liberty is given, ascend to the Superficies of the Water, but will rise above it, and then fall and rise again successively before it settles in it's due place, where it is in an *Æquilibrium* with the Water, which endeavours to press it upwards.

The next Sentence concerning Nature, which we shall examin, is, that she always does what is best to be done; *Natura semper quod optimum est facit*. But before we give our Opinion of this, it will be requisite to consider, that the words are ambiguous, and admit of two different Senses, *viz.* either that Nature in the whole Universe does what is most convenient for the Preservation of it's present state; or that in respect of each particular Body, Nature does what is most conducive to preserve that particular Body. In the first Sense, it seems to be less liable to Objections, yet it will be hard to prove it, by such Instances as make it appear, that Nature acts not according to Laws Mechanical. And as for the Second Sense it ought both to be explained and limited. Indeed, we allow that God hath so contrived the World, as if particular Bodies were watchful both for their own safety and that of the Universe; but inanimate Bodies acting without Design, tend not to what is best for them in their private Capacities, any further than what is consistent with the Laws of Motion, and the important Customs of Things Corporeal; so that in this respect, several things are done which are neither best,
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sidered.*

nor good in respect of the Welfare of particular Bodies. This Opinion may be confirmed by what we have already considered, as also by daily Observations and obvious Experience. We may observe, that Fruit-trees, when they grow old are so over-charged with Fruit for one Season, that soon after they decay and dye; and whilst they flourish, the excessive weight of Fruit, often breaks the boughs, and both hinders the Fruit from ripening and hastens the Death of a Tree; whereas that fatal Superfluity had been prevented, had Nature been implanted and solicitous for the Welfare of the Tree. And in unseasonable Crises's of Distempers we see, how little solicitous Nature is for the Welfare of the Person ; so that in several Diseases the Physitian is forced to endeavour the Welfare of the Person by Correcting the Errors of Nature in Convulsions, Fluxes of Blood, &c. And if Nature were so Solicitous and Watchful for the Welfare of Animals, and that part of the World they live in, such Multitudes of Men and Beasts would not be destroyed by Earthquakes, Pestilence, Famine, &c. And in Women with Child we see, how careless Nature is to suffer the Production of Monsters, upon a fright or longing desire of something they cannot obtain ; and the Infants are often not only so ill shaped and ill contrived as not to be fit to live one Day, but unfit to come into the World without killing the Mother. These things seem to be inconsistent with the *Idea* Men form of Nature, as a Being that always does that which is best; yet may be accounted for by the Doctrine of God's General Providence.

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But to proceed to that Axiom, *Natura Vacuum horret*, before we give our Opinion of this, we shall premise the chief Acceptations of that ambiguous Term *Vacuum*, it being sometimes used in a vulgar and sometimes in a Philosophical Sense. In the vulgar Sense, *To be empty* signifies to be void of the thing which should be in it, or what it was designed or made to contain, as a Purse is empty without Money, or a Bladder when the Air is squeezed out, or a Barrel when the Liquor is drawn out. But by Philosophers it is meant, a space in the World where no body at all is contained. In this strict sense *an actus Vacuum* is a Question, whose Decision depends on the Stating of the true Notion of a Body, which the *Cartesians* affirm, and others deny, to consist in Extension, according to the three dimensions, Length, Breadth, and Thickness. If *Cartesius's* Opinion be true, a *Vacuum* cannot be admitted, any space having those three Dimensions, which are necessary to essentiate a Body; and all the Experiments made with Quick-Silver or the *Machina Boyliana*, or other Instruments will be eluded, the space deserted by the Quick-Silver or Air, having the three Dimensions, and being filled with their *Materia Subtilis*, which may pass through the Pores of the Glass, as well as the *Effluvia* of the Loadstone.

We shall not therefore pretend to determine, whether there be a Vacuum, but shall shew, why Nature cannot properly be said to abhor a Vacuum. For *First*, The chief or only Reason, why Nature is said to abhor a Vacuum, is that there is a forceable Motion of Water up a Pump

*A Fifth
Axiom con-
sidered.*

*Whether
Nature ab-
hors a Va-
cuum.*

Pump to oppose a Vacuum, but this being nothing but a Motion upwards different from the usual Motion, we ought not to ascribe to inanimate and senseless Bodies, as Water, &c. Appetites belonging to rational or sensitive Beings, nor allow such Reasons since they may be accounted for otherwise. Besides, if we allow the Cartesian Notion of the Essence of a Body, Nature does not produce these great and sometimes irregular Efforts to hinder a Vacuum; since it would be unreasonable to suppose so wise an Agent as she's imagined, to take so much Pains to prevent an Impossibility. If the Atomical Hypothesis be allowed, Nature must be so far from abhorring a Vacuum, that it would be requisite; so many things being brought about by Local Motion; the necessary Motions of Bodies not being able to be performed, except there were empty spaces for Corpuscles to retire into, when in the way of Bodies that impel them, and endeavour to displace them. So that neither of the Sects of the Corpuscular Philosophy will admit of this Axiom that Nature abhors a Vacuum.

How a Vacuum may be prevented by Mechanical Rules.

But without having recourse to either of these Hypothesis, we may reasonably think, notwithstanding the Phenomena made use of to prove Natures abhorrency of a Vacuum; either that she does not, though she may seem to endeavour to prevent it, or that she hath but little abhorrence of it in the common sense of the Axiom. For if we consider, that there is more or less Gravity or Tendency towards the Centre, in most visible Bodies, as well as the Atmospheric Air, a Vacuum may be prevented,

ted, without Natures abhorrence of it, by a Tendency of heavy Bodies as near the Centre of the Earth, as heavier Bodies than they will permit: Which are assisted in preventing a Vacuum by the Confluibility of Liquors and other Fluids ; for by Virtue of Gravity and the Minuteness of their Parts, they will be apt to insinuate themselves, and fill up all the spaces that are not filled up with other Bodies, either more ponderous than themselves, or of so firm a Structure as may enable them to resist and obstruct their Descent. Consonant to this Doctrine, Bodies may move, as when they are said to endeavour to prevent a Vacuum, when there is no danger of a Vacuum. As, if you press your Fist into Sand, when it is moved away again, the Sand will by it's own Gravity fill up most of the Space which was deserted by your Fist. And if a Pail be filled with Matter whose Parts are more minute and smooth than Sand, as Water or Quicksilver, the Gravity and Minuteness of the Liquors will dispose them to fill up the Space your Hand possessed. And if you take a Glass Pipe so small, that it will not suffer Quicksilver and Water to pass by one another in it's Cavity, and lodge a Cylinder of Mercury in the lower end of it, about half an Inch long, and stop the upper Orifice with the pulp of your Finger, the Mercury will remain suspended in the Pipe, and if the Mercury be thrust downwards into a deep Glass of Water, about a Foot beneath the surface of it, when you take your Finger off the Orifice of the Pipe, the Quicksilver will immediately ascend five or six Inches and remain suspended at that Place.

Where

Where we see so heavy a Body ascend, yet not to prevent a Vacuum, the Pipe being open at both ends, but by the genuin Consequence of the *Æquilibrium* of Liquors.

And indeed Natures abhorrence of a Vacuum is so small, and her Care so little, that in the Sense of the Peripateticks, she easily admits a Vacuum, sometimes when she might prevent it, and though in the Torrecellian Experiment it cannot be proved, that there is a Vacuum, in the strict Sense of the Word, either against the *Cartesians* or other Plenists, yet as the Reasonings of the Peripateticks explain it, it will be difficult for them to prove there is none in the top of that Tube. And as from the Schoolmen's urging Natures abhorrence of a Vacuum from the suspension of Water in a Tube, it appears, that they supposed any space empty, which was deserted by one, and not succeeded by another Visible Substance. So the space above the Mercury in a Baroscope seems not to be so formidable, that Nature needs to abhor it, since it may continue several Years without any mischievous Consequence to the Universe. And though the Peripateticks urge, that the influence of Celestial Bodies on Sublunary Ones would be intercepted, if a Vacuum were allowed, Motion not being continued in Vacuo, yet we see that the Beams of Light have their Effect in the empty space at the Top of a Barometer, the reflected Beams shewing to our Eyes, that the Top of the Mercury is Protuberant. And in such a Vacuum as the absence of Air makes, a Loadstone will emit it's Effluvia and move Iron or Steel placed

ced in it. From whence it appears, that Nature is not so sollicitous to prevent a Vacuum as to abhor it; and that such an Emptiness is as much provided against by the Gravity and Confluxibility of Bodies. And although some say, Nature as much strives to prevent a Vacuum above as below, it will be time enough to answer that Assertion, when it is proved: besides if we believe the *Cartesian* Principles a Vacuum is as impossible above as below.

But to proceed to that other Axiom, *Natura est Morborum Medicatrix* *ἡ φύσις φαρὰς ἐννοεῖται*. *Hippocrat. Epidem. Lib. 6. Sect. 5. r. 1.* we shall consider in what Sense and how far, it may or ought not to be admitted. And *First*, It may be taken in a Negative Sense, the aggregate of the Vital Faculties being weakened or depraved, so not to be able to perform their Functions, in preserving Life, or assisting Medicines in preserving or recovering the Patient; thus Physick is said to come too late, and that Nature is quite spent.

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Axiom con-
sidered.*

But as to the positive Sense of it, in which Men suppose a provident Being in the sick Person, which endeavours it self or with the Assistance of Medicines to restore him to his Pristine Health. To give our sense of this, we shall consider, that God Almighty at the first made Man in such a State, that by the use of his Reason, and of things about him, he might be able to recover a State of Health, if put out of his Natural State by those lesser Accidents, except those which he in his Providence thought not fit to secure them from: therefore several things which are ascribed to Nature, depend upon the Mechanism

*and illus-
trated.*

Mechanism of the Microcosm, and the Macrocosm. To illustrate this, we may consider, that when in a Sea Compass the Magnetick Needle, and the Box that contains it are duly poised, if you give the Box a rude shake, it will not only totter, but the Needle will deviate several Points East or West from it's due Position ; but when that force ceases to act upon it, the Box will after some Reciprocations return to it's Horizontal Situation ; and the Needle, after some Vibrations, to it's due Position ; yet this recovery of it's former State depends on the Mechanism of the Body of the Instrument, the Earth, and other Bodies, amongst which it is placed. But further, if when a Balance is duly poised, by your Breath or Hand, you depress one Scale and destroy the *Equilibrium* ; after a few Vibrations the Scale will settle again in it's just *Equilibrium* ; yet before it does, each Scale will several times ascend and descend ; whereas, if Nature were so careful and provident, she would stop each Scale at the first, at the Horizontal Line, beneath which, the one was depressed and the other elevated. Thus in a Human Body, the Causes that disorder it are frequently transient, yet the Structure of the Body it self, and the Causes that tend to preserve that Structure, are durable, and may enable the Engin, to last longer than those Causes which are inimical to it. To illustrate this, we may consider, that Sleep though not a Disease, easily becomes so, when it exceeds it's Bounds ; and whilst regular, obstructs the Exercise of several Functions, more than several Diseases do yet the Matter that locked up the Senses

Senses being spent, the Man wakes again, and recovers his sensible and active State. And further we see, that the Preternatural Thirst which Men get by excessive Drinking, in a few Days is removed by forbearing those Excesses; and so the Appetite which is lost by excess in Eating, is recovered by Abstinence, the renewed Ferment or Menstruum of the Stomach gradually concocting the Indigested Humours, and expelling the Peccant Matter that offended the Stomach.

And here we are to consider, that a Human Body is not to be considered, as a Machin made up only of Solid Parts, but also as a Hydraulick or Hydraulopneumatick Engin, consisting likewise of fluid Parts, in an Organical Motion; and that the Liquors in a Human Body are so constituted, so as to be put into a fermentation or commotion by some Circumstances, which may dispose Peccant Humours to a depuration or discharge by Excretion or both; which may conduce to the Recovery and Health of the Body: and even the Solid Parts may be so formed and connected with other Parts, as to vary their Motions as Circumstances may require. Thus the Pupil of the Eye, is not a Substantial Part of the Organ, but only a hole made in the *Uvea*, through which the modified Beams of Light fall upon the Crystalline Humour, and being there refracted, make an Impression or Image of the Object on the Seat of Vision, in the bottom of the Eye. Now the Wise Author of things hath so contrived this Instrument of Sight, that as it happens to be in different Lights, the Bigness or Area of
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of a Hu-
man Body
considered.*

the Pupil varies ; in a great Light which would make too strong Impressions upon the Sensory, the Pupil contracts, lest too many beams should be let in ; but in a faint Light it is expanded, that Rays enough may be admitted to make a sufficient Impression on the Sensory ; and this in a well formed Eye is regularly done, as the Light is more or less ; which may be observed by looking upon the Pupil, when turned to a Lighter or Darker Place, and is very observable in the Eyes of a young Cat: which various Motions in the Eye, are performed meerly by Mechanism, without the Knowledge or Direction of the Rational Soul ; other Motions likewise in the Parts of the Eye, being also spontaneously produced as occasion requires. And thus the fluids in the Body are so constituted, that when healthful Women are of Age, a Monthly Fermentation made in the Blood, produces a Separation and Excretion advantageous to the Person.

*The Reason
of the Parts
recovering
their Tone.*

But that we may the better apprehend what is meant by the Disposition of the Parts to return to their former Constitution, we may observe, that if one end of a thin Plate of Steel or refined Silver be drawn aside, the Texture of the Parts is so changed, or the Congruity or Incongruity of the Pores for the Permeation of the *Æther* is such, that when that force is removed, the Plate will return to it's former Position ; yet this depends not on any Internal Principle or Watchfulness to restore this Position ; since, if it stand long bent, Nature will forget the Office, and the Spring bent will not regain it's former streightness. And if a Silver Plate

Plate be but heated, and suffered to cool again, it will loose it's Springy Quality, which will presently be recovered again by giving it a few strokes with a Hammer.

But to return to observe, how far Transient Distempers are harmless, we may take Notice, that the third or fourth day, after Women are brought to bed, a kind of Fever is occasioned by the plentiful afflux of Milk to the Breasts, but this Milk Fever in a little time disappears, depending on less durable Causes than the Economy of Human Bodies: which disorders are truly Diseases, though instituted by the Course of Nature; as well as the Consequences that attend Women in Labour, or Children breeding Teeth, which though according to the Course of Nature, are nevertheless Disorders in the Common Course of the Microcosm. And thus the Bleeding of the Hæmorrhoidal Veins, is often Dangerous when Superfluous, and the Physicians are obliged to use their endeavours to stop it; yet frequently is healthful, Superfluous and Vitiated Humours going off that way, and preventing Mischievous Consequences. And so Coughs and Hoarsnesses and Coryza's are said to be Cured by Nature, no Medicine being used, the Structure of Human Bodies outlasting the peccant Humours, or the Effects of those Causes, which produce those Distempers. Most Persons when they first go to Sea, by the unusual Agitations of the Ship, are thrown into that Distemper called Sea-Sickness, which, though seldom Dangerous, is always troublesome, being attended with Loss of Appetite, continual Faintness, Pain in the Head, and almost con-

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stant Nauseousness, attended with almost frequent and often violent Vomitings, which is a very troublesome Sickness; and yet this Distemper is in a little time overpower'd by the strength of the Constitution, the faculties of it striving to preserve their orderly and regular Course, and suppressing the Advantitious Motions that oppose the Health of the Body. And though by the accustomed Agitations they are apt to acquire an Habitual Giddiness, which disposes them to reel when they come to walk upon firm ground; yet when they are a little while at home, the Regular Motions of the Parts in a little time obliterates those Advantitious Impressions which discomposed them. To this we may add, that Persons unaccustomed to ride backwards in a Coach, will be disordered in their Heads and Stomach, and inclined frequently to Vomit, yet when this Motion is discontinued, they presently recover, the Distemper yielding to the regular Motions of the Blood, and other Fluids. And thus when, in a Coach or other place which is too close, and the Air is too full of the fuliginous Reeks of Mens Bodies, a Man is apt to grow fainty and swoon, that formidable Disease is presently relieved by being in the open Air, the Tendency of the Parts to maintain Life and Health, soon restoring the Body to its pristine State.

*Accidents
in Diseases
illustrated.*

Several Accidents in Diseases may be illustrated, if we take Notice, that if you put some Mud into a Vial of fair Water and shake it, the Water being dirty loses its Transparency, both as it is mixed with dirt, and as a Number of Bubbles are raised; which being

newly

newly generated, swim at the Top, and yet without any Design of Nature, the Bubbles will break, the dirt subside, and the Water become clear. Thus *Must*, or the Juice of newly pressed Grapes, will continue troubled for a good while, and though there be no substantial Form, to guide the Motion of this factitious Body, yet a Ferment is raised according to the common Course of Things, and some Parts being separated in the form of Vapours or Exhalations, others are separated and adhere to the sides of the Cask, whilst others Settle in the Bottom and form Lees; by which means the Liquor becomes clear, and as to Sense uniform. And for as good Reasons, the fæces of the Blood and Heterogeneous Parts may be separated, and the Mass depurated, without any Sollicitous Directions of Nature.

Indeed there are some Cases where Nature seems to be the Curer of Diseases, which is in the Healing of Cuts and Wounds, which seem and are cured without the Assistance of Art, these being barely in the fleshy Parts; but in Hæmorrhagies and other Cases, the Chyrurgion is obliged to check the Exorbitances of Nature, whereas the Healing of this *Solutio Continui* is an Effect of the Consequence of that fabrick of the Body, on which Nutrition depends. For the Nourishment of the Body being carried to all the Parts by the Circulation of the Blood and Chyle, if it any where meets with preternatural Concretions, or a Gap made by a Cut or Wound, it's Parts there, by Concretion; form a Bastard Flesh, or some other Substance, which

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that

that Juice, in that Place and other Circumstances is apt to convene into. Thus not only Wens and scrophulous Tumours, but mishapen Mola's grow in the Womb, as well as perfect Embryo's. And thus proud Flesh and Fungus's grow in Wounds as well as true and genuin Flesh; so that Nature is much amiss, if she designs the growth of such Superfluous and Inconvenient Bodies; or the Chyrurgion must be in fault to suffer them, though he uses Corrosive Medicines to destroy them. And Nature seems so careless and unreserved, that she nourishes Warts and Corns as well as necessary Parts, and sometimes such preternatural Things, as Horns, one of which kind I have observed to grow upon a Woman's Head.

Nature unconcerned in the Cure of Acute and Chronick Distempers.

But to proceed, there are several Acute as well as Chronick Distempers in which Nature seems unconcerned in the Cure, except in a limited Sense; but since Physitians acknowledge themselves but Nature's Ministers in these Cases, we shall consider in what Sense these Expressions may be admitted according to our Hypothesis. But before we proceed to this, it may be requisite to note, that the Reason of these Common Mistakes seems to be grounded on the Opinion Men have, that the Body of Man is rather as a System of Parts, most of which are gross and consistent, and some hard and solid, than a Compound Engin, which besides those consistent Parts, is made up of Blood, Chyle and other Fluids, as well as more Subtile Liquors, as Spirits and Air, all which are constantly in various Motions; and put the Solid Parts, as the Heart and Lungs, &c. in frequent

quent and various Motions likewise. So that when the Motions of the Fluid Parts happen to be depraved or anomalous, the Engin is immediately out of Order, though the gross solid Parts were not primary affected; so when by proper Remedies the vitiated Crasis of the Blood or other Juices is corrected, and the Inordinate Motions they and the Spirits are put into, or they put the Consistent Parts into, are rectified, the whole Oeconomy will be restored to a more perfect State. Thus Hysterical Women, by the Fragrant Effluvia of a Spanish Glove, or some other strong Perfume have the *Genus Nervosum* so disordered, and such irregular Symptoms produced, that the Motion of the Blood being stopped, no Pulse can be perceived, nor Respiration discerned; so that the whole Engin being disabled, falls to the ground, and is moveless; yet by applying to the Nostrils *Sal Armoniack* or *Sp. of Hartshorn*, in a little time they are restored to their Senses, Speech and Motion again.

And here we are to observe, that as we have before noted, the Oeconomy of a Human Body is so constituted by God, that if the general Laws settled by the Author of the Universe will permit, it may last many Years; and therefore it is no wonder, if in many Cases the *Automaton* concur, though without Knowledge or Design, to it's own Preservation, when assisted by the help of Medicines or the Physicians hand.

And perhaps it may be objected against what we have said, that the Comparisons we have made, are of Engins inadequate to Human Bodies, which we allow, considering the Bodies

A Mans Body different from other Machines.

How a Crisis is to be promoted.

of living Animals, to be the Effects of an Omniscent and Almighty Artificer God; so that it cannot be expected, that the Inferior Productions of Human Skill, should be comparable to These, which had God for their Author; besides, Man is not a mere Mechanical thing, where the Recovery of it's good state, depends on it's own Parts, or other Agents, acting according to Mechanical Laws, without design; since an Intelligent Being is added to it, which is Capable, by the Art of a Physitian to discern what may hurt it, or be conducive to it's welfare; and is able to do several things for the Advantage of the Body it is joyned with. So that a Man is not like an empty Boat, but like one Manned, which besides the Mechanical Part, hath an Intelligent Being to take Care of it. So that a Physitian may look upon his Patients Body, as an Engin out of order, and that by his Endeavour, along with the Concurrence or Tendencies of the *Automaton*, may be brought to a better State. If then the Disposition of the Body shews a Propensity to throw off any Pecant Matter that offends it, a convenient way, he will rather promote that way of discharge than another; as if the Body shews a Disposition to make a Crisis by Sweat, he will rather encourage it, by keeping the Patient Warm, and giving him Sudorifick Medicines, than to endeavour to carry it off by Purging, and hinder that Discharge which might be beneficial. And in this sense, Men may say, Physitians are Ministers of Nature, as a Saylor will not shift his Sayls, when the Ship goes before the Wind, nor alter the Ship's Motion, because he needs not.

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But in these Cases the Physitian does but by accident obey the Inclinations of Nature, since in a great many Cases it is the Physicians Care to hinder Nature from what she designs, as they say, or to bring things about otherwise than her Inclinations endeavour. As for Instance, though in a Dropsy, Nature covets a great Quantity of Drink, the Physitian will deny it; as also in the Green-Sickness or a Pica, Incongruous things, as Fruit, Lime, &c. being earnestly coveted. And a Surgeon often hinders Nature from closing a Wound, before it is healed at the Bottom, which Nature would indiscreetly do. And Physicians often carry that off by Purging or Bleeding, which Nature would throw off into the Lungs. And when a Tendon or Nerve is pricked, the Surgeon is obliged to use Anodynes, and appease the furious Transports of Nature, which would disorder and endanger the Patient and bring on violent Convulsions. And so the Evacuations peculiar to Women are sometimes unduly discharged by Nature, as at the Nipples, the Mouth or Eyes, *Shenk. Obser. l. 4. p. m. 633. and Seq.* Where the Physitian is obliged to alter Natures Purposes, and promote the discharge by the Uterine Vessels. And though according to Nature's Institution there ought to be a discharge Monthly, and a Physitian rather promotes it than stops it, yet sometimes Nature is too profuse, and endangers the Life of the Person by extravagant Discharges; and then Physicians are forced to correct and check her Exorbitances. So that I look upon a Physitian not so much a Servant to Nature, as a Counsel-

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lor and a Friendly Assistant, who promotes what may conduce to the Health of the Body, but endeavours to hinder what Nature seems inclined to do, to the disadvantage of the Patient. And on this occasion it may be requisite to take Notice, that the most prudent Physicians will not stop a Moderate Flux of the Hæmorrhoids, since it may be beneficial to the Patient. *Hippoc. Lib. 6. Aphors. 11.* But if the Flux be too long and copious, they endeavour to stop it, lest it inclines the Patient to a Dropsie or some other fatal Distemper. And if a Naturist should alledge that Nature was provoked to this by the Acrimony of the Humours, it argues her not wise to be provoked to Fury, to the Destruction of what she ought to take Care of, if the Physician more Calm and Wise did not prevent her. So that when Hippocrates says, *Invenit Natura ipsa sibi ipsi aggressiones Epidem. lib. 6. Sect. 5. text. 2. 4.* and after, *Non edocla Natura & nullo magistro usa, ea quibus opus est facit*, which is not to be received without Limitation; and makes some Physicians less careful, and leave that to Nature which they themselves ought to do.

A Physician may do what Nature cannot.

But as some Physicians relieve their Patients in a Negative way, and oppose Nature's unreasonable attempts; so they may do it in a Positive one, employing Medicines, which may strengthen the Parts, and promote necessary Evacuations, by using Medicines which have manifest Qualities to oppose those of the Morbifick Matter; as when Alkalies are used to correct Acids; so that in a positive way a Physician may do more than Nature is able; for if there
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be such a Medicine as *Helmont* affirms, may be made of *Paracelsus's Ludus*, by the Liquor Alkalist ; or as *Cardan* relates of an Emperick in *Italy* who cured the Stone in the Bladder ; such things may do what Nature cannot, she never dissolving a Stone in the Bladder : Nay, sometimes a Physitian does that without a Medicine, which Nature cannot ; nay, suffers the Contrary ; as when by a fright a Person swoons and the Motion of the Blood is stopped ; for here Nature takes little care of the Heart, but a Physitian by rubbing or pinching the Limbs, Ears or Nose, presently rouzes the Spirits, and encourages them to exert themselves, and to flow into the external Parts, which Nature had retracted towards the Parts internal.

From what we have said, it appears, that though some *Phænomena* may seem to favour Nature, yet more of them do our Hypothesis, and suggest that the Wise Author of things having formed Mankind fit to last many Years, and to propagate his Species ; and when neither particular Providence, nor the Rational Soul, nor overruling Impediments interpose, things are generally performed according to Mechanical Laws, whether the Event be conducive to the Engin, or cherish and foment Extraneous Bodies, which are prejudicial. So that what is attributed to Nature, is a Consequence of the Mechanism of the World, and the Patients Body, which is coincident with his Recovery, rather than designed to be so, since Nature seems to produce and cherish things hurtful as well as beneficial ; for we see that out of so A-

A Conclusion from the Premises.

limental

limental a Juice as Milk, the Stone in the Kidneys and Bladder is often bred in Children, Nature framing so hard a Body of so soft a Liquor; which will resist the Effects of Spirit of Salt, which readily dissolves Iron and Steel; nay, so strong a Menstruum as Oyl of Vitriol; nay, we see that the Seeds, or Semina^l Principles of Worms lye hid in Fruits, or ill qualified Nourishment, and are preserved and cherished in the Body, and notwithstanding the ferment of the Menstruum they meet with there, grow into perfect Worms, very troublesom, and sometimes dangerous, producing more Distempers than every Physitian is aware of; to which we may add those Productions, as Frogs and Toads, *Shenk. Observ. Lib. 3. Pag. mihi 337. & seq.* their Spawns being taken in with corrupted Waters, where the Eggs being cherish'd in the Stomach, have grown to compleat Animals, and occasioned horrid Symptoms in the Bodies that nourished them. And if stubborn Quartans, as some say, proceed from Melancholly Humours lodged in the Spleen, Nature seems busie to convert new Chyle into a tenacious Juice, hardly dissipable, and which notwithstanding the nearness of the Stomach and Spleen, can neither, by Emeticks, Purges, or other Medicines, be dislodged, resolved, nor corrected. And what is more to our Purpose, is the Poyson of a Mad Dog, which Nature seems industriously to preserve, since a little Foam, conveighed into the Blood by a slight Hurt, is reserved for many Years, and at last produces it's ill Effects, though the constant heat and frame of a Human Body, and the dissipable

spable Texture of the Foam might occasion it to perspire. And in the bite of a *Tarantula*, so small a Quantity of the Poyson as is conveyed by the Tooth of a Spider, is preserved in the Body several Years annually occasioning it's Paroxysms. And I am informed by a Person of Quality, that the Effects of a bite of a Creature in the *East*, whose Arms were so small that the Hurt could scarce be perceived, continued annually for twelve Years after; he feeling a pain every Year in the place that was hurt, about the same time of the Year. And in Hereditary Distempers, as the Gout, &c. Nature acts with so little Skill, as to transmit the Seeds of the Distemper to their Posterity, which after it hath lain hid for forty Years, at last exerts it's ill Qualities.

To what hath been said we shall add, that when Men Dye of a Distemper, *that* Death is called a Natural Death (which is inconsistent with what *Hippocrat.* says, *Nature Morborum Medici*); which though inconsistent with the Notion of Nature's being a kind and prudent Being, is yet consonant with Divine Providence.

But since Nature is supposed to be such a Being, and is asserted to be the Principle of all Motions and Operations in Bodies, we shall further enquire what it is. We shall therefore ask of those that assert this Notion of Nature, whether it be a Substance or an Accident? If an Accident, it should be shewn what kind of Accident it is; it being inconceivable, how a Solitary Accident, should have so many Attributes and Effects, as are ascribed to Nature; and why they

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Nature is a
Substance
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they may not be imputed to a complex of such Accidents, as the Mechanical Affections of Matter, as Figure, Bulk, Motion, &c. which may as probably be conceived to have been instituted by the Wise Author of the Universe, as that Accident *Nature*. But if such a Complex Accident, cannot bring such Effects to pass, it ought to be shewn, by what other particular and intelligible means, Nature may produce them better. But if it be said, that Nature is a Substance. It may be asked, whether it be a Corporeal or an Immaterial one. If Immaterial, it may be further asked, whether it be Created or not. If not, then God is called under another Name, the Object or Subject being removed; by the Schools, it being accounted God's Vice-Gerent, and not he himself. If Nature be a Created Being, as Christian Philosophers urge, then we may ask, whether she be endowed with Understanding, knowing what she does, for what ends, and by what Laws. If not, the Notion of Nature will be useless, in giving an Intelligible Account of things, her usefulness being destroyed, as she is a Corporeal Being. And though she should be allowed Understanding, as the Antients did to the Soul of the World; besides that such a Notion tends to Heathenism, it will be very insufficient to account for the *Phænomena* of the World. For if we compare the Macrocosm and Microcosm, though Nature were endowed with Reason, yet several *Phænomena* might be accounted for without her Intervention; for tho' the Rational Soul hath so small a Province as a Human Body to take care of, and is intimately united

The Rational Soul not concerned in several Animal Actions.

united to all the Parts of it, yet a great deal is done Mechanically, without the Intervention of that Soul; as in Sleep, the Blood circulates, the Heart beats, and Nutrition, Respiration, &c. are continued, without the Knowledge of the Mind. And several things are done, whilst awake, without the Direction, and contrary to the Inclination of the Mind, as Cramps, Convulsions, Coughing, &c. And though the Body of an Ape be analogous in several Parts, to that of Human Bodies, yet the formation of the Fætus, and it's Organization is allowed to be made by the Soul of the Brute, which is neither an Incorporeal nor a Rational Substance. And even in Human Bodies, the Organization and Formation of it is performed without the Assistance of the Soul, which is infused into it, when fitly Organized to receive it, which is about the end of the sixth or seventh Week. And here it may be enquired, how far by the Knowledge of the Mind before mentioned, we are enabled to account for the manner, how the Functions of an *Embryo* are performed, when the Soul is united to this Living Engin and Supervenes.

If it be urged that Nature is the Principle of Motion in Bodies, and that their various Motions are to be explained by having recourse to her; it will be difficult to conceive how an Immaterial Created Substance, can act by a Physical Power, the Agent having no Impenetrable Parts, to impel the Corporeal Mobile. God indeed though an Immaterial Spirit, ought to be acknowledged the Primary Cause of Motion in Matter, which belongs not to a Corporeal

*Whether
Nature be
the Principle of Motion.*

No Imma-
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real Substance as such ; but there is a great Distance betwixt the Incomprehensible Creator, and the imperfect Order of his Creatures ; so that we should be very Cautious of making Comparisons betwixt him and them ; and how we, from his power and manner of acting infer theirs ; he as their Creator, being able to act immediately upon Human Souls, but they are not capable of acting so upon one another. Besides, if Nature were an Incorporeal Substance, it would be difficult to conceive how she should be the Cause of Motion in Matter, since the Rational Soul, in a Human Body, though united to it, only determines the Motions of some of the Parts, but cannot give it to any, nor so much as regulate it in most. And it will scarce be useful to Physiologers in explaining *Phænomena*, to say, that Nature moves Bodies, other than in a Physical way, since it would be but an indifferent account from a judicious inquisitive Physician to say, that those strange Symptoms and Distorsions in Distempers ascribed to Witchcraft, were produced by a wicked Immaterial Spirit called a Devil.

Nature no
Corporeal
Substance.

From what we have said it appears, that Nature is no Immaterial Substance ; we shall next consider the Opinion of those who suppose her to be Corporeal. Not then to ask, how a Body can produce Rational Souls, which are Immaterial Beings, not to be formed by Subtilization or any other Change of Matter, we shall require, whether Nature as Corporeal, knows what she does, and acts for predesigned Ends, or be blindly moved and directed by a Superior Agent, who is endowed with excellent Understanding.

And

And *First*, If Nature be Corporeal, we cannot suppose her capable of thinking, nor a Wise or Provident Director of the Motions of Bodies.

Secondly, A Corporeal Being cannot pervade all the Universe, so as to be present with all its Minute Parts, of which they say it is the Principle of Motion.

Thirdly, If Nature be a Material Substance, how came it by that Motion of which it is the Principle, Motion not belonging to Matter, a Body being nevertheless so, whether at rest or in Motion. If it be said, that God, as the first Cause, put it in Motion; the same Cause may as reasonably put the Mundane Matter in Motion, without the Intervention of another Corporeal Being, where Motion is not involved in the Conception, as it is Matter.

Fourthly, It is a Question, how a Corporeal Being may observe or maintain the Laws of Motion; and without Knowledge, understand or act according to them, and make all the Mundane Matter do so too.

Fifthly, In explaining the *Phænomena* of Bodies, such an unintelligent Being and undesigning Principle can be of little Service; for if Nature be a Bodily Creature and acts necessarily, it can be looked upon but as an Engine, where it will be as hard to conceive, how the several Parts of that Engine, Nature, are framed and moved by the great Author of things, and how they act on one another, as well as on other Bodies, as in the World it self, which is so admirable an *Automaton*, how the *Phænomena* may

may be produced by the Primitive Construction and Motions he assigned it, without the Intervention of such a thing as Nature, since he might endow Bodies with active Powers as well as assign them other Causes; for if Nature as well as the World be a Corporeal Creature, it can act no otherwise than Mechanically. Besides, it is consonant to Divine Wisdom, so apparent in the Fabrick, and the Conduct of the Universe, to employ the fewest and most simple ways to produce the *Phænomena* designed in the World.

Whether Nature is of a Superior Order to Matter.

And though some say that Nature, though not incorporeal, is of an Order Superior to mere Matter, as Material Forms are said to be, it is hard to conceive what Kind of Beings those must be, which though Substances, are neither Immaterial nor Corporeal. And if we should suppose this unintelligent Being, to have a kind of Life or Soul, it would as little assist us to explain the *Phænomena*, as when a Man is acquainted with the Construction of Mills; he may as well apprehend, how Corn is ground by a Mill, turned by Wind or Water, which are senseless Beings, as he can by knowing it is done by a Horse, who though an Animate Being, acts but as part of an Engin, which goes round, yet neither designs nor knows, that he grinds the Corn.

Nature not the Principle of Motion in Natural Bodies.

And here it may be questioned, how Congruously *Nature* may be said to be the Principle of Motion in all Bodies said to be *Natural*; for not to urge, that those Masses of Matter called *Elements*, and the mixed Bodies compounded of them, are said to be moved to or from the Centre

Centre by those Internal distinct Principles called Gravity in Earth and Water, and Levity in Fire and Air, and that the Quality of the Predominant Element is assigned to every compound Body, the Celestial Part of the World so far exceeds the Sub-celestial in bigness, that there is no Comparison betwixt them; yet the Peripateticks say, that the Celestial Orbs are moved by Intelligences, *i. e.* Rational and separate Beings, which regulate the durable Motions of the Heavens; so that the greatest Part of the Universe hath no recourse to Nature as the Internal Principle of Motion. And here we shall observe, that if it be an advantage in explaining *Phænomena* to know the General Efficient Cause of Motion; the Notion of Nature will have little advantage in our Opinion, which ascribes all Motion to a primitive Impulse given by God, and the Mechanical Affections of Parts of Matter; It being the same thing in assigning the Causes of things to particular Motions, as Swift, Slow, Uniform, &c. whether the Parts of Matter owed their Original Motions to *Nature*, or to God; only it may be supposed, that his infinitely perfect Knowledge might accommodate the Motions of Matter better than a Creature, to produce the *Phænomena* designed.

Nor is there any occasion to allow, that Nature produces any Motion *de Novo*, she only transferring and regulating the Motions of Matter communicated at first; (the Rational Soul in a Human Body having no power to make new Motions, but only to direct those of the Spirits and of the Instruments of Voluntary Motion)

No new
Motion pro-
duced by
Nature.

tion.) For besides that it is allowed, that the same Quantity of Motion is always continued in the whole Mass of Matter, which was first given it, being perpetually transferred from one part to another, if new Motions, never before in Beings, were produced in Bodies, the Quantity of Motions in Beings would perpetually increase, which would disorder the Doctrine of Local Motion, and perplex rather than assist the Explication of *Phænomena*. And whether Nature be Immaterial or Corporeal, with or without Understanding, would be neither necessary nor useful in explaining the Effects of Local Motion. The Bodies of Animals are little less curiously framed, than Mens; and most of them more exquisitely than the inanimate Masses of the World. Yet some Philosophers who deny Sense or Cogitation to Brutes, explain the *Phænomena* observed in them, as plausibly, as those that allow them Souls endowed with Faculties, only gradually different from Human ones. And from some things which the Peripateticks teach, we may argue, that the Notion of Nature extends not so far as they imagin; for the formation of Plants and Animals, is not immediately ascribed to Nature, but the Soul, which they call the Architect of it's own Mansion, which they say it forms by an innate Power and Skill. And to the same Soul they attribute the Functions of Concoction, exclusion of the Excrements, production of Milk, Semen, &c. as well as the Locomotive and Appetitive, and other Faculties of a Living Body. They likewise attribute to substantial Forms, the Noblest Properties

ties and Operations in Inanimate Bodies; from whence also they deduce the attractive faculties of the Loadstone, Amber, &c. and the Medical Virtues of Gems and other Minerals, whether fluids or consistent.

But not to insist on these Arguments, we shall add, that it is not enough to explain a *Phænomenon* to ascribe it to one General Efficient, such as Nature, but the particular manner, how that Cause produces the Effect, ought to be intelligibly delivered. It would argue but little Curiosity, for a Man to be satisfied with being told, that a Watch was an Engin made by a Watchmaker; nothing of the Spring, Wheels, Ballance, &c. being known by such a Relation; or how they effect one another to direct the Needle to shew the hour of the Day. And as he that is acquainted with the Conformation of a Watch and it's Mechanical Structure, will explicate the *Phænomena*, without supposing it to have a Soul to be the principle of it's Motions, so he that understands not how it was made will never give a Rational Account of it, by supposing, (as the Chinese did, when the Jesuit's first brought them there,) that it was an European Animal, or a Living Body, endowed with a Soul. Again, when one unacquainted with Mathematicks, thinks it strange to see the Sun rise in one Part of the Horizon in the Winter, and another in Summer, and the Days so much shorter at one time than another, and sometimes equal, as also the Sun and Moon, sometimes in Conjunction, and sometimes in Opposition, &c. he will soon understand how these things are occasioned,

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if he be taught the Mathematical Elements of Astronomy. But if he will obstinately reject these Explications; *Aristotles* Account, that the Orbs of the Sun and Moon, and other Celestial *Spheres* are moved by Angels or Intelligences will afford him but little satisfaction; such general and undermined Causes not assisting him to explain those *Phænomena*.

From what we have said it appears, how unsatisfactory those Accounts are, which are attributed to the Efforts of Nature; and we had better much, when Mechanical Principles will not give us an Account of particular *Phænomena*, confess our ignorance, than have recourse to a Notion unintelligible. But though all *Phænomena* of Nature cannot be explained Mechanically, yet those acquainted with Opticks, Astronomy, Hydraulicks and Mechanics, will clearly explain those which cannot be accounted for by *Aristotle's* Doctrine. But if both the Notion of Nature and the Mechanical Principles prove insufficient, we ought to find out if possible one preferable to both.

If it be asked of what service the preceding Discourse may be to the Reader, we hope what hath been said may be serviceable both to Natural Philosophy and Religion.

The Usefulness of this Discourse in Respect of Philosophy.

And *First*, this Discourse may be of service to Natural Philosophy, in diswading Men from the use of that Ambiguous Term, *Nature*, which having various Acceptations occasions Confusedness in Mens Words and Writing, and Controversies in which they dispute more about Words than Things, and might not differ at all, if they expressed themselves clearly.

Another

Another advantage may be, to wean Men from flattering themselves they know the Reason of Things, when they ascribe them to Nature: To do which a Man needs not to be a Philosopher, a Plowman being able to do the same. And Ambiguous Terms of less Importance have been prejudicial both to Philosophers, Physicians and Chymists, as well as Physiologists, referring particular *Phænomena* to real Qualities or Natural Powers, or that more comprehensive Term Faculties; though they do not intelligibly explain, what this Faculty is, or how the Operations they ascribe to them are produced. Thus Attraction hath been received as a good Explanation of the Ascent of Liquors by Suction through a Pipe, upon the Account of Nature's Abhorrency of a Vacuum; whereas Modern Philosophers have explained Mechanically what they ascribed to an attractive Faculty. The Power of a Loadstone to attract with one Pole, and drive away at the other the North point of a Marriners Needle, is esteemed a noble Faculty in that Stone; and yet by a small change of Texture, I have made that extreme of the Magnet, which before drew the Southern point of the Needle, draw the Northern point, and the Opposite Extreme the Power to drive it away; this admirable Faculty depending on the Mechanical Structure of the Mineral, with relation to other Bodies, the Globe of the Earth and it's Magnetical Effluvia.

Yet the Term Faculty may be used as a Com- *The Use of*
pendious form of Speech, though not denoting *the Term*
a real or distinct Agent, the Power or Faculty *Faculty.*
of

of a thing frequently signifying, only the matter of it made Operative by some of it's Mechanical Modifications ; the complex of the whole making up it's particular Nature. And though often Faculties are taken for distinct Principles, yet frequently the Effects of what they call a Natural Faculty, depends on the Texture, Figure, and Mechanical Texture of the Agent, determining the Action of a more remote Agent to the Effect produced. As in a Clock, to make the Vibrations of the Ballance, to point out the Hour, and make it strike, are but various Effects of the weight or spring that continues the Motion. Thus a Key may lock or lose that Faculty, as some may call it, by an Alteration in the Locks it is used to unlock; or by the Motion of the hand that uses it. And further, when a piece of Native Chrystal is of a good Prismatical shape, and exposed to the Sun in a due Position, it's figure refracting and reflecting the beams in a peculiar Manner, gives a Colorifick Faculty, it shewing as great a Variety of Colours or greater than those of a Rainbow. And in a Metaline concave Looking-Glass, those distinct Faculties, of reflecting, inverting, magnifying several Objects, and melting, and burning of several Bodies, are but Consequences of the Mechanical Affections of the speculum, as it's Figure, Capacity and Smoothness.

What qualities are.

And indeed several Qualities of very many Bodies are but Dispositions to be thus wrought upon by the Action of External Agents, and also to modify that Action; an Eccho, which is made in several hollow places, depending on a Mechanical

chanical disposition of the Figure, which gives them the power to resist and reflect a Sound. And a Key by due Position, if it be long, may acquire a Magnetick Quality or Faculty from the Earth's *Effluvia*, which though not lasting, yet by the Mechanical Change received from a Loadstone, it may acquire a durable one.

How such inherent and active Powers or Faculties came to be ascribed to several Bodies, might proceed from Men's Ignorance of Natural and Artificial Things, they not duly weighing the difference betwixt a Body considered absolutely, and by it self, or the same Body considered in it's present Circumstances. In some Cases a Body may have strange things attributed to it, though not as such a Body is considered simply, but placed amongst congruous ones, where it is the Principle Part of the Composition, or the Complex Body it is joyned with, which are of convenient Structures to produce the *Phænomena*. This may be illustrated by considering, that a Spring wound up and crouded into a Box, is but a simple thing, endeavouring to expand and remove the Body that compressed it, but in a Watch it may be the principle of a great many Motions: This may be further illustrated, if we consider, that in several Bodies, a fluid Substance, by convenient Motions may answer the Intention of a Spring, especially assisted by External Agents. Thus if a Man blows into the Air, he will only eject a vapid aerial Stream, but if it be blown into a Flute, and modified by the Musicians Fingers and Skill, that stream of Air

How the Term Faculty came to be used.

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may form a great many Melodious Tunes: Thus Gunpowder fired in the open Air, will make but a rude and sudden Flash, but in Rockets and other Instruments, well contrived and managed with Skill, it will afford a variety of shining Bodies and *Phænomena*. An Analogous Instance to those of Springs may be taken from the Bulbs of Onions, and the Roots of Aloes, &c. which being exposed to the Air in the Spring, the warmth will so exagitate the Juices and Spirits, that being modified by the structure of the Parts, without the assistance of the Earth or Rain, they will send out stalks and leaves for several Weeks, without the addition of any supply from Radical Parts without, but only from what is contained within; which is evident from the Decrement of the Bulb and it's different Weight. Thus also the Concurrence of External Air, with the Juices and Spirits of several Insects and other Animals, may put them into Motion, which may be so determined by their Organization, as, to recover in the Spring or Summer, a new Life, tho' they have lain dead all Winter; so Flies in a Warm Air presently recover Sense and Motion, which they had lost for many Months. And in an Air Pump, when they have by an Exclusion of the Air, lost both Sense and Motion, they presently recover it again, when the Air is admitted to them again. And the Sun Beams, which primarily produce but Light or Heat, when they fall upon a rorid Cloud, being variously reflected and refracted, they form the various Colours apparent in a *Rain-Bow*.

From

From hence it appears, that the advancement of solid Philosophy may be much hindered, by assigning Imaginary Things, or Arbitrary Names, as the true Causes of Physical Effects; and perhaps none hath been employed more to that purpose than the Term *Nature*, which ought to be more cautiously used, and with restriction; and used only as a Compendious way of speaking, particular *Phænomena* being to be deduced from Intelligible Principles, where instead of Ambiguous Words, such Words and Expressions ought to be used, as may clearly be understood by ordinary Readers furnished with an ordinary measure of Knowledge and Understanding.

But to proceed to represent what advantage our past Discourse may be to Religion. *First, Advantage* It may prevent Men from having so great a Veneration for *Nature*, and running into those Extravagant Errors, which were embraced by many of the Heathen and several of our Modern Philosophers, though Professors of Christianity; who under new Names have received the impious Errors of the Gentiles. Many of the Heathen Writers indeed acknowledged a God, but meant such a one, as was very little different from matter, and even from the (a) World; but different from the true one adored by *Christians* and *Jews*.

The First Advantage our Discourse may afford to Religion.

(a) *The Stoicks* in Laertius describe the World thus. *Mundus est qui constat ex Cælo & Terra atq; ex illorum Naturis; sive qui constat ex Diis & Hominibus, iisq; rebus quæ horum gratia conditæ sunt.* And of Chrysippus, one of the Patriarchs of that Sect, the same Historian Diog. Laert. l. 7. in Vita Zenon says, *Purissimum dixit, ac Liquidissimum Æthera, quem etiam primum asserunt Stoici esse Deum, sensibiliter*

sibiliter veluti infusum, per ea quæ sunt in aere, per cunctas Animantes & Arbores, per terram autem ipsam secundum Halitum. *To which agree not only that Passage of Virgil. Principio Cælum, &c. But another, which I somewhat wonder Learned Men should read with no more reflection ; since he there gives the Sky the Title of the high God,*

Tum Pater Omnipotens sæcundis Imbribus Æther, &c.

For our God is, First, Infinitely perfect. Secondly, Incorporeal and too Excellent to be united to Matter, like the Mundane Soul of the Heathens ; or to be properly a Soul to any Body. Thirdly, Incapable of being divided, or having Human Souls taken from it or out of it, or separated, so as to be Parts of his own Sub-

(b) The Error rejected was received by several Heathen Philosophers, especially the Stoical Sect, as Laertius in vita Zenonis, says, De Divina Substantia Zeno ait, Mundum totum atq; Cælum, And several Heathen Philosophers, after the Gospel was preached, adopted the Argument of the Elder Stoicks, who inferred that the World was Anima-

stance ; whereas the Idolaters (b) we mention conceived a Being under the Name of God much more distant from truth, and of which they had several Notions ; for First, Most of them esteemed their God Corporeal ; as Diogenes Laertius, and Origen affirm. And according to Eusebium, Prepar. Lib. 3. cap. 4. the Egyptian Theologers look-

ted and Rational, from the Nature of a Human Soul, which they supposed to be part of the Intelligent Soul of the World, which some confounded with the Deity. The Stoicks, Laert. de vitis Philos. Lib. 7. affirm, Mundum esse Animale & Rationale & Animatum (ἐν ψυχῇ) & Intelligibile. To which he adds, Mundum animatum esse, inde manifestum est, quod anima nostra inde veluti avulsa sit. And Seneca Epis. 92. Quid est autem cur non existimes, in eo divini aliquid existere, quæ Dei

Dei par est? *And Plutarch in Quest. Plut.* Non opus solum Dei, sed & pars est; neque ab ipso, sed ex ipso Nata est. *And Epictetus Dissert. 1. cap. 14.* Animæ ita alligatæ & conjunctæ Deo sunt, ut particulæ ejus sint,

ed upon the Sun, Moon and Stars, to be Gods, and that the visible Sun made the World, and no Incorporeal Substance, or Invisible Nature; which Corporeity of God was the Opinion of *Mr. Hobbs*, being as agreeable to their Opinions as it is repugnant to Religion. But others believed a Soul of the World, as a Rational and Provident Being, which with the Corporeal Part of the World, especially Heaven, was esteemed a *Divine Body* or the *Body of God*, *de Cælo, lib. 2. cap. 3.* This Being they believed, informed the great Mass of the Universe and was the Mundane Soul. And tho' the later Infidels pretend to refine the Antient Doctrin, yet theirs seems to be little different, if not the same, with what we noted out of *Lactantius*, which is expressed by *Maximus*, a Pagan, to St. *Austin*. *Equidem Unicum esse Deum summum atq; magnificum, quis tam demens, tam mente captus, ut negat esse certissimum? Hujus nos virtutes, per mundanum opus diffusas, multis vocabulis invocamus, quoniam Nomen ejus Cuncti, proprium ignoremus.* And *Varro, de Civit. Dei, lib. 7. cap. 6.* is thus cited by St. *Austin*, *Deum se arbitrari animam Mundi, & hunc ipsum Mundum esse Deum: Sed sicut hominem sapientem, cum sit ex animo & corpore, tamen ab animo dicimus sapientem; ita Mundum Deum dici ab animo, cum sit ex animo & corpore.*

But

*A Second
Advantage
in respect of
Religion.*

But the Doctrin we have proposed may vindicate some Proceedings of Divine Providence, as in those anomalous Proceedings, *viz.* Earthquakes, Eruptions of Vulcanos, Famines, &c. against those that pretend to censure it; for according to our Hypothesis.

First, God is a free Agent, who formed the World voluntarily and as he pleased, without advice or limitation. *Secondly*, Since God hath a clear Understanding of a larger Extent than Ours, and probably hath made the World and the Subordinate Engins comprized in it for several Ends, some respecting Corporeal, and others Rational Creatures; some of which are likewise evident to our weaker Reason, and some lye hid in the unfathomed Abyfs of his Wisdom. *Thirdly*, The Glorious and Excellent Being hath formed things so, that they bear the Badges of his Attributes, Tokens being Imprinted on the Corporeal Works, of his Divine Wisdom, producing a Multitude of things from a few simple Principles, in a very uniform way. *Fourthly*, The Divine Author of the Universe hath formed it so admirably, and not only contrived it's Structure, but settled such constant Laws amongst it's Parts, as were most convenient for such a Fabrick as the Universe; and hath given the particular Parts of it such subordinations in reference to one another, and to the Original Fabrick of the System of the World; that the welfare of Particular Parts of it should be so far provided for, as was consistent with the General Laws of the Universe, and such Ends as he proposed more considerable than the Welfare of Particular Creatures.

Upon

Upon these Considerations, not to mention Miracles which are Supernatural, nor those Instances where the Providence of God does peculiarly interpose, it may be reasonably said, that God having an Infinite Understanding, clearly discerned the Consequences of those Laws he had made, in respect of all Conjunctions and consequent Circumstances; and having settled standing Laws of Motion, suitable to his wise Ends, it was agreeable to his Wisdom to prefer Catholick Laws before Subordinate ones, and Uniformity in his Conduct, before alterations according to particular Emergences. And consequently he recedes not from General Laws wisely established, to serve particular Creatures, or to prevent seeming Irregularities, which he foresaw would happen, and thought fit to ordain and permit, not unsuitable to some Physical, Moral or Political Ends, he had in View; so that several things which to us seem Anomalous, were Congruous enough to his secret Ends, and therefore not to be censured by us.

And indeed, the conspicuous Instances of Skill and Wisdom in the Uses and Ends of what he seems to have reasonably designed, give us Reason to think, that there is no less Skill in the rest of his Works, if we could as well discern them. For if in an Excellent Letter on several Subjects, and to several Purposes, some Part was wrote in plain Characters, others in Cyphers, and a third mixed with both kind of Writings; if an Intelligent Person should find, that the Passages he understood were suited to their scopes, it would be but reasonable for him to

Gods Wisdom in his Invisible argued from that in his Visible Works.

to conclude, that those of the *Third Sort*, tho' seemingly incongruous because illegible, would be no less worthy the Excellent Author, than the plainest Part of the Epistle; if the Purposes they were designed for were as clearly discerned by the Reader. And by ordering things so, that in some of God's Works, the Ends may be manifest, and the aptness of the means conspicuous; and in others his Designs may be beyond our Reach, God Almighty both gratifies our Understandings, and makes us sensible of their Imperfections.

Third Advantage of our Doctrine in respect of Religion.

The Third Advantage of our Hypothesis in respect of Religion is, that it may incline Men to pay that just Veneration, Praise and Thanks directly to *God*, the true and only Creator of the Sun, Moon and Earth, &c. which are usually called the Works of *Nature*. And in this way of paying their Adoration to the true God, who styles himself a *Jealous God*, *Exod.* 20. 5. and in their gratitude, they are Warranted by the Examples of the Antient People of God, the *Israelites*; and not only the inspired Writers of the Old, but the Promulgators of the New Testament, and even the Celestial Spirits, *Rev.* 4. 2. are introduced Praising and Thanking God himself for his Works without taking Notice of that pretended Vice-Gerent Nature.

CHAP.

CHAP. II.

Containing an Essay about Final Causes of things Natural, wherein it is enquired, whether and how far a Naturalist should consider Final Causes.

THat we may deliver our Thoughts more distinctly in our present Enquiry, we shall propose them under these four General Considerations or Questions.

First, Whether Generally and Indefinitely speaking, there are any Final Causes of Natural Things within the Scope of a Naturalist's Knowledge.

Secondly, Whether, the first Question being answered in the affirmative, we may consider Final Causes, in all Sorts of Bodies, or only in some peculiarly Qualified.

Thirdly, Whether and what Sense Acting or Ends may depend on unintelligent or inanimate Bodies.

Fourthly, What Cautions are to be used in forming Arguments upon a Supposition of Final Causes.

And *First,* Those that deny Naturalists to consider Final Causes, do it, either because they think with *Epicurus*, that the World was produced by Atoms and Chance, and therefore in vain to enquire for Final Causes in the Effects of Chance ; or, with *Des Cartes* they think, that as God is an Omniscient Agent, it is presumptuous for Men to think they can investigate God's

Why Final Causes are denied by Philosophers.

God's ends in his acting with respect to his Creatures. The Opinion of the Epicureans, having already been confuted, we shall only take Notice of some things which may discountenance that Opinion. But the Cartesian Principles having been received by several Learned Men, will require our further Consideration and Enquiry. That which perhaps gave rise to his Opinion was, that all Creatures in general were designed for the Service and Benefit of Man; so that a Learned Writer to prove the World annihilated after the Day of Judgment, uses this Argument. *Viz.* That since the World was made for Man's sake, when he is possessed of his future State, there is no more Use for it; but since I cannot agree intirely with either of their Opinions, I shall leave them to defend their own Opinions, and only propose my Own.

*A fourfold
Distinction
of Final
Causes.*

But before we proceed to declare our Opinion, it will be reasonable to premise a Distinction; for when we speak of the Ends the Author of Nature is said to have in things Corporeal; we may suppose them fourfold. *First*, There may be some general Ends, in respect of the whole World, as the Creator's exercising his immense Power and Wisdom; the communicating of his Goodness; the Admiration and Thanks, which are due from Intelligent Creatures, for those Divine Excellences which manifest his Glory. And as these respect the Creation of the Universe, they may be called *Universal Ends*. *Secondly*, There may be ends in a restrictive Sense in the Number, Fabrick, Situation and Motions of the great Masses of Matter

Matter, which make considerable Parts of the Universe ; it being probable, that the Sun, Moon and Stars, as well as our Globe, and perhaps the Earth and Sea, were so formed and situated, as might best conduce to the Preservation of their present state, and the Universal Ends of the Creation, and the good of the Globe they belong to. And these Ends may be called *Cosmical* or *Systematical Ends*, reserving the Symmetry of the System of the World. *Thirdly*, another sort of Ends respect the Parts of Animals, as designed for the welfare of the whole Animal, considered as a System of Organized Parts, appointed for the Preservation of it self, and the Propagation of it's Species in such a Part of the World as his Structure and Circumstances determine him to act in. And these may be called *Animal Ends*. *Fourthly*, other Ends which chiefly respect Man, may be called *Human Ends*, which Nature is said to aim at, when she forms Animals, Vegetables, &c. for the use of Man. And these Ends may be further distinguished, into *Mental*, which respect the Mind, and *Corporeal*, which respect his Body, both, as he is formed as other Animals, and also hath Dominion over the rest of Animals, &c. and is capable of making them Subservient to their proper Ends.

Having thus proposed a Distinction of Final *The Au-* Causes, we shall proceed to our intended Dis- *Author's Op-* course ; where we shall observe, that though we *nion.* think it erroneous to say, in the strict Sense, that all things in the visible World, were made for the use of Man, yet it is more erroneous

to say, that all the Ends are investigable by Man.

*Cartesius
his Notion
of Motion
examined,
in respect
of it's Fi-
nal Cause.*

It is known, that the *Cartesians* allow, that there is always the same Quantity of Matter in the World. For they suppose, as God is immutable, that when he first put Matter into Motion, he gave it such a Quantity, as neither wanted to be augmented, nor lessened. By which those that employ it, seem to Judge of the Ends, God proposed in Natural Things. For except we suppose, that they knew God's Design in putting Matter in Motion, it is difficult to shew, that his Design was not such, as might be best accomplished by adding or diminishing the Quantity of Motion communicated to Matter at the first. And it is a Question, whether by this Notion the *Cartesians* do not Judge more than others, of the Designs of God. For if a Man be known to be wise, and hath several ways to accomplish his Ends, when one sees some of them tend to a Rational End, and that those were intended, it would be less presumption, and shew more respect to that Wise Man, to conclude that those were his Ends, than that he can have but one General Design named by the Assertor. And it is easier to know, whether an Engin was designed by the Artist for something it is proper for, though never so skillful, than to know he can have no other. And how can a *Cartesian* tell, but that amongst the Ends he allows God hath proposed in the Production of his Creatures, one may be, that his Intelligent Beings, who are capable of admiring and praising him, should be moved to do so, by the Wisdom and Goodness he hath shewn in the World?

World? Which Attributes we could neither discern nor celebrate, without knowing the Creatures were made for such Uses, and well adapted to those Purposes. And though God's Immutability is urged to prove, that the Quantity of Motion is not varied; I see not why it may not be as inconsistent with his Immutability to alter his way of acting to produce particular Ends, as to bring his Eternal Decrees to pass though not yet done. Or why, he should be less immutable for varying the Quantity of Motion, than for daily creating Rational Souls to unite to Human Bodies, which the *Cartesians* allow; since especially, these created Substances have a Power to determine and regulate the Motions of the Spirits and the Conarion. But we use this Argument not so much to reject the Hypothesis, as against the Grounds on which they argue for it.

But to proceed to *Cartesius's* Assertion, that it is presumption in Man to investigate the Ends, God proposed in making his Creatures. There are two ways, a Man may know the Ends of God in his visible Works, *viz.* either he may know some of his Ends, or all of them. He that pretends to know them in the later Sense must be guilty of Presumption, and no less Folly since he is Omniscient; but to pretend to know them in the former is rather a Duty; for some things are so curiously contrived and fitted for certain Operations and Uses, that it seems Blindness not to discover, that though they might be designed for higher Uses also, yet this was intended: As he that considers the Structure of the Eye, and how the Parts are adapted

Whether a Man may enquire into the Ends God proposed in making his Creatures.

ted to make up the Organ of Vision, must needs conclude it was designed for Man to see with. The *Epicureans* indeed, who believed the World to be made by a Concourse of Atoms, without the Intervention of an Intelligent Being, may say, that, as the Eye was made by Chance it hath no Relation to a designing Agent, and that Vision is as Casual as the Formation: Or at least, may be Effected by a Man's Knowledge. But when by the Anatomical Dissection, and the Optical Consideration of an Eye, we see how it is adapted for an Organ of Sight, as if it were an Organ purposely designed for that use, it would be very hard to say an Intelligent Artificer either did things by chance, or made such a curious Peice of Work without Knowing what it was fit for, or should not design it for that use it was most fit for. And though he may have uses for it, that we cannot divine, yet amongst those it is reasonable to think that one, for which it seems so fitly adapted. And I cannot see how it either contributes to magnify Gods Wisdom, or how we shew our Veneration, to deny God that end in framing the Eyes, which we see them so aptly fitted for, and which we see is made of them. This may be further illustrated, if we suppose a Country Man in a clear day brought into a Mathematicians Garden, where he might see a Geometrical Instrument shewing the Place of the Sun in it's Zenith, it's Declination from the Equator, the Day of the Month, the length of the day, &c. it would be presumption to pretend to tell all the Ends of the Artist in making an elaborate and curious Instrument, which he did not understand,

stand, but when he saw all those things in it, which were requisite to shew the hour of the day, it would be an Error rather than a Presumption, to deny it was a Sun-Dial, designed to shew the hour of the Day.

But those who deny Natural things to be made for ends knowable by Men, may be asked, whether those things are not framed, as if they were made for such ends? And whether the Course and Fabrick of Things are for or against our Supposition? I think indeed it no disparagement to the Wisdom of an Agent; that what he did was designed for such ends, which they seem aptly framed for, unless they were unworthy the Wisdom of the Agent; but this cannot be in this Case, it arguing the Wisdom of the Divine Author to determine several of his Works to communicate his Goodness, that he might receive from his Creatures, especially those that are Intelligent as Man, an Ardent Love, just Admiration and Gratitude, for his Wisdom and Beneficence, in making his Works serviceable to one another, and useful to Man.

But to proceed to that other Assertion of *Des Cartes*, viz. That it cannot be said, that some of Gods Ends are more manifest than others; but that all of them lye equally hid in the Abyss of the Divine Wisdom, *Nec fingi potest aliquos Dei fines, magis quam alios in propatulo esse: omnes enim in imperscrutabili ejus Sapientie Abyssso sunt eodem modo reconditi.* Respons. Quart. ad Object. Gassend. This Assertion cannot be allowed, since the Uses of many of his Creatures are so obvious, that the Vulgar have always observed

Whether things were made for particular Ends.

Whether some ends are more evident than others.

served and acknowledged them. And to what he says; that all things in Physick ought to be proved by solid Reasons. We answer, *First*, that God's designing his Works for Particular Uses, may consist with the Physical Accounts of making those things; as a Man may give a Mechanincal Account of the Structure of a Watch without denying, that the Artist designed it to shew the hour of the Day. *Secondly*, Though in Physick all things ought to be grounded upon as solid Reasons as we possibly can, yet there is no necessity those Reasons should be exactly Physical, except we treat of a particular *Phænomenon* produced according to the established Laws of the Universe. For when we treat of the first and general Causes of the Universe, Final Causes or Uses may attend those General Physical Causes. And in Physicks it seems not Material, whether the proof be by the peculiar Principles of that Science, if proved by the common Grounds of Reason. Nor does *Cartesius* urge strictly Physical Arguments in proof of his Fundamental Tenents, but such as are Metaphysical, Rational or Experimental. As when he ascribes all the Motion of Matter to God, and consequently, all *Phænomena* in the World, he proves not by Physical Arguments, that an Immaterial Agent is the Cause of Motion; But that Motion not essentially belonging to Matter, it must owe it to some other Being, and thence Reasonably infers, that since it must be put into Motion by some other Being, that must be Immaterial. And when he endeavours to prove, that there is always the same Quantity of Motion in the Universe, and that one Body
looses

looses as much Motion as it communicates to another, he urges as Proof the Immutability of God, which is not a Physical but Metaphysical Argument.

And though *Cartesius* by one passage seems to urge, that what he says against Mens pretending to know Final Causes, was in Opposition to those, who teach that the Sole End of Gods making the World was to be praised by Men; yet that part of his Discourse contains some things we cannot agree to, as that it is self Evident we cannot know God's Ends, except he reveal them; which must either mean in a Supernatural way, or else it must be absurd; for what he asserts is evident, is not so to all Men, and therefore what he says ought to be proved. Besides, it appears not how we are obliged to praise God, if we neither discover his Intention, that we should do so, nor the End of his Works for which we are to praise him. Thus if a Judicious Man were told, that a Book writ in an unknown Language was wrote by an Intelligent Physitian; he might think it was not made by chance, but could not tell by looking into it, either that it was skillfully done, or deserved Praise and Thanks, since he could not tell, whether it was suited to the particular Ends designed. And though *Des Cartes* says, it would be absurd to suppose, that God had made the Sun, so vast a Body, only to give Light to Man, there are few that assign it only that particular use; and though Man be but a small Bulk, it is not absurd, that God should have a regard to his Welfare; since for ought we know Man's Body is a more excellent Machine, and a

Other Objections against Cartesius's Opinion.

more admirable thing than the Sun, not to mention his Immortal Soul, which is much to be preferred before a great Mass of brute unorganized Matter. And since he allows, that we may know the Ends of God's Works, when revealed to us, a Christian may believe, that the Sun was made to give Light to the World, and for the Use of *Man*, the Scripture telling us, that the *Sun*, *Moon* and *Stars*, which *Cartesius* probably thinks to be so many Suns, were designed for to give Light to the Earth, and all Nations that inhabit it, *Deut. 4. 9*. Nor can our Belief, that God's Ends in Corporeal things, may be known, lessen our Veneration for his Wisdom, more than to know the Ends of some things the Scripture informs us of, as *Job's* Sacrificing for his Friends, and the known Uses of *Urim* and *Thummim*; for God may instruct *Men* by his Creatures and Actions as well as by his Words; as when *Noah* was informed by the Rain-Bow, and *Jonah* by a Gourd and a Worm, and regulated the *Israelites* Camp, guiding them by a Cloud and a fiery Pillar. And though *Cartesius* says, That those he Opposes, look upon God as a proud *Man*, who designed his Works only for Praise: Though Humility in *Men* be a Vertue, it is none of God's Perfections; for that which is Pride in an Imperfect Creature, and hath nothing but what he hath received, is not so in God, who cannot be guilty of Vice, but may propose his own Glory as one of his Ends, and may require as well as delight to be praised by *Men* for his Works, since he is not only worthy of it, but it is their Reasonable Service.

But

But though we oppose *Cartesius* in these Particulars, yet we are far from thinking him a Favourer of Atheism, which would subvert the foundations of the Tenents of his Philosophy; yet we think his rejecting Final Causes, tends to weaken the best Arguments for a God; and that we ought to Admire, Praise, and Thank Him. And here we shall observe, that the excellent contrivance of the System of the World; the curious Fabrick of Animal Bodies; the Uses of their Sensories and other Parts, have always been strong Arguments of the Existence of a Deity, who made those Admirable Structures; and that the greatest praises that have been paid him, have been upon the Account of that Admiration, which was raised by the Contemplation of his Works. Therefore it would be both injurious to God, and unreasonable to disallow Final Causes; from whence, those Attributes of Wisdom and Goodness, must receive the Honour due to them. Indeed the Cartelians say, they demonstrate the Existence of a God, by the innate *Idea's* Men have of a Being infinitely perfect; who hath imprinted it upon the Mind of Man, as an Artist does a Mark upon his Work; they also allow, that God made Matter out of Nothing, and first gave it Motion; which argue the Immensity of his Power. But though we shall not oppose this Part of the Argument, yet it is reasonable for us to think, that God who hath taken care, that Men should acknowledge him, may have imprinted such Characters upon his Works, that Men may be informed of his Wisdom and Goodness from without, as well as by the Mind

The Usefulness of allowing Final Causes.

Mind within. To consider only the Fabrick of the World, without the determined Uses of it's Parts is insufficient to convince us of a Wise, Intelligent, and Provident Author and Disposer of things; since the Aristotelians believed the World to be Eternal, notwithstanding it's Extent, Symmetry and Beauty. And though they acknowledged not a God, yet asserting Animals to act for Ends, they were obliged to acknowledge a Provident and Powerful Being, to maintain and govern the World, which they called Nature, which they sometimes confounded with God, and made them co-ordinate, as *Deus & Natura nihil faciunt frustra*. And though the Cartesian Doctrine is proper to shew the Greatness of God's Power, yet the allowing of Final Causes is requisite to manifest his Wisdom and Beneficence; for as a Cartesian shews only, that God is Wise as he is Existent, Final Causes are the Effect of a Wisdom as well as Power, that can be ascribed only to a most Intelligent and Potent Being, and which may move us to admire and thank as well as acknowledge a God.

The second
General
Question
considered.

But to proceed to the second Question, viz. *Whether we may consider Final Causes in all sorts of Bodies, or only in some peculiarly qualified ones.* In considering this we are to divide Natural Bodies into *Animate* and *Inanimate*. Under the first Term, we shall comprehend, not only Animals but Vegetables, though they have not a Soul properly so called as Animals. The Inanimate Bodies, we shall consider on this Occasion, are such as the Sun, Planets, and other Celestial Bodies. For when the Sun was constantly

stantly observed to move about us, and give us Light and Heat, and produce Day, and Night, Winter and Summer, and different Seasons, so convenient for Mankind, those who observed these things, concluded, that these Motions were guided by a Divine Being, and that too for the Benefit of Man; which Conclusion is not contradictory to Reason, since there is nothing misbecoming a Divine Author; and the Motions of the Sun and Stars are such, that we may well allow them to be designed amongst other Purposes, to give Light and Heat and other Benefits to us, so that the Motions of the Heavens, which *declare the Glory of God*, *Psal.* 19. 1. may excite Men to admire his Power and Wisdom, and to return him Thanks and Praises for so great Benefits.

But amongst Inanimate Bodies, whether the Portions of Matter be great or small, the contrivance is not so exquisite, but that it's various Motions may cast themselves into several of those Circumvolutions, which *Epicurus* calls *συστροφές*, and *Cartesius* *Vortices*, which might continue a long time when once begun. Yet if we consider, how little acquainted we are with the true System of the World, and how small a part we make of the Universe, perhaps we are too forwards in assigning the Systematical Ends and Uses of Celestial Bodies, and that they are made and moved for the Use of the Earth only; for though by the established Order and Motion of the Stars, they may have a particular respect to us, amongst their other Uses, yet some of these Celestial Bodies and Motions may be de-
signed

All the Celestial Bodies not designed only for the Use of the Earth.

signed for other Purposes, than to cast their Beams and Influence upon the Earth.

*The Bodies
of Animals
and inani-
mate Bo-
dies, in-
stances of
Final Cau-
ses.*

But further the Situation of the Celestial Bodies afford not such strong Arguments for the Wisdom and Design of God, as the Bodies of Animals and Plants; for there seems more admirable Contrivance in the Muscles of a Man's Body, than the Celestial Orbs; and the Eye of a Flie seems a more curious piece of Work than the Body of the Sun. As for unorganized Masses of Matter, Stones, Metals, &c. they seem to be made also for particular Uses, as well as the Use of Man, yet they are of such unelaborate Contextures, that the various justling of the Parts of Matter might produce them; since we see in Chymical Sublimations, by the Motions of the Parts of Matter, without the guidance of an Intelligent Cause, Bodies of various Contextures may be produced. But perhaps it may be objected, that if we allow Chance, without an Intelligent Cause to make a fine shaped Stone, or a Metalline Substance, which should grow in the form of a Plant, as I have seen Silver do, we may as well allow, that Chance made Vegetables and Animals. But there are some Effects so easily produced, that they infer no intention in their Causes; yet others require such a Concourse of conspiring Causes, and such a Series of Motions and Operations, that it is impossible they should be produced without the Guidance of a Rational Agent, Wise and Powerful enough to dispose intervening Agents and Instruments so, as to produce such Effects; and though in sawing Pieces of Marble, Men sometimes find the Delineations of Towns, Woods,

Woods, and Men; and though such pleasing spectacles may dispose their Imaginations to favour such Opinions; yet no Wise Man would believe, that real Towns or Men should be made by the casual concourse of Atoms, there being no comparison betwixt the workmanship of a few irregular Lines drawn upon a Surface and a few Colours luckily placed, and a multitude of Organized Parts, which constitute a Human Body; every part having a determined Size, Figure, Consistence, Connection, &c. several or all which conspire to particular Functions or Uses. And though some of these Productions of Chance seem curious, yet there is more contrivance in the Foot of a Dog, than the famous Clock at *Strasburg*.

And though the Paw of a Dog is of a less curious Structure than the Hand of a Man, yet a greater Instance to our purpose may be taken from the Eye; for though the Parts that concur to make up that Organ, are very Numerous, yet how little any Part could be spared, or altered without a prejudice, may appear by the Number of the Diseases of those Parts, which depend on the depraved State of some of the Coats or Humours, and one would scarce think, that such small recesses from a Natural State should occasion such considerable inconveniences. The Pupil is only a hole of the *Uvea*, which alters it's bigness according to the different degrees of Light, the Eye is placed in; and therefore one would expect, that as long as it admits the Incident Beams of Light, whether direct or reflected, it performs it's part well enough; yet I lately saw a Woman whose Pupil,

*Instances of
Distempers
of the Eyes.*

Pupil, after a Fever, was very little contracted, yet she complained in particular Lights, she could hardly see. And as the Pupil may be too much contracted, so it may be also too much dilated, which is a much worse Distemper, depriving the Patient totally of sight. The Coats of the Eye wanting Colour, or the *Cornea* being smooth and transparent, seem but slight Circumstances, yet when any of these Properties is wanting, it vitiates the Sight. Thus in the Yellow Jaundice, Objects appear Yellow; and by a small Inequality upon the *Cornea*, by a Pustle raised there, and which afterwards broke, a Person hath been so much prejudiced in his sight, that though he can read well enough in a Room, yet in the open Fields or Streets objects appear glaring; & he seems to see many others, as Men see Stones in the Bottom of a Brook or running Water; which is for want of an uniform refraction of the Beams of Light, that fall upon the *Cornea*.

Further Instances of Final Causes in the Formation of the Eyes.

To prove further, that the Eye was made with design, we shall add some observations which occur not in the Dissection of an Eye. We may observe in Frogs, that besides those parts of the Eye, which they have in common with Men, Dogs, Cats, &c. they have a peculiar Membrane or Cartilage with which they can cover the Eye at pleasure, without too much obstructing the sight, being both transparent and strong: where Providence is very conspicuous; for they living in watry places, which commonly abound with Sedges, and other Plants which are sharp pointed, and their progressive Motion being made by leaping and not walking,

If they could not thus cover their Eyes, they must leap blindly with their Eyes shut, or leaving them open, venture to have their Eyes cut or pricked, whereas this Membrane defends them, which they can at pleasure withdraw into a little Cell, where it is lodged till there is further occasion for it; which you may perceive, if you hold a Frog in your Hand, and offer to touch it with a Pin or any sharp thing; but when the danger is over, it will be again withdrawn: and Birds which fly amongst Trees and Hedges are likewise furnished with the like Membrane. Men and several sorts of Beasts and Birds have several Muscles by the help of which, they can turn their Eyes any way to receive the Impression of External Objects; but Flyes having not their Eyes moveable are recompensed with a great many little Protuberant Parts, ranged upon the Convex of their Protuberant Eyes, by which the Beams reflected from any Object above, below, or on one side, are received and make the Object Visible. Some hundreds of these Protuberances may be reckoned on the Convex of the Eye of an ordinary Flesh Fly.

But perhaps it may be here objected, by those who chuse rather to ascribe the Structure of Animals to Chance, than an Intelligent Being, that the Organs of sight ought to be conformed to those of Men as the best and most perfect; but though the Eyes of other Animals are different from those, which are the most perfect, as Man's may be supposed to be; yet it will not follow, that those are defective, which differ from Men's; for we are to consider, that God's Wisdom in forming the Eyes and other Parts

An Objection answered.

of

of Animals, for the uses designed in their Fabrick, and the Faculties we see them Exercise, may convince us, that though we know not the Uses nor Reasons, they are notwithstanding wisely constituted; God having too much Knowledge to do any thing unskillfully; and it being too much Presumption in us to think, that he can have no ends in forming his Creatures beyond our Discovery. *Secondly*, we are to consider, that an Eye is not only to be esteemed as an Instrument of Vision, but as belonging to Animals of Different kinds, which make use of it in different Circumstances, and therefore it ought to recommend the Wisdom and Providence of God, that he hath adapted the Organ of Sight, suited to the various Species of Animals, according to the different Circumstances of their Bodies, and that part of the World they are to act in. Thus Horses and Oxen and other Beasts have a Seventh Muscle, which Men have not; but we are not therefore to conclude, that Mens Eyes are imperfect, or that they have any thing superfluous; for as those Beasts feed upon Grass, and hang their Heads long downwards, this Seventh Muscle enables them the better to do so without being tired, whereas Men having no occasion to do so, that Muscle would be not only useless but troublesome. On the contrary, the Defectiveness of some Creatures Eyes may be attributed to Natures sparingness, declining to do that which is not necessary in the Fabrick of a Part for the particular End. Thus Moles which live for the most part under Ground, have Eyes so small in proportion to their Bodies, that a great
many

many have maintained, that they have none at all, though by Anatomy it appears to the contrary: In which Cases God Almighty's Providence is very Apparent, since those Creatures almost constantly living under Ground, greater Eyes would be not only useless but more exposed to Danger; and though their sight is but dim, it serves to let them know when they are no longer under Ground, which is all the occasion they have for Light or Eyes.

It is observed, that a Cameleon's Eyes have a very different structure from other Creatures, which move independently from one another; since they can look forwards with one Eye and backwards with the other; or upwards with one and downwards with the other; which is a great Argument of Providence; for this Creature being a low Animal, and living commonly in Trees and Bushes, where they feed on flies, it is requisite they should perceive them, which way soever they came, that they might catch them with their Tongue, which is very long, and is suddenly darted out when they have occasion for it.

Of the Structure of a Cameleon's Eyes.

It may be observed, that most Fishes have the Christalline Humour of their Eyes, almost Sphærical, and much rounder than in Man and other Terrestrial Creatures, which is necessary, since they living in Water which is a thicker Medium, it does more refract the Beams of Light, than the Air, so that the Beams already refracted by the Water, being again refracted and made convergent, may paint the Images of Things so near, upon the bottom of the Eye.

Of the Eyes of Fishes.

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If the Structure of the Eye is compared with other Parts or the various Structures of that Organ in different Animals, and the uses of those Parts according to the ordinary Circumstances they are to act in, the Reason of those differences may be probably accounted for, which are taken to be Errors in Nature or Defects. The Pupil in Horses, Oxen, &c. and in Cats, is of an oblong Figure, and in the former lies transversely from the right side of the Eye to the left, but in Cats is situated perpendicularly; by which situation, those Creatures which feed upon Grass are by the transverse Position enabled to see the Grass on each side the better, whereas Cats who live upon Mice, which run up and down Walls, have their Pupil Perpendicular.

The different Structures of the Eye.

And here we shall further observe, that the different Structures and Situations of the Eyes are great Instances of Divine Providence, it expressing the fruitfulness of the Divine Author to frame so great a variety of exquisite Instruments, which seem designed, besides other ends, to shew the multiplicity of his Wisdom, and to let his intelligent Creatures know, that it is not confined to one sort of living Engins, nor the same contrivance in the Parts of the same kind, but can make a Multitude of Engins, which, though not equally perfect, are curious in their kinds, and for their different Ends: As it is a greater Argument of the skill of an Artificer, that he can make Watches, Clocks, Ships, &c. than if he could only make one sort; and his skill would still more be shewn, by making Engins of the same kind after different manners, and to make some Clocks to go by weights, and others

others by springs. And though Feathers seem necessary to Creatures that fly, yet we see a flying Fish will move a great way in the Air; and in the Indies, there is a sort of flying Squerrels: to which we may add, that Bats also fly, which are some of them as big as little Hens, & in the Kingdom of *Galconda* they are said to be much bigger.

And in several Cases, a peculiar and less perfect Fabrick or Situation of an Eye, or other Organical Parts may be more apt for the Ends it was designed, than one correspondent to the Eyes of Man would be; besides an Organical Part may in some Animals be designed for more Uses than in others, and consequently, may require different Structures; as the Feet of Moles are differently formed from the feet of other Creatures; they being not only made to walk upon, but to dig their way under ground. The Provident Maker of the World hath so wisely contrived the Fabrick of the Parts, as to make them fit for the uses they were designed for: as the Wheels and Pinions, &c. of a Mill, are different in one that is made to go with Water from another that goes by Wind. And the Camelion hath a Tongue disproportioned in Length and Shape to the rest of his Body, to enable him to catch his Prey by shuteing it out of his Mouth; and we may perceive a strange compensation for those seeming Imperfections some have in the Parts of Particular Species, in respect of other Species of Creatures: Thus Birds have hard Bills to break their Victuals with, instead of Teeth; and Birds of Prey, as Hawks, &c. have crooked Bills to tear their food, and Crops to prepare and soften it,

*and other
Parts ar-
guments of
God's Pro-
vidence.*

and strong Muscular Stomachs to digest and grind it, which is promoted by the assistance of Stones and Gravel, which Instinct directs them to swallow, and which supply the want of Teeth to Grind their Food.

Chance no
Natural
Cause or
Agent. 

And here it may be requisite to take Notice, in opposition to them that assign so much to Chance, that it is no Natural Cause or Agent, but a Creature of Man's Intellect; for the accidents that happen in the Corporeal World, depend on the Parts of Universal Matter, acting according to the established Laws of Motion; but since we suppose some of these Parts of Matter directed in their Motions by God, with respect to certain Ends, if other Causes intervening, an effect happens different from what we supposed was intended, we then say it was done by Chance, so that Chance is only an Extrinsecal Denomination signifying, that Physical Causes did not intend such an Effect. And here it may be proper to take Notice, that whereas those curiously shaped stones the *Astroites*, have encouraged the followers of *Epicurus* to compare them with those Animals, from whose likeness they received their Names, we are to consider, that some Learned Men have made it probable, that the Curiouslest of these stones were formerly the Parts of those Animals, they resemble, turned into Stones by a petrifying Cause. And *Secondly*, though some of those stones were Mineral Productions, it would not follow, that they were the Effects of Chance, since there may be seminal Principles in some of the more elaborate sort of Fossils; yet are they not to be compared with Animal Productions, the outward

outward figure being but a Superficial thing, and not comparable to the Internal Structure of an Animal, consisting of a Multitude of Parts of Particular Bulk, size, Shape, &c. But the difference lies not only in the Consistent Parts, but also in a great many Liquors, Spirits, Digestions, Secretions, Coagulations &c. which are lodged in a Living Body, much more than in a Dead Body, the Structure of the Solid Parts being not so admirable as them; therefore tho' a stone externally like a shell Fish should be made by Chance, yet we should not allow that Chance could make a shell Fish, no more than that a Smith who could make a hollow piece of Iron, like a Watch Case, could make a Watch, because he could fill it with some rude stuff; nor would it be less unreasonable to suppose, that because the Wind or Putrefaction should make Trees hollow & blow them into the Water, where they should swim like Boats, that the like Causes should build a Galley according to the Rules of Naval Architecture, furnished with Mariners to Row and Steer it, and guide all its Motions for the Advantage and Preservation of the Vessel: But if any thing be ascribed to Chance, it is not what Nature uses to perform.

But to give a Summary of our Thoughts in reference to the Second Question. If due Caution be used, some Arguments may be drawn from the ends and uses of the Parts of a Living Body by the Naturalists. *Secondly*, Inanimate Bodies, which have but a similar Texture, as Earths, Liquors, Flints, Pebbles, &c. will not Warrant Reasonings deduced from their supposed Ends. *Thirdly*, The Immense Bulk of the Celestial Bo-

dies as well as the celerity of their Motions sufficiently shew his Power and Greatness, as well as his Wisdom and general Providence, having preserved the Regular Course of things so many Ages; & tho the Use of the Sun & Stars might be amongst others design'd for the Service of Man, yet we cannot think, that the sole or chief End of those Bodies is to lighten the Earth, and to benefit the Creatures that live upon it.

Final Causes proved by Revelation.

From what we have said it appears, that we suppose a Naturist to discourse meerly upon Physical Grounds; but if we admit Revelations, we may more reasonably believe the Ends of God, than Philosophy will give us grounds to do; for when God pleases to tell us any thing concerning his Intentions in forming his Creatures, we ought to believe it, tho' we could have no knowledge of it from the consideration of the things themselves. And though the Light of Reason would not acquaint us with God's Ends, that the Sun was designed to enlighten the Earth, and for the service of Men, yet *Gen. 1. 16.* we are told, that God made *the two great Luminaries, the greater to rule the Day, and the less to rule the Night, and He made the Stars also, to give Light upon the Earth,* and *vers. 14.* The Use of the Luminaries is said to be *to divide the Day from the Night, and to be for Signs and Seasons, and to be for Days and Years.* And *Moses, Dent. 4. 19.* Diswading the Israelites from Worshipping the Sun, Moon, and Stars, says, *The Lord had imparted them unto all Nations under the whole Heavens.* So that if we allow the Authority of the Scripture, Revelation discovers Final Causes; nor is it any Presumption for us to know what

what God acquaints us with himself ; nor is it absurd to believe, that the Sun, though a larger Body, amongst it's other Uses should enlighten the Earth. The Design of God's making Man, *Gen. 1. 26, 27, 28.* was, that *Men* should *subdue the Earth, and have Dominion over the Fish of the Sea, and over the Fowls of the Air, and over the Cattle, and over all the Earth; and over every living thing that moveth upon the Earth.* And *Gen. 9. 23.* after the Flood God delivered all *Terrestrial Beasts, and Fowls and Fishes and every moving thing that Lives into the Hands of Men.* And *Gen. 1. 29.* he designed Animals for our Food, as well as all sorts of Vegetables ; and since Living Creatures were designed for our Food ; I see not why one of the Uses of the Sun. should not be to give Light to the Earth, since without it, we could not enjoy our selves ; nor could Plants which Men and Cattle live upon, grow without it, and ripen ; nor could those Animals, which serve us for other Uses, be sustained and provided for. We might add other Instances of God's Intentions for the Welfare and Dominion of Man over the rest of his Creatures, but we shall only add this. *Psalms 8. 56.* *Thou hast made Man, a little lower than the Angels, and hast Crowned him with Glory & Honour. Thou maid'st him to have Dominion over the Works of thine Hands, & hath put all things under his Feet.* Indeed, if we consider the little Bulk of a Man, it may seem improbable, that so many great Bodies in the Universe should be made to serve him ; but if we consider him as he hath a Rational Mind, which proceeds immediately from God, the Value of a Rational Soul, is as of a small Diamond, which

is more esteemed than a great Quarry of rough Stones. And as for those who undervalue their own Species, God who is the best Judge, hath shewn so much value for Man, that he made him at the first after his own Image, and when he had lost his happiness, he vouchsafed to redeem him, by no less than the Death of his Son, who is more Excellent than the whole World. And that God designed the rest of his Works for the service of Man is very probable, since he hath upon Man's Account suspended and overruled the Laws of Nature, as in the Flood, and when the Israelites passed the red Sea, and the river *Jordan*, and when the Sun stood still in *Joshua's* time; also by the burning of the fiery Furnace; and the Eclipse of the Sun at the full of the Moon, when our Saviour was crucified. To which we shall add, that at the last God will enable the greatest part of Mankind to inhabit that *new World*, viz. *the new Heavens and the new Earth*, 2 *Pet.* 3. 10, 11, 12, 13. Which shall succeed the Refinement of the present World, by the last Fire, which will dissolve and transfigure it.

And we may the less wonder, that such vast Bodies, as the Sun and Moon, may be designed for the service of Men, if we consider, that a thing more Excellent, may be designed by a wise Agent for the good of one less so, as an Angel was sent to relieve *Hagar*, a wandering slave, *Gen.* 16. 9 and another took Care of the Life of a Soothsayers Ass, and several others were employed on Earth, to do good to particular Persons. *Numb.* 22. 23. *Gen.* 32. 1, 2, 3. *Kings* 6. 17. and *Heb.* 1. 14. we are told, they

they are ministring Spirits, sent forth to minister unto them who shall be Heirs of Salvation.

But to proceed to the Third Question, viz. Whether, and in what Sense, the acting for ends may be ascribed to an unintelligent and even inanimate Body. *The Third General Question considered.*

The greater part of Bodies being void of Knowledge, and all inanimate Bodies of Life, it appears not how they should act for ends, since they cannot predesign, or use means, of which they have no Knowledge to make choice.

Aristotle gives so dark an Account of this Matter, that he seems rather to shift it off, than resolve it. To clear this difficulty then, we are to consider, that the Actions of Natural Agents, may be said to tend to a certain End, on two Accounts. First, When the Agent hath some Knowledge of that End, and pursues it in his Actions, as when a Man aims to hit a Mark. Secondly, When the Proximate Agent is directed by a remoter intelligent Agent. In the former Sense, Inanimate Bodies cannot act for Ends, as having no Knowledge, and though some will say, they have a Knowledge *sui Generis*, yet this is against the Rational Rule of Reasoning, *Entia non sunt multiplicanda sine necessitate*; besides, what sort of Knowledge that must be, I cannot conceive. Inanimate Bodies are said to act for Ends in the second Sense, the immediate Agent, which is inanimate, being only the Instrument of the remoter Intelligent Agent. But to explain this Notion, we suppose, that the Wise Omnipotent Author of things, did at the first so contrive them, and framing them into a System, settled such Laws of Motion, as he thought fit to bring about the
Ends

How Natural Agents tend to certain Ends.

Ends he designed. And as he not only saw the present state of things he made, but all the Effects of Bodies so formed, and acting according to particular Laws, so he was able so to contrive the whole Fabrick, that every part should act as regularly and constantly with respect to ends, as if they understood and prosecuted those Ends with design; as in a Clock, the Spring, Wheels, Ballance, &c. act according to a determinate Impulse, without any Knowledge of what they do; yet their tendencies are so overruled by the Structure of the Clock, that they could not, if they knew what they did, act with better Intentions to mark the hours, and shew the time of the Day. It is indeed hard to imagin, how Local Motion only can direct a Multitude of Agents, and act regularly, as if they knew some design, yet all conspired to obey the Laws of Nature. But since God is an Omnipotent and an Omniscient Author and Agent we cannot wonder, that he should be able to perform such things, since by an ordinary Artist, we see Engins made, where a great many Motions are regularly carried on, by the help of one Spring. Besides it is more Skill, and an Argument of greater Knowledge to make so many Bodies act according to particular Ends, and conspire to the General Ends of the Universe, than to act conveniently for Ends unknown to themselves only; for if Bodies have a regular Motion, and due Connection, an Intelligent Agent may easily direct them to particular Ends, though unknown to the immediate Agents; as the Ox, amongst the Jewish Husbandmen, who intended no such Matter,

Matter, separated the grain by treading the Corn, as well as when our Plow-men thrash it, and an Ass will as well grind the Corn by going round, as the Miller could do. Nor is this Doctrine inconsistent with the Belief of a Miracle, for though the ordinary course of things is maintained, yet the powerful Author of things, may if he thinks fit, suspend or alter the Laws of Motion, which he first established and upholds by his perpetual Concourse.

And here it may not be amiss to take Notice, in relation to the Opinion, that the whole Material World was made for Man, that though the Arguments we have used may be more probable than others hitherto proposed, against the Vulgar Opinion, especially, as it relates to the Celestial Region of the World, yet amongst the ends designed in several of his Works, especially Plants, Animals and Metals, the usefulness of them were designed chiefly for Men, yet God may design several Ends in several Creatures, which Men are not yet aware of; so that Men may find other, and more Noble Uses for several Creatures than have yet been discovered. As for those who reflect upon Divine Providence, by ascribing what belongs to it to Nature, they have been already answered by *Lactantius* and others; we shall only add, that as God hath given Man both Necessity and Reason, and hath excited him as well as furnished him with Abilities to acquire greater Advantages than Beasts, who have only Providence to take care of them; He hath given him Knowledge and Understanding to convert those things to his Use, though profane Wits would prefer
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The Authors Opinion of Final Causes further considered.

the Condition of Beasts before his. For Man is able by his Reason to employ admirable Instruments, as his Hands, to overpower and apply for his own use, the fiercest of Wild Beasts, as Leopards which the Persians hunt with; also the strength of Elephants, the great Bulk of Whales, the Sagacity of Spaniels, &c. and tho' at the first he is not able to help himself, or to exercise Dominion over Inferior Creatures, yet God hath contrived, that Parents should have such Natural Affections, as to take care of him till he is able to take Care of himself, and hath acquired Knowledge and Industry to make use of those advantages that were designed for him.

The Advantages of Man above other Creatures.

As for those who think it ridiculous to Imagine such vast Globes should have respect to so small a Part of the World as Man, they rather consider things as Surveyors than Philosophers, rather measuring their Extent, than making an Estimate of their Value; for though Man is an Animal small enough to be contemptible, yet his Rational Soul is of more value than the whole Globe of inanimate Matter, being capable of knowing, and willing, as well as serving and enjoying God. And since Man alone can understand the Wisdom, Power, and Beneficence of God in his Works, and by several ways can overcome other Creatures, and make them serviceable to him, it needs not be thought strange, that the Author of things, who made them for his Glory, should have a special regard for so noble a piece of Work. And the littleness of the Soul of a Man, is so far from being a disparagement to it, that it's minuteness

shews

shows its Excellency, it being less than the minutest Body; for not having Extension, it is not divisible, which is the Prerogative of Substances, which is for that Reason immaterial and immortal.

But further, that several Parts of the World, which we have not made use of, may yet be of advantage to a Rational Creature, who by contemplating the Works of God, may elevate his Mind in the acknowledgement of his Attributes, and produce due Sentiments of Veneration, Gratitude and Love, is evident, since they may safely be reckoned amongst those uses or ends, which are by us accounted Human ones. And some of the Heathen Philosophers called the World a Temple, and one of the more Philosophical Fathers of the Church, Styles it, *παιδευτήριον τῆς θεογνωσίας καὶ ψυχῶν λογικῶν ἀδασχάλιον*. And the Psalmist tells us, *Psal.* 19 1, 2, 3. *That the Heavens declare the Glory of God; in a Language that is extended all over the World, notwithstanding the Confusion at Babel.* He likewise makes use of the Contemplation of Gods Works, to excite true Sentiments of Devotion and Particular Virtues. Thus *Psal.* 139. 14. *Being wonderfully formed in his Mothers Womb, makes him celebrate the skill of the Artist, Psal.* 104. especially ver. 24. and elsewhere, the regular Vicissitudes in the Course of Things, made him admire and extol Divine Providence. And *Psal.* 8. 3, 4. admiring the Celestial Part of the World, he acknowledges just Sentiments of Humility and Gratitude. And in this respect the distance and amplitude of the fixed Stars, the Immensity of the

Several Parts of the World yet unknown may be instances of Final Causes.

the Heavens, and the Regular Motions of the Planets may be of advantage, since they afford sufficient Grounds to believe, admire, adore and obey a God. And thus the Corporeal Works of God may much more advantage the Soul than they do the Body, which Uses are considerable to a pious Soul, since they tend to make the Soul more Perfect, and are of Advantage to it, when the present Constitution of the World is destroyed.

*The Use of
Final Causes as a
Man is Rational as
well as an
Animal.*

But to proceed, from this Theological to a more Physical & Human Use, as a Man is not only an Animal but Rational, a Nation may sometimes be considered as one Man, notwithstanding its Continuance and Various Dispersions; as the *Israelitish* People were for many Ages, by the Apostles and Prophets called by the Name of *Israel*, whom God sometimes hath called his Son, *Exod. 4. 22. Hos. 11. 1.* and thus Mankind may sometimes be looked upon but as one Man, who may successively improve the uses of things, which the Providence of our Maker hath formed, with a Design to make them advantageous to us; and therefore it follows not, but that those things which are not yet discovered to be so, or which may be hurtful, may prove beneficial. Thus Opium which for a long time was looked upon as Poyson is found to be a good Remedy; and such Venemous Creatures as Vipers whose flesh was esteemed dangerous, is a chief Ingredient of an Antidote Treacle; and having been some time dissolved in Spanish Wine, proves a good Medicine in a very difficult Case. And Scorpions afford an Oyl by Infusion, which cures their own Stings, and is good in

in several other Distempers. And a Physitian of *Padua*, told me, that he cured one of a Fit of the Stone by a Preparation of Scorpions given inwardly. And though the Roots of *Mandioca* are reckoned as Poyson whilst the Juice is in them, yet when the Juice is pressed out, and the consistent Part is reduced to Meal, it makes the *Cassava* which is the Bread of most of the *Americans*: And the Juice it self is turned into a Drink which is made and loved by the Poor Inhabitants: but to proceed to Instances of another kind. The Directive virtue of the Load-stone, which was for many Ages known by the Greeks and Romans, hath not been known in these Parts of the World above four Ages; since when we have learned the Method of Sailing about the Cape of good Hope to the East-Indies, and have discovered the West-Indies; and not to mention the use of the Silk-Worm and Sugar Cane, which were unknown many Ages, Cochineal, which is but an Insect, makes up a good part of the Trade of Europe, being useful in sweet Meats and furnishing the Courts of Princes with a great many of their finest Ornaments.

But to proceed, many things are thought useless, because they do not bring an immediate Advantage, yet they may be useful as they assist and are necessary for those things that are immediately advantageous; as the Rains, that occasion the Rivers to overflow in *Africa*, and other Countries, which though they may seem to be destructive, make *Agypt* plentiful and fertile, which would otherwise be very barren; so those Clouds which are not immediately serviceable,

*Some things
useful by a
secondary
advantage
Men find
by them.*

viceable, by watering the Fields and Gardens in Summer, and manuring them in Winter, nourish the Trees. Grass, &c. which are serviceable either to Men, or to those Creatures which serve them. And not only Plants, Animals, Stones, Metals, but greater Masses of Matter, and even the Celestial Globes, which we can only contemplate, may be serviceable. To which we may add, that the Ebbing and Flowing of the Sea, which Sea-men make a great deal of Use of; as also the Declination and Variation of the Mariners Needle, which may depend on some changes, of some Internal Parts of the Terraqueous Globe, are of great Use to Pilots, and Navigators; and not to mention the Light of the Moon, which serves to make Moon Dials by; and to tell the various times and quantity of the Ebbing and Flowing of the Sea, which is beneficial both to Mariners and Mathematicians. And the Sun, besides it's Light and Heat, which makes it serviceable to Plants and Animals, which afford both Food and Medicines, and several other Productions which are serviceable to Man, helps likewise to burn without common Fire, with her beams, passing through concave and convex Glasses; they also help the Gnomist to make Dials to measure time, and the Cosmographers know how to discover the Elevation of the Pole, and the Latitude of Places, by it's rising and setting, they likewise discover his Amplitude, which is useful to Astronomers, but more to Navigators; assisting them to judge of the Variation of the Compass. And the Conjunction and Opposition of the Sun and Moon in Eclipses, though it
be

be frightful to the Vulgar, yet to skilful Men it may be of Service; as to settle Chronology and rectify the mistakes of Historians. As likewise, they may be necessary to define the Longitude of places, or points assigned on the Terrestrial Globe, which is useful both in Geography and the Art of Navigation. *Lastly*, tho' the fixed Stars are so remote, yet they may be serviceable; and though their Influences are little less than the Idols of Astrologers, by which they pretend to foretel Changes of Weather, Plenty and Dearth, Sicknes or Health; yet a skillful Navigator can tell by any of them. the Hour of the Night, and Fishermen and Pilots made use of the North Star formerly, to guide them in their Courses.

I have seen a Telescope, which was made in the form of a walking-staff, which would serve for several purposes, all which were designed by the Artist. And a Concave Metalline Burning-Glass, though made use of to magnify the Pictures of Objects, or to cast Images into the Air, or concenter the Sun Beams to a Focus; yet these, and several other Effects were foreseen and designed by the Artist, which Effects have no Affinity with these. And if we consider, how Indulgent Providence hath been to Man, it will not be unreasonable to think, that God foresaw, that several Uses might be made of his Creatures; which might be discovered by Human Reason, and that he designed they should reap the benefit of them; which reflection may recommend the Doctrin of Final Causes, to a Philosopher, who is truly Pious, since it furnishes us with Arguments of Gratitude

*God's Ends
illustrated
by some In-
stances
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signs.*

tude to the Author of so many Benefits. For if we look upon so vast and curious a piece of Workmanship, as the World, it will not only give us a great *Idea* of God's Power and Wisdom, but will raise our wonder and gratitude. Therefore the Aristotelians, who thought the World Eternal, did not thank God, but Nature, for those benefits, whom they thought designing in her Actions, and to propose Ends for the welfare of the Universe. To illustrate this, we will suppose, that a Traveller in the East Country, coming to one of those Stately Buildings, they call the *Caravanzeras*, though he would admire the stateliness of the Buildings, yet since it was built only for the Honour and Pleasure of the Builder, he would have no reason to thank him for it; but if he knew that it was designed to accommodate Passengers, he would praise the Magnificence, with Gratitude for the Bounty of the Founder.

*The Fourth
General
Question
considered.*

But to proceed to the fourth proposition proposed, which is, *With what Cautions Final Causes are to be considered by a Naturalist.* This Question having Relation to so many different Cases, in so difficult a Subject, we shall rather point at some general things, than spend time to consider every particular. But before we proceed to this, it will be requisite to observe, that there are two ways of Reasoning, about the Final Causes of Natural things, which ought not to be confounded. Sometimes Arguments are drawn from the Uses of things, with relation to the Author, and his General Intentions, as when from the usefulness of the Eyes to the action of Vision, we infer, that the Eye was made

made by an Intelligent Being, who had a peculiar Care to furnish Animals with so necessary an Organ. And sometimes from the supposed Ends of things, Men deduce Arguments both Affirmative and Negative, about the Nature of things themselves; and conclude, that this Affection of a Natural Body or Part ought to be granted, or that to be denyed, because the end designed may be best attained by one, rather than or more than another. These sort of Arguments may be reckoned Physical purely, and the former Physico-Theological Ones, or Metaphysical. What we shall offer in reference therefore to this Grand Question, we shall refer to five Propositions.

P R O P. I.

As to the Generality of Celestial Bodies, it seems not safe to propose Arguments of their Nature, from the supposition of particular Ends, at least of the Human Ones, designed by God in framing them.

THE Contemplation indeed of the Celestial Part of the World, is sufficient to encourage us, to admire the stupendious Power and Wisdom of the Author of such immense Bodies, who hath preserved such vast Orbs, in a Constant Rapid Motion so many Ages, and likewise a regular One. And we ought to return Thanks and Praise, to the Goodness of Divine Providence, who hath continued the Motion of the Sun and Moon, under that oblique Circle

The Use of our Contemplating the Orbs above.

Circle the Ecliptick; it requiring Skill in a Cosmographer to apprehend, how useful the Situations and Motions are to the good of Men, and other Animals; and how prejudicial they had been, if they had been placed otherwise. Yet we are not to conclude, that all the Celestial Bodies were made for the Use of Man only; or to argue one System to be true, and another false, because the former is better fitted to the Conveniency of Mankind, and the other perhaps useless or unnecessary. As when they urge that the Sun, &c. ought to be in perpetual Motion to shine upon the Earth, thinking it more convenient for Man, that those Bodies should be kept in Motion, than the Earth which is his Habitation. But if we consider things as Naturalists, it is inconsistent, that a most Wise Agent should continue such vast Bodies in such rapid Motions, to illuminate a little Globe, which is but a Physical Point, in respect of the immense Heavens, whose Lights might as well illuminate the Earth, if they were twenty times less, and placed at a nearer distance. And it will be hard to assign, what use those Stars are of to our Globe, which make up the Milky way, since they are so incapable of enlightening the Earth singly, that Philosophers for many Ages took the whole Aggregate of them, only for a *Meteor*. And what advantage can those fixed Stars be to us, which are only to be discovered by a Telescope amongst those which are visible in the Pleiades, or those the naked Eye discovers in the Belt or the Girdle of *Orion*.

But perhaps it may be said that these Celestial Bodies may be useful, as they raise our Admiration and Praise, of the Greatness and Power of our Maker, which we readily allow; and tho' his Wisdom may be as conspicuous, in the Structure of a Glow-Worm, as of the Stars in the *Galaxy*, yet such vast Productions illustrate his immense Power. But these Arguments are *Metaphysical*, relating to the Intentions of God in the Universe, and which we call *Cosmical Ends*; but teach us nothing of the *Determinate Nature* of particular Bodies. And since Philosophy only tell us, that one of the Ends designed in framing the World, was the good of Man; the Omniscient God may have other ends in forming those Stars, which are out of sight; to the attainment of which ends, they may be admirably contrived, and their Motions suitably directed. And our Reason, not being able to discover those Ends, which God's Infinite Wisdom gives us more Reason to believe, than our Reason can furnish us with Arguments to the contrary, it would be *Presumption* to judge of the System of the World, and the Intent of the fixed Stars, which are so remote, which we cannot discern without good Telescopes, by any advantage we receive by them; for though it be certain, that God designed they should be serviceable to us as well as for other Uses, yet he hath not discovered how far they should be serviceable; and therefore, if they are so in any degree, that is, as much as he designed, and deserves our humble Thanks. It is plain, God did not design equal Advantages to all Parts of the World, since the *Samoids* and *Novazemblans*

An Objection answered.

want a great many Conveniencies which those in temperate Climates enjoy.

God's particular
ends more
evident
from Re-
velation
than Philo-
sophy.

But though Philosophy does not, Revelation tells us, that the World and what is contained in it, were designed for the Use of Man, who hath a right to make Use of what he can subdue; and that the Sun and Moon were designed for the Use of Man, *Psal. 104. 19.* and therefore the Psalmist might well cry out: *How manifold are thy Works, O Lord! how wisely hast thou made them all! Psal. 104. 24.* and elsewhere, *The Heavens declare the Glory of God, and the Firmament sheweth his handy Work, Psal. 19. 1.* but though these Expressions may excite Wonder and Gratitude, yet it is no where said in Scripture, that the chief or only Use of the Celestial Globes was for the Use of Man; so that we ought to be very Cautious, how we assume to our selves, the Liberty of estimating the System of the World by our Conveniences: And though it be affirmed and agreed, that Man alone hath, and Corporeal things have not, a Rational Faculty of referring God's Works, to his Glory; yet it hath not been proved; and I wonder that Passage in *Job* hath not been considered more, where *chap. 38 4, 5, 7.* it is said, *where was thou, when I laid the foundations of the Earth? declare if thou hast Understanding. When the Morning Stars sang together and all the Sons of God shouted for Joy.* And it seems reasonable to think, that God created Angels before the World, that they might not only see but praise him for his Productions, and the admirable Productions of the Universe; and it appears from this Passage of *Job*, that there were Intelligent Spirits

Spirits and Spectators, as well as Applauders, of his Works before Man was created. And since Angels as Intelligent Creatures are of a Nobler Order than Man, and are not unconcerned Spectators of the Works of God, who knows, but that there is as much contrivance in those Stars, which are only to us, as Declarations of their Maker's Power, as in our Globe, which may invite their devout Hymns and Acclamations. Nor will God loose the Glory of his Divine Attributes, though the fixed Stars should not be only or principally designed for the Service of Men.

But to proceed to a second Caution in making Physical Inferences from the supposed Destinations of Celestial Bodies, it seems not safe to build Arguments of the Nature of inanimate Bodies, on the Uses they seem designed for; for the Purposes of Nature in inanimate and in organical Bodies are so little known, that by the curiousness of their Structure, we cannot discover the particular Ends they were designed for; and since their Motions, are much more unconstant and irregular than those of the Celestial Bodies, we have much more Reason to be cautious, how we draw Inferences; or ground Arguments on such things, as clay, chalk and stones, whose Textures are but simple and slight in respect of Living Creatures, and may easily be imitated by Art; Stones or Metals being dissolved in proper Menstruums, and the Solutions afterwards chrySTALLIZE. And though Revelation tells us of Animals and Vegetables, rather than inanimate Bodies being serviceable to Men, yet one end in forming of

*A Second
Caution
in respect
of Physical
Inferences.*

those Bodies may be designed for his Use as far as he is able to apply them. But our Globe being about Three Thousand and Five Hundred Miles Semidiameter, and Men by Spades or Plum Lines not being able to penetrate into it further than a Mile, there may be several Minerals, &c. nearer the Centre, which we shall never be able to discover, which cannot be supposed to be made for our Use, since they lye hid and undiscovered to us. And though it will not hence follow, that the World was made by Chance, since the structure of Animals, &c. evince the Existence of a most powerful Providence & he may be suppos'd to have made nothing in vain, yet that those inanimate Bodies were made for determinate Ends may be known by the Knowledge we have of the other Mediums, better than by contemplating these inanimate Bodies themselves. And it may be a Question, whether some Bodies may not be made, by a wise Agent, not out of a primary Intention, but as Productions of the Established Laws of Motion; and it is possible, that many Parts may be so placed, as not to be serviceable to Men; because the whole Globe could not otherwise be suited to the General Design of the Universe, which might, if otherwise contrived, be less serviceable to Man himself; for though Eclipses of the Sun and Moon are unwelcom and prejudicial to a great many; yet God did not think fit to alter the Motions of those Bodies to avoid such Eclipses; whence it appears, that some *Phænomena* depend not on the primary Intentions of Nature, but are consequential Effects of the primary Constitution of the World, and the Catholick Laws of Motion.

If it be asked, what the hidden Parts of the Earth, and those Stars, which are not to be discovered by the Eye, were made for, if not for the Use of Man, we had much better acknowledge our Ignorance, than suppose them to be made for a particular End, which appears neither worthy of the Wisdom of God, nor to be attainable by us. Which would be an Argument of our Reverence for the Author of things, whose Works and Ends surpass our Knowledge or Discovery.

P R O P. II.

In the Bodies of Animals, it's oftentimes allowable for a Naturalist, from the manifest and opposite Uses of the Parts, to collect some of the particular Ends, to which Nature destined them. And in some Cases we may, from the known Nature, as well as from the Structure of the Parts, ground probable Conjectures, both Affirmative and Negative, about the particular Offices of the Parts.

TO prevent Mistakes we shall observe, that though under this Proposition, we speak of those Ends or Uses of the Parts of an Animal, which respect the Welfare and the Propagation of the Animal it self; and therefore call them *Animal Ends*; yet we deny not any thing, that may be said in Scripture of God's Designs, that intire Animals as well as their Parts should be serviceable to Man.

This

Final Causes evident in the Structure of Animal Parts.

This being premised, we shall proceed to consider the two parts of this Proposition distinctly, And *First*, Final Causes are no where more evident than in the Structure of Human Bodies, discovered by Anatomy; which is so admirably contrived, that I cannot but admire a Philosopher should ever think, such things were made by Chance. The Stoick did not without Reason, ask the Epicurean, why Chance did not make Palaces, and other Buildings, which yet have far less Curiosity in them, than the Bodies of Men, they consisting of but a few Materials, as Wood, Bricks, Mortar, &c. in respect of the different Parts of an Animal, as the Bones, Nerves, Ligaments, Membranes, Muscles, Veins, Arteries, &c. Besides, the disposition of the Parts of the finest Buildings, are but slight in respect of the curious contrivance in the Structure of the Parts of a Human Body; for the Solid Parts are not only reckoned to amount to some Hundreds, each of which vary in Bulk, Figure, Consistence, Texture, Situation, Connexion, and aptness for Motion; but all of them are commodiously contrived, and very symmetrical; so that a great many of them conspire to those Motions, *viz.* Leaping, Running, Speaking, Swimming, &c. and though so many Parts are packed closely together, and have different Motions, yet they do not hinder, but promote one another. And how far the excellent contrivance of the Parts, contribute to our Welfare, appears from Diseases or Hurts, when those Parts are disordered; for if a Finger be disordered by a Tumour, or be dislocated, or kept in a wrong posture by Contractions;

ctions, or a Solution of Continuity happens, or the Tone of the Part is altered by Strains, or it hath lost it's Sense or Motion by the Palsey, or if the Membranes are corroded by sharp Humours, or their Motions are disordered by Cramps or Convulsions, these differences shew how aptly they were formed, whilst in a Natural State, since their change of Figure, Connection, Tone, &c. in a preternatural State occasions such disorders.

The Eye which alone serves for the Action of Vision, is so curiously adapted for that purpose, that there is no doubt, but it was designed for that End. The Muscles that move it every way, and the Coats and Humours that make up the Sensory, have their Bigness, Shape, Connection, Situation, &c. so admirably adapted, and the Transparency of the *Cornea* and the Humours, the Opacity of the *Uvea*, and Semi-opacity of the *Retina*, as well as the several Motions of the Parts, being necessary to receive, transmit, and refract the incident Beams of Light, in order to compleat the Organ of Vision, it seems as evident, that it was designed for that purpose, as that Telescopes were made to discover the Colours, Magnitude, Shapes and Motions of distant Objects. And the Pupil is so much above the Imitation of Art, that in Telescopes we are obliged to apply to the Object Glasses, Opacous Bodies, with several Circular Apertures, which may let in more or less Light, as the Objects are more or less enlightened; whereas the Pupil dilates and contracts it self, as there is occasion presently, expanding, when there is but little Light; and contracting

*The Eye an
Instance of
Final Causes.*

contracting lest too much Light should offend the Organ. And if you consult *Scheiner's Oculi*, and *Des Cartes* his *Dioptricks*, it will appear, that the Eye was not only made with design, but so skilfully, that a Man ought to be well acquainted with Opticks, to discover the Wisdom of the contrivance. And not to mention other Parts, which seem preordained for certain Uses, all the Parts of the Body, appear to be the Effects of an Intelligent Cause; which appears more evidently, if we are acquainted with, and improve our reflections by Mathematicks, Mechanicks and Chymistry.

An Objection
answered.

But the Epicureans say, the Parts were first formed, and their Uses afterwards found out by Men's Sagacity: but to this we answer, that several inward Parts as the Heart, Liver, &c. perform their Offices, without our knowing their Structure or Situation, being far from being applyed to those Uses by our Sagacity. And as for the Parts which serve for Voluntary Motion, they cannot be employed till they are actually formed; but that hinders not, but that they are at the first so formed, that in due time they may be fit for such Uses. Thus a Chick hath Eyes, Wings and Feathers, before it is hatched, though in the Egg he cannot make Use of them. And Nature we see hath furnished Pregnant Females, with parts which are useful for that time, which afterwards fall away, and turn into Ligaments, and serve no longer for the former, but for another Use. And as the Umbelical Vessels, and the *Placenta*, are of no Use to the Female before Conception, those Parts seem to be designed more for the Propagation

gation of the Species, than the Preservation of the Animal ; which Destination being accomplished, at a convenient Age, it seems to be designed by our Provident Creator for the continuation of the Species. And though Mens Sagacity may have discovered the Uses of some of the Parts, which cannot be proved to be primarily intended by God ; yet it does not follow, that those Uses were not intended, which are made within us, or are as it were intruded upon us. And as for other Uses it does not appear incredible, but that he who hath so much Goodness and Prescience, and furnished Man with Limbs as well as rational Endowments of the Mind, and hath formed several Parts double, that one might supply the loss of the other, could foresee what Uses Men might make of such Parts, and might contrive them fit for those Uses. As supposing a Wise Man should send his Son to travel, and give him a Pocket Dial with a Magnetic Needle, though he should commonly make use of it only to find the hour of the Day, yet at Sea or on some wild Plain, he might make use of it to guide his Course or steer the Vessel ; which uses though the Effect of his Sagacity, yet his Father may be supposed to have designedly furnished him with it for such incident occasions, that he might distinguish the South and North Points of the Horizon, which could not be done with an ordinary gnomical Dial : so one that hath taught another to paint Landscips, when he gives him a Pencil and a Pallet furnished with Colours to draw a particular Prospect cannot be supposed but to have given it him to other Purposes, if occasion requires.

But

From
known Ends
particular
Conjectures
of the Use
of the Parts
may be
drawn.

But to proceed to the second Part of the Proposition, *viz.* That from known Ends as well as the particular Structure of the Parts, we may draw probable Conjectures, about the Use of the Parts, which supposes that the Parts were not only designed for particular Uses, but that the Parts were commodiously contrived for those Uses or Ends, those being intended as well as the welfare of the whole. And indeed if we consider, how aptly the Parts are fitted for the Ends we discover them to be designed; when by the structure, another Part seems less fit for that purpose, we cannot suppose it primarily designed for that end, for which the other appears more aptly formed, but that that Part was designed for that end, which seems most aptly fitted for it. Thus the Christalline Humour was looked upon to be the Seat of Vision, till *Scheiner* in his Tract, Entituled *Oculus*, shewed, that it wanted those requisites to make it fit for that Use, which the Ratina is furnished with. And the Famous *Harvey*, first supposed, that the Blood Circulated, because the Valves in the Veins must hinder the Flux of Blood towards the Limbs, and permit it to flow through the Veins towards the Heart; which he therefore supposed to move through the Arteries to the Limbs, & thence to the Heart through the Veins, the Valves not opposing it's Motion that way. Thus the Antients supposed the Parts to be nourished by the Venal Blood, whereas the Moderns teach, that they are nourished by it in it's Passage through the Arteries, the Spirituous Parts being more agitated and impelled into the pores through which they are to pass, by the force of the Lat-
ter.

ter, as they are of a Congruous shape and size, to pass through those Pores. We might add more Instances of this kind, were it necessary, it being usual for Anatomists, when they treat of the Physiological and Pathological Parts of Physick, to draw Arguments, both affirmative and negative, about the Use of the Parts, from their aptness or unfitness to serve for such Ends. Which way of arguing, since it is made so much use of, we shall proceed to give a Caution about it in the following Proposition.

P R O P. III.

It is Rational, from the manifest fitness of some things, to Cosmical or Animal Ends or Uses, to infer, that they were framed or ordained in reference thereunto, by an intelligent and designing Agent.

Since several Ingenious Men, have along with other Innocent Opinions of *Epicurus*, entertained such, as exclude the Influence of God and a Providence upon the Motions of Matter, and referred those productions to a casual Concourse of Atoms, we shall here shew, that in the Structure and Nature of Animals, there are some things which argue a higher and nobler principle than blind Chance, the Excellences of the Contrivance shewing the Wisdom of the Author.

Chance not the Cause of the affection of Matter.

And

And *First*, The Bodies of Animals, are not only furnished with necessary and convenient Parts, but extraordinary provision against Casualties. Thus though a Man might live and propagate his Species with one Eye, yet God hath furnished him with two, lest one, by accidents, should be destroyed; and if one Ear grow deaf, the other performs the Office of hearing in it's Room. Thus Man is furnished with double Parts, where that duplicity may be permitted, without inconveniency. On the Contrary, in other Cases, Providence hath been more sparing, some Vessels having double Coats, which within the Skull have not, as the Arteries, which are almost like Veins, the Skull being their Defence from outward Injuries.

*The Parts
of Animals
made with
Design.*

And that the Parts of Animals are formed with design, appears from those Parts of the Womb or Fætus, which appear but at certain times, when they are Useful. Thus the Umbelical Vessels are produced, to be Channels to the Blood, and alimental Juice and Spirits betwixt the Womb and the Fætus, which as soon as the Child is Born, are thrown off as Useless, as well as the Membranes that involved it; where that part of the Umbelical Vessels which extend from the Navel to the Liver, degenerate into a Ligament. And the *Foramen Ovale* through which the Blood passes from the right Ventricle of the Heart to the left, is soon obliterated, when the Child is Born, and the Blood passes through the Pulmonick Vessels. Which Instances seem to prove, that these Parts were made by design, and intended to serve the Turns they serve for.

Other

Other Arguments may be drawn from the *Instincts* of Animals, some of which respect the *Arguments* Individuals they belong to; others the Propaga- *of Final* tions of their Species, and some both, of which *Causes.* Historians and Travellers give us several Instances, especially if we take the word Instinct in a Latitude comprizing those shifts and methods, some Animals make Use of, to escape or shun dangers; to provide for their future Necessities, or catch their Preys. Several Poets and other credible Writers have given strange Accounts of the wonderful Sagacity and Government of Bees, in relation to Oeconomy as well as Politicks: And I my self, having kept a transparent Hive, a long time in my Cloiet, out of which there was a Passage into a Garden, have often observed those Creatures at work, both making their Combs, and filling them with Honey, which were good instances of their Natural Instincts and Providence, those Creatures contriving so many Cells in the Area of one of their Combs, with as much Skill, in so little a space as a Mathematician could do. And they not only lay up their Honey seasonably against Winter, but close up the Cells with covers of Wax, which preserve the Honey from spilling, and from external injuries. They likewise keep in their Hives in bad Weather, and when they go out return before a storm, which we cannot foresee; but this may be the Effect of their tenderness and quickness of Sense, as we see Weather-Glasses and wounded and crazy Persons, are affected with such beginnings of such changes of Weather, as are not perceived by other Men. But what is very observable in Bees is,

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that

that after a fight, they take up their dead, and carry them a considerable distance from their Hives.

*Ants and
Spiders In-
stances of
Final Cau-
ses.*

Another Instance of the Instinct, Providence hath implanted in small Insects, may be taken from Ants, to whom *Solomon* sends the sluggard; since they heap up Provision in the Summer, and bite off the ends of the Corn, least the moisture of the ground should make the grains they lay up, sprout; which is an Argument of their Industry and Sagacity. And the admirable skill and contrivance of Spiders is no less worthy our Notice, their curious Webs. being aptly made to catch their flying Prey, which they do not by Example. since if their Eggs are hatched in a Glass by the heat of the Sun, as soon as they are formed they begin to spin. And the Eggs of Silk worms hatched by the heat of the Sun or external heat in a place, where there had been none before, at the proper season, climb up to proper places prepared for them, and weave their curious oval Prisons, in which they enclose themselves, unreveled into Silk very fine and slender.

But Insects alone have not this provident Industry, of whom the Poet says,

Ingentes animos angusto in Pectore versant,

*Instances of
the Provi-
dent Indu-
stry of Bea-
sters, &c.*

Since it is to be observed in greater Animals, as Beavers; which by their sharp Teeth cut pieces of Wood fit for their purpose, and build themselves Houses against Winter, sometimes with an upper Story, which they may retire to, when the Water overflows below; and these Houses

are

are built in convenient Places, as near some River, where they may be furnished with Fish; the entrance of which is so near, that they may immediately leap into the Water, when their Houses are attacked. And to enable them the better to swim, and to catch their Prey, two of their Feet are furnished with broad Membranes betwixt the Toes, like the Feet of Geese.

To these Instances we shall add, some Observations of those Actions that concern the Propagation of their Species, and the various Constructions, as well as Materials of their Nests, and their Situations. And it is observed, that Apes and Monkeys, which climb Trees to come at Birds Eggs, and peculiarly affect one sort of Birds Eggs, that Bird builds it's Nest, suspended at a flexible Branch that hangs over the Water, so that their Enemies cannot swim to come at them underneath, and are afraid to venter upon those flexible Branches the Nest is hanged at. And Wasps build their Nests very curiously under Ground, where their young ones lie hid, till they are ready to fly away. But these things are much Inferior to that Providence Animals are furnished with, for the Propagation of their Species; it is very observable how several Birds build their Nests of different Materials, and such odd ones, that one would wonder how they seek and find such out. I have seen a Nest of an *Eastern* Bird, which was made of a white Substance, almost like *Ithyocalla*, which may be dissolved in Liquors, and so well tasted, that in the Southern Parts of *India* they make Sawce of it. The Structure

The Propagation of the several Species afford Instances of Providence.

also of several Nests is very remarkable, both in their suitable Bigness, as well as in their Warmth and Softness ; which are the more to be admired ; those Creature having nothing but their Beaks and Feet to build them with. Their Situations also shews a great deal of Providence and Fore-sight ; as the Pendulous Nests of Swallows, and the Crafty hidden Ones of other Birds, especially those just now mentioned, to preserve them from Apes and Monkeys ; and those well tasted ones, which are only to be found upon high and steep Rocks, and such concave Parts of them as look down upon the Sea, where they are hard to be come at with Poles and Boats, which makes them very dear in the *East Indies* themselves. Insects also take a great deal of Care in contriving their Nests in secure Places, as Wasps, which are under Ground ; and Snails, whose Eggs I have found under Ground and hatched in Glasses with the same Earth, they have been found in. We might add several Effects and Arguments of God's wonderful Providence in the Propagation of Animals, by distinguishing their Sexes, and furnishing both with Organs and Appetites fit for the increase of their kinds ; to which we might add, the formation of the Fætus in the Womb, without the Females knowledge ; the Subtlety and Courage of several Animals to hide and defend their Young : also the Provision that is made for the Nourishment of the Fætus, and the welfare of the Female after it is brought forth, but to enumerate all these would be too tedious.

We shall in the next place proceed to shew, *Some Observations of the Teeth of Human Bodies.* that the meanest Parts of Animals, formed with the least contrivance, are worthy of their Author. As the Teeth which are the least Elaborate Parts of a Human Body, yet afford a great many Observations not unworthy our Notice. And *First*, Though other Bones cease to grow when a Man is arrived at his full Stature, yet the Teeth continue to grow all a Man's Life time. This is evident in their keeping the same Length always, and when one is lost the Opposite hath Liberty to grow into the Space left by it, and increases it's Length, because not worn by an Opposite; whereas those that are continually worn by Mastication would be consumed without this continual Growth. *Secondly*, That Part of them which is above the Gums hath no Periosteum, which would make them subject to Pain and Lacerations. *Thirdly*, That they may be fit to break and grind the Aliment to pieces, they are of a stronger and harder Substance than other Bones; and I have heard of some, which have been so strong as to strike fire, when struck against another fit Body. *Fourthly*, That these Bones may be the better nourished, in the Greater Channel of each Jaw, an Artery, a Vein and a Nerve are lodged to supply them with constant Nourishment, which send twigs through lesser Cavities to the Root of each Tooth. *Fifthly*, a Human Fætus is several Months without Teeth, having no occasion for them whilst it sucks, & least they should hurt the Nipples of the Mother's Breasts: Whereas Brutes, which are often obliged to feed upon Aliment, that is not very soft, are born with Teeth ready formed.

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formed. *Sixthly*, Since it might be prejudicial to have the Bone of one piece, we are furnished with several; and since we feed upon different sorts of Aliment, which are to be differently prepared in the Mouth, to promote their Digestion in the Stomach, we have not only opposite Teeth, but of different shapes for different Uses. Thus the fore-teeth called *Dentes Incisorii* are broad and sharp to cut in pieces the more yielding Aliment; others are stronger and fitly shaped to tear any thing that is tough, as those called the Eye-teeth, and resembling those of Dogs are called *Canini*: The rest are made broad and flattish and uneven, that they may grind the Aliment cut in pieces by the others, and therefore are called *Molares*. *Seventhly*, Since the Operations of the Teeth require strength and firmness, not only in themselves, but the Instruments that move the Jaw, the Lower, which is only Moveable, is furnished with strong Muscles to move it forceably against the upper, each Tooth being not only placed in a strong Socket, but furnished with such Roots, as may make them fitter for their distinct Offices; the *Incisores* and *Canini* having only one Root, and the other three, and sometimes four in the upper Jaw, whose Substance is something softer, and which are employed like Anvils, for the lower to strike and press against; for which reason, the Lower Jaw hath a strong Muscle on each side to move it with greater force against the upper Jaw.

An Objection answered.

But perhaps, it may be here objected, that some other Creatures have not so many Teeth as Man, nor so commodiously placed and shaped,
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and others have none at all, and that other Animals have other Parts less convenient in their kind, or are not so well provided for as they would be, if they were not casual Productions, rather than of an intelligent designing Artist. To answer this Objection, the same Answer may be given, as in case of the different structure of the Eye above mentioned *mutatis mutandis*, the reason why this or that Species of Living Creatures hath not the same structure, or that an Organical Part is not so placed, being, because it would not be so proper for other Ends more important to the Welfare of the Animal, that such a structure as we should prefer; and what we think wanting or amiss may be provided for by other contrivances, which make it serviceable and symmetrical to the other Parts of the Body, and performing other Offices, besides the chief, may be more useful to the Animal it belongs to, than it would be otherwise. Thus Oxen and Sheep and other ruminating Beasts have fewer Teeth than Horses, Dogs, &c. But this is made amends for by their Power and Instinct of chewing the cud, which second Attrition further grinds the Aliment already softened, and also by their successive Cavities or Stomacks, called by the distinguishing Names of *Primus venter*, *Reticulum*, *Omasus* and *Abomasus*, where the Aliment is gradually transmitted, and further elaborated. The Beaver, Turtoise, & Bee, who sucks the Exudations of Flowers with his long Bill, and other Creatures have their Mouths, as well as their way of preparing their Aliment for the Stomach, very differently formed from Men, yet very conveniently for them. So that there

is good reason, why God hath not given all Animals the same Parts: His Wisdom and Providence being illustrated by shewing, that the seeming Omissions of this or that Part, is not necessary in those Animals, where it is not to be found; and that he furnishes others with such Parts as their necessity and welfare make necessary to make them compleat; for which reason, God hath not furnished Man with such a broad thin Membrane to cover his Eyes, as he hath Frogs and several sorts of Birds. It is no Omission, that Girls have not swelling Breasts, before they are capable of Generation, no more than it is to discontinue the *Placenta*, when they are not with Child. Thus Bats afford us an Argument of our Creators Skill, which fly like Birds, and yet have no Feathers, but differ in shape from other Birds; where we may see, what compensation is made for Parts which seem deficient, or are not so advantageous as in other Birds; we may further see, what Care the Author of things takes of the Symmetry of Parts, and the fitness of the Parts for the place they are to live in; for a Bat sometimes flying like a Bird, and sometimes living like a Mouse, ought to have parts suitable for those ends; and therefore in respect of the first Action he is provided with a broad Membranous Expansion instead of Feathers, and with articulated Toes instead of Wings; and that he may not be obliged to settle upon the ground, except when there is occasion, each Wing hath a strong crook, like a Birds claw, by which he can fasten himself to Trees, Walls, &c. and keep himself at what distance he pleases from the ground; and since he hath Teeth to
chew

chew his food, he wants not a Crop or a strong Musculous Stomach as Birds have. And not to mention other differences in structure, since the Female brings forth her Young alive, she is furnished with an *Uterus*; and as she excludes not Nourishment along with her Young, as Birds do, that lay Eggs, she hath Dugs to suckle her Young; and no more than two, since she brings forth but two at a time.

I might mention various Instances of the Contrivances of several Animals different from Man, in the Fabrick of their Mouth and other parts, which receive and prepare their Nourishment; but not to mention the Mouths of Tortoises, Cameleons, &c. whose hard Gums supply the want of Teeth, we shall subjoyn the Account of an *American* Beast mentioned by *Hernardus* called *Achoas* and *Tamendoas*, *vid.* *Schett. Phys. Curios.* l. 8. c. 5. *Offenduntur apud Tucanenses quadrupedes quidem, dorso præduro & fulvi, agnorum magnitudine, sed qui ventre circiter terram attingant, dentium omnino expertes sunt; & solum formicarum venenatu vivant quarum cumulos duobus magnis unguibus quibus singuli anteriores pedes armantur, excavant, turbantq; ac deinde exerta lingua, quæ doctanto longior est, scabra, teres ac pennam anserinam crassa, formicas eam conscendentes ac densantes suscipiunt, eademq; contracta, & in os, quod mirum in modum angustum & parvum est, recepta, gratum sibi pabulum capiunt; & innocentium Animalium præda potiuntur.* And *Piso* in his History of *Brasile* mentions two kinds, the greater and the less, which he calls *Tamanduas* and *Myrmecophaga*, of which he gives the following Account, l. 5. *Nat. Hist. & Med.*

Med.c.22. Utraq; sunt Noctambule pabuli causa; Cicurate carne quaq; vescuntur, sed minutim conscissa quia non solum capite, promuscide, sed & ore sunt angusto, acuminato, edentuloq; lingua deniq; instar Chrassionis Chorda, tereti adeoq; longa prefertim: In Tamandua majori, ut duorum pedum longitudinem excedat; atq; proinde duplicata (quod notatu sane dignum) quasi canuli incumbit inter inferiores genas, quam esuriens madidam exerit; & arborum truncis diu imponit, mox formicis opertam repente retrahit: Si alte fodiendo labracarum detegi postulant; Unguibus id prestat commode, quibus pedes posteriores instructi sunt satis validis & longis numero quinque, anteriores quatuor, iisque recurvis, duobus in medio maximis.

Several other Differences and Uses to be considered.

But Organical Parts may be otherwise useful, besides in their primary and main Function; for though the Eye lids, their Motions and their little Glands are not all necessary to the Act of Vision; yet they are to compleat the Welfare of the Organ, as appears, when the Eye lids are affected with any Distemper. And besides these Uses of the Parts, which are discovered by *Anatomy*, there may be others which, we may say, have *Chymical* Uses, these parts elaborating several sorts of Spirits; besides which, there may be yet other Advantages to be considered in a Human Body, which are *Mechanical*; for which the different shapes and structures of the Muscles, and the Fabrick of the Bones, especially their Processes and Protuberances are adapted. And in other Parts, Optical Reasons, as in the Eyes, are to be considered, before we can apprehend the Intentions of the Maker of them. As though the *Christalline Humour* is more Globous in most Fishes

Fishes than in Men, yet he who understands the Doctrin of Refractions, and that Fishes are to see under water through a thicker Medium, will be satisfied, that that Figure is not an Imperfection but an Advantage. And there are so many Sciences and Parts of Knowledg, some of which are yet undiscovered, which are requisite to enable a Man to know God's Ends in forming the Bodies of Animals, that none that hath Knowledg will, except rashly condemn them; and those who know the most will rather admire them; & Men may easily be too forwards in affirming, that a part is unskilfully made, because they know all the Uses it was designed for.

And though we understand not the Reason, why in particular Creatures, some Parts are not to be found, and why some differ in frame or situation from Men, yet we are not to conclude, that they are casually or improvidently made. Since we cannot find the Reasons by answers from Brutes about their Bodies, as we may from Men; and though we have so much advantage in Human Bodies, as well as by the progress in Anatomy, &c. yet the Uses of several Visible Parts, and especially Invisible Ones, as Spirits, Salts, &c. are still in a great Measure unknown; and therefore it is no wonder, if in Bodies which we have less Opportunities of being curious in, we have not the Knowledge of their Uses, and are not able to give an account of them. For in Mans Veins there are Numerous Valves, whose Uses were so long unknown, that an Epicurean Physitian might have looked upon them as Superfluous Parts; which since the Circulation of the Blood have been

Our Ignorance no Argument against Providence.

been found Useful. And here we shall observe, that as God is a free and wise Agent, it needs not be thought strange he should adorn some Animals with Parts designed not so much for their Welfare as their Beauty; as the *Cameleon* hath a Disposition to change Colours, and we see Pidgeons, Parrots, humming Birds, &c. curiously adorned with Feathers of different Colours. Whereas on the other hand, sometimes we see some Creatures furnished with no more Parts than what are requisite for their Use, as the Veins are observed to have no more but one Coat or Membrane, and lie more exposed than the Arteries that attend them; which have stronger Coats, that they may be able to carry a more agitated and spirituous Liquor, impelled by the strong impulse of the Heart. To which we shall add, that the Arteries within the Skull, are more thinly Coated than elsewhere, the Skull being a defense to those Vessels. And though the Nerves lie deep that they may be defended from External Cold and other Injuries, and be kept safe and warm, yet it being requisite, the Optick Nerve should be expanded in the Eye, the Coats of the Nerve and other Coats of the Eye, are firmer than the *Dura* and *Pia Mater*, and are not only sensible of Cold, but will bear the Contact of Liquors and other offensive things, whose Pungency would put other Nerves into Convulsive Motions. Thus God like an Excellent Writing Master, bestows some things Ornamental more than Necessary, like Flourishes on Capital Letters, and sometimes uses Characters, and some of them differently shaped, as in different Languages to express

express the same Letter ; and sometimes uses strokes and dashes for Letters or Syllables, to express things compendiously. And it is very likely, that God by the variety of his Works, designed to shew the greatness of his Wisdom, in forming the Parts of Animals variously, as well as in beautifying them ; and might also design the innocent Delight of Man, by the curious Colours and Shapes of several Flowers, the Melodious Tunes of Singing Birds, and the variety of Colours in the Feathers of Birds, especially those in a Peacocks Train.

We are not so able to judge of Wisdom, as we are of Justice and Veracity, the last being to be judged of by eternal and fixed Bounds or Rules, which are to be apprehended by a moderate Understanding. But the Deeper Wisdom is, the more it is unfathomable, and it's Actions the less to be judged of. So that tho' we may know that God acts wisely, by the admirable tendency of things towards designed Ends ; yet we cannot safely conclude, what he does unwise, because we cannot discover their Tendency ; for so wise an Agent may have Ends which we cannot discern, or so much as suspect ; and may make use of such means to obtain his Ends, whose co-operations we may think useless or improper, which being far above our reach, we must censure the Wisdom of his proceedings but very rashly. It would be rashness for a Man to condemn the Lines upon a double Horizontal Dial, because they are not necessary to shew the Hour of the Day, since we may suppose the Mathematician that drew them, had more ends than one in making them,
and

Our Understandings unfit to judge of God's Wisdom.

and did not make them by Chance, or for want of Skill, though he who censured them for want of Knowledge, did not know the design of the Artift. If an Indian Fisherman should come aboard of a Man of War under Sail, though he would soon perceive that this floating Building was very skilfully contrived ; yet if he should see no Use made of the Guns or Anchors in Sailing, he would be apt to think, that those heavy Bodies were useless and burthenfom ; but being told, that the Guns were for defence, and the Anchors to stop the Ship in convenient places in Storms, he would soon see that he blamed the Builders and Furnishers of the Ship, for those things they ought to be commended for, and that his Ignorance and not their Skill was in fault. Thus much we have said to shew the Vanity of those, who have more Wit than Philosophy or Piety; and to convince them of, as well as manifest, the admirable Wisdom of God, to which Intent, we have besides General Notions layed down particular Instances of his Divine Skill. Indeed, Boundless Wisdom is one Attribute included in the Idea of a Being infinitely perfect ; but such a General and indefinite Idea will not give us so much cause to admire, and shew a Veneration for it, as the Knowledge and Considerations of the admirable Contrivance of the particular Productions of that immense Wisdom, and their exquisite aptness for the Ends and Uses they were designed for.

P R O P. I V.

That we be not over hasty in Concluding, nor too positive in asserting, that this or that must be, or is the particular destined Use of such a thing, or the Motive that induced the Author of Nature to frame it thus.

FROM what we have said, it appears, that some Parts, as the Eyes are so excellently contrived, and are so manifestly fitted for such Uses, that it would be heedlessness or perverseness to deny them to be designed for such Uses, as the Eye for seeing. But the Uses of all the Parts, especially the Internal, are not so evident; and several Uses are either necessary, or conduce to the Welfare of the Animal, for which no Part seems apparently to be destined; and it is too difficult to determine the true Uses of some Parts to draw certain and Physiological Inferences from thence, for which Difficulty there seems to be four Reasons, all of which or most occur in each Case.

The Reason why we cannot easily know the true Use of the Parts internal.

And *First*, The whole Animal is but a Part of the Universe, and therefore the Parts it consists of, cannot be supposed to have been formed only for it's own sake; and when the Parts are said to be contrived for the best advantage to the Animal, we suppose it to be meant in a Limited Sense, viz. as far as the welfare of the Animal is consistent with the General Ends of God, in the Government and Constitution of the Universe; which Ends relating to the

The first Reason.

the whole World, or considerable Parts of it, as the Globe of the Earth, the Planets, &c. we call those *Cosmical Ends*. And though it is not yet proved, that none of these Ends are discoverable by us, yet it is no easie Task to discover them all; yet it is Presumption to suppose, that the Welfare of particular Animals is further designed than consists with the *Cosmical Ends* of the Universe, and the Course of God's General Providence, to which his special Providence in respect of particular Animals is but Subordinate. And though it is rashness to assign positively God's Ends in framing the World, yet it seems to be one of the Grand Motives of the variety of his Works, that the different Contrivances in the Structure of Animals, might exercise and manifest what the Apostle, *Ephes.* 3. 10. on another Account Styles πολυποίχλος σοφία τοῦ Θεοῦ, *The Multifarious or Manifold Wisdom of God*. Man being esteemed the most perfect of Animals, even in respect of his Body; so that if he had designed to give every Animal the most advantageous Structure he could contrive, he must have formed no other Animals but Men; and then there could not have been such variety of Contrivances amongst Animals, to recommend the Wisdom of the Creator in making so many Creatures, which, tho' not equally perfect, are well framed for the Purposes designed, and therefore it is no reflection on Providence, that he hath not given Men Wings as well as Birds, nor Fishes four Feet, nor Birds Fins and Scales; since they would have been superfluous and troublesome, or would not have answered the design of making

king some Animals live on Earth, and some on Water, whereas when he designed they should live on both, he furnished them with suitable Parts, as a Beaver and a Frog. This consideration tells us the Reason, why Vegetables were not the Food of all Animals, some feeding on Flesh, and furnished with Appetites and Organs to devour others, and live upon the Destruction of the Weaker, and were it not for the same it would be hard to shew, why the Safety of Animals of the same kind, should not be equally provided for; for we see, that some Ants and Glow-worms are furnished with Wings, and some not. And amongst Mankind we see, the Female Sex are not so happily framed for their own Welfare as the Male; since the Womb and other Parts, which only serve to the Propagation of the Species, make them subject to a great Number of Distempers, either as Women, or with Child, or when brought to Bed, which Men are free from. So that we are not presumptuously to conclude, that a Part was framed for such an Use, without considering the Cosmical or Primary over-ruling Ends, designed in the Construction of the whole.

Secondly, Men sometimes conclude a Part cannot have such a Use, because they think it not so commodiously framed as it might, without considering, whether if it was otherwise framed, it would not be inconvenient for the Welfare of the Animal, and inconsistent with other Uses of the Parts in that Creature: For we cannot expect that any particular end should be pursued, which may prejudice the whole; Universal Symmetry being preferred before particular

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icular Expedients, the several Parts being adapted to their respective Offices, so far as is consistent with the good of the whole. How reasonable this Observation is will soon appear, if we consider that though Man be the perfectest Animal in the World, yet his Body is not a Model to form the Parts of other Animals by. The Lungs of Dogs, Birds, Frogs, &c. being different from those of Man, who is not furnished with so many stomachs as an Ox or Sheep who ruminate. And though the Gall is contained in a peculiar Bag, which made *Halmont* call it *Nucleus Hepatis*, yet we are not to deny the Liver the Use of separating Choler, where such a *Cystis* is not to be found, in Horses and Pidgeons that Humour not being collected in one Bag; and though it is contained in one *Cystis* in Vipers, yet that does not touch the Liver.

The Third. But *Thirdly*, It is difficult to assign the true Primary Use of a Part, because one Part is often fitted for several Uses.

The Fourth Reason. *Fourthly*, It increases the Difficulty, since the same End may be attained by several ways, which are equally sufficient though not equally commodious: And very often the third as well as this concur to render the Use of a Part difficult to determin. And which adds to the Difficulty in the Later is, that very often one Part is not employed only to perform such an Office, but the Effect is produced by a Series of successive Operations, to which several Parts may concur. And here we shall observe, that neither the Mechanism of the Body, nor of a particular Part is to be judged of, by the structure

ture of the visible Parts, whether consistent or fluid: For the Body of a Man is a Hydraulico-Pneumatical Engine, compounded of many Parts, whose Functions are performed, not by the Blood and other Liquors, barely as fluids, but by their Circulating and other Motions, and partly by that invisible and active fluid Spirit, whether Vital or Animal, to which perhaps springy Particles contribute, and such as are called *the Vital Portion of the Air*, and things analogous to *Local Ferments*: The Effects as well as the Agents not being to be discerned in a dead Body. So that there may be Chymical Uses of some Parts, besides those which depend on their manifest structure, which require Skill in Spagyric Principles and Operations to discern them.

From hence it appears, how difficult it is to determine the Use of some Parts, excluding other Uses. Nor is it sufficient to shew the Use of the *Part*, to know, that it was fit for such a purpose; since notwithstanding the primary Use of the *Part* may be more beneficial to the Use of an Animal, or the Cosmical Ends of a God. And it ought not to be thought unreasonable or strange, that one compound piece of Work should be judged to be fit for one Use by one Man, and for another by a second, since both Uses may be Worthy of the Author. When a politick *Prince* acts without declaring the Reason *Why*, the Statesmen have different Guesses at his Intentions, yet none unbecoming a wise Man. And so when a Learned Author expresses himself ambiguously, though his Words are variously interpreted, yet both Senses may agree

Inferences from the preceding Reasons.

with the scope of the Writer ; from whence we infer , that several Arguments have been grounded upon Final Causes which were but conjectural ; and in several Cases what is offered upon the supposition of the intended Use of the Parts, are rather Excitements to a stricter Enquiry, than sure Grounds to build Physical Conclusions on.

But to proceed, the last Consideration about Final Causes, we shall present in the following Proposition.

P R O P. V.

That the Naturalist should not suffer the Search or the Discovery of a Final Cause of Nature's Works, to make him undervalue or neglect the studious Indigation of their Efficient Causes.

What a Naturalist is properly to enquire after.

TO Enquire to what Purposes particular Effects are produced, is worthy the Curiosity of a Rational Creature ; but the proper Work of a Naturalist, is not to discover so much *why*, as *how* particular Effects are produced. A Country Man knows that a Watch is an Instrument made to measure Time by, which is more than a wild American, or the Civilized Chinese knew, when they took it to be a Living Creature ; yet the Englishman is far from knowing the Nature of it, and as the two main Scopes of Physicks are, to know how *Phænomena* are produced ; and how we may imitate or produce the same, to attain these Ends, it is not sufficient to know the General Efficient, or the Final Causes of things ; but the particular Efficients,

ficients, and the manner of their Operating, and what Dispositions they produce or find in the Matter they Work upon. As it is not sufficient to understand the Nature of a Watch, to know a Man made it, but he must know of what Materials it's Parts are made; of the Number of the Wheels, their bigness and shape, situation and connection, and how each Part moves the other, from the Spring to the Index; which Knowledge is much more requisite to him that would make one, or give Instructions to another. Nay further, to neglect Efficient Causes, would make Physiology of no Use, yet the Study of them will not prejudice the Contemplation of *Final Causes*. For as it is true, if rightly understood, that *Opus Natura est Opus Intelligentie*, the Universe is so excellently contrived, that the more clearly we discern the Method by which Ends are produced, we the more plainly discover the Wisdom of God, who, as the Prophet says, *Isa. 28 29. Is Wonderful in Council, and Excellent in Working*. Nor will the Knowledge of intermediate Causes, deny the Necessity of a supreme or first Cause, since the Order of second Causes must be instituted by an Intelligent Cause. And if it be unreasonable to ascribe the Fabrick of the Universe, and Final Causes to blind *Chance* as they now are; it must be much more unreasonable to assign the Formation of the Universe to Chance, from whence the present State of things flow; for at the present the several Actions depend on the Contrivance of the whole, determined and qualified to attain such Ends, but we cannot suppose, That stupid Matter had Power

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without

without the Guidance of a wise Superintendent, to Form Bodies so excellently contrived, and adapted to their particular Ends.

The CONCLUSION.

*The result
of the prece-
ding Dis-
course.*

FROM what hath been said on the four Questions first proposed, it will follow, That Natural Philosophy is not to exclude totally the Consideration of Final Causes; it being in some Cases both allowable and commendable to deduce from the manifest Uses of things, that they were pre-ordained. That the Celestial Orbs declare both the Power and Wisdom as well as Glory of God, and amongst other Uses, were designed to be serviceable to Man. That it is not safe to deduce Arguments of the particular Nature of inanimate Bodies, or the System of the Universe from their supposed Ends. That it is no Presumption to say, that particular Parts of Animals and Vegetables were designed for particular Uses. in respect of the Animal they belong to, or their particular Species. Yet we ought to be cautious in framing such Arguments, and careful least we mistake the Ends in the Contrivance of particular Bodies, and the ways, that they are Effected by.

And, That the Search after Final Causes ought not to make us neglect our Enquiries after Efficient Causes.

THE

THE
THEOLOGICAL
WORKS
Of the HONOURABLE
ROBERT BOYLE, Esq;
EPITOMIZED.

BOOK I.

PART III.

CHAP. I.

*Containing some uncommon Observations about
Vitiated Sight.*

SINCE throughout the greatest Part of the Discourse of Final Causes, the Honourable and Worthy Author hath thought fit to make Use of Instances of the Structure of the Organ of Vision, and the different Uses of it; and hath further taken notice, that the Uses and Ends of that Organ may

be illustrated by considering the ill Consequences of any Defects in so admirably contrived an Organ; and further, since to that Tract he hath subjoyned these Observations of Vitiated Sight, we shall proceed to recite those Observations as briefly as the Circumstances will admit; and first,

Obfer. 1. A Gentleman, who was almost blind, and in fear of growing worse, though he could not well distinguish Objects of other Colours, could discern those that were White; a greater quantity of Light being reflected by white Objects than others, which was confirmed by another, who when almost blind, could discern white Objects.

Obfer. 2. A young vigorous Gentleman, who had a Cataract, which almost covered the upper Part of the Pupil, could scarce discern Men from Women cross the street in clear Weather, which was occasioned by a great Blow on that side of his head; for those who have had but a small part of the Pupil uncovered, have had more sight than he had. We further observed, that though he could not discern Men and Women on the other side the street, yet he could discern a white Object at the same distance.

Obfer. 3. A Person, who had Cataracts in both his Eyes, being either ill conched, or ill managed afterwards, having ragged Films, which covered considerable Portions of his Pupils, could go up and down without help, and could read, with the help of Cataract Spectacles, in a place that was moderately light, though he could not in a place that was too lightsome.

A Gentleman having received a violent Blow *Obfer. 4.*
on one fide of his Head, found afterwards a
great Weaknefs and Dimnefs of his Eyes; in
which I obferved, that though when he looked
downwards, he could fee well enough, one half
of the Pupil being yet uncovered; yet there was
grown in it two diftinct Cataracts; the one which
feemed fmoth, fpread, as if it's Circular Edges
adhered clofely to the infide of the Eye, and the
other hanging loofly, was of a different Colour,
at fome diftance above it.

A Learned Gentleman, who, when he looked *Obfer. 5.*
upon an Object near hand, faw it fomewhat
dimly, yet fingle; but fome Objects, as Posts
and Rails, when he faw them at fome diftance,
appeared more dark and double. He complain-
ed alfo of fome black Flyes and little Leaves,
which paffed now and then before his Eyes,
which though they do not always foretel a true
Cataract; fince they continue feveral Years
without being more than a baftard fuffufion, yet
in him they feemed to foretel a true Cataract,
feveral having complained before a true Cata-
ract, that they faw Objects almoft double, fo
that when they looked at ones hands, they
thought they faw a great Part of a dark head, a
little above it, which whether it was occafioned
by fome Refractions of the Opacous Matter of
the Cataract or no, we fhall fay.

It's worthy our Notice, how long the better *Obfer. 6.*
kind of Cataracts may continue, without hurt-
ing the Optick Nerve, or Vifion, when once it is
removed; yet I have heard of a Woman, who
after a Cataract was couched could read a fmall
Print, though it had continued feveral years.

And

And I have heard of one that was born with Cataracts, having them couched at eighteen years Old, had the sight of both.

Obfer. 7. Several Learned Men have thought, that though both Eyes are turned downwards to an Object at once, but one is employed in the Representation of it. But these Observations may happen according to the feveral Customs and Constitutions of their Eyes ; for I have found, that with my two Eyes together, I could fee an Object in a different Situation from what either of them single would do. And I knew another, who had a Cataract two Years in his Eyes, without perceiving it in either, others taking Notice of it, before he himfelf could perceive it, but one Day the found Eye being fhut, he found he could not fee with the other, and was told by an Oculift he had a Cataract, which was Couched. And an ingenious Perfon who had one of his Eyes itruck out by accident, told me, that after that he went to pour Liquors out of one Vial into another, he was apt to spill them, and pour them on one fide. And another that had loft the Ufe of one of his Eyes, by an Accident, told me, he was fubject to the fame Accident. And another told me, that he had often broken Glaffes, by falling them, when he thought he had put them into another's Hand, or on a Table ; to which he added, that he was often fubject to miftake Diftances and Situations more or lefs, near two Years. And another, whose Right Eye was constantly drawn towards the greater Angle of the Eye, fo that the Edge of the Pupil does almoft touch it, one would think it fcarce poffible

sible but that he should see things double, yet he told me, he never perceived that inconvenience, but that he could not read so freely as other Men.

It is worth observing, that there may be a great Distension of the Eye without loss of sight. A Handsom Gentlewoman about 22 Years of Age, was disfigured with Eyes, which they call Ox Eyes, being swelled so much beyond the size of Human Eyes, that they often frightened those that saw her, and were so big, that she could not turn them one way or other, but was obliged to look strait forwards, or turn her whole Head the way she wanted to look, and could not read without moving the Book, to bring the Lines right before her Eyes. Yet this Tumidness was not always equal, sometime being much more swelled in a Morning than at a Night; yet she could see very distinctly, though the Distemper had continued this twelve Years. And she was so little prejudiced in her Sight, that in the beginning of this Distemper, she perceived not her Eyes amiss, till she was told of it, and it had continued some time. Yet it occasioned pain in her Eyes, for which she Purged and took other Medicines to no purpose, I proposed Salivation to dissolve and carry off the peccant Humour, but she would not consent to it.

Obser. 8.

I once saw a Gentlewoman, whose Eyes seemed to have no other Fault, but the Narrowness of her Pupils, which is esteemed a good sign, yet she was troubled much with fumes and weakness of her Head; and though her sight was so dim that in the Day time she could hardly

Obser. 9.

ly

ly find her way, after Sun-set she could see better. Whether the Pupil was contracted too much in the Day, and expanded in less Light or a greater Dissipation of her Spirits at one time than another might occasion it, I shall not enquire. But I knew a Divine, whose Hand shaked so much in the Day, that he could not write, but was forced to do it in the Night by Candle Light, to put him off with a Reason for which I told him, that perhaps the Spirits which should move his Hand were too much dissipated and exhauled by the Warmth of the Day, but were kept in by the Cold in the Night, which straightened the Nerves; I recommended strengthening things, and advised him to drink Chocolate, which he did, and in a little time told me, he could write in the Day.

Obfer. 10. Being acquainted with two Ladies, that were troubled with Distempers which I thought might affect their Eyes I asked whether they were not often troubled with Apparitions of Flame or Fire? one answered, that she fancied she often saw sparks of fire; and the other being subject to Convulsive, but not Epileptick Fits, often fancied she saw flashes of fire before her Eyes.

Obfer. 11. A Gentlewoman about 18 or 20 Years of Age, having grey Eyes, I could perceive nothing amiss, though her Eye-lids were something red, either with heat or weeping. To some Questions I asked her, she answered, that having been tormented about five Years ago with Blisters, she quite lost her Sight. Sometime after she could perceive the Light, but nothing else by the help of it; and that she could discern

discern a Window without seeing the Bars or
panes. Soon after she could discern the shapes of
bodies and their Colours, and at the last could
read and discern the Minuteſt Speck at Noon,
and at an Evening could ſee much better than
at Lighter times of the Day. And though ſhe
could diſtinguiſh the White Paper, and the Ink
black, yet the Book ſeemed to her as if a white
Glaſs was laid over the Objects ſhe diſcerned.
And what was more remarkable in her Caſe,
Flaſhes of Lightening often ſeemed to ſtart out
of each Corner of her Eyes, which frightened
her and put her into Melancholly Thoughts.
And though ſhe could diſtinguiſh black and
white Colours, yet other Colours, eſpecially
red and green ſhe could not. When I ſhewed
her red, ſhe took it to be of a dark dirty Co-
lour, but could not name it, and when I ſhewed
her a ſky coloured Silk ſhe could not tell the Co-
lour, but compared it to another piece of much
the ſame Colour, which was then preſented to
her, and when ſhe walked in the fields in the
Evening, the Graſs did not appear green, but
of a dark dirty Colour, nor could ſhe diſtin-
guiſh Violets from the Graſs, that grew about
them, only by the ſhape or by feeling them ;
and when ſhe looked upon a Turkey Carpet, ſhe
could diſtinguiſh no other Colours but white
and black, and though ſhe was not then, ſhe
had formerly been troubled with Obſtructions
and the Green Sickneſs.

A Famous Mathematician told me, though *Obſer. 12.*
nothing could be diſcerned amiſs in his Eyes,
that ſome Colours he conſtantly ſaw amiſs, and
named one, which appeared to him of a dar-
kiſh

kish colour, which appeared to me of a quite different colour.

Obfer. 13. A Lady who had a long time an Indisposition in her head, and constant pain in it, though nothing appeared amifs in her Eyes, yet after violent Fits of her pain; if ſhe ſuddenly turned her head from one ſide to the other, ſhe had preſently a convulſive Motion in one of them and not only white but all other colours appeared green, which Diſcompoſure would frequently return upon her for a whole year, though at that time ſhe could ſee very well, her Diſtemper being rather mitigated than cured, whiſt the Diſtemper continued upon her, if ſhe offered to read the Objects appeared double. So that whiſt ſhe was reading, ſhe was forced to ſhut the diſtempered Eye, and read with the other.

Obfer. 14. Some may think it an Excellency to ſee Objects with leſs Light than others, which though it may be allowed in *Bats* and *Owls*, who ſeek their Victuals in the twy-light; yet Men perform moſt of their Actions in the Day, which ſhews the provident Goodneſs of our Creator, who hath given Men Eyes conſtituted as they are, ſince ſuch a Tenderneſs in the *Retina* would be an Imperfection in Man.

A Gentleman confined to a Priſon at *Madrid*, where there was no Window, but a hole in the Wall, at which the Keeper every day put in his Proviſion, and cloſed it up again on the Outſide. After he had been ſome time confined in this dark place, began to diſcern a little Light, and by degrees could ſee better, ſo that he could diſtinguiſh his Bed and other large Objects, and at the laſt, ſo minute ones as the Mice, which came

to eat the Crumbs that fell upon the ground, and could discern their Motions very well. And that this proceeded from the acquired Tenderneſs of the Viſive Organ, by ſtaying ſo long in ſo obſcure a place, appeared, ſince upon his Liberty, he durſt not leave his Priſon at once, for fear of looſing his ſight by the Dazling Light of the day, but was obliged to accuſtom his Eyes by degrees to the Light.

C H A P. II.

Containing a Discourse concerning Occaſional Meditations.

SUCH a way of Thinking, as we call Occaſional Reflections and Meditations, and their Productions, if rightly employed, are both ſo advantageous and delightful, that it is a pity, ſerious and devout Perſons ſhould be unacquainted with it: And ſince we are forced ſometimes to make uſe of careleſs and unpoliſhed Subjects for our Meditation, leſt they ſhould diſcountenance ſuch Meditations, we ſhall preſiſe ſomething concerning this way of thinking, and ſhould divide the following Diſcourſe into two Parts. The *Fiſt* containing Invitations to the cultivating ſuch Meditations: And the *Later* propoſing a Method of forming ſuch Meditations. But ſince this Method cannot be ſo diſtinctly obſerved at the preſent, we ſhall as commodiouſly as we can, infer the ſecond Part in opportune Places of the *fiſt*. The In-ducements

The Diſtribution of the following Diſcourſe.

ments to this Exercise of Meditation, we shall reduce to five General Heads, of which in their Order.

*The First
Inducement
to Occasio-
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Idleness.*

The *first* Inducement then to Occasional Meditations is, that it keeps the Soul from Idleness, or other Exercises worse than Idleness; for whilst we are engaged in such sort of Meditations, which are innocent at least, if not good, our Ghostly Enemy hath less Encouragement to attack Us; for the Evil and Danger of Idleness, though in it self it be no Sin, yet it may be more mischievous than a great one, as it gives occasion for the Tempter to tempt us, exposing the Soul, like a place uninhabited, to the next Passion or Temptation that hath the Opportunity to seize upon it, which represents it so formidable an Enemy, that that is a sufficient Motive to recommend our way of Meditation, *That it banishes Idleness.* He that is versed in making Reflections on the Works of Nature, and the Actions of Men, and sets his Thoughts on work upon what Casualties fall under his Notice, will not want Subjects to employ them on; and he that can make the World vocal, and every Occurrence conversant with himself, and every Accident of Life, and even the Flowers of his Garden speak Lectures of Ethicks and Divinity, needs not frequent Taverns, or worse Places to pass his Time away with a Drawer or a Gamester; Nay, he will rather pity than covet the Company of those, who neglecting the main business of Life, spend it wholly in Diversions, and led by ill governed and unskilful self-Love, hate to be by themselves. He that frequents the Company of Gamesters, looses
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what his Winnings can never purchase or redeem, exposing himself to more Casualties than those of War, giving way to those Passions, which Wisdom would decline, and Vertue suppress; such patiently loosing their Time, and that Reverence and Submission, *they owe to him, that of Lots themselves, the whole Disposal is his.* He will have no occasion for want of Employment to throw away his time in impertinent Visits, or idle Company, to the Loss of his Good Name, his Innocence and true Zeal.

And as this Exercise prevents Idleness, so it does evil Thoughts; the best way to keep out evil Thoughts, being to employ the Soul with good ones; as Husbandmen, to rid a piece of Ground of Weeds, sow it with good Seeds, and cut them down or burn them up. And indeed some People's Thoughts are so active, that they will be perpetually employed about something or another; and like unruly Soldiers, will find ill Employment for themselves, when they have nothing else to do. But when once this way of Thinking is familiar, their Meditations will produce Thoughts, and stir up Affections full of Serenity and Joy; as the Cloudless Beams of a fair Morning, and their cherishing Warmth invite the Lark both to mount towards Heaven and sing; and when the Mind is once elevated to such a welcome state, a Man cannot give way to an ordinary Temptation, without forfeiting his Pleasure as well as violating his Duty; So that in forsaking so entertaining an Employment, by stooping to so mean an One, as he is solicited to, the loss of his Innocence will not be the only Disadvantage. But if such an Em-
V ployments

ployment of his Thoughts will not be so delightful, it will give him the satisfaction to say with *Nehemiah 6.3. I am doing a Good Work, so that I cannot come down, why should the Work cease, whilst I leave it, and come down to You?* For when a pious Soul is upon the Wing of Contemplation, she must stoop to exchange her Conversation with Heavenly Objects, for one with Earthly Vanities, which will much more debase and degrade her, if tempted to Lusts as low as Hell, which they both belong to and deserve.

And as these Objects will sufficiently employ our Reflections, so by their wholesom Instructions they will incline us to avoid those ways of wasting our Time; for there is this difference betwixt Ghostly and Ordinary Dangers, that as in Military Hazards they are boldest to run themselves into dangers, who are best able to surmount them; so on the other hand, they are most cautious of Temptations, who are most resolved, and qualified to resist them.

But this way of Meditation will not only secure Men from gross and notorious Idleness, and the reproachful Question, *why sit ye here all the day idle?* *Mat. 20.6.* But will secure us from the loss of such small parcels of Time, as though a Moralist might not censure the Neglect of them in others, yet a pious Person would condemn them in himself; for betwixt the more earnest Employments and important Occurrences of Life, there are several Intervals, which though in one day they may be inconsiderable, yet in the whole time of his Life they amount to a great part of it. These uncertain Inter-

vals are commonly lost, either as they are not valued by most Men, or neglected though not despised by good Men for want of Skill to make use of them. But though the Particles of Sand and Ashes are very small, and easily scattered or blown away, yet a skilful Artift will turn them into Glafs, by the Use of which we may discern our own Blemishes and Celestial Objects, and by the Sun Beams kindle disposed Materials; and so when those small Portions of Time, which without care would be lost, are skilfully employed by one that is able to contemplate, and improved by the Celestial Fire of Devotion, they may afford us Looking-Glasses to dress our Souls by, Perspectives to admire heavenly Wonders, and Motives to inflame our hearts with Charity and Zeal; and as Goldsmiths and Refiners preserve the very Sweepings of their Shops to save the filings of Gold or Silver, which may fall amongst them, so a Christian ought to be very careful of those Portions of Time, which are more precious than Metals, since those employed in pious Devotions, may be very advantageous to Religion.

And indeed the Affairs and Employment, as well as those Recreations, which Health and Weariness require, and a Multitude of other Avocations take up so much of our Time, and leave us so little for solemn Exercises and Devotions; that our Hearts are in great danger of being diverted from enjoying a Communion with God, and are apt to be too much strangers to him, if we embrace not those transient Opportunities of cherishing and renewing that Grace in us; and do not make short and fre-

quent flights towards Heaven in extemporary Reflections and Ejaculations, serious Soliloquies and other mental Exercises and Expressions of Devotion, by which means those Objects may elevate and animate our Minds, which might otherwise discourage and distract them. Thus those things which the Philistines sought to ensnare *Johnathan* by, both encouraged him to fight against them, and were Omens of his Victory. And as no Time can be so short; but that it will admit of short flights of Devotions, a *Nehemiah* sent up successful Prayers to the Throne of Grace, whilst he stood behind the King of *Persia's* Chair, so by these Extemporary Reflections, and other mental Acts of Piety, a devout Soul may improve those pretious Fragments of Time, and purchase Eternity with them.

*A Second
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Devotion
is the De-
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ness of it.*

A Second Motive to Occasional Meditations is, That the Exercise of Devotion is very delightful. Human Nature is so pleased with Variety. that the Love of the same thing seldom lasts long; and Change recommends one thing more than another, which we should otherwise esteem equally good. Now Meditations supply us with a Variety of Subjects, as numerous as the Works of Nature or Art. The Revolutions of Government, and Kingdoms, the Rise and Disgrace of Favourites, from the highest Transactions to the slightest Circumstances furnish us with Matter of Contemplation; nay, the Mind of Man is so active and comprehensive, that it extends it self to those Imaginary Spaces beyond the uttermost Heaven, and can presently return and consider the meanest of Human Circumstances,

cumstances, so that it is both capable of reflecting on the Works of God and the Actions of Men, & we cannot want Subjects to employ it, the whole World being but part of it's Object. The Productions of Nature and Art, and of the Providence of God as well as the Will of Man, may be so many ways considered, that the Variety of Notions they afford us is greater and more numberless than themselves, so that the most active Soul will sooner want Thoughts to pursue them, than Variety for them to work upon. As Men are wont to retire to Libraries or Stationers Shops to furnish themselves with Matter of Study, an Occasional Reflector always carries his Library about him, having the World as well as Mens Actions to furnish him with Variety, and an Infinite Number of Occurrences to be Objects of Contemplation; something worthy reflection being always before his Eyes, which ever way he turns them.

And that which makes such Meditations more delightful is, that they often surprize with wonder the Person, who employs them; for that which makes Wit delightful is the Unexpectedness of the Thoughts, which is the highest Degree of Novelty, and exceedingly gratifies Mens Minds. We need not be uneasy to prepare Matter of Entertainment, our Instructions being suddenly supplied, as if out of an Ambuscade, and darted into our Minds, from such Things as we could not expect, and Learning flows upon us, without going to School; but the Unexpectedness of the Result of our Meditations, which flash into our Minds often as quick as Lightning, depends not always up-

on Suddenness, the Notions suggested being often foreign to the Subject reflected on. And the Titles of several reflections, though the occasion be known, assist the Reader so little to guess at what they contain, that though they know the Subjects treated on, they will scarce believe, how such thoughts can have relation to Subjects so remote; besides the Informations we receive from many Creatures or Things are often very different from what we might reasonably expect from such Subjects, yet upon due consideration they seem proper enough. Thus a Sailor will scarce conclude, when he sees a Sail at a distance on a foreign Coast, that he shall hear News from his own Country, till he hails her, and meets with such Informations; and thus a small Flower may point out the Sun to Us, and by looking down to our Feet, we may discover in the Water those Stars, which shine in the Firmament.

And these Meditations will still be more pleasant, as they are Proofs as well as Effects of the Contemplators Will. To be instructed, by Forms distinctly laid down in Books, argues Docility more than Ingenuity; but to collect Moral and Spiritual Instructions out of Hieroglyphicks, or from a Landscape or a Map, is what every one, though attentive, cannot do, and implies Sagacity so to receive Instructions from Ethical & Theological Composures, which is much inferior to the taking them out of the Book of Nature, where if they are not Physical, they are but obscurely and darkly hinted; there being as much difference betwixt the former & the later,

later, as betwixt the Ant, which only by it's Industry carrys away into it's Cell the Corn she lays up, without contributing to it's Production, and the Bee, who without prejudicing the Flowers gathers and improves her Food, by transforming it, and not only lives upon that which would otherwise be Useless, but hath likewise the Pleasure to gather it from Flowers, and feed upon a Juice as delicious as nourishing. No doubt but *Æsop* took a delight in his figurative way of Speaking and making Lions and Foxes, &c. speak, and it may be no less pleasure to us to make all sorts of Creatures as well as inanimate Bodies, teach Ethicks and Divinity, and to make insensible Creatures reveal Truths, which they never knew themselves, and do something, like what the *Augurers* and other *Diviners* admired by the Heathens, did, who pretended to learn the Will of Heaven by the accidental Flight of Birds, and looking into the Entrails of Birds. It is looked upon as a piece of Skill in Mathematicians, and no less pleasant to those that know it, than admired by those that know it not, to prescribe to the Celestial Orbs their Place and Stages, and to shew the Journeys of the Sun in the Zodiack by a little Gnomon; and it is no less Noble and Delightful, by an innocent Necromancy, to consult the dead, and raise up dead Carcasses, without being afraid to hear such dismal Discourses, as *Saul* did from dead *Samuel*, and to make all the Works of Nature, and whatever occur to our Notice, concur to our Instruction, which they could never design; since the Motions of the Celestial Lights are known and invariable; but

these particulars are both numberless and unlimited by Rules : To which we may add, that this Secret as much exceeds that which recommends Astronomy, as Wisdom is above Science, and is as much more Useful, as it's to know how to pass away Time to our Advantage, than to know how it passes away.

But the Pleasantness of Occasional Meditations is much more evinced, if we observe, that as Self-Love renders any thing uneasy and unwelcome, which puts us in mind of our Faults, the Discoveries made us by this way of Thinking allay our uneasiness and gild the Pill; for two things help to sweeten our Reproofs, and render them less offensive, *viz.* first, when they come from those, who have mutually Love, and when the Person designs to please us as well as serve Us. *Secondly*, when the Discovery of our Fault is softened by the acknowledgment of commendable Qualities; for which reason, wise Reprovers mix their Reprehensions with Praises. Now in Occasional Reflections both these Correctives of Reproof concur; for in such cases our own Consciences making the Applications, we cannot suspect such Reprehensions either mistaken or impartial against us; and as a Mans Conscience applys those Truths to himself, which the Sagacity of his Understanding hath drawn from Objects, which every one would not have deduced from thence, frequently the same Reflections will discover a Man's own Excellences, as well as his Faults; and that which condemns the Disorder of his Affections, may commend as well as argue the Goodness of his Thoughts.

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But perhaps it may be objected, that to make Occasional Reflections is too difficult to be delightful. But there are some sort of Employments, whose Difficulty recommends them; as in Hunting and Hawking, where the Toil endears the Recreation, so that when Difficulties enough do not occur we make new ones, by giving the Hare Law as they term it, lest they should kill her before they almost kill their Horses and themselves. But the Difficulties in what we mention are not so much in the Nature of the thing it self, as in some prejudices and misapprehensions about it; as when Men think themselves obliged to confine themselves to the Subject that employed them; it being uneasy for them to dwell long upon one Subject. But there is no necessity of that, the thoughts often pursuing different Subjects successfully and successively, which perhaps by a further Consideration might have afforded little more advantage. And sometimes it happens, that when Men have a long time insisted on the pursuit of a Subject without Advantage, giving their thoughts Liberty to expatiate, they light on something instructive, and at the last perhaps find out what they first aimed at, though not without time, and winding untraced ways. As when a Greyhound is turned loose, we confine him not to the pursuit of the first Rabbit in the Warren he runs after, since it frequently happens, that one sets him a Running, and another proves his Quarry. Besides the Title of Occasional Meditations employs, that such emergent Thoughts are upon fortuitous Occasions. So that in some Cases, the Occasion is rather the Rise, than

The Objection considered.

than the Subject of the Meditation. And indeed I would not confine Meditations to Divinity only, but allow Men to make also a Moral, Political, Oeconomical or Physical Use of their Contemplations; for there is so great an Affinity betwixt Truths, that they either hint or illustrate and confirm each other, so that divers may belong to, and be deduced from, the same Subject, and if Objects were Occasionally applied to such Purposes, such kind of Thoughts would be more in request, and help to improve those Parts of Knowledge themselves.

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considered.*

Others are discouraged from making Occasional Reflections, because they think themselves obliged to write down such sort of Meditations, so that they rather chuse to forbear making any, than to write down all. But to do this would be both tedious and unnecessary. Indeed such as are fit for Instruction ought to be noted; and those which were the Result of some extraordinary Affection of the Mind, ought to be pursued to raise devout Thoughts, and to put us in mind of those, which such like Objects had occasioned. But other Occasional Thoughts, they have done what they can in Employing our Time, and filling our Heads.

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Difficulty
removed.*

Another Difficulty, which may discourage such Meditations is, That Men cannot shew so much Wit or Eloquence, as they would be ambitious of. But much Wit is not to be expected in such Composures, which are the Effect of haste rather than choice, and but the first Thoughts. And these kind of Reflections ought rather to be encouraged by Christians, as they cherish Piety, than as they express Wit, and
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tend to make a *Man* good, whether his *Style* be so or not. It would be unreasonable to think, that Rain and the Sun are of no advantage to a Fig-tree, because they do not produce unnecessary Blossoms on it; as on other Trees, but fruit without previous Blossoms; and though it may be difficult at the first to make Occasional Reflections, yet Practice lessens that Difficulty, and by degrees they will easily occur, where the Mind is addicted to make them. And though it may be difficult to attain this Habit, the Benefit will recompense the Trouble, the Practice in attaining it, being not proportionable to the Delight and Facility, when such a Habit is once acquired.

But to proceed to the Third Advantage of Occasional Meditations, they conduce to exercise and improve several Faculties of the Mind. *The Third Advantage.*
First, as they accustom a Man to observe, what he considers attentively, and as any Object may be the Subject of Occasional Reflections, so our Inclinations to manage any Subject well, dispose us to consider their several Attributes and Relations to make a more compleat Parallel of the Particulars betwixt those Things, whose similitudes we would illustrate, by which means we are apt to discover a Multitude of Particulars of those obvious things, which without such Attention we should never discover. And as the Habit acquired by Occasional Meditations may not only suggest devout Thoughts, but others, so we know not before hand, whether the Particular Object will afford us an Occasional Reflection, till we have considered it, yet by Degrees the Mind will be engaged in a general

neral and habitual Attention of the Objects that Offer themselves to our View. And though at the first, we only apply our Attention to the Circumstances of but a few Objects, yet the Habit will at the last extend to others. So when those that sing Anthems have acquired a Critical Ear, they will be better able to judge of the similitude and differences of Tones in other Songs, and will observe the Peculiarities in Voices, which would not be minded by an unpractis'd Ear. And as it appears, that this way of Thinking, disposes Men to an attentive Disposition of Mind, so that Disposition will prove of considerable Advantage to a Man in the whole course of his Life, Attention, like a magnifying-Glass, shewing several Particulars in common Objects, which would be undiscerned without it, which makes such Contemplations afford the more Instruction: So that such an Exercise of the Mind must prove a compendious way to Experience, and attainable without gray Hairs, and consisting not in the number of Years, but Observations, Experience resulting from their Numbers and Variety. Nor is Age an Argument of Experience, except the Person by living long hath ripened his Judgment with a Variety of Occurrences; for it matters not much, whether a Number of Observations have been made in a long or short time, if they have been made well.

But further the Practice of making Reflections, by exercising, improves his Reasoning Faculty; for as a Man hath more strength in his right hand than the left, and as those Limbs, which are used to exercise are more vigorous
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and nimble than others; so the Improvements, the Reasoning Faculty receives from Logick, are rather from the frequent Exercise than the Precepts, and if Men were used to read Controversies of subtle Wits, and engage in frequent Disputations, it might as much improve their Wits, as such as belong to Logick, and are stocked with the Precepts of that Art. Thus the Use of Singing improves the Voice both in strength and clearness, whatever Tunes are sung, or whether or no those we sing with make it their Business to teach the Art of Musick.

But the Custom of Thinking and Reflecting may endear a Person to make Occasional Reflections is not the only advantage, since it may likewise be of service to Mankind in General; for though Reason is the chief Faculty of Human Nature, and some of those various Objects, which daily occur to us, will furnish the unattentive with some Notions, yet all that hath been discovered in Mathematicks, Philosophy and other Sorts of Learning, hath been acquired by thinking Men, regularly and frequently employing their Thoughts; and though the Elaborate Effects of assiduous Meditations were the Productions of Philosophers, or other speculative Heads, yet Gallants and Courtiers, who seldom tire themselves with Thinking, or are fond and able to write Books except of Love, yet their busying their Thoughts with that Passion, which is several ways considered by them, hath been shewn in those Numerous Plays, that have employed the Stage, and those voluminous Romances, that have made up the Libraries of Gallants, and filled the Closets of the Ladies.

dies. He that hath called himself the *Truth* says, that the Devil is not only a Liar, but the Father of Lies ; or the Promoter of Falshood ; and as he studiously opposes all Truths, whether those Discovered by Revelation or Reasoning, so he does the regulated Exercise of our Natural Faculties, and he would not be so much an Adversary or Enemy to God and Man, if his Enmity did not make him solicitous to divert and discourage Men from Thinking, by which he opposes, both the Glory of God, and the Good of Men ; and if this subtle Enemy were not solicitous about it, Men would not be so apt to slight such a Privilege, since their not employing their Thoughts would be rather their Punishment than their Choice ; and that Rational Creatures, especially Christians, should keep idle or confine to Employments worse than Idleness, so Noble and Improveable a Faculty, that enables Men to enquire into the innermost Re-cesses of Nature, and is able to discover so much of the Wisdom, Power and Goodness of the Author, as may afford the Pursuer of them so devout a Veneration for their Excellences, seems very strange. A Faculty by which an Inquisitive Soul may expatiate through the Immensity of the Universe, and be her own Teacher in so many Cases, where the Lessons are so Delightful and Instructive ; and further a Faculty, which is able not only to take it's flight through the Parts of the Universe in a trice, but to expatiate beyond it, scorning to be confined within the Limits of the World.

But the intellectual part of the Mind may not only reap the above mentioned Advantages Occasional Meditations, for we may add another, which is, that this faculty of thinking may be much improved where it finds a proper disposed subject, especially when a Man hath a readiness in conceiving, and a neatness in expressing them, which is comprehended under the Name of Wit, which useful and pleasing Quality, may be promoted three or four Ways by these Occasional Meditations. For *First*, Accustoming Ones self to Extempory Reflections, does gradually bring the Mind to a readiness of Conception, so that a Man cannot be easily surprized by the subject he hath occasion to consider, but may oftentimes surprize his Hearers. And this kind of surprize is one of the most endearing Circumstances of the Productions of Wit. *Secondly*, This way of thinking accustoms a Man to draw his Conceptions from the Nature of the subject, which is a greater sign of Wit, than what was the result of longer Meditations, as in Epigrams, and other premeditated Productions of Wit; where the thoughts were made before the Themes and not after them. *Thirdly*, Occasional Meditations may conduce to Wit, by improving the Style of the Writer; for when a Man is to treat of familiar or solemn Subjects, he is so much assisted by received Forms of Speech, that he is seldom at a loss how to express his Thoughts; but the Subjects of Occasional Reflections are so various and uncommon, that vulgar Forms of Speech will but little assist him in expressing himself, so that he will be forced to exercise his Invention, and to form various
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new Expressions, to suit the variety of Subjects and Occasions, and thus by degrees will so much improve his Style, that scarce any thought will puzzle him to find Words to express it.

But Occasional Reflections may further improve Wit, by supplying Men with several good Comparisons, apt Similitudes being a very necessary part of Wit, both to illustrate and persuade; a plausible Argument illustrated with good Similitudes, being more prevalent than a Demonstration in a naked Syllogism; thus the Antients when they could not think of good Similitudes, used Parables and Apologes to recommend what they said, to the Attention and Memory of those they would Influence. Thus the famous Roman Orators commanded, that Martial People who had made themselves Masters of the World, by their enchanting Tongues, whose Influence chiefly depended on their Comparisons, which leave the deepest Impressions on the Minds as well as the Memories of Men. And as Similitudes are so serviceable in Discourses or Writings, so Occasional Reflections are likely to supply us with a sufficient Number and Variety of them; for by observing the Properties and Circumstances of most things that occur; and their relations to one another, and how their Properties may be accommodated by way of Similitude or Dissimilitude to one another, we may find besides Occasional Reflections, that we may be easily furnished with Similitudes, strong and unobvious enough to be surprizing to us, as well as to our Auditors or Readers.

But besides these Similitudes, we may find in the Subjects of Occasional Meditations, some Circumstances though improper or unnecessary to the Occasional Meditations, may be properly accommodated to other things, and contribute to encrease the variety of Comparisons. To illustrate which we shall observe, that being alone in a Storm of Thunder, Lightning, Wind and Rain, the chief thing that offered it self to my Thoughts was, a resemblance betwixt Prophane and Atheistical Wits, and the black Clouds in the Sky; for as though Clouds elevated to so high a Station, afford flashes of Lightning, so irreligious Wits, often bring forth Notions surprizing and instructive; but as those Clouds, whilst they afford their Momentary Light darken the Sky, and intercept the Light of the Sun, which is preferable to those vanishing Flashes, so those profane Wits, whilst they seem to enlighten those they dazzle with their Opinions, deprive them of that Heavenly Light, which would shine forth out of the Word of God; and as the Light we receive from the Clouds, may dazle and astonish us, but is not sufficient to shew us our way, so the Arguments of these Wits may surprize or amaze us, but will not afford a constant *Lamp unto our Feet, and Light unto our Paths, Psal. 119. 105.* And as the Lightning is attended with rightful Thunder and Storms, and burns, destroys or scorches, where it goes, and often falls upon Colleges, Hospitals, Churches, &c. and frightfully ruins, where it comes, it would be better for Men to want such flashes than be otherwise incommoded by them, so the Irregular Wits not only make a

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Noise in the World, and darken those that oppose them, without regard to Sacred Things, or such as are beneficial to Mankind, so they do more damage by their erroneous Practice, than the little Service they can do, will make amends for.

But besides this Occasional Meditation afforded by the Storm, there are other Circumstances, which may by the way of Similitude be applied to other Occasions; as for instance, how the most contrary Qualities may proceed from the same Subject, as from the same Clouds we receive both Light and Darkness: Again, they afford both Light and Rain, two such Contraries being seldom contained in the same Subject, as Fire and Water. Another comparison may be drawn from this Observation to shew, how the same Thing may sometimes do both good and harm together, and sometimes singly. For as by Thunder and Lightening they blast Trees, kill Men, fire Houses, &c. So they afford us refreshing fertile showers, which cool the Air, and moisten the barren Ground. And one that is skilled in making Similies may find further in the foregoing Subject, Circumstances applicable to other purposes. And as to find the latent Similitude betwixt Things, seemingly unlike makes up a great Part of what we call Wit, so to discover the Unobvious Disparities of things evidently alike, is the chief thing that argues Judgment. Hence it appears, how much Occasional Reflections improve Men's Parts, instructing the more serious Faculties of the Soul and sharpening the more subtle.

But the Use of Occasional Reflections does *How Occa-*
 not only learn us Attention in considering what *sional Re-*
 occurs, and to reflect on them seriously *fections*
 as well as to express them fitly, but al- *further con-*
 so teaches us how to make those Objects infor- *duce to In-*
 mative; For either by Example, Analogy or *form us.*
 some other way, we are led to the Discovery of
 several Useful Notions, especially Practical Ones,
 and indeed the World is a Book of the God of
 Nature, full of Instructive Lessons, had we skill,
 and would we take pains to pick them out. The
 Creatures are Hyeroglyphicks, which contain the
 Mysterious Secrets of Knowledge and Piety.
 And as Chymists boast of an Elyxir, which might
 turn the worst of Metals into Gold, so Wis-
 dom enriches the Possessor of it with useful and
 pretious Thoughts; and as a good Husbandman
 can enrich the ground, and promote the Growth
 of useful grains, as well as the most flagrant
 flowers by so abject a thing as Dung; a Wise
 Man may improve the Noblest Faculties of the
 Soul, and the Loveliest Qualities of the Mind,
 by the meanest Creatures and slightest Objects.
 But how Instruction is to be gained from the Sub-
 jects we consider, will appear from the manner
 of making Occasional Reflections, and how they
 may be derived from Example, Analogy, Dissi-
 militude, Ratiocination, &c.

Having thus far considered the Advantages of *The last*
 Occasional Meditations in respect of the In- *General*
 tellectual Faculties: We shall now consider their *Advant-*
 Usefulness in respect of the Will and Affections; *ages of Oc-*
 which is, that they excite good Thoughts and *casional Re-*
 Motions in the Will and Affections; for since *fections*
 such Thoughts are delightful, they may excite

Devotion, since the Beams of Knowledge, like those of the Sun, afford not only Light but Heat. And indeed it would be strange, if one used to make Reflections on such plentiful Varieties of Objects, by due Attention should not acquire Instruction, either as they afford Examples to imitate, or shew the Danger, or Inconvenience of something to be avoided, or raise our Thoughts towards Heaven or supply us with some new Practical Consideration, or demonstrate some Truth in a different and delightful dress, or renew the Memory of some Notions we had forgot : For if we suppose the chief Aim of a Man is, in making Reflections, to excite his Affections, and improve his Piety, we shall find the World to be a School for Rational Souls to learn the Knowledge of God in ; since there is no Subject which will not afford an aspiring Meditation : as the Lark, from the lowest furrow in a Field can soar towards Heaven and delight her self as well as her Hearers with her Melodious Notes. And if we consider the wonderful Harmony as well as the odd Antipathies of the several Creatures in the World, they universally conspire to represent their Author very Wonderful, which will raise an awful Admiration of the Great Wisdom of their wise Disposer, which made the *Psalmist* cry out, *How manifold are thy Works, O Lord, how wisely hast thou made them all, Psal. 104 24.* If we consider the Merciful Dispensations of Divine Providence to the Pious, or observe the severe Inflictions of Divine Justice on the Wicked, we shall find powerful Engagements to relye on the former, and to dread provoking the later. If we consider,

that

that the World contains a Multitude of Admirable Creatures, chiefly designed for the Use of Man, so that several of them seem but to cater for one another, we must burst out into Mental, if not Vocal Expressions of Thankfulness and Humiliation to the Father of Mercies, for a Bounty so ill deserved and unthankfully returned, and say with *David*, *What is Man that thou takest knowledge of him? or the Son of Man that thou makest account of him.* And if further we consider God's Munificence, in creating so many Creatures, which have acted according to the Ends they were made for the necessary Use and Pleasure of rebellious and unthankful Man, we must both be ashamed and disdain, that that Creature should be the least grateful, that hath received the greatest Benefits, and that he should be the most unruly, that hath the most Reason to govern himself. If we look upon the fixed stars, which are so many in Number, and might be more in Number without wanting Room, the least of which is bigger than the Earth, and contains above Ten Thousand Millions of Cubick German Leagues, and consequently above threescore times as many *English* Miles of Solid Measure, we shall with reason say with *David*; *when I consider the Heavens, the work of thy Hands, the Moon and Stars, which thou hast Ordained. what is Man that thou shouldest be mindful of him, or the Son of Man that thou visitest him, Psal 8.3,4.* In which Text it seems, since the Sun is not mentioned, that the Moon was the Chief Subject of his Meditation, and that it was made in the Night; we shall therefore add some Reflections on the same Subject, to confirm

X 3

firm what we have said about the different Reflections and Similitudes, the same affords in respect of it's different Attributes.

Some Reflections on the Moon.

If then we take Notice of the greatest brightness of the Moon, it is at the full, that she is subject to Eclipses, it may put us in Mind of the Mutability of Human things, and that Prosperity is never the securer for being full and splendid. The next Consideration tells us, that as the Moon communicates to the Earth Light, which she receives from the Sun, so the Ministers of the Gospel communicate the Light to the rest of Mankind, which they received from the Sun of Righteousness. To which we may add, that as the Moon shines with no other Light, than what is afforded by the true Sun, so the true Preachers mix not their own Inventions or Human Traditions, with the sincere Light of Revelation, it being the safest for the Church; it being requisite Christians should receive the true Bread of Life, as the Jews did the Material Bread; as Christ *Mat. 15. 36.* First break the Bread, which his Disciples afterwards gave to the People, so that they might say with *St. Paul, 1 Cor. 11. 3. I have received of the Lord, that which I delivered unto you.* And tho' the Moon hath only a borrowed Light from the Sun, she gives more to Us, than the fixed Stars which are supposed to shine by their own Light, and so those illiterate Fishermen, whom the Sun of Righteousness made the Light of the World, by the Irradiations he vouchsafed them, bestowed greater Light upon Mankind than the greatest Philosophers, who had not the assistance of Divine Revelation. And as the same Subject

Subject variously considered, may shew us some things fit to be avoided, and others fit for Imitation, so in the present we have the Emblem of an ungrateful Person; for as the Moon when nearest to the Sun from whom she receives her Light, Eclipses him, to whom she owes her Splendour, so ungrateful Men abuse the Favours which should endear them to their Benefactors, to the disadvantage of those that oblige them.

And as the Sun and Moon thus afford a Simile to represent Ingratitude, so the Moon and the Sea furnish us with an Example of the contrary, for as a Thankful Man will be True and Obsequious to his Benefactor, though he hath lost that Prosperity, which made him conspicuous and attracted vulgar Eyes, so the Sea answers the Course of the Moon, as much when it hath little or none of her Light, as when she is at the full. The Moon likewise may shew us a similitude to represent a Liberal Person, for as she imparts to the Earth what she receives from the Sun, so a Liberal Person communicates to the Indigent what he receives from God. And in respect of Intellectual Communications, as the Moon enjoys not less Light, for giving so much to the Earth, so Mental Communications impoverish not him that Communicates. And as the Moon represents the Duty of a Preacher, so it may of a Hearer, for as it would be ungrateful in respect of the Author, not to make use of the Light of the Sun by the Moon, or to think her useless, because she communicates not Heat as well as Light, so it would be ungrateful for us not to acknowledge as Hearers, or to be guided by the conspicuous Endowments of Learning

*Reflections
on the Moon
and Sea.*

ning and Eloquence of Scholars, though they were but illustrated and warmed by the Beams they reflect. And therefore as Oyſters and other Shellish thrive at the increaſe of the Moon, though her Light hath no heat to attend it, and though ſhe is not without Spots at the full; ſo devout Hearers will receive Inſtructions from thoſe Preachers whoſe Illuminations have neither Zeal nor Charity, and whoſe greateſt Luſtre is not free from Spots and Blemiſhes. And as the Moon by ſimilitudes may ſet forth the Virtues and Vices of the Mind, ſo it may give Us an Emblem of our Condition; for as the Moon ſometimes is Eclipſed, and undergoes ſeveral Changes, and at the full is never free from dark Spots; ſo Mens Minds are partly in the Dark and partly in the Light, being more or leſs illuminated with Heavenly Rays of Light and Joy, and not only ſometimes Deſerted by Diſconſolations, but at the beſt know but in Part; and are partly blemiſhed by their Native Imperfections. And as theſe Similitudes may be appropriated to the Mind of Man, ſo they may be applicable to his Proſperity and Adverſity. To which, we might add ſeveral Reflections on the Adjuncts of the Moon, but we ſhall proceed to ſome other Conſiderations within our own Globe.

*Reflections
on a Gar-
den.*

But ſince the Earth contains ſuch a Variety of Objects, we ſhall take Notice only of ſome which may be ſupplied by the Objects even of a Garden. And *Fiſt*, When we ſee a Tree Pruned, one that underſtands not the Reason of it, might think the Gardener an Enemy to the Tree, as if he meant to cut it in pieces; but one that conſiders

considers that it is not Anger, but Skill, that made him lop off some Branches, and that he designs not to destroy it, but to make it fruitful; and thus, whether one that knows not the Designs of Providence, may think when a Church is exposed to the Afflictions of Human Societies, and Persecutions, which seem to be Divine Infections, that give Men Occasion to say of the Body, as *Isaiah* said of the Head, *we esteemed him Stricken, Smitten of God and Afflicted, Isa. 53. 4.* I say whatever a Carnal Man might say of these Distresses, a Christian will not thence infer, that God hates the Church, or hath left her, since he loved her so well as to give himself for her, and chastens and rebukes whom he loves. This is applicable also to believers, so that the great *yeoꝝ yd:* or Cultivator of the Ground, *John 15. 2.* both lets us know, that Afflictions do not suppose God's hate, and that they do not always suppose Man's guilt, but sometimes rather tend to his Improvement, since our Saviour says, *John 15. 2. Every branch in me that beareth not fruit, he taketh away, and every branch that beareth fruit, he purges it, that it may bring forth more fruit.* And the similitude may be illustrated, if we consider further, that the Husbandman only prunes the Trees of the Garden, and not those that grow wild in the Wood, and though he often wounds the former, yet he does the later more fatally, only cutting off the Superfluous Twigs of one, and laying the Ax to the Root of the other. But the pruning off a Tree may give us other Thoughts, for as by cutting off several Twigs, and nailing the rest to the Wall, the Gardener both secures it from being blown down and

and also makes it look well shaped ; so the Divine Husbandman by his Afflictions secures them from a great many Dangers ; and as he secures their safety, by obstructing their Liberty, so by afflicting them he adorns them ; those kind and skilful strokes beautifying a Christians Mind, as they diminish the Superfluities of their Fortunes ; for Afflictions give so much gloss to the Soul that bears them patiently and resignedly, that the Heathen Moralist ventured to say : that if any thing here below was worthy the sight of God, it was a good Man generously contending with ill Fortune ; which Hyperbole will be the less strange, if we consider, that when Job's Patience was tryed to the Uttermost, it was crowned with Fortune fairer than the best in the East ; and when it was not so far tryed, his Constancy was received with higher than Mortal Honours, or any that ever was conferred on Man before ; God himself declaring his approbation, as if he boasted of a Man, *Hast thou considered my Servant Job, that there is none like him in the Earth, a perfect and an upright Man, one that feareth God, and escheweth Evil ? and still he holdeth fast his Integrity, although thou movedst me against him to destroy him without Cause.* Job 2. 3. So that he was more than a happy Job, since David tells us, that *the Man is happy whose Sins God is pleased to cover.* So that what must that Man be whose Graces he vouchsafes to proclaim.

And as the Consideration of the pruning of Trees under the Notion of Pruning, as it is called wounding them, may afford the forementioned Reflections, so if we observe, that Gardners not
only

only cut away all the Suckers, and Luxuriant Sprigs, but some of the Branches, and that this adds to encrease the Fruit, it may illustrate what we observe amongst some Men, who by Afflictions grow more Charitable than they would have been in Peace and Plenty, for Saint Paul says of the *Macedonians*, *that in great tryals of Affliction, the abundance of their Joy, and their deep Poverty, abounded unto the Riches of their Liberality*, 2 Cor. 8. 2. To which we shall add that Instance of *Zacheus*, *Luke* 19. who owned, that though his Repentance had cut off more of his Riches, than all the Slander and Oppression and other unjust ways had added to it, yet he gave more out of the remainder, than some liberal Men would have given out of the whole; his Wealth like a pruned Tree yielding more pious Fruit, his Charity encreasing as his Fortune was lessened.

But to proceed, if towards the End of the Spring a Contemplator should see Blossoms blown down with Time and Wind, he would think, that though Blossoms were great Ornaments to the Tree, and both useful and pleasant, yet to be seasonably deprived of them is not mischievous to the Tree that looses them, since till they are gone, there can be no Fruit; so it is not a certain consequence, that as things desireable may be esteemed Goods, the Loss of them must be an Evil. And thus tho a fair and healthy Body may be looked upon as a Blessing, yet to dye in the Lord, though it destroys and rots this Body must not needs be a deplorable Evil, since as the Blossoms falling is according to the Course of Nature, and previous to the Formation of the

*Reflections
on the Blossoms of a
Tree.*

the Fruit, so the Loss of Life being ordained by God, must needs antecede those durable Blessings of Vertue and Happiness.

*On a Bee
sucking
Flowers.*

And if we observe, whilst a Tree is full of Leaves and Blossoms, the Bees busily sucking the latter, we may consider, that though the Leaves be not only Ornaments but Productions, and of Use to shelter the Fruit, and are of a more durable Texture than the Blossoms, which are more gaudy than lasting, yet the diligent Bee employs her Time about the latter, sucking from them store of Honey, which the Leaves would not yield. Thus though Dogmatical and Controversial Points in Divinity shew their value and skill in Theology, and may be more substantial and last longer than Books of Devotion, yet a Devout Christian will sooner peruse the latter, not containing solid Disputes, but pathological Books of Devotions, which affect the Reader, and from which a Devout Soul may extract Honey, or Celestial Pleasures, which proceed from and maintain a free Communion with God, which both exercises her Devotion, and afford a nutritive delicious Aliment. To illustrate this farther, we may consider, That both Silk-worms that live upon Leaves, and Bees that feed on Flowers and Blossoms, feed upon their Aliment, and are able by that means to supply Us with useful Productions; yet with some difference, the Threads of Silk worms serving chiefly to cloath others, whereas the Honey yields both healing and cleansing Medicines, and a great deal of Pleasure to the Bee herself; and thus those who study speculative and polemical Divinity; as well as those who peruse Books of Devotion

Devotion, may reap benefit by what they study, yet the former may be assisted to write others of the same Nature, which may enable their Readers to talk more acutely and with Applause: and the later may help to cleanse Men's Consciences from dead Works, and both pacify their Minds, as well as heal the Schism or Scandal of the Church; and have themselves all the Joy and Felicity they would afford others, and happily find pious Reflections, Soliloquies and Ejaculations as well as other mental Entertainments of a Religious Soul of so sweet improving and advantageous a Nature, that as other laudable Employments recommend us to the Students of Theology, these do to God himself.

But further, if we consider a Tree only thick set with Leaves, of which it had none before, it may put us in mind of the Instability of their Condition, who are envyed undeservedly for seeming Friends they had not before, and gaudy Attendants, which are so to the Fortune and not to the Person; for as in Summer, the Weather would keep the Tree warm, without the help of Leaves, it is covered with those Ornaments, but loses them in Winter, when it most wants their shelter; so those who in Prosperity have plenty of Friends, whom they have no need of, are forsaken by them in Adversity, when they have most Occasion for them. If it be further observed, how the Tree is decked with Leaves and Blossoms, when it is ready to bring forth Fruit, it should put us in Mind, with what alacrity a Charitable Person should do good, and that as a Cheerful Giver is

*On a Tree
thick of
Leaves.*

is loved by God, so the Tree is a Hieroglyphick of a generous Temper, which seems to triumph in all its Ornaments, when it exhausts the greatest part of its Sap to produce Fruit for others to eat. And if we take Notice, how Leaves and Blossoms regularly precede the Fruit, it may make us look upon the Essays of early Writers with more Candor, since the Author aims at good things, though he perform not great ones; for though these productions are more pleasing and florid, than otherwise considerable; yet if they be good in their season and kind, though they be not the most Useful, yet they ought to be encouraged, since though they have not solidity, they may promise something better, as Trees that Blossom before they give us Fruit. And if we further see Young People shake the Tree in vain, or offer to gather unripe Fruit, it may put us in Mind of those, who too eagerly pursue desirable Things or Honour; for as good Fruit will not easily be shaken down, though of good kind, when green, but requires force either in pulling or striking it off, which commonly bruises and disfigures it, as it is then but sowre and unwholesome for want of Maturity, and is apt to set the Teeth on Edge, so if it were let alone till ripe, it would fall into one's Mouth, and taste delicious and wholesome; so when we pursue Honour or Pleasure in this Life, it being an improper Season, we meet with Difficulties, and have not the satisfaction in possessing them, which we promise our selves; whereas if we would wait God's Time, there would be no need to steal or force them, but we should receive *Incrruptible Crowns of Glory,*

Glory, 1 Pet. 5. 4. from him, with whom there is Fulness of Joy, and at whose right hand there are Pleasures for evermore, Psal. 16. 11.

But further in Autumn, this Tree will be full of Fruit, being grown taller, and representing an Emblem of a true Believer; for as the Branches of the loaded Tree, abstract Moisture from dirty Soil, which rising towards Heaven, affords Fruit for Men, so a Christian improves the Blessings of this Life to elevate his Mind. And the Use he makes of Terrestrial Advantages, is to raise his Soul towards God, and dispenses them in Works of Charity to Men. On a Tree in Autumn.

We might mention a great many Subjects, which might afford us opportunities of occasional Meditations; but to put an end to this Discourse, we shall take Notice by the way of Advertisement, that besides the Advantages of Occasional Meditations already hinted at, there are several other Accounts, on which a pious Soul may receive Benefit, and which an Ingenious Person may make Use of. The Woods, the River-side, the Fields, the Street, a Library, or the Exchange may afford plentiful Occasions of Reflections. Besides, the respects one thing may have to another are Numberless, and Notions may be compounded and disjoyned so many ways, and such Inferences may be made from them, and such Applications of them, that besides the first Reflection occasioned by the Rise of the Meditation, several Conceptions may happen different from the first, and perhaps better. Thus Hounds hunting a Hare may meet with a Stag, Plato's Opinion, That all Knowledge is but Reminiscence seems to have been justly rejected; yet

yet when the Mind is furnished with Variety of Notions, it will by the Contrariety of things and notions in respect of each other, be so apt to lay them together, and discourse upon them, that it will by a strange Facility upon any Occasion light upon things it would otherwise not take Notice of. When once the Mind is set at Work, the first Thoughts may be the Subjects of further Meditations ; and the Connection of thoughts within the Mind, is frequently so strange, that the Contemplator himself will often admire to see how far his last Thoughts are removed from his first Meditations. And such incidental Excursions may sometimes as much delight and surprize him, as the Honey in the Carcass of a Lyon did *Sampson*, *Judg.* 14. 8.

*Occasional
Reflections
a great
help to Pi-
ety.*

But one thing may further induce us to this way of thinking, which is, that Occasional Reflections may gradually bring the Soul to a frame or temper which may be called Heavenly Mindedness, by which she may acquire a disposition to make pious Reflections upon every Occasion, often without designing it ; but such must be so accustomed to this way of thinking, that they must do it of their own accord, which Habit may be acquired by Practice, and when this Habit is once acquired, and the Soul hath acquired a Disposition to make Spiritual Uses of Earthly things, the advantage and delight of such a frame of Mind will be extraordinary ; it being a satisfaction to an Ingenious Person to be able to make the World both his Library and Oratory ; and to find Pleasure and Delight, which way soever he turns his Eyes, every Object presenting good Thoughts to his Mind,
which

which may be gathered with innocency as well as pleasure, and with as little prejudice to the subject that affords them, as Honey is from Flowers. If we would but pursue this Method, it must needs prevent that Dullness or Drowsiness, which blemishes our Devotion; and we might out of every thing strike some Sparkle of Celestial Fire, that would kindle, feed or revive it. And if half the Idle time, that must cost us Tears or Blushes, were thus employed, Ministers need not so long insist on the Uses of their Doctrins, the World being a Pulpit, and every Creature a Preacher, and every Accident affording Instruction, Reproof or Exhortation: each Burial would put us in mind of our Mortality; and each Marriage Feast of that of the Lamb; each Cross would increase our Desires to be with Christ; and each Mercy would move our Obedience to so good a Master. The Happiness of others would move us to serve him that gave it; and their Misery make us thankful, that we were free from it; their Sins make us ashamed of the same; & their Vertues would excite our Emulation: And when once we can look upon the things of the World, as Men do upon Water gilded with the Sunbeams, not for the sake of the Water it self, but as it represents a more glorious Object; and when a pious Soul can once Spiritualize whatever Objects he meets with, that Habit may be the most effectual Means to make the Saying Good, *That all things work together for Good to them that seek God*, Rom. 8. 28. A Devout Occasional Meditation, being from never so mean a Theme, like Jacob's Ladder, whose foot leaned

on the Earth, and the top reached up to Heaven,
Gen. 28. 12.

C H A P. III.

Containing the first Section of Occasional Reflections.

*Upon the
manner of
giving
Meat to a
Dog.*

A Dog seems to be a Creature ignorantly thankful, begging with a kind of antedated Gratitude, rewarding before hand the Grant of his request, the Address and the Recompence teaching Religion to him that feeds him; for when you hold him Meat and invite him to take it, it being held out of his reach, if he leaps not at it, you do not give it him, but if he does you let it fall half way into his Mouth; so God deals with us. He holds forth Eternal Glory, and his gracious Word encourages us to attempt it. Alas! It is above the reach of our Endeavours or Merit, yet if we strive not for it, it is in vain for us to expect it; but if we use our utmost Endeavours, God mercifully accepts the Will for the Effect, and what we can do, for what we should do, His Grace condescending to bring down what we cannot aspire to. Piety is the Terms, but not the Price of Heaven, and like the Wedding Garment, though it gives us not a Right to the Beatifick Feast, yet without it no Guest shall be admitted. And though Good Works will not reach Heaven, we cannot attain it without them.

One that considers the grateful Smell of Roses, and is ignorant of the Use of them, might wonder to see an Artist take Pains to destroy the Beauty of the Flower, and hasten their withering faster than Nature inclines them to do. Except if he considers how apt they are to fade, and how the fragrant Part may be preserved by Distillation, which would otherwise fly away as the Flower withered; so that by destroying and withering, Art preserves them, the Spirituous Ethereal Part being preserved in the nobler abstracted Quintessence: So he who sees a Liberal Person, part with Money freely, which others are fond of, being unacquainted with the Effects of Faith, and the Promises of the Gospel, may think it Folly or Profuseness, and that the Person is fallen out with his Money. But he that considers the future Prospect, and that the Scripture bids the Disciples, *make themselves friends with the uncertain Mammon, that when we fail they may receive us into everlasting Habitations.* And further, if he considers the Transitory Nature of worldly Possessions; their perishing, or Ours being sure to make a Divorce, and the inestimable Reward in Heaven, he will conclude this way of Parting with it the way to preserve it, exchanging it for Riches he shall never loose. So that a Charitable Use of Wealth, is only parting with what we cannot long keep, for that which will not fade, and though we have not them in kind, yet considering Riches under the Notion of Goods, we shall procure there what here they could never afford us, viz. Happiness.

*Upon Travelling up-
on Mendip
Hills a-
mong cover-
ed Lead
Mines.*

How have I wandred on the Brink of the Grave! Though out of my way, I little thought so near the end of all my Journeys, wandring over deep and uncovered Pits, upon which if I had stumbled, I had been killed and buried at Once, my Fate being as obscure as my Body. How great a Debt of Gratitude then must be due to God's Goodness, who miraculously saved me from a Danger I knew not till past? And how much short do I shew my Thankfulness? returning unfuitable returns for known benefits, besides those I am not sensible of. But this Deliverance shall for the future teach me to beware of other Dangers, since I fall into them unknown; and of Distrusting God's Providence, since he wonderfully delivered me.

*Upon a
Horse stum-
bling in a
fair way.*

On so smooth a piece of Ground, one would scarce think a Horse could stumble; since he carryed me through Places safe, where such a thing was very likely; but this was done so lubberly, that I as much admire my Escape as Danger. But it is too usual to stumble in the smooth ways of Prosperity, though we pass steadily through Adversities. And it is an Old Saying, That Fortune ruins more in her Embraces than whilst she would crush them. And those that make the Observation are as frequently Instances of it; Fortune hath not yet turned Syren to pervert me, and hath hitherto given me more Exercise for Constancy than Moderation. I have often wished my self in the Number of the Prosperous, who never think Prosperity formidable till deserted by her. But upon second Thoughts, I leave the choice of my Antago-
nist

dist to Fortune, and him that knows my strength and gives it me, since *Solomon* says, *even the just Man falls seven times a day, Prov. 24. 16.* So stumblers often happen to miscarry in the fairest way, into which when Providence leads me, it will be seasonable to pray, *lead us not into Temptation*, and I shall consider, that Ice is not only the smoothest but the slipperiest of ways; and we ought to be no where more cautious than where treacherous evenness makes us think our selves most secure.

Of two Beggars, behold the formest whose Deformity and Ghastly Sores, demand our pity and horror, and that none can deny Compassion to such an Object that hath any; his Blindness encreases his Misery since he cannot see it, and he is the more to be pittied to desire the continuance of such a miserable Life, or rather lingring Death. The sight moves more compassion than the hearing of him, and his Condition makes a better Petition than his Words. Every Member and Part are Motives to compassion, and plead for Pity, so that he may be said to be *all Tongue*. Yet the other thinks his own Case as deplorable and as loudly calls for Relief. His Companions Burthen lightens not his Load, but if one were to judge of both their Conditions by the Ear, the later would be the most wretched of the two.

On two Miserable Beggars on the Highway.

Convert all this (O my Soul) to Spiritual Uses, and do not rashly infer thine own Health from the forlorn Diseases of others: Let not the Difficulty of anothers Cure, lessen the Care of thy own, nor thy earnestness in seeking relief. In so depraved an Age Earth contains as

wicked as any in Hell. And Men are apt to think themselves innocent as long as they can find any more culpable than themselves ; nor will they be apt to escape from the Pollutions of the World, or disengage themselves, if they wait for the Reformation of others. Let us not therefore content our selves with that comparative Innocence, which in Heaven hath no place, where no vitious Persons are to make comparisons with ; and in Hell it will be but small Consolation, that we are not altogether so much tormented as the most wretched.

*On sitting
in a Coach
that went
fast.*

Though the Coach moves with so much rapidity, yet the Seat is as inviting to rest as a bed. The wheels which strike fire out of the flints, were I under them would crush me to pieces, but as I am above them, hasten me to my Journeys end : So external Accidents disorder and oppress those that lye under them. But he whose Reason and exalted Piety hath the Power to contemn them, may enjoy Happiness and Tranquility, and will not be discomposed with any inferior Revolutions, which the Wheel of Fortune shall produce, which serve to hasten him to his Blessed Mansion.

*Upon sight
of a Wind-
mill stand-
ing still.*

Upon viewing of a Wind-mill standing still. The first Consideration is, That if one knew not the Miller's Trade, he would conclude the Man that lived in such a House a mad Man ; having built it in a solitary place, on rising ground and exposed to the Winds : But he who knows the Design of it, will commend it. So that we ought not to censure Men, otherwise vertuous and discreet, because concerned in some things that are troublesome and unsettled ; for if the
end

end be not amiss, the means are to be judged of by their Tendency; and though a quieter Life might be desiræable; yet if a more troublesome one will make a Man serviceable in his Generation, it is rather to be chosen than the other, since the hardships it exposes him to, give him the greater opportunities of prosecuting his Aims; so that those Circumstances recommend it to him, which disapprove it to others.

A Second Observation on the same Subject is, That we may consider, the whole as a great Engin, where every part is fitted for grinding of Corn; yet though never so well contrived it can do nothing for want of Wind. Which represents the Condition of a certain Lord, for if one not knowing his Humour and Aims, should know his Estate and his Skill to manage it, he would be apt to envy the happiness of his Condition, nothing appearing to be wanting. But alas! the Man wants Esteem and Reputation, which hath a Resemblance to Wind, being an airy Thing which we must receive from others, and know not how long we must keep it when we have it: the want of this makes all the rest insufficient for his Satisfaction. Thus *Alexander*, who was more Ambitious than Great, after he had conquered the World, shed Tears, because he had not conquered more than one, being told by a Philosopher, that there was more than one. And all the Favours proud *Haman* could enjoy upon Earth, could not make him happy, because he could not neglect a Captives neglect of him; nor could his Greatness do him any good, if one Man only could resist it and

not bow to it; and the unsatisfy'd Appetite of Revenge, took away the relish both of Monarch's Favours and of fair *Hester's* Banquets. And no doubt, but we often repine at Providence by Mistake; for those that refuse to be God's Servants, are often so to their Passions and Affections: Therefore we often envy the Great and Rich, as if those Advantages made them as Happy, as they would a good and wise Man, when the Man courts a Favour to make him happy, which he cannot obtain: So that it is not what a Man hath, but what he desires that makes him happy or otherwise.

*Of paring
a fine Summer
Apple.*

A curious Apple admired for it's gaudy Colour, having a green that Emerald, and which *Flora* could not boast, adorned also with a curious Vermillion, which emulates also Rubies in Colour, shews, that Nature can afford Vegetables as curious Colours as pretious Stones: This Apple perhaps might vye with that which tempted our first Parents. But these beautiful Apples may delight the Eyes, yet they are not so acceptable to the Stomach. The Palate cannot taste Colours; and to know, whether this or that so acceptable to the Eye, be as grateful to the Stomach, and whether as *Plato* said, that *Beauty was the Lustre and Flower of Goodness*, the gay Out side must be cut away. Thus though Opinions are adorned with never so smooth Pens and Turns of Wit and Eloquence, yet to know their true value, those Glosses and Ornaments are to be taken off and they are to pass the Test of Reason as well as Phancy.

My

My Coach being stopped in a narrow Lane, I found Subject enough to exercise my Patience, a Churlish Dray-man being as tedious as *Ludgate Hill* to his Horse: So I thought had I walked a foot, I should sooner have arrived at the place appointed than I did. And thus it often happens in our Journeys towards Heaven: Those that are not ensnared in external Things, may readily pursue the Paths of Life; but where Pride or Effeminacy stop their way, unless a Coach of Pleasure will convey them; and will not bate a Superfluity or a Punctilio of Honour, to enter in at the straight Gate, these seeming Conveniences, become troublesome Clogs and Impediments to obstruct our way to Happiness, and a place of Joy, where he is unworthy to enter, that cannot willingly leave all behind for the sake of it.

Looking through a Perspective Glass at a Ship, though the Glass makes the other seem nearer to our Eyes, yet it is equally distant, and approaches not to our Vessel the more; the Instrument being no Loadstone to attract her, except she pursues us; such another Instrument Meditation is to Death, which is never the nearer for thinking of it, nor does it exempt us from being Mortal, though we forget that we are so; Yet this Thought brings it nearer without lessening the real Distance; nor will it quicken the Pace of that Enemy, nor hasten his Arrival, though it prepare us for his Reception. My Age presumes I have a good deal of Sand to run; but though I am not old enough to say with *Isaac*, I am old, and I know not the day of my Death, *Gen. 2 27.* yet in a little time,
when

*Upon a
Coach be-
ing stopped
in a Nar-
row Lane.*

*Upon the
Use of a
perspective
Glass at
Sea.*

when a few Years are come, then shall I go the Way whence I shall not return, Job 16.22. And since we are advised not to boast our selves of to morrow, because we know not what a day may bring forth, yet we ought to take heed to our selves lest at anytime that day come upon us unawares, Luke 21.34. and in order thereunto will I all the Days of my Appointed time wait till my Change come, Job. 14. 24.

CHAP. IV.

Containing the second Section of Occasional Reflections, upon the Accidents of an Ague.

*On the first
Invasion of
the Disease.*

WHilst I was engaged with a foreign *Virtuoso*, I was suddenly surprized with a Chilliness and Shivering, which increased so fast, that it was soon heightened into the fit of an Ague, which had not surprized me, had I considered of how many curious Parts so curious an Engin consists, whose Harmony is requisite for Health, whereof none are Superfluous, and most of them insensible; so that it is not strange a Man's Body should be subject to Pain or Sicknes, no more than that an Instrument with above a thousand Springs should be often out of Tune, since the Change of Air may as well discompose the Body of a Man, as untune the Strings of an Instrument, so that the Structure and Fabrick of a Man's Body is so curious and elaborate, that it is a Wonder it is no oftner out of Order than it is. And if we further consider,

consider, how many outward Accidents may destroy the Health or Life of those most careful to preserve them; again if we consider, how many ways our Appetites or Vices which make the Creatures offend us, and how Sin may provoke the Creator to punish us, I say if we consider all the Accidents that may happen before grey Hairs, it is a wonder, if an Old Man be any thing Healthy. But these things are seldom thought of till excited by some ill Accident, those that are in Health thinking to continue so, without thinking it a Mercy that they are so. We think not how much our welfare depends on the Will of Divine Providence, when we long enjoy Mercies; and therefore he deprives us of them, to make us sensible we stand in need of them; it being reasonable those Mercies should be denied which are not acknowledged as such; this Sickneſs therefore ſhall make me thankful for Health, when God ſhall pleaſe to reſtore it, nor ſhall I confidently depend upon it's Continuance; for though we are not inclined to follow the Wiſeman's advice who bids us, *not boast our ſelves of to Morrow, becauſe we know not what a Day may bring forth*, yet he had not done amiſs, if inſtead of a Day, he had ſubſtituted an Hour; for we are expoſed to ſo many Accidents, that Health well deſerves our Thanks as well as Wonder. And though my ſickneſs is but my unhappineſs, my ſurprize at it was my Fault.

One that ſhould ſee me in Bed, and covered with ſo many Cloaths, would ſcarce think me troubled with Cold, and if he were ſo, he would be apt to envy me. And if he ſhould Viſit me

Upon the immoderate heat and cold of an Ague in ſit.

in my Hot fit, and see my Shoulders and Arms quite uncovered, and the Sheet only upon the rest of my Body, he would think I lay very Cool. But instead of that, an Internal Frost is in every Part, my Teeth chatter, and my whole Body shakes, and I am so little relieved by the Number of Cloaths, that I might sooner be crushed with additions of more, than warmed; so that frosty Nights were short of this Cold, and as it was more easily born, so it was more easily removed.

Thus when a great Man is affected with Ambition, or any immoderate Affection, though the by standers see not the Cause of his Disquiet, and may envy the Plenty he is possessed of, yet they will little suspect his want of Contentment. And yet the Cold of External Air is more supportable, than the Cold of an Ague, with a Pile of Blankets, or the Hot fit, with a single Sheet; so External Inconveniences are more supportable than the best Accommodations to a distempered Soul. Mens Happiness therefore consists, not so much in what they have, as in what they are. Fortune can but give much, but the Mind makes that much enough. And as Water, or Dog-Days are better to be endured in the Air, than the Blood, so a Healthful Mind is more happy with Inconveniences than the best Accommodations can make the Contrary.

*Upon the
succession of
the cold
and hot fit.*

In the Cold fit melted Snow seemed to Circulate instead of Blood, and might be only distinguished from that of Death, by it's violent shaking me. More Cloaths were laid on, not for any relief I found, but for want of them.

I rather desired the Torrid than Temperate Zone, and envied the Laborers that tend the Chymists Fires. But when the Hot fit succeeded I thought it more troublesome than the Cold one; and found a single Sheet troublesome, and removed the Cloaths with as much impunity as I called for them. I then envied the Inhabitants of *Norway*, and thought Fishes happy that Swim in a Cold Stream.

Now, if a Man's Condition can so soon alter, that what he Thought a Grievance becomes a Relief, it is plain, we may easily mistake in estimating Afflictions, and judge them not so uneasy as we think them, since we increase the Affliction by repining at it.

A Man in Affliction is apt to think, that he suffers worse than any other, and is apt to say otherwise than *St. Paul*, who says, *No Temptation hath befallen You, but that which is common to Men*, 1 Cor. 10. 13. He thinks he could more easily bear other People's Afflictions than his own, yet if the Sickneſs was changed, he would wiſh for the former, and be as much concerned at his Folly as at the Diſeaſe. He that hath the Gout is apt to envy thoſe that are free from that pain, and able to walk about, and thoſe that have a Dropſy envy thoſe that may drink to quench their Thirſt. The Blind Man envies thoſe that can ſee. Fevers burn, Agues ſhake us, Dropſies drown us, and every Diſtemper hath it's particular Symptoms and Uneaſineſs, though Religion may ſoften and mollify them; for as a Gaſon, if the Defendants be faithful cannot be taken except by Famine or Storm, ſo Life cannot be deſtroyed, without a Lingring Chronick Diſtemper

temper or an Acute one. And that which encreases our unhappiness in Sicknefs is, that we fancy our Distemper more grievous than if it was some other; but there are Distempers different in circumstances, which are equally troublesome. As the Wretch our Saviour cured, who though he was sometimes cast into the Water, and sometimes into the Fire, yet was tormented with the same Devil. But we should make a better estimate of Afflictions, if we considered the attending uneasiness in general; and therefore what we feel may proceed from the Nature of the Sicknefs and Crosses, rather than from the particular kind or degree of ours. And many who we think less Sufferers than our selves, would be glad to change with us, and though they carry it off better, yet they find no more ease than we, according to *St. Peter*, who says, *that the same Sufferings are accomplished upon our Brethren in the World*, 1 *Pet.* 5.9. For it is all one, whether they be of the same kind, or not superior in degree; and we should bear our Sufferings much more easily, if we did not consider them as Present Ones, rather than Great Ones.

*Upon being
let Blood.*

Thirst in all Fevers is a very troublesome Symptom, and in mine was extraordinary in the hot Fit; so that I the less wonder, that a thirsty King should sell his Liberty for a Draught of cold Water. But drinking no longer relieved me than I was swallowing it, and what was worse increased my thirst by increasing the Fever; therefore Juleps being only serviceable as they relieved my Fancy, and palliated my Expectation, the Doctor ordered Phlebotomy, to
relieve

relieve the Symptom by moving the Cause.

Thus when the Mind is disturbed, and the Appetite eagerly pursues Objects unfit for the person, they think the only way to appease their desires is to grant them what they desire; but a discreet Physician minds not so much what we desire as what is convenient, and a Lancer performs what Juleps will not, so God Almighty takes away Spiritual Superfluities rather than grants what we inordinately desire; and a few Afflictions help to moderate our corrupt Affections, and appease our inordinate Appetites: To gratify our Appetites amuses, but does not cure the Patient; but seasonable Crosses, make us know our selves, and sensible how little those things we are greedy of, would contribute to make us happy, and if obtained, may produce a Resignation and Tranquility of Mind; so that being denyed the Enjoyment of them, we find not the need of them. Thus *Zacheus*, whilst a Publican never thought he had enough, but when a Christian, he not only offered a four-fold Restitution of what he had fraudulently gained; but free from Avarice grew so rich, that he was willing to give half what he had to the Poor: The Divine Guest, having had the like Influence upon his Goods, as our Saviour did on the five Loaves and two Fishes, the remains being more than the whole at the first.

Being obliged to take Physick often, in hopes each Dose would be the last, I find and fear there still will be further Occasion, but though it is troublesome, it is healthful, and if Loathsome, the Sickness is much worse. Thus a relenting Sinner, having washed away his Sins
with

*Upon taking
Physick.*

with Tears, may think himself thoroughly cleansed, and if entertained with those Delights which God bestows on returning Prodigals, he is inclined to think that Repentance like Baptism needs to be repeated but once in a Man's Lifetime. But though an unexperienced convert, may say, he shall never be moved, yet tho', *The Spirit indeed is willing, but the Flesh is weak,* and frequently our Resolutions abate with our Joys; and those who have thought they could despise the World, have in a little time been mistaken, finding it hard to be amongst Sinners without being of their Number, and in a World so defiled without a spot. And as *David* said in his Prosperity, he should never be moved, so in distress he said, he should one Day dye by the hand of *Saul*. So in the height of Joy and Tears of Repentance we are apt to contemn and despise all Ghostly Enemies, but in a little time these Resolutions will meet with Impediments and turn into Despair, we thinking those Despicable Enemies invincible. But as we ought not to reject Physick that does good for a time, nor other Measures for our present Recovery: So though repentance is to be repeated frequently, since it is the only Means to recover our Souls out of a State of Sin, we are not to be discouraged, but renew that Duty as often as we fall into Sin, with a hearty Sorrow for them, and firm resolves against them. And as Physick is to be chosen before Sickness, so Repentance is better than to continue in Sin. And as a bitter Potion is better than the Symptoms of an Ague, so Sorrow for Sin here is better than Lamentation, where there is nothing but wailing
and

and gnashing of Teeth. Our Souls in this are much like our Bodies, our whole Lives being spent betwixt gathering and purging away ill Humours. And the flesh is still saying to the Spirit, as *Ruth* said to *Neomi*, *The Lord do so to me, and more also, if ought but Death part thee and me*, *Ruth*, i. 14. But though distempers are washed away they do as often return, and though the *Deeds of the Body*, *Rom.* 8. 13. will scarce dye, till the Body doth it self, yet next to a continued State of Health, quick recoveries are desireable. And though the necessity of asking many pardons for the same fault, may give just occasions for an ingenious Christian to cry out with *St. Paul*, *O! wretched Man that I am, who shall deliver me from the Body of this Death?* yet the Sense of our own frailty may also comfort us, and give us occasion to say, *Thanks be to God which giveth us the Victory, thro' our Lord Jesus Christ!* 1 *Cor.* 15. 57.

My Complaisant Physician at once Studies to gratify my Palate and oppose the Distemper, and my Remedies are so sweet that they seem to come from a Confectioner rather than an Apothecary; but my Mouth out of taste cannot relish them. And though my Condition makes it necessary, that my Palate should be gratified, yet instead of being pleasant, they are but a degree from being Loathsome. And I have so little enjoyment of these things, that if they are not uneasy, yet my relish of them deprives them of their Nature, so that that Envy me for the sake of them, may be suspected to be troubled with a worse distemper, a Fiebre.

*Upon Syrups
and other
sweet
things sent
by the Doctor.*

Thus some Favorites of Fortune may be envied by those that only look upon their Condition, yet those that know them pity them. When greatness of Power, Riches and Effeminacy of Mind encourages Men to hear nothing but Praises, when they rather deserve Reprehensions, and when they can relish nothing but what is sweetned with Flattery and Disguise, it will scarce recommend greatness to a Man that can distinguish true greatness, and is more likely to ruin, than raise Mens Envy; besides those uneasy Qualities which afflict an impotent Soul, occasion greater Distempers than those Grati-
fications can recompence, and often hinder the relish of other pleasures. These treacherous Delicacies afford so little delight, that they are less considerable than the weakness they suppose, so that we had better be without them than want them.

*Upon want
of Sleep.*

The Night being spent without sleep, my Thoughts were as various and wild, as if I had dreamed. The first Thought was, when I found how tediously and slowly the time passed away, and how long the Intervals betwixt the striking of the Clock, and how long the Night seemed, which were much shorter than the Days, how miserable it must be to be cast into Eternal Darkness, upon a bed of Fire and Brimstone, without the Attendance of Friends, and without hopes of Consolation, or a day dawning after so dismal a Night, continued for Millions of Ages, each miserable hour representing an Age. The next Thought was how ungrateful we are to God, in not acknowledging the Power of sleeping as a Mercy.

But

But I find it is our negligence not the uselessness of a great many Mercies, that makes us forget to return Thanks for them; their commonness preventing our being sensible of their greatness. I once Thought sleep an inconveniency that deserved consolation, but now I find it a Grievance, and *that God made every thing beautiful in it's season.* But when I compare the Affinity betwixt Sleep and Death, I can scarce think this Life was designed for our happiness, since not to lose one half of it were an unhappiness. Another Thought was, that tho' want of sleep was an unhappiness and uneasy; yet it frequently happens to be useful as well as unwelcome. There are a great many that hate thinking, or to be alone: Their sinful Pastimes making them afraid of it, as well as preventing it. In Health, Visits, Cards, and other Diversions succeed so thick, that the distracted Person hath no time to converse with his own Thoughts; and in Sickness, Cards and Company prevent the opportunities of thinking; which he willingly declines, so that Sickness is far from helping them to think, unless it hinders them from Sleeping. But when all the Company is withdrawn, than in the dark night he begins to think of his Condition, and for want of outward Objects he begins to look inward, and must needs think of what Avocations in the day would not admit. And this though unwelcome is the greater Mercy. For could he Sleep as in Health, his Conscience would do so too, till awaked by the Flames of Hell. And when we neglect to think, we not only hinder our selves of the Advantage of Sickness, which is to

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reclaim

reclaim us, by putting us in mind of our Condition, but by avoiding to consider, we lengthen the sickness we are impatient of, which is much the same, as if a Nice Patient, after a wholesome bitter Potion, should use Juleps and Cordials to hinder it from working, and thus loose the benefit of it's Effects. So that Repentance being requisite to recovery, and that a Man should consider his ways, in order to Repentance, want of Rest is a happy Grievance, which gives us an Opportunity of thinking, and tends to lessen those Afflictions, and to pursue the End for which God afflicted us.

*Upon the
strikes of
an ill going
Clock in the
Night.*

Lying awake all Night, and hearing the Clock strike every Hour, when it struck Eleven. I compared it with my Watch, and found it to be Twelve; and when the same Clock struck Two, I observed it was but One, which whether out of Negligence or Design of those that looked after it, it gave me Occasion to think of the useful Rules of judging of the Length or Brevity of Discourses. For some Subjects are so Difficult, that though they make Use of many Words, yet if what they say, is not suited with the Nature of the Subject, they may say much, and yet not enough. But if a Man speaks unreasonably or impertinently, a little may be too much; so that we are not to consider, how much or how little is said, but whether it be as much as is required. And as the Clock struck too little, when it struck Eleven, and too much when it struck Two, so to measure and estimate the due Length of our Discourse, we are not so much to regard the
Number

Number of Words, as the proper time, and what is requisite to be said.

Comparing the Circle on which the Hours are placed in a Clock, with those of a Watch the former is much greater than the later; yet the Index of the Watch being at the Hour Twelve, when the other was but at Eleven, though the larger had moved over a greater Space, yet the Index of the Watch went not only truer, but faster.

Upon comparing a Clock with a Watch.

Thus we are not to estimate Men's Lives by their Duration: some Loyer so much of their Lives away, that they have nothing to shew for their Age, but Church Books, and Gray Hairs; and they as little live, that spend their Years in Diversions, neglecting the business and true end of Life; so that such may be rather said, to have lasted, than to have lived long. So a Traveller, that wanders too and fro without pursuing the right way, may rather be said to have been long a Horse-Back, than to have performed a long Journey; whereas, he that makes good Use of his time, and hath soon performed what he was sent into the World for, may have lived long enough, and consequently longer than those that have Gray Hairs, though born some Years before him. So that One may be said, to have had a longer Time, and the other a longer Life, as the Heathen said, *Non est vivere, sed valere Vita.* And how short soever time a Man may Live, if in that time he hath done that which was the End of Living, the acquisition of competent Knowledge, and the Practice of Graces and Virtues, that fit a Man to glorify God and

to be glorified by him, in that which shall have no End.

Upon a
Thief in a
Candle.

The dim Light of the Candle being suddenly increased, I perceived, that it was occasioned by a Thief in the Candle, which had wasted down a great deal of the Tallow, and would have served the rest so, had it not been prevented. Which occasioned me to think, that though the Thief made the Candle shine more brightly, yet since it made an irregular Wast, I ordered it to be taken away; which put me in Mind of what *Pharoh's* forgetful Butler said, *I do remember my Faults this Day, Gen. 41. 9.* for though I could easily abstain from other kinds of intemperance, yet to studying I have been too indulgent; and though in that Exercise there may be excesses, yet since they tend to the Improvement of Knowledge, and the Exercise of Piety, it may be allowable, if not commendable, to spend our time in pursuing such Ends; for which Reason, Sickness is more formidable, for disabling us to learn or teach, than as it is attended with Pain and Danger, and when it hath hindered me from pursuing what I designed it makes me more uneasy than what I suffer. But my Body is sooner weary than my Mind, and I have been more tired with Contemplation than with riding Post. Therefore though a Candle is to consume to light others. yet the Thief would have wasted it too fast, and therefore I have thought it convenient for the future to favour what strength I have left, and endeavour to make it shine longer, though more dimly, which Abstinence and self Denial will be more ungrateful and difficult, than if

Wine

Wine or Women were the Objects of my Delight ; but if I should not always perform what I intend, I shall easily excuse my self, if I a little hasten the end of my Life to attain the Ends of it.

Though an Ague it self be without Danger, *Upon being* yet it may degenerate into a Distemper that is *in danger of* so. And since the Prognosticks of Physicians *Death.* are but guesses, and are not forwards to make us fear, till there is little hopes, therefore we ought to think of Death, whilst there is hopes of Life ; for should the Physician be mistaken in his Judgment, he might more easily save his Credit, than the Patient his Soul. Therefore finding my Distemper attended with unusual Symptoms, which might prove Mortal, I began to think of my End ; which we ought more readily to entertain ; *First*, Since we cannot be too well provided for an Act which never can be acted but once, and as it is appointed for all Men once to dye, so after Death comes Judgment, and where the Tree falls there shall it lie, Errors in this last action being irreparable ; so that is the safest way to follow the Example of him that says, *If a Man dye shall he live again*, to which he adds by way of Inference, *all the Days of my appointed time will I wait, till my Change comes.* *Secondly*, We ought to think of the Grave to provide our selves against many Dangers, which perhaps may never reach us ; for several endure more Torment by the Apprehension than they would by the Infliction of Mischief ; but Death is what will one time or another certainly come, and therefore the thoughts of it may be serviceable and advantagious ; the Thoughts
Z 4 of

of Death, tending to make us live well, and consequently as advantageous to those that scape Death as those that dye.

But not to mention all the Thoughts, that every sober Person, as a Man, as a Christian, would have upon a Death Bed, we shall mention some suggested by the general Circumstances of my Condition. The Approach of Death is apt to make Men serious, and to make a truer Judgment of the World they are to leave, having no Partiality for the Pleasures and Profits of a Life they are about to quit. And as Men are apt to have their Thoughts better grounded, so they are to speak them more freely: Death being free from Hypocrisy, as well as stripping them of other things.

One thing then I was thinking was, how wretched I should be, were I of the same Mind with the Generality of those of my Age, who think their Youth as good an Excuse as it is a Temptation to Vanity, and that they do a great deal in their Youth, if they resolve to reform when it is gone; and they think more than intentional Religion is a Reflection upon Youth, as well as an Inroad upon old age. But how few live to be old, and it is but little satisfaction upon a Death Bed to think, that according to the Course of Nature a Man might have lived longer, since the thought must needs be dismal to an unprovided Person, whose early decay employs the Number of his Iniquities, and that his Death is rather a Punishment for his Sins, than a Debt due to Nature. The Pleasures of Sins will not contravail the Horror they Create in a dying Person, who
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is not only to leave them, but to suffer for them. But when a Man hath forsaken his Pleasures, for Virtue or Religions sake, it will yield him far greater Joys, than the fruition of them could afford him.

I must confess, I have quite different thoughts now of a sufficient Preparation for Death, than I had in Health. If then a Christian should frequently break his Resolutions, but never renounce them, but often stumbled in the way to Heaven, and find the approach of Death formidable; how dismal must it be to those that have continued in Sins, without ever intending to forsake them. Being free from Scandal, and something more than Negative Piety, is not common amongst those that have the Opportunities of enjoying the Pleasures and Vanities of this World; which with the Charity of others, and my own self Flattery, made me think I was fitter to dye, than to be afraid of it. But now I see the Grave underneath me, and that Gulf of Eternity, it is difficult to prepare for a Change, to be doomed by an Omniscient Judge to a state of Eternal Happiness or Misery. The Death Bed makes us remember those things which Youth and Jollity make us forget, and those frivolous Arguments which excuse us in Health to our indulgent Thoughts, will scarce now be thought sufficient to excuse us to God, before whom if the Angels cover their Faces, sinful Men may tremble to be brought. When approaching Death makes our Eyes grow dim, our Consciences more clearly discern, that our Senses prevailed upon our Reason, which made us acquiesce in those frivolous Pleas; but when
we

we appear before God, our Jolly Companions cannot excuse those Actions they tempted us to, since they must be condemned themselves. If we consider Death as the conclusion of Life, and a Debt due to Nature, it is sufficient to excite Horror; but if we consider, that the Body will not only corrupt, but the Soul must be brought to the Tribunal of God, to answer for the Actions of this Life, and there to be condemned to Eternal Torments, or sentenced to inexpressible Joys, such a change must occasion a Commotion in the most Pious or Courageous; and those that would not be afraid of Death it self, will be afraid of Eternity.

*A Continu-
ation of the
same.*

Another Reflection on this Occasion is, that most men think a Death Bed, the fittest place for Repentance; but such must little consider the Disadvantages of Sicknes, or the Nature of Repentance. Indeed Sin and Death may more easily frighten us when both together; but being frightened by Hell, will not give us hopes of Heaven; for when Sin and Torment appear together, it is not easy to discover which of the two frights a sinner towards Heaven. And Repentance which ought to be the Work of a Man's whole Life, and to be a thorough Change of the Man, is improperly begun, when his Course is almost finished, in which it should have guided him. Nor can Men reasonably think, that whilst God is punishing them for their Sins, he will vouchsafe them the Grace of Repentance, which they refused before. Besides in so uncertain a State it is hard to promise themselves the Opportunity; who knows when a Phrensy may seize the Brain, and cast the Patient

Patient into a desperate Condition on this side the Grave, so that the Man may be dead, before his Body is dissolved.

But though these Accidents happen not, the Organical Faculties of the Mind must needs be dulled by the Disorder of the Spirits, by which they perform their Offices; besides the sense of Pain, the effects of Medicines, the faintness of the Spirits, the uneasiness for want of Sleep and occasioned by Heat; the Importunities of interested Persons about them, that like Birds of Prey wait for a Carcass, the Tears of Friends at the last Farewell; the uneasy Direction of a Lawyer to draw a Will, the Divines Discourse about the Soul, and the Conscience frightened, render a Man's Condition so amazing, dismal and distracting, that it is as much Madness to think this a proper time for Repentance, as any a Death bed can produce; it is so improper to begin to provide Graces on a Death Bed, that it is difficult there to practise such Graces as were before acquired, it being difficult there to reap the Consolation of a pious Life.

But one Consideration, which may deter us from relying on a Death bed Repentance is, that though we allow, that they are mistaken, who think such a Repentance too late, yet though a Dying Sinner may not despair of Heaven, yet he can scarce have a comfortable Assurance of it; for though true Repentance cannot be too late, yet it is a question, whether that late Repentance is true; for Repentance implying a renouncing of Sin, at least with a hearty purpose and resolution, an habitual Sinner who remembers, how often he hath violated those Vows and Promises

mises of Amendment, which Sickneſs or Danger have extorted from him, when thoſe Dangers were over, cannot eaſily be ſure, that the preſent is not of the ſame kind, ſince he hath no Experience to ſhew, whether his Reſolutions would prevail againſt the Oppoſite Temptations; beſides a Man may eaſily miſtake a true hatred for Sin and the Love of God, for a horror of the impending Dangers, Sin makes him ſubject too; and a ſtrong deſire he hath to go to Heaven, when he is no longer able to ſtay upon Earth, but muſt go to Hell if he ſtill carries. And as it is difficult for a Man to know upon what Account he is ſorry, when he feels the puniſhment of Sin, ſo it muſt be a ſtrange uncomfortable ſtate for a Man to be hurried to the Grave, when he cannot tell whether he is going to Heaven or Hell. And if he ſhould be miſtaken in eſtimating the Validity of his Repentance, the Error would be fatal, and without Remedy, and more horrid than that of the *Syrians*, who inſtead of arriving Victorious at *Dothan*, found themſelves at their Enemies Mercy in *Samarita*, 2 Kings 6. 18. But to conclude, he that renounces not his Sins, till Chriſt is ready to renounce him, both hazards his Soul and Ingenuity; and it will be a ſad loſs for a Man, to looſe the Opportunities of a pious Life by Death, and to derive his comfort from a bare aſſurance that he intends it.

Upon the
Apprehen-
ſions of a
Relapſe.

Having recovered my Health, and being able to purſue my uſual Courſe of Life, what our Saviour ſaid to the Paralytick may be ſeaſonable, *Behold thou art made whole, ſin no more, leſt a worſe thing comes unto thee.* But though I am free

free from my Distemper, yet I am not from the Apprehensions of it; for having had Experience of my Sickneſs, I have the more value for my Health, and am more jealous in preſerving ſuch a Bleſſing; and the ſmall Chillneſs, which I formerly imputed to the Spleen or Melancholly, I am now apt to ſuſpect, as the fore-runners of my Diſtemper, and therefore I am careful to avoid all Irregularities, which may endanger a Relapſe. But why ſhould not I be as ſollicitous for the Wellfare of my Soul, and avoid cheriſhing ſuch beginnings as have ended in Sin, when neglected; and as dangerous Diſtempers leave the Body infirm, and ſubject to Relapſes; ſo Sins commonly leave behind them a Diſpoſition to fall into the ſame Sins, Men being much more apt to relapſe into ſpiritual Diſtempers, than thoſe of the Body; ſo that we ought to have a much greater care of thoſe Relapſes that concern the Soul, if we think the Nobleſt Part is the moſt worthy looking after.

It being my Cuſtom to take Notice of the Particular Remedies made uſe of in my Sickneſs, that I might know, what I received the moſt advantage by, ſhould I fall back into the ſame Diſtemper, upon taking a View of what Preſcriptions were made in my late Sickneſs; I was ſurprized to ſee, what a Multitude of unpleaſant Medicines I was forced to take; the Thoughts of them were ready to make me ſick, though the Medicines made me well. Should all thoſe things have been propoſed at the firſt, I ſhould perhaps have been deterred from purſuing ſuch a courſe as well as deſpaired of my recovery, not apprehending my ſelf able to go through

*Upon re-
viewing
the Bills
ſitted up
in the A-
pothecarys
Shop.*

through such a course. Thus if we consider the Duties and Mortifications, requisite to remove us from a state of Sin to a state of Grace, it requires good Resolutions to undertake the Conditions of Piety, through so many difficulties as will present themselves to our affrighted Imaginations. It's true, were all the Medicines to be taken at once, or a tenth Part, they would have killed me in one day, but though I see them all at once, I took them but by degrees, and assisted by moderate Intervals of respite, I was enabled to bear them, supported by seasonable Cordials, and that chief one the hopes of Recovery, and of being freed from the Use of them. And thus though the Hardships of Piety are presented at once to one that is to be a Convert, and may seem Formidable because Numerous, yet he is to strive with them but by one at once, and may overcome a Temptation one Day, and another the Next, so that what our Saviour says, may be applyed in this Case; of our not being Sollicitous for to Morrow, nor charging one Day with more than belongs to it. And as a Physitian takes care, that his Remedies shall not be disproportionate to the Patients strength, and to relieve him afterwards with Cordials, so God will not suffer us to be tempted above what we are able, but will allow them Comfort, if he does not turn their Sufferings into Cordials. If a Convert considers these things, the Difficulties will not discourage him, but will rather enable and indear his success, and he will never despair of Success, where he is sure God will assist him in the Victory, and give him Heaven for a Reward.

CHAP.

CHAP. V.

Containing the Third Section of Occasional Reflections.

There are a sort of Vain Persons, who in their Age and Unhappiness much resemble painted Clouds, both being raised to such a station, that makes most Men think them above them, being rendred more conspicuous by the Sun-shine of the Princes Favour, which though it alters not their frail Natures, yet it adds a Lustre and Gaudiness which attracts the Eyes, and perhaps the Envy and Respect of those that admire insignificant Outsides. But further, as the Clouds Sublimity and Conspicuousness, makes them not less aery and unsolid, they consisting of Vapours, drove about by every wind, so these fine People, notwithstanding their being exalted, are in themselves but slight, having no intrinsic nor solid weight, but are guided by their own Lusts and Passions, or by interest as fickle and variable as the Wind. And though the Clouds seem great and high, and for some time darken the Sky, yet they are but of short continuance and quickly fall down in Rain, or are dissipated and vanish; so these great Persons either descend by voluntary Humility and Repentance, or make amends for their past Uselessness or Mischiefs, by their doing good; or after a while their Splendour vanishes, without leaving behind them the least Token of their Greatness. And this happens not only to Favourites

*Upon the
sight of
various co-
loured
Clouds.*

rites but Princes themselves, and is often occasioned by the same Power that raised them; as Clouds are dispersed before night by the same Sun that raised them.

*Upon his
making of
a fire.*

How long have I blown this Fire in vain. It was not the Greenness of the Wood, but the Greatness of the Logs, which for want of some smaller sticks, the Fire could take no place on; for as soon as I laid on some brush Wood, the Flame encouraged by those slender twigs, presently got hold of the Billets, and grew so great, that it threatned the house, and to reduce all to Ashes. These Blocks may put us in mind of necessarys, the sticks are our less important religious Practices, and this raging Flame the Devil. The Devil might in vain attempt our Grand Resolutions, till the less considerable ones are overcome, and made Instruments to destroy the other; our more trivial Affections, having once received his fiery Impressions, easily communicate them to the higher Faculties, and kindle those more solid Materials. The best way then is to be watchful over our lesser Determinations and Passions, and neither to violate or neglect those less considerable ones, considering the consequences that may attend them, and what such slight things may tend to endanger or preserve.

*Upon my
Spaniels
ears not to
loose me in
a strange
place.*

Whilst I was at home my Spaniel was so caressed and cajoll'd by my Tenants, that I had little of his Company, his time being spent in so many Visits, which made the Proverb good, *Love me, Love my Dog*: but now in a strange place, he will not stir from my Heels, so that it is as difficult to loose him, as before it was to keep

keep him from wandring. Thus whilst a great many flattering outward Objects invite us, how apt we are to wander from God; but when deprived of those Allurements; our Maker is free from Rivals, and our Affections chuse the noblest Object, by removing, as well as they would by the undervaluing, and the Knowledge of Inferiors. *Lord!* When I loose a Friend, or any Idle Fondness, let that loss transfer and settle my Thoughts on thee; and if thou vouchsafe to make me so happy, I shall not envy him whom the loss of his Asses made him find a Crown; and shall not so much be concerned at what thy Dispensations have bereft me of, as I shall congratulate their having reduced me unto thee.

How unreasonable is this bad weather, & what Winter weather have we had in Summer, Rainy and Cloudy weather having continued some Weeks without Intermission. We have here no small Temptations, to envy Rhodes and Syracusa, where it is a rarity to see a day without seeing the Sun. Here the Confusions of the Country seem to have infected the Air, and Serenity in the Air is as rare as in Mens Consciences; and those who make fires to defend themselves from the Cold, have displaced the florid Ornaments of their Chimneys, courting *Vulcan* more than *Flora*, so that *November* seems to be mistaken for *July*. Yet the Fruits in the Gardens gradually ripen, and promise to be good, though not early fruit. Thus for Reasons best known to God, a pious Soul may be reduced to so bad a Condition, the Face of Heaven appearing so overcast, that Tokens of

*Upon the
prodigious
wet weather
which
happened
the Summer
Colchester
was be-
sieged,
1648.*

God's Displeasure may follow as close, as Clouds return after Rain. But if notwithstanding the Soul seems to be deserted, it brings forth fruit, like the good ground in the Gospel, with perseverance; and if Prayers, Charity, Resignation, and other Divine Graces, genuine Products of Gods Spirit flourish and prosper in the Soul, we may conclude, that Soul to be in a State of Grace, and shall have that blessed Assistance from him, who can give the Increase, though not so conspicuously as in an unclouded Heaven, yet in the secret Method of fructifying Influences. And it may Reasonably be expected, that he who hath *begun a good work* and carryed it on through such Impediments, will gradually bring the Slowly ripening Fruit to perfection. For Christian Graces so much depend on the Author, that though he be hid in the Clouds, we need not fear the fruit we see, to be the Productions of the Son of Righteousness. We must not conclude it Winter with the Soul, because the Heavens lowr, if the Earth be fruitful, since the saving Influence of God's Spirit, may be, where it's presence is not conspicuous. Sensible Comforts and Joys are rather Rewards than Parts of our Duty; and it would be a great Consolation to pious Persons, if they would Judge of their Spiritual Condition by the Duties and Services they pay to God, rather than the Comforts he at present affords them.

*Wax being
Carved to
as a Feast.*

Though this plate passed through several Hands before it come to me, and I bowed to each, the solemnest acknowledgments were to the Lady that sent it. Why should not then my Soul stop in the like ways to Civility? Return
in

ing due thanks to every one by which Blessings are handed from *The Father of Lights* from whom every good and perfect gift comes down, having still a peculiar regard to God himself, yielding the highest Strains of Gratitude to the Giver.

The Frame of this Glass is so curious, that it is sufficient to invite both our Admiration and Curiosity; and for a much like Reason I admire, or at least approve Eloquence in Sermons; for as this glass in a Common Frame would not have invited us to consult it; so a Sermon, by some may be disregarded, though its Substance be excellent; and as the Workmanship of the glass attracts our Eyes, though it shews us not our Face, so Wit and Fine Language, though they be no Essential Part of a Sermon, often invite Men to hear or read it. And as the frame at once attracts and pleases the Eye, without representing the Beholders Face, so fine Expressions are not able to represent the Hearers Condition, nor shew him what is otherwise than it should be, which is the Use of a Looking-glass; therefore as a Man will not Judge of the goodness of a Glass by the fineness of its Frame, but by representing his Face, and will not think the worse of it for shewing his blemishes, so a wise Christian will not Judge of a Sermon by the Language, but the Divinity, and will not think the worse of it, for shewing him his Errors. And as a gaudy Frame often attracts Childrens Eyes, and makes them regardless of any thing else, and even the most useful part of it, so too much Rhetorick makes some Men, take no Notice of the more Instructive part of the Discourse: and the witty Parts are so much more used to Judge of Sermons

A a a

than

than themselves, that they use them, as if a Man should only praise the Frame, without caring to make use of the Glass it self, to mend any of his faults. Thus these Wits only use Sermons to applaud their Expressions or Contrivance, without regarding the Doctrin. And it is too often *like People, like Priest*, some taking more Pains to make their Hearers such than to reform them, taking more care to make their Expressions than their Hearers good; rather coveting, they should applaud the Preacher than condemn themselves, being better pleased with their Praises than to hear their sighs, and chusing rather to tickle their Ears than to Sting their Consciences: such may invert *St. Paul's* saying, that he preaches *not Christ Crucified*, but himself; and if he declaims against Vice, it is such affected Anger that he fences with sin rather than seeks to destroy it, exercising his Skill, rather than Hatred, being more Solicitous to be an Orator than a Divine; and had rather they should admire his Language, than take his Counsel. Again he is more concerned to remember his own Sermons, than that his Hearers should. In such Sermons little is spoke from the Heart, or affects those of the Hearers, both sides being agreed to deceive themselves; so that instead of aiming at the Conversion of sinners, the Minister thinks he hath done his Part when he hath shewn his Wit, and the Hearer his, when he hath commended it.

Poor Cur ! How earnestly does he seek to be employed , and Court me to fling it him ? being more eager with it than if it were Victuals, which he knows it is not, nor hath he an Appetite to any ; but with Pride and Gladness carries it to me , not desiring to have it for himself, but that he may return it as a present to me.

*Upon my
Spaniel fet-
tering my
Glove.*

But tho' the Glove was empty, it is thee my Soul that must fill it with Instruction, that I may learn the like behaviour towards God. Implore God less earnestly for External things for the service they will do me, than the service I may do God with them ; and as Courtiers look upon Princes commands as Favours and Honours, being satisfied that I am entrusted and employed by him. I will rejoyce at the free Expressions of his Love, that I may improve them into proportionable Expressions of mine, and will not beg his bounty without a design of raising it to his Glory.

So when God Almighty vouchsafes his Servants extraordinary Measures of Grace, he expects they should employ and exercise them, and tries them with Temptations. And thus the great Captain of our Salvation, *Heb. 12.* whom we are exhorted to regard, when he was solemnly inaugurated into his Prophetick Office, the Heavens were opened, and the Spirit of God descended like a Dove upon him, a voice declaring him to be the Son of God in whom he was well pleased. *Mat. 4.* Then as *St. Mark. 1. 12.* says, *immediately Jesus being as St. Luke hath it , full of the Holy Ghost , was led up of the Spirit into the Wilderness to be tempted of the Devil.*

*Upon ta-
king his
Horses from
Grass and
giving
them Oats
before they
were to be
rid a
Journey.*

Devil. The wise Disposer of things who will not suffer his Children to be tempted above what they are able, fortifies them by preparatory Consolations, for the Difficulties they are to be exposed to. But if these Horses could foresee the Journey, their Provinder was given them in order to, they would loose a great deal of the enjoyment of it, by thinking of the ensuing Labour. But with the Servants of God the Case is otherwise, for his Goodness reserves them a Crown, proportionable or outvaluing the Toils requisite to obtain it; so that be the preparatory Vouchsafements never so advantageous, a pious Soul may think them less Favours upon their own Account, than as they enable the Receiver to be more serviceable to the Giver.

*Upon the
making a
fire with
Charcoal.*

The Lustful think, that if they can but stifle it's visible Effects, and sensible Heats, that will secure them from all the Mischief they need to fear. But Lust is so apt to intrude wherever it hath been entertained, that it may be mischievous to those that have repelled it; for as Wood being thoroughly fired, and then extinguished by choaking it up, may be turned into Charcoal, which is more easily kindled and consumed than before, so those who have had their Hearts once kindled with the flames of Lust, which is, to be set on Fire with Hell, when those Carnal flames are stifled and their heat is extinguished, their Reputation may be stained by what is past, and they still retain an unhappy Disposition to be rekindled; and by a few sparks fomented, are apt to have those Fires kindled again, and rage more fatally than ever. This

This flattering Glass adorns all the Objects I see through it with a variety of Colours, whose liveliness are as charming to the Senses, as my Reason is puzzled with their Nature, representing as many Colours as a Rain-bow. And when I look upon Gardens, Trees or Meadows, it adds Ornaments beyond those of Nature or Art. And when I look upon the most despicable things it adds beauty to their deformity, so that each Object represents a Jewellers Shop, adorned with *Saphirs, Topazes, Emeralds*, and other Orient Gems; which lively Colours shew, that Colours are but disguised Light, which are dyed by various Reflections and Refractions.

But this Glass instructs as well as delights, and by deceiving, teaches; for when God looks upon sinful Christians, polluted and disfigured with sin, they appear Loathsome to him, *who is of purer Eyes than to behold Iniquity*: but through Christ our Filthiness appears Lovely, if not Glorious; and as some Objects, as White and Flames, appear better through this Glass than dirty and ordinary Ones; yet the worst appear better through it, than the richest without it. So that notwithstanding the difference betwixt the most Innocent and Exemplary, and the frailer Children of God, when we look through Christ they are more acceptable to God, than the others, considering them only on the Account of Morality. And as looking through the Prism, alters not the Nature of the Objects, which it leaves as homely and foul as before; God's gracious aspect upon us through Christ, makes us by degrees fit Objects of his Delight,

and hath a transfiguring Power like the Sun, which cherishes and paints unblown Flowers with their Natural Colours, by his looking on them. Since then we are both reconciled to God, and ingratiated to him in the beloved, what Gratitude do we owe to God the Son, who hath made us appear so lovely to his Father; it being the highest Honour which leads to the highest Happiness.

CHAP. VI.

Containing the fourth Section of Occasional Reflections, which treats of Angling improved to Spiritual Uses.

*Upon being
called to
rise early
in a fair
Morning.*

TEarly in the Morning as I lay asleep, wholly taken up with Dreams, being called by a Voice I was not unacquainted with, I at first only half opened my Eyes, and fell asleep again; but being called a second time and shaken withal, I still was unwilling to shake off my Drowsiness, and to loose my pleasant Dreams; but my Friends earnestness at last prevailed, and we pursued our design, which was to go a fishing. The first delightful Entertainment I met with in my Walk, was the hopes of such a fine Morning, and the Freshness of the Air, the Viridure of the Fields and Trees, and the various Colours of the Meadows, and the Melodious tunes of Birds, which welcomed this fair Morning; to which the various Colours represented by the rising Sun in the Eastern Sky, made the Morning

Morning so charming, that I grudged not the loss of Sleep, to behold so fine a Prospect.

Thus when a Man is lulled asleep in sensual Pleasures, he hath the faculty, not the use of Reason, taking his Dreams for Realities; and if a serious Divine would out of concern for his Soul, or the Glory of God our Saviour, awake him out of that state; such attempts are looked upon at first as unseasonable and unwelcome, as the Light to one that is waked out of Sleep; and instead of looking upon him that attempts it, as a Friend, he is apt to check and expostulate with him, and look upon him as an Enemy; so that those that slight the welfare of Souls, without hopes of reclaiming of them, neglect their endeavours. But if by God's Blessing, he comes to be thoroughly awaked, he presently perceives that he is brought out of the Kingdom of Darkness into a Marvelous Light, and instead of empty Dreams which deluded him, and to relish which, the Eyes of his Mind must be as much closed as those of his Body, he is then admitted to manly Entertainments, such as Reason chuses, Conscience applauds, and God approves. When he finds such an advantageous Change of his Condition, he would not for any thing return to his former State, and thanks the Person that roused him, blushing to think, that others must importune him to be happy. What Reason then have we to return Thanks, betwixt shame and gratitude, to our Benefactor, being as much obliged to him as *Philemon* was to *St. Paul*, to whom as the Scripture says, he owed himself. And sometimes a new Convert will think himself so much

much obliged to the Instrument of his Change, and so suitable to the Transcendent satisfaction he finds by it, that to recompence his Benefactor, he will say with the Prophet, *that those that turn others to Righteousness shall shine for ever and ever*, which gives him hopes that God himself, whose bounty is inexhaustible, will recompence his Work. Wherefore if we have any Friends, who stand in need of this kindness, let us not be discouraged by their coldly receiving our admonitions, though they look upon them as disturbances; for not to say that the less they are desired, and the worse they are entertained, the more they stand in need of them; a Christian is not so much to consider the success of his Endeavours, as to leave it in their power to make him unhappy, whom they reprove, when he may miss his aim, without losing his Labour, since the Master he serves is as ready to reward, as able to discern intentions; for if your Endeavours succeed, you will at once make a Man your Friend, and also worthy to be so, and scarce any Men are more affectionate, than those who are made Friends, by making them Enemies to Vice.

*Upon the
Mounting,
Singing,
and Light-
ing of
Larks.*

Having passed on our way towards the River side, where we were to fish, some plowed Lands interrupted our Discourse, where we were entertained with the melodious Musick of Larks, some of which mounted gradually out of sight, and some hovering over us soon lighted near our Feet.

One of them singing all the way upwards, and mounting out of sight, not long after descended among some Clods of Earth, which being
of

of her own Colour, we presently lost sight of her. Amongst the Reflections made upon this Occasion, one was, that a Lark seems to be of the most elevated Nature of any Bird, giving the earliest and sweetest welcome to the springing Day, and this Bird which was last observed, seemed to sing as we came from the place she seemed to go to, and mounted as high as if she meant to stop at that Sun, whose beams cherished and transported her; and soared so high that if she left not the Earth beneath her sight, she mounted quite out of ours; and when she lighted on the Earth to catch some Worms or other wretched Prey, she seemed like the Earth about her, and could not be discerned from it's Clods. And as other Birds fly not so high, nor are so fond of the Sun, yet build their Nests in Trees, the Lark builds her's upon the Ground, and looks like part of it. Thus many a Hypocrite when conversant about sublimer Subjects, looking like a Saint, is pleased with nothing more than new Light, as if his Lips were touched with Coals from the Altar, which sweetly set forth God's Praise and Sacred Dispensations. So that in a fit of Devotion, one would either think he had been in Heaven, or would not rest till he had mounted thither. But when his Interest concerned him in secular Affairs, he seemed altogether Earthly, and meaner and lower spirited than those he undervalued for being more earthly than himself: So the best things corrupted prove the worst, it being no disadvantage to Piety to discountenance Hypocrisy as a Vice. And when pretended Religion is in request, several

veral are formally Religious, who deny the Power of it; and some have been preferred less for their *Jacob's* Voice than for their *Esau's* hands.

BUT we are not to run out of one Extreme into the other, and to deny Religion, because Hypocrites do but profess it: It is ignoble and preposterous to make Piety a step to Preferment rather than to Heaven; but it is more excuseable to live free from Scandal for an Inferior End than not to live so at all; Hypocrites being no more able to justify themselves than the prophane; and though all that own Religion are not pious, yet those that scorn to own it must be less so; and if Scoffers at Religion should succeed Pretenders to it, they cannot be said to be an Innocent sort of Hypocrites, who are better than they seem to be; for Scandal is so criminal, that those that desire to seem so, are so; and to refuse to be religious, because some seem to be so, is to be injurious to God, because others have been so; and as Counterfeits do not lessen the Value of true Pearls; so they are not less Cordial, because the Counterfeit made of *Mercury & Glass at Venice*, are rather hurtful than medicinal. And indeed Hypocrites should rather commend Piety, than discourage it, since none would endeavour to Personate it; if it were not a Noble Quality. Therefore the best way to shun Hypocrisy is to become true Professors of what we pretend to.

Upon the
sight of a
Milk Maid
singing to
her Cow.

Having made these Reflections on the singing of Larks, the next thing we observed was the melodious Voice of a Maid, which though without Skill or Art, repaired the want of that
by

by it's Native Sweetness; but her Voice was not more charming than her Person, her Face being like *Hermione*, before she proved inconstant; she had the Blushes of the Morning in her Cheeks, the Splendour of the Sun in her Eyes, and the Freshness of the Fields in her Looks; her Skin was as white as the Milk, and her Voice as melodious as the Larks; and though her Cloaths were coarse, they were cleanly, and not well suited to her Beauty; so that Nature seemed to triumph over Fortune, and made my Liberty more distressed than others could do in their most curious Dresses. This Fair Creature to whom Nature had been so bountiful, was so satisfied with her unpurchased Treasures, that she seemed as well pleased as I was to look upon her: She looked so innocently, as well as pretty, that she was likely to do mischief without intending it, and might Eclipse a hundred fine Ladies, had she the same Dress, nay without it; and might captivate a great many, who only pretend to love those designing applauded Ladies; for though Skill may guard us against the Wiles of Art, the Charms of Nature are hard to be resisted. When the Maid had done her business, she came past us, and made a Salute low enough to let us know, she had not forgot the meanness of her Condition, which was returned with another from one of us, which made the Maid smile, and go away better satisfied than she left my Friend; who seeing the Contentedness of the Creature, and the Pleasantness of the Place, could not forbear celebrating the Happiness of a Country Life; comparing what the Poets had said of the Golden Age with

with it ; and though Villagers seem to be a wretched sort of Creatures , yet their Condition seemed to make them happy, and also to keep them innocent ; being, contented with a cheap way of Living, answerable to Nature's Bounty, or an easy Industry. Whereas amongst Persons of Quality it is looked upon as want of Breeding, not to think themselves unhappy, if they have not a Thousand a Year.

But Innocence and Contentment depend more upon a Man's Mind than the Condition of Life, it not being always the Occasion or Object ; but the Degree that makes the Affections unruly and troublesome ; nor is it the intrinsic Value, but the Rate put upon things, that makes them affect the Passions. Thus a Child will be more concerned for the loss of a Sparrow, or for breaking of a Rattle than some Men will be for the Loss of an Estate or a good Friend ; and *Haman* complained more for want of a Bow from *Mordacai*, than *Job* did for all his Misfortunes, till miserable Comforters exasperated his Grief. And though Courtiers and Gallants have greater Temptations to Sin and Discontent than Country People, theirs may be as great, though not so specious, their Faults and Infelicities being not so much taken Notice of, as their Persons and Conditions being more obscure ; for their Poverty conceals their Vices as well as Vertues from us : As the Snow in the Winter very often covers their Dunghills as well as Gardens. But if we should enquire into them, the inferior Country People are not without their Parties and Intreagues as far as their Wits will allow. And the lowest Cottage hath

hath Care proportionable attended with Malice, Covetousness and Envy, if those that dwell in them are minded to entertain them. And how Envy and Discontents may produce Crimes appears from *Cain* and *Abel*, though Heirs to the whole World, yet Envy would not let them be at Peace: And the meaner necessitated sort of Men are subject to some sort of Vices, as thatched Houses are more subject to Spiders and Cobwebs than great Men's Houses. Tho' I should be apt to think these Men happy, if they thought themselves so, but the Poms and Vanities of the World are often stronger Temptations to these, than to Grandees and Courtiers; for those that are possessed of these Imaginary Joys, are convinced that they are envied without Cause. When I was conversant in great Men's Houses, I found their Course of Lives convinced me as much of the Vanity of the World, as Sermons could convince them, whereas the Country People only see the glittering outsides of Vanity and Greatness, in the most favourable Light, which is apt to tempt them to admire and envy their Condition, and to repine at their own, every gaudy trifle in a Country Town being apt to make a Country Man gape and envy them. And the Country Maid we thought so happy, may perhaps envy some Neighbouring Farmers Daughter, for a tawdry Ribbon, or a black Hood; for it is not a Mans outward Condition, but his temper of Mind that makes a Man subject to Temptations to Sin or Discontent. When *Joseph* was sold into *Egypt* and tempted by his Mistriss, though his Condition might expose him more
to

to hopes and fears than any other Man, and his Youth might make him relish those Pleasures he was invited to, yet he rather chose to be imprisoned any where, than in the Ladies Arms. But though *Joseph* was chaste in *Potifar's* house, *Ruben* committed incest in *Jacob's* house, whose Family was the Visible Church of God ; and *Lot* though Chast and Temperate in *Sodom*, was Drunk and Incestuous in a Cave, the Temper of Men's Minds making them more liable to Temptations than the place they live in.

Whether the Innocence of Country People is easier than of great Men or no, it is not so commendable ; for a Woman that is innocent, because never solicited is rather innocent than vertuous ; so those whose Ignorance secures them from the Vanities of the World, are more fortunate than meritorious ; there being a great Difference betwixt being unacquainted with the Pleasures of the World, and a Contempt of them ; and those are truly Heroick, who can enjoy all those Pleasures, as *David* could, yet chose to reject them ; for he that could feast Nations, preferred Temperance before Abundance ; and as he gained Victories over his Enemies, so he did over the Temptations Success exposed him to. And though he built stately Palaces he professed himself, but a *Stranger*, and a *Sojourner upon Earth*. Humility was his Companion on the Throne, and notwithstanding the Acclamations and Panegyricks of his Courtiers ; he preferred the Objects of Faith before the greatest Beauties. And though he had got the greatest Treasure upon Earth, yet he

Dedicated

Dedicated it to the Building of a Temple, and made the Fruits of his Valour the Oblations of his Piety. And though the greatest Person on Earth, he was willing to leave and to forsake the Throne for a Grave, through which he was to pass to Heaven; so much esteeming a Heavenly before an Earthly Crown. And though it is as difficult to meet with a Man of *David's* Condition as Temper, yet there is a great deal of difference betwixt one that is free from the Sight of Temptations, and one that rejects the Proffers of them.

But though a rural Life may be subject to Temptations, yet a private and quiet Condition of Life, is much less exposed, than a Turbulent one to several sorts of Vices and Disquiets. But as some Men will be healthful in the worst Air; and others of vitiated Constitutions will be sickly in the best Air; so some generous Souls will with Innocence and Content pass through the worst Courses of Life, better than some will in a Condition free from Disturbances and Temptations. Yet we may question their happiness much, since the Country People will admire and envy a Man for a gaudy Suit of Cloths, or two or three Foot-Men. before they know whether he is a Fool, Knave, or both; nor need we envy those who are possessed with envy themselves.

When we came to the Water side, one of the Company finding the Fish forwards enough to bite, made use of a Counterfeit Fly, made up of the Feathers of a Wild Fowl, and hawled up the Fish as fast as he could through in the Hook, which success was as pleasant to us, who were

Upon fishing with a Counterfeit Fly.

not less unwary to delude those silly Creatures. Which gave us occasion to think how the Worlds treacherous Pleasures are apt to deceive us. For as the Apostles were Fishers of Men in a good Sense; so the Devil is a skillful Fisher of Men in a bad Sense; and finds as much success in his Attempts upon us foolish Mortals; and as sadly deludes us, when he uses his best baits for the best things he can offer are of small value in respect of what it must cost us to enjoy them. But though Riches, Power, &c. which delight the Senses, are good in their kind, though they are not of the best kind; yet many are so easily deceived, that he needs not make use of his true baits to catch us, since we suffer him to cheat us with empty Titles of Honour, the smiles of great ones, and uneasy Drudgeries disguised with the Empty Names of great Employments. And though these when obtained by Sin are the rewards of it, and the Devils Counterfeit Flyes, which we greedily swallow; not discerning that which Vice shews, no more than what it hides. We ought therefore to be cautious of such baits as may grossly deceive us; for whoever is tempted with the delicious sweets of sin which the enjoyment Promises, swallows a true hook for a Counterfeit bait, which hides that under it, which makes it not need to be a Counterfeit to deceive him.

*Upon a Fish
struggling
after it had
swallowed
the Hook.*

At last a Fish having greedily swallowed the Bait, thought to go away with it, but being struck and wounded as well as detained; it after a short struggle broke the Line and carried away the hook and some part of the Line. If we are not too forwards in allowing Brutes

to think, no doubt but this Fish expected a great deal of pleasure in the bait he so greedily fell upon, which when he had got it in his Mouth, he might well think his own; and no doubt but other Fish, when they saw him swim away with it, envied his good Fortune. But though he got what he wished for, yet since he got the Hook as well as the Bait, which wounded his Gills and put him to pain, no doubt but he wished the Hook, Bait, and all out of his Jaws, the Pain of the one taking away the Pleasure of the other. Thus Men who make use of undue Measures to obtain an Object of sensual Pleasures, are often disappointed in their Expectations; Conscience, Reason or Honour, when perhaps their desires are not of the worst kind, making them do as *David* did, too earnestly longing for Water out of the Well at *Bethlehem*; which being got by the bold and venturous Attempts of his affectionate Officers, he did not taste it, but pour'd it upon the Ground. But when things are criminally obtained, sometimes it happens as it did with *Ammon*, who hated his Sister he had incestuously ravish'd more than he loved her before; and sometimes as *Judas*, who when he betrayed his Master of more value than all the World, for a little Money, could not enjoy it, but in a fit of remorse parted with that Money, which the price of his Conscience purchased; so that though he had what he looked for, he had not what he expected, nor could enjoy it for the guilt of acquiring it. And in less Criminal Cases, when Men have got their Aims, their wounded Conscience is so painful, that they detest what they have gained.

Upon the
sight of ones
shadow in
the River.

One of the Company instead of minding his Hook, fixed his Eyes upon his own Picture, reflected from the surface of the Water; and sometimes on the shadow of his Body, a little aside the Picture, in the same River, as if *Narcissus* like he was in Love with his own Picture; but his thoughts made him rather play the Part of a Christian. One of the Differences betwixt the Law and the Gospel may be represented by the Difference betwixt a Common Looking Glass, and the Picture in the Water; for though either will shew the Face, yet if my Face be spotted with dirt or otherwise grow pale with faintness occasioned by the heat of the Weather, a Looking Glass will discover them, but not wash them away; whereas the Water will both discover and wash away the Spots, and by cooling and refreshing my Body, relieve that faintness.

Thus the Law which is compared to a Looking Glass, shews us the Pollutions of our Souls, and our spiritual weaknesses, but the Gospel in *St. John* tells us, *If any Man sin, we have an Advocate with the Father, Jesus Christ, the Righteous, who is the Propitiation for our Sins, and whose Blood cleanses us from all Sin.* And the same invites all them that are tyred and thirsty to come and refresh themselves.

The Thoughts suggested by his Shadow were. *First*, That this shadow had the like relation to himself, as the Universe hath to God, it representing and containing the Impressions of his Attributes and Perfections. And as my shadow only represents the shape and outlines of my Body, so in respect of it, it is
but

but a superficial thing. and thus though the World contains the Lineaments of Divine Wisdom and Power, yet it is but a dark imperfect and superficial Representation of the Excellency of our adorable Author, who is infinitely above all his Works.

But we may take Notice, that I make this shadow without taking pains for it, with as little Difficulty as God made the World. *He spoke and it was done, He commanded and it stood fast, Psal. 33. 9. and Isaiah 40. 28. The Everlasting God, the Lord, the Creator of the Ends of the Earth, fainteth not neither is weary,* and therefore his resting the seventh Day, was a cessation from Creating, not a resting from Labour; for the Disproportions betwixt Infinite and Created Agents are so inconsiderable, that Omnipotence may make the World without Toil. Secondly, Neither Colours nor Pencil are requisite to make this Shadow, no Materials being employed about it, as God had no præ-existent Materials to form the World. Our Creed declares him Creator of Heaven and Earth, and Revel. 10. 6. the Angel that holds the Book resembles him. And the Apostle tells us. Heb. 11. 8. *That through Faith we understand, that the World's were framed by the Word of God; so that things which are seen, were not made of things that do appear. He brought forth Light out of Darkness, by calling for Light, and there was Light, he spake and it was done,* says the Psalmist; so that the World was but an *Eccho* to that *Fiat*. Another thing I observed was, that as the withdrawing my self under a Neighbouring Tree was sufficient to destroy this shadow, so the

Preservation of the World depends on the Will and Pleasure of it's Author, as *St. Paul* says, *for in him we not only live and move, but have our being*, and *Nehemiah* the 9th. and 6th. he says of God, *that he hath made the Heaven, the Heaven of Heavens with all her Host, the Earth and all things that are thereon, the Sea and all things that are therein*, to which he adds, *that he preserves them all*. So that without God's Influence the World would soon fall again into it's primitive nothing. So the Notions of Genus and Species no longer exist, than they are upheld, by being thought of by an Intellectual Being, and the *Psalmist* speaking of many of God's Creatures says, *Thou hidest thy Face, they are troubled; thou takest away their Breath, they dye, and return to their Dust; thou sendest forth thy Spirit they are Created, &c.* And as by moving any Part of my Body, I could alter the Posture of the shadow, without any Instruments or Effluvia, so when God hath a Mind to work Miracles, as when the Sun stood still in *Joshua's* time, or when it went backwards in *Hezekiah's*, we are apt to think that He is forced to put himself to a great deal of trouble, to exert his Power, whereas those things are so far from being difficult to that Divine Agent, that it is as easie as for him to resolve to do so; such miraculous Effects flowing from the Motions of his Will, it being no more trouble to produce the greatest than the least Effects amongst his Creatures, as it is no harder to move the Arm than the Finger of my shadow. Which may afford Consolation to the Church, who trust in God, that can as easily produce changes in the World,

World, as he can resolve on them; and can as easily destroy her Enemies, as he can decree their Destruction.

To which Observations we may add, that the shadow was as constant upon this fugitive Stream, where one particle continually succeeds another, as if it were upon the standing Water of a Pond, so that though as *Solomon* says, *One Generation goes and another comes, & successive Generations and Corruptions* maintaining the World, yet God's Providence hath so far established the settled Laws of Nature, that notwithstanding individuals constantly give place to one another, yet the Creatures which make up the World, represent the like Picture of the Divine Original. *Lastly*, Though this Picture is a Resemblance of the Person, yet it is very superficial and obscure; and had the Fishes Reason, they might from the shadow conclude, that the Original was a Man and not a Brute; yet they could not tell what manner of Man he was, nor know his Intentions or Thoughts; and thus though the World is as a shadow of God, it is so imperfect, that though it represents him to be the Author of the Universe, yet these productions of his Wisdom and Power gives us but a dark Opinion of his Knowledge; a great many of his other Attributes being only to be discovered by Scripture; his manifold Wisdom being so great, that even to Angels it must be made known by the Church. And if *Moses* and *St. Paul*, who had Revelations from God and intimate Communion with him, saw him but darkly as in a Glass, the Light of Nature only must give us but an im-

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perfect

perfect *Idea* of him, which our limited Nature will let us but know imperfectly in Heaven, though we there see him face to face, the dazzling Object being disclosed as our Faculties are enlarged.

To these we shall add this Moral Observation, that the shadow near noon was almost as much shorter as in the morning it was longer than the Body; which made me reflect how foolish it would be for me, who have a sure way to measure my stature, to know that it is moderate enough neither to be proud of it, nor to be complained of, to conclude my self as big as a Gyant, or as short as a Dwarf, from the Length of my shadow; and if Fame or Glory be the shadow of Virtue, it would be as unreasonable to estimate ones self without the Testimony of Conscience, which is the Standard of Intrinsic Worth, by the fickle Opinions of others, which flatter or detract, and seldom give a just estimate of Merit; for Fame may increase or decrease, and the Person still continue the same, losing nothing of substance with the shadow. And for a Man, that is to judge of himself by his own Designs and Actions, to be puffed up with vulgar Applause, and dejected by Censures, would be to mistake the Shadow for the substance.

From a fall
occasioned
by coming
too near the
Rivers
Brink.

One of the Company walking too near the Edge of the Water, where it seemed firm Land, the Water having undermined it, it gave way, and occasioned him to fall, but endeavouring to throw himself towards the Land, and by the assistance of a Friend that was near, he was safe from Danger. Which shews us, that

that it is not safe to Travel on the Confines of what is Lawful and Sinful, no more than on the borders of two hostile Countries; for when we venture too near the Confines of Sin, and to the utmost virge of what is Lawful, our Natural Proclivity to Evil is apt to carry us into Sin, as our weight carries our Bodies downwards; since we may meet with hollow ground, where we may expect to find it firm. He that goes too near Sin to day, may fall into it to morrow; so that the wise Man forbidding his Son to go into the paths of the wicked, and the way of evil Men, bids him avoid it, pass not by it, turn from it and pass away. God hath been so indulgent as to give us a Latitude and Liberty to exercise a pious Zeal over our selves, that we may shew how much we fear to offend him, and a Cautious Christian will say with St. Paul, *All things are Lawful, but all things are not expedient.* And Prudence will not always venture to the brink of Innocence.

After this Discourse we began to pursue our Angling, but were soon interrupted with a loud confused Noise, aboard a Ship, with some Barges Sailing for London; where we did not only take notice of the Windings of the River, but the Viridure of the Land on each side, occasioned by the Water which yields not only plenty and fertility at home, by enriching those places that lye near it, but helps to convey home whatever is useful and rare from the East or West Indies.

Upon the Good and Mischief that Rivers do.

One Reflection upon this Occasion was, that this River furnishes us with an Argument against the Stoicks, who would have us deal with our Passions,

Passions, as *Pharoah* did with the Jewish Males, lest they should one day rise up against us. But though these Passions are rebellious, yet it would be as unreasonable to be without them, as without Rivers, because when they overflow they do a great deal of Mischief. The Immaculate Lamb *looked round about upon certain Jews, with Indignation, being grieved for the hardness of their Hearts*: where two Passions are ascribed to him; and if we consider what use the Wise may make of their Passions, we ought not to destroy those Instruments of Piety, which God hath bestowed upon us; since we ought to retain them, as *Abraham* did those Servants *he bought with Money, whom, he both Circumcised and kept as Servants*.

But as Rivers drown those Grounds, and ruin Husband Men when they overflow, which they made fruitful, whilst they kept within bounds; so Passions destroy those Virtues which they might, if within due bounds, be serviceable to. Valour is said to be Anger's whetstone; and the Apostle counselling us *to be angry* and not to sin, argues Passion within Limits of Moderation to be consistent with Innocence. But when Anger is blown up into Rage, or Choler turns to habitual Fury, it does more Mischief than Beasts and Inundations. The greatest part of those Rivers of Blood, which are lost in Battles, stir up the Thirst of insatiate Fury. The burning Towns and Fleets, and the Desolations of Kingdoms are the Effects of inhuman Passions, when once it invades Crowned Heads. And even Love when once it grows unruly and misplaced, produces a great many Tragedies; and

and Innocent Love, if not regulated, is apt to grow Disobedient, deceive Parents, violate Friendship, fight Duels, to betray the Innocency of Virgins, and a great many more Accidents which make Thousands Miserable. And as Ambition when it respects Virtue and Goodness, makes Men undertake Noble things, so when it tends to Superiority in Fame and Power, how many Vices does it run Men into! as the Contempt of the Laws, the Violation of Oaths, the Renouncing of Allegiance, &c. and when harboured in a Princess Breast, it tends to the undoing of his own Subjects, and a great many Inconveniences that Result from his Disputes with Neighbouring States. *From whence came Wars and Brawlings amongst You, come they not hence, even of your Lusts that war in your Members,* Anger and Ambition bringing upon Men publick Calamities, either as Judgments inflicted by God, or as Evils flowing from those Mischievous Practises, which unbridled Passions inflave Men in. So that as the Usefulness of Rivers hinders them not from being secured by Banks to prevent Inundations; so neither does the Usefulness of Passions, hinder us from restraining our Passions within due bounds by Reason and Religion, which when they overflow they are like Fire and Water, which are not so good Servants as they are bad Masters.

Observing the Difference betwixt the Land that lay near the River, and that which was more remote, we could not but take Notice, how swiftly the Water run past those Flowry Meadows, so that one might think, that the Water having no inlets or receptacles, would but afford little

Upon the comparing of Land that lay near the River with that more distant.

little advantage to the Neighbouring Ground; since there are no evident ways to convey it; yet some of the firtlelizing Moisture must needs soak through the Land, which makes the Land adjacent more verdent than that, which being at a greater Distance wants that Improvement. Thus many a pious Person, who is careful to attend upon God's Ordinances, and to place himself near them, is apt to be discouraged from pursuing those Duties, by considering how little he remembers of what he hears, and is inclined therefore to think that he shall receive as little benefit for the future. But though it be a fault or unhappiness to loose so much of so pretious a Doctrin as that of Salvation, yet it is less Mischievous to forget Sermons, than to forsake the hearing of them; the one being occasioned by a weak Memory, and the other by a depraved Will, perverted by Laziness or Impatience, or some other fault. It would be as Reasonable for one that grows not fat with Eating and Drinking in a Dysentery, or a Consumption to renounce doing so. But Pious and Melancholly Persons are too partial to be Judges against themselves of their own State, being not so apt to forget any thing, as that Charity begins at home; but they may remember that Ground that is equally Good is not so fruitful, some bringing forth a Hundred, some Sixty, and some thirty Fould; and yet all of them are esteemed good; and as Mad Men that have lost their Senses, seldom complain of the want of them; so those that are void of Grace, seldom are sorry for their weakness. It is no sign of Piety to deplore their want of Proficiency.

Preaching

Preaching I fear is oftener *a Death unto Death*, than *a Life unto Life*, yet though it aggravates those Sins committed in Defiance of it, it may prevent a great many; and he that is often put in mind of God, Heaven and Hell, and his Duty, will have his Conscience in a better State, than he who never is told of such things. And if we compare a desponding Christian with one that flies from Instructions, we shall have reason to conclude, that Preaching may gradually be instructive, as the Moisture of a River gradually imparts it's Fertility to the Land by unperceiv'd Passages; for though a great deal runs by, yet some will stay by the way, which we may discern by the Effects; for remembering most, does not always make Sermons do the Most Good; water in a Pond making the Borders not the Bottom fertile; and a Sermon does more good by affecting the Understanding and the Affections, than the Memory; and if we frequent God's Ordinances with sincere Intentions, Despondents may not be Non-proficients; and though the Seeds of Regeneration grow not hastily, yet by degrees they may come to Maturity. To conclude, if a Sermon makes a Man good, or keeps him so, the Effects are not to be estimated by what we remember, but by our good Resolves.

To this we shall add, that One of the company, hearing this Observation, adds, that having bathed himself in the River, he took notice, that though the greatest part of the River run past him, without doing any good, and though, when he went out of it, he carryed very little with him, yet whilst he was in it, the stream washed
away.

away the foulness of his Skin. And likewise both cooled his intemperate heat, which made him faint, and helped him to a good Stomach, which continued some time after. Thus a Sermon, though it hath not afforded me the Advantages that others might make of it; and though when I went away, I found that I remembered but little of it, yet it had that Effect upon my Mind to move away a great many Impurities; besides I found that such Sermons allayed the inordinate heats of my desires, which Temptations excited, refreshing my Spirits; and raised my Appetite to the means of Grace, which are the true Aliments of Piety. And though Sermons do not do me all the good they might, yet I dare not forsake them, though I forget them, since it is some good to make a Man better than he was, and to create a Disposition towards being better.

*Upon a Fish
running a-
way with
the Bait.*

A silly Fish having at length seized the Bait, he had been aiming at, ran away with it, little thinking himself was taken: Thus greedy Men having got hold of things forbidden, run away with them as goods they aimed at, and whilst they think they have got a Booty, they themselves become a Prey; and whatever he gets into the Bargain, he loses himself. Amongst other Properties of Vice, the Scripture mentions the Deceitfulness of Sin; and that Wine is a Mocker; for when we think our selves possessed of a Pleasure that is sinful, we are taken by it; as *Demoniacks* are possessed with the Devil, who serves Sinners as he does Witches, when he gets command by seeming to obey, and answering their wicked desires. And when

Sin

Sin is the kindest, and exceeds our desires, our Condition is like that of the *Cananite* General, whom *Jaël* brought Milk instead of Water, which he only requested; but this, like the counterfeit Fly, betrayed him to *sleep the Sleep of Death*, *Judg. 4. 29.* his Fears being exceeded rather than his Desires. But further, though this Fish seemed to have devoured the hook and bait, yet it is taken by it: So the Devil when he had played the Serpent and the Lion, and perswaded the *Jews* and *Gentiles* to betray their Saviour, and had made *Herod* and *Pilate* Friends, to be Enemies to Christ, and thus seemed to have conquered the greatest of his Enemies, and to have swallowed up the Lord of Life, he presently triumphantly said, *O Death where is thy sting? O Grave where is thy Victory?* *2 Cor. 15. 15.* and did by Death conquer him, that had the power of Death, that is the Devil, *Heb. 2. 14, 15.* and likewise delivered those from the Fear of Death, whom it hindered from relishing the Joys of Life.

Seeking for a more convenient place for our Sport, we got into a Boat, which promised, for a Reward, to carry us to a baited place, where Fish were plenty; but whilst we were in the Boat, a storm rising and the Watermen being unskilful, the Passengers could not forbear finding Fault; but the Watermen being both unskilful and drunk, and the Confusion betwixt the Passengers and them, being likely to overset the Boat, which was very unskilfully managed, one of us advised them to sit still, and let the Watermen govern the Boat, as well as they could.

*From a
Danger oc-
casioned by
a Contest
with a
Steersman.*

When

When the Wind was over, we had time to entertain our selves with the following Reflections. *First*, A Common-Wealth being compared to a Ship, the Skill of Ruling Nations is an Art both noble and difficult, a Ruler being to work upon free Agents, who may have private interest and designs, different from those of the Prince, and perhaps repugnant to them. And Prizes in Government are thought so valuable, and so eagerly pursued, that it makes the Rulers of States often misgovern them. But the Infelicities of declining States, are not always due to the Imprudence of Rulers; but the Resentments of such Imprudence, often occasions publick Disorders. And it is a question, whether it be a greater Infelicity, to have indifferent States-Men, or a great many wise Subjects, who is apt to censure what is done by their Superiors, because not done by themselves. And it may be questioned, whether the respect we pay to Princes is grounded on our Reason, and our inward Thoughts: for Right in Government does not employ Skill, nor confer it, a Crown adorning the outside, without enriching the inside; and the Splendour can scarce dazle the Beholders, though it does them that wear it, the Jurisdiction of Reason reaching Thrones themselves; Though Sovereigns sometimes can not well avoid what they do. Nor is it more a breach of Loyalty to question the Prudence of a Governour, than to think him Tall, Streight, or Sharp-sighted, when he is Low, Crooked, or Pur-blind. A Monarch may command my Life or Fortune, but my Opinion I cannot command my self; it
arising

arising from the Nature of the thing I judge of; therefore to think, that all things done by Men in Power are done with Wisdom, is too great an impossibility to be a Duty; and it would lessen the Merit of Obedience, which upon that Account is paid to the Authority of the Magistrate; since we obey the Injunctions of Lawyers and Physicians, if for our good, though we acknowledge they have no right to command us.

And as the greatest Princes Actions should be regulated as well as judged by Reason, so lawful Authority may have a Jurisdiction over my Actions, though not my Opinions, and though Authority and Wisdom are obeyed with more charfulness, yet Power unguided by Prudence may be obeyed as punctually and faithfully. I would not oppose a Magistrate I cannot esteem; and though I may see the Folly of a Prince never so great, I can reverence Authority in the weakest. But this is not only difficult to do, but what perhaps is not usually, yet it would not be amiss if we did it more; for as Human, especially Political Matters, are attended with a great Variety of Circumstances, some or other of which may be differently considered, and estimated, so it is not difficult to represent most Actions Politick or otherwise, as those Circumstances are considered, which may excuse or discommend them: So that those Counsels, which are capable of several Constructions ought to be favourably censured and I should use the Fathers of my Country as *Noah's* Children did their sick Father, who when they saw their Father's Nakedness, covered it, being

C c

willing

willing to see no more of it, than was necessary to hide it. But the Vulgar who are the greatest and loudest part of them, that concern themselves with State-Affairs, and find fault with their Management, are but incompetent Judges of Politicks; for to judge of things by Success, is to forget the wise Disposer of Events, and contrary to the Opinion and Custom of the Wise. Besides the Vulgar have not a sufficient Prospect of the true State of Affairs, to enable them to judge of them, and are unacquainted with the Motives of the Princes Designs or Councils; so that that which to them seems imprudent, may in respect of other designs, be Politick enough; and a private whisper from an unsuspected Spy, or things unthought of by those unconcerned in State-Affairs, may make Proceedings seem imprudent, which they cannot be acquainted with; those private Reasons being as unfit to be divulged as obeyed. So that only Pride and Ignorance give the Vulgar occasion often to complain; and when they judge upon incompetent Grounds they may be mistaken, when even their Superiors are in fault. Not but that such as have Parts and Opportunities, and have suitable Conditions, and know their Interests and Designs may judge of their Councils, and know their Errors, as the Astronomers by good Glasses might discern Spots in the Sun. But for ambitious pragmatical Inferiors to correct the Government, is no less prejudicial than common; for when it is decryed at home, it encourages Foreigners to endeavour to subvert a State, and make the Subject despair of preserving it, little considering that Impru-
dences

dences in Government, are much less prejudicial than a Subversion, whether by a Foreign or an Intestin Power, such changes entailing upon an unhappy Country, the greater misfortune of War. And though the right of Government confers not skill, yet it is better to stand by the former, than oppose it, though it wants the latter; for the right is commonly inherent in one, or but two or three; but skill is so undetermined a thing, that every Man would Flatter himself capable of Sovereignty. And where the Craftiest or Strongest might preside, there must needs be frequent Vicissitudes in Government and Governours, since he that could get an Interest amongst the Souldiers, might assume the Government by Power.

But not to mention, what Confusion might happen by every Body pretending to a right of Government, and pretending to Counsel or Command, and none to obey, we shall add, that Magistracy being instituted by God, for the good of Men, we may by obeying Magistrates less Wise than our selves, or than we could wish, reap several Advantages of our Obedience, besides those Blessings which God bestows upon those that are Obedient to his Vice-Gerents on Earth. We may wish for Wise Princes, but ought to submit to those which Providence and the Laws of their Country have given them. We ought to assist with the Wisest Counsel we can, and to make the best of the Unwise Council he hath taken, not adding Faction to Misgovernment; for the Happiness of the Common-Wealth consists, not

only in the Prince Commanding, but also in his Subjects obeying well: And weak Councils assisted by those that Execute them, may be less prejudicial, than the Jarring Endeavours of those, who perhaps might govern more Wisely. Affection and Diligence in Publick Services may, in spite of Miscarriages, prevent or lessen the Ruin of a State: However it will be a satisfaction to an honest Loyal Subject; that he hath no ways contributed to Publick Calamities, and he will bear those Calamities better, when they are not attended with private Guilt. Nay, whatever Service we do to a Prince, as God's Vice Gerent, is ultimately done to that Supreme, which the Scripture calls the *only Potentate*, whose Munificence is inexhaustible, and whatever we have suffered in Obedience to his Commands we may expect to be considered in reward of our Obedience.

Upon
Clouds ri-
sing out of
the Sea, and
falling
down again
in Rain not
brackish.

Taking Notice of a Black Cloud, which interposed betwixt us and the Sun; it made us reflect that this Cloud, whilst it lay mingled with the rest of the Water from whence it was exhaled, was as clear and limpid as any of the rest, but now the Sun hath elevated it in the form of Vapours, it composes a Cloud, which no longer receives nor transmits the Light, but Eclipses the Sun that raised it, and sometimes produces dismal Storms of Rain, Wind and Hail. Thus many in a mean and low Condition, were blameless, as others; yet when Providence hath raised them, their Nature seems to be changed as well as their Fortune: and as their Condition grows better, they grow worse, and are principally taken notice of for the In-
jury

jury they do their Inferiors, and their Ingratitude towards the Monarch that raised them; High Stations perverting our Natures, and the gaining of an Earthly Crown, being far from promoting their way to a Heavenly Crown. Nor is Change of Fortune less destructive to Innocency and Morality, those Dignities which the World courts and envies, making the Possessors unworthy of them.

But to shew, what different Thoughts the same Subject may afford, as it is considered in different Circumstances, we shall further observe, that when we first saw that Cloud, it seemed to be made of Sea Water raised in the Form of Vapours, which were drove here by the Wind, and though the Water in the Sea is brackish and unwholesom, yet this raised and elevated and turned into Rain, had lost all its Brackishness; and proves both wholesom and fit to make the Ground fertile.

Thus some Men, who were subject in a private Condition to Vices, lay them aside, when elevated to Honour, as Silk-worms leave their husk behind, when they acquire wings, and become flying Animals; so some improve by their Station, being vitious before, because depressed below their proper Sphere. And indeed a Throne not only affords Temptations to Vice, but Engagements to Vertue; and though so high a Station may make a Man giddy, yet it is enough to make him circumspect, since the Eyes of the World are upon him; and indeed so sublime a Station would make a generous Soul despise mean things, which Inferiors are prevailed on by. Princes that have Shame or Honour

will consider, that there are too many Eyes upon them to keep their Faults secret and free from Censure; which Men are the more severe in, because Reputation is all that Subjects can punish their Sovereign in. A generous Mind will make them ambitious of Glory, which Monarchs cannot pursue without great and good Actions. And if they have a respect to Piety, being God's Vice-gerents, they cannot but in Gratitude to him promote his Interest; and imitate him in his Attributes of Clemency, Justice and Bounty, as he hath given them Power and Authority. Besides an Earthly Crown leaves us nothing but a Heavenly one to aspire to. And considering the Advantages, they have of doing good above others, so their Examples have a great Influence either in Vertue or Vices; and what a great Account must they give one Day of Thousands committed to their Care, which they ought to be careful to make a good one. History tells us of several, that a Crown hath not only dignified but improved, as *Saul* 1 *Sam.* 10 6, 9. who when a King, became another Man; and *Titus* was styled the Darling of Mankind: had besides his Vertue and Nobleness, an Obligingness proportionate to his Greatness; but before he arrived at the Dignity of a Crown, his Life promised not the happiness the World received from his Government, being stained before with the Blemishes of Lust and Blood. And as *Titus* had been *Indignus Imperio, nisi imperasset*; So *Henry* the Fifth before he came to the Crown committed Crimes, level with the meanest Malefactors, and was forced to be used accordingly, but when he came to the Crown, he behaved

behaved himself like a Person worthy of it, and not only conquered *France*, but gained a Victory over his Resentments, promoting that Judge whom he could not commend without condemning himself, and preferring Vertue before Revenge; and the Prince became another Man than the Subject.

When we came to the Landing Place, the Waterman took hold of the shoar with a Boat hook, and haul'd her ashoar; which otherwise would have been carryed away with the stream, which occasioned this Reflection, *viz.* That it is as ordinary for Men to think themselves wiser than God, as it is impossible for them to be so. Those that study and leave nothing undone to obtain their Ends, often lay their Designs with so much Art, that whatever becomes of the Designs of God, his Promises or Threats, they doubt not of the Success of their own. And Pious Men, who have the opportunity of discovering the Measures they take, to bring about their Ends, are often possessed with needless Fears, that Providence will be puzzled with them, and that for good and just Reasons, Providence may be forced to an After-Game in the World to come. But such Designers have the like Fate with our Waterman; for one that did not know the World was fixed, would think, that this Waterman endeavoured to pull to him whatever he forceably laid hold on; but the shoar being unmoveable, instead of drawing that to him, his Force drew himself and his Boat to that. So the Contrivers of *Babel* thought by their Building to get a Name and prevent Dispersion; and had not only engaged Mankind in

Upon drawing the Boat ashoar.

their Design, which was as high as their intended Building, since *Gen. 11.v.6.* it is said, *that this they begun to do, and now nothing will be restrained from them, which they have imagined to do.* But their Policy being contrary to God's Decree, which was to people the Earth, he made that which brought them together the Cause of their separation, so that the remotest Parts of the Earth are but Colonies of *Babel*; and though it's dispersed Architects have got them a Name, yet it is different from their design. And thus *Joseph's* Dreams of Superiority over his Brethren, occasioned them to sell him to prevent it; yet that Method brought him to be Interpreter to *Pharaoh's* Dreams, which brought him to be Lord of a rich and populous Kingdom, and by that means of his Envious Brethren. And the proud Favourite of *Ahasuerus*, doubted not of his Ends, when he provided *Mordecai's* Gibbet which if he had not erected it, he might probably have escaped. And the High Priest and *Sankedria* of the Jews thought he had acted politickly, when he resolved upon the Death of our Saviour, lest the *Romans* should come and destroy their Temple and Nation, which it rather procured than prevented. And the Devil, who was the crafty Instructor of the rest, found himself taken in his own Craftiness; for though by making *Herod* and *Pilate's* Friends, he thought to destroy the Lamb of God, and to engage them to kill the Prince of Life and by that means to destroy the Devil's Enemy, and to make God theirs; yet Christ by his Death destroyed the Devil, who had the Empire of Death; and the Wound
in

in our Saviour's side vvas deadly to him. Therefore the Decrees of Providence cannot be moved by Human Attempts, God's Power and Wisdom over-ruling their Utmost Endeavours, and using their own Policies to defeat what they aim at.

When we came to the fishing place appointed, we found them plentiful as we were told, the place being baited overnight with Corn and Worms. Admiring what a resort of Fish there was, and comparing how fast we drew them up, with the Occasion of it; these Thoughts were suggested. Those that saw the Fisherman throw his baits into the Water and go away, might think him very wastful, to bury his Corn and throw his baits to be eat by the Fish, who would perhaps never come to thank him for them. But those that knew, how profitable it was, would not think it a folly, but a piece of Prudence; for though he caught not what he threw away, yet he was rewarded with things of more Value. Thus tho' the World may esteem a generous Alms-giver, a Fool and a Prodigal, because he seems to throw away what he hath in Possession, without hopes of recovering any Goods of the like Nature; yet those that consider a Future State, and the final Issue of Temporal things, will commend his Wisdom for parting with such Trifles, for more permanent Riches. Nor will parting with a greater or less Estate alter the Case, no more than greater or smaller grains of Corn do the Fisherman's; for Heaven is more inestimable than the greatest Value we can give for it; and he who is of more value

than

*Upon
catching
store of Fish
at a baited
place.*

than all the World says that such as plentifully sow, shall likewise reap, and receive proportionable Rewards; and as the Fisherman is sure of no greater reward than Fishes for what he there threw into the Water; a Christian Adventurer may promise himself a hundred fold in this World, and Life everlasting in the Other. And therefore as St. Paul says, if we regard not things Temporal, but the invisible Ones which are Eternal, the Exhortation will be both Rational and Pious; which is after his Discourse of a future State, thus. *Wherefore my beloved Brethren, be ye steadfast, immoveable, always abounding in the Work of the Lord, for as much as you know, that your Labour is not in vain in the Lord.*

*Upon the
Magetical
Needle of a
Sun-Dial.*

We had not long pursued our Diversion in this new Station, before one of the Company pulling out his Watch to know the time of the Day, the Waterman pulled out a Sun-Dial with an Excited Needle, which both shewed the Hour of the Day, and helped to know how the Wind stood. When we had seen the Hour of the Day: I applyed my Penknife to the North Point of the Needle, which followed the Penknife which ever way it was moved, as is usual; but one of the Company holding the Case of his Watch, and his Diamond Ring to it, it gave us this Reflection: That it might give us good directions in the choice of Company; a thing of as much importance, as it's direction for Navigators to find the Poles; for as it is a good direction to know, whether a Man be good or bad, wise or foolish, so it is a good way to make him so: Conversation disposing our Minds
and

and Manners to a resemblance with those we converse with, most Men complying with Customs and Fashions in those we esteem or would be esteemed by. Yet there is a great deal of difference betwixt keeping Company with some Men, and making it our choice to do so; for when the exigency of our Calling obliges us to bad Company, this may be an Infelicity without a Fault, but it must be a great one to chuse such Company, and to prefer it before that of good and wise Men, the proper use of Conversation being to improve our time, not only to pass it away.

Many of those who are commonly called good Company, either perswade or divert us from good things, and it's esteemed indiscretion to say any thing that may enrich our Understandings, or awaken our Consciences. Yet it ought not to be the business of Conversation to promote Idleness and Vice; for if it were well employed it might be made an Instrument of Piety and Knowledge, and be as useful as pleasant. But before this can be, the Method must be quite altered, Vertue and Seriousness being commonly derided, and any thing contrary to Piety or Reason, in jest or raillery is applauded; and in civiller sorts of Company the passages are scarce worth remembring, any thing grave being looked upon as indiscretion, so that in the innocentest Company we only loose our time. And indeed, when I think of idle Company, it puts me in Mind of *Hermites*, who chuse a solitary Life, that Conversation may not disturb their devout Thoughts, or discountenance the entertainment of good ones. And if Civility were
not

not a Verge, and Hospitality in some Cases a Duty, I should take little delight in some kind of Entertainments, the Ceremonies and Insignificant Conversation being like Parents playing with their Children; and though it may be justifiable to do so, to still a Child, or keep him from harm; so the Duty of Civility justifies such Conversation, though the Expressions considered seem much below a Man, who is fitted with the Use of his Reason, or those whom Religion hath given the hopes of Heaven.

But though we ought to keep good Company to acquire Vertue and Knowledge, Christianity teaches us, that we were not born for ourselves, and therefore we ought to converse with others, that they may learn and see how much the Goodness of God hath made them different from other Men; and though our Conversation does not presently reform such, yet it may not be altogether ineffectual; for the seeds of Vertue may a long while lie dead, yet at last may flourish and fructify; so that your Conversation may have a good, though not a conspicuous Effect: As a Man may be hindered from making so much haste to Hell; so old People may be relieved by Cordials, though not perfectly cured.

And it may not be a little serviceable for a Man of Piety and Parts, to speak of Religion amongst those that deride it, and to make their Conscience a Witness of God and good Things; to let them see the Beauty of a Pious good Life, and to let them know, he despises those Vanities they doat on, living contentedly

ly without their sinful Jollities ; and to let them know, that amongst bad Men , a vertuous Life is neither impracticable, nor a Melancholly one. Our Saviour by conversing vwith Publicans and Sinners gained their Hearts, and reformed the Lives of those he conversed vwith. And though Men of settled Vertue and fine Parts may make a good Use of bad Company, yet for others to be often in such Company, is not only an Infelicity but a Fault. But generally speaking, there are three sorts of Company , One vvhich can neither improve , nor vwill be improved themselves ; Others both able to learn and to instruct ; and Others though unable to instruct me are very willing to learn. Now to apply our Discourse , if the Loadstone should be applied to the Magnetick Needle, it will be most powerfully attracted, because it can receive more Virtue from it , and if a piece of Steel be held near it, it will not be attracted so strongly, because it can receive no Magnetick Virtue from it, but may communicate some to it; but if Silver, Gold, or the most glittering Diamonds are held to it , it regards them not. Thus I shall most chearfully seek such Company, as may impart to me Vertue and Knowledge ; nor shall I refuse the Company of those who are forward to learn, and stand in need of it. But those who can neither teach me good , nor are willing to learn, though their Company may court the Eyes, & though I may accidentally happen into their Company, yet I shall not willingly chuse it.

*Upon the
Quenching
of Quick
Lime.*

At a small Distance from the Place we landed at, some Water being thrown upon unslacked Lime, and repeated till it was quenched, gave us Occasion of the following Reflection. The first Effect of Water upon this Lime, would give one Reason to think it acted by a sort of *Antiperistasis*; for that which before had no sensible Heat, upon the Affusion of Water presently grows hot, and seems to shew a great deal of Enmity and Impatience, by acting furiously upon that Cold Liquor, so as to throw a great deal of it into the Air, and heats that cold Element so much as to make it boyl and smoak. But this Conflict is not so lasting as violent; but when the Fire is spent and quenched, it lyes under the Water as quietly as it self, being as cold and moveless. Thus when a good Man first falls into prophane or vitious Company, his Zeal instead of being over-powered by such Opposition, is excited, being more likely to warm the Devotion of others, than loose any himself; but vvhhen he is frequently furrounded with such Company, he vvil too often both lose his own fervency, as well as the power of communicating it, and will at the last live quietly with them, and shew as little Religion as they, that which at the first exasperated them becoming familiar, and not at all moving them.

*Upon ones
talking to
an Eccho.*

One of our Company stragling was diverting himself with an Eccho, whom when we discovered, and found what he was doing, another of the Company told him, that he should not like such Company as talked indifferently with any Body; that would talk to her, and

make

make Noise enough ; for those who are so easy in admitting all kind of Company , provided Men have boldness enough to intrude themselves, are exposed to one of the greatest hardships, which does more mischief than most Men are aware of ; for it does not only keep fools in countenance, but encourages them to be troublesome to wise Men. Some sort of Praters fill their Discourses with Noise instead of Sense, and because Men give ear to their Impertinences, they think them none ; and Confidence and Wit are so hard to be distinguished by some, that they will easily answer any Body that will talk loud enough. Which hazard of Patience and Loss of Time encourages others to multiply idle Words, so that by Custom, Civility is made a Duty , and Vertue accessory to a Fault. And though such Talkative People are worse Grievances, and rob us of our Time, than those which judges condemn for petty Thefts, a little Money being less valuable than that Time which it cannot purchase , yet those Lords and Ladies who thus spend it, deserve it ; for if their Minds were suitable to their Qualities , they might easily banish such conversation , and live at quiet, advancing the Reputation of their own Judgment without injuring that of their Civility ; for when this Fault is committed, their Quality makes it the more conspicuous ; for no doubt but fewer will be found studious to express Wit and Vertue, when they see, that empty impertinent Prattle with Confidence and Loudness, obtains as good a Reception as the most Rational Discourse. And indeed that Tyrannous Thing, called Civility, hath been so prejudicial

judicial to Reason and Piety in conversation, that if never so many be engaged in Instructive Discourse, the Addition of one that is impertinent and below their Discourse, shall debase the whole, and level it to their own; as if the Exercise and Benefit of Wit and Vertue, were to be laid aside, for the foolish Conversation of one not able to discourse with them. Thus they seem to be ashamed of their Conversation, instead of improving him to make him fit for their Company; which if they should endeavour to do, they would either be freed of such Companions, or make them worthy of their Company.

Another Objection against the Conversation of an Eccho is, that we may make her to speak when we will, just as we please. Indeed moderate Complaisance is necessary to preserve the Peace and Pleasantness of Human Society, and Discretion allows it in many Cases; for if Men always spoke their Minds freely, and did not mutually conceal their Dislikes, and Dissents, and by External Expressions of kindness and respect, represented by Compliments and Gestures; Men have so many Imperfections, and so much Self-Love, that they would scarce endure one another. Nay though Men are Naturally inclined to indulge themselves, yet there is scarce a Man of a Thousand, that would endure himself, if we did not flatter our selves, and exercise a Complaisance within our own Breasts, and thus disguise our selves to our selves, as well as to others.

But further, perhaps I may endure, but shall never chuse a Companion, whom I must always direct how to answer me. And I should like
one

one better that would always dissent from me, than one that never would ; for I should never esteem him my Friend, or think him not worthy to be so, who rather chuses to please me, than to advantage me ; and takes not the Liberty of a Friend, by shewing that he regards me as well as himself ; for as Unity of Affections is a Token of true Frindship, so there can be no good Company, where there is not sometimes a dissent in Opinions.

But one of the Company, who vvas a Friend to Seriousness without being an Enemy to Pleasantness, added in Defence of this harmless Nymph Eccho, that she is so modest and reserved, that she never begins a Conference with You, and is so complaisant, that you must blame your self, if she says any thing to displease; and as Human Things are none of them so perfect, but that something in them ought to be shun-ed; so there are not many so imperfect, that something in them may be worthy Imitation ; and as Eccho hath two Qualities which discommend her, so she hath as many to recommend her. The first is, That this Nymph is less Talkative than most of her Sex, or even of ours ; for she never Speaks except spoke to. If we consider how much Talkativeness wastes Time, and is made up of such Discourse as either flatters the Present, detracts from the Absent, or censures our Superiors ; or, otherwise, expresses our own Prophaneness, or excites Pride and Lust in others ; and if we farther consider, that in much Words we are apt to offend, and must give an Account of these *Idle Words*, a Man being to be justified by his Words as well as Actions, we

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shall easily believe, that silence would be much more servicable to Mankind, and that Hell would be much thinner than it is. Besides silence is commendable, as it conceals Ignorance, and discovers Wisdom, it being a Property belonging to Wise Men so much, that a Fool may pass for one when he says Nothing; and this is to be said for our Nymph, that she never speaks but when an Answer is extorted from her. Another good Quality in Eccho is, that she seldom repeats above a small part of what is said, which in dangerous times is a great piece of Discretion; for some as if fit for Universal Statesmen, concern themselves in almost all the Publick Quarrels in Christendom, being zealous for a Party that hath no Benefit by their Disputes, and are not like Merchants, who may suffer by their Passions in the remoter Parts of the World. In our own fatal Differences, they will declare their Opinions, when there is no Occasion for it, for want of Judgment, and perhaps ruin themselves as well as those that protect them, by spreading Reports, and maintaining Discourses, which make them suspected amongst those, who would otherwise think their forces better. Nay some in considerable Employments, would talk so much of their Party, their Innocence not deserving it, their Goodness would not support it: These Men dealing with their Fortunes as Children do with their Cards, who build Castles, and blow them down with their own Breath. It is less Folly to believe what one hears, than to report all one believes; and especially those who are censured for want of Reservedness: For though some
Mens

Mens Talking, makes others take notice, how much their own Party confides in them, yet it would argue more Discretion to consider, that the Proof they gave of their being trusted with Secrets, argues that they ought not to be so.

One by looking long upon the rapid Stream of a deep River, grew so giddy that he had like to have fallen into it, something like this often happens by the unwary consideration of some sort of sinful Objects, especially those suggested by Atheism and Lust. For we often think of Atheistical Suggestions and Lustful Fancies without Design to pursue them, or to quit Religion and Chastity, thinking to fortify our selves against them, by discerning their Formidableness; and yet the Nature of Atheism and Lust are so pernicious, that they turn our Brains, and without the Interposition of Providence and Christian Prudence we might fall into them, and be devoured by the greatness of the Danger we were considering. It is dangerous to parly with such Enemies, though we design to strengthen our Aversion; and is as dangerous, though not so fatal, as to hold Intelligence with our Enemies. Indeed the Deformity of these Sins is such, that it cannot at once be discerned; but the Discovery is more dangerous than necessary; a small Knowledge of them being sufficient to make us abhor them. And since those Deformities, which are less obvious, are dangerous to be pryed into, we ought to be cautious, how we learn more of them than is necessary to make us hate them, since those that are frightened with the recent Marks

Upon Giddiness by looking upon a rapid stream attentively

of the Small Pox , may catch the Disease with that sight.

Upon once
drinking
Water out
of the Brims
of his Hat.

One kneeling upon his Knees, and taking up Water with the brims of his Hat turned up like a Cup, drank enough to quench his Thirst, and carelessly threw the rest upon the Ground; which gave Occasion for the following Reflection, *viz.* That if he had stooped his Head lower, he might have drank out of the River; but he thought it safer and more convenient to drink out of this new made Cup; and that he quenched his Thirst is plain, since he threw away what was superfluous; and should he have said he could not quench his Thirst, because he drank it out of the River, and not out of the Hat, it would have looked, as if he stood in need more of a Physitian than Water.

Thus if a sober Man hath a competent Estate to supply his wants and condition, it matters not, whether it be supplied by a moderate or a plentiful Fortune; and sometimes it is safer to receive it out of a moderate Fortune and more convenient; the Necessities of Nature being few and her Capacities limited. And therefore let a Man have never so much Victuals or Drink, his Body does but require a certain Quantity, and what is more only gratifies his Fancy; as when a Man's Stomach is satisfied, a Number of Dishes only feeds the Eye, or his Pride: and if he could cram more into his stomach, it would either nauseate him, or breed distempered Humours and Diseases. As *Solomon* says, *When Goods increase they are increased that eat them, and what Good is there to the Owners thereof, saving the Beholding them with their*

their Eyes. Indeed I shall not condemn them, that think not the Necessaries of Nature, the only Competency of Fortune; for though he that wants them hath just Reason to complain, yet Custom hath made Expences so necessary to some Stations, that since a Man cannot live without them, without Disgrace, there are but few so much Stoicks, or such mortified Christians, as not to think, that what is too much for one may be too little for another, so that we are to estimate Competency, not only by the Exigences of Nature, but the Quality or Station of the Person. But he that hath a Competency of outward Goods is very unthankful to repine, because he is not rich; for though Superfluities may please the Imagination, yet that Pleasure is not answerable to the Cares that imbitter an over-grown Fortune, which not only makes their Condition uneasy, but lyable to a greater Number of Misfortunes. Nor will Carelessness lessen it, a Provident Care of a Man's Estate, being a Duty and part of Prudence; so that a Man cannot loose his Estate without the Loss of his Reputation. Yet I cannot but wonder to see Men greedy of *Lading themselves with thick Clay*, and keep their *Riches* from those Uses, which give them the name of *Goods*, living otherwise than *St. Paul*, *As having all Things and possessing Nothing*. The chief Motives to this are, the keeping of a great House, and leaving their Children great Fortunes. As to the *first*, too many get by it, not to commend it; and though it be necessary as well as decent in some Cases, yet it is a very unhappy Attendant; for the Laws of Hospitality and Custom, makes him

that

that maintain it an Honourable Host, obliged to comply with the Humours of a Succession of Guests, who care as little for him as he does for them ; and the numerous acquaintance it brings him, think him obliged to them for eating his Victuals; and to requite them, must part with the most pretious thing he hath, his Time. Besides the Customs of a plentiful Table, tempts him to indulge his Appetite to the prejudice of his Health. And if they do not give him the Trouble to talk, they oblige him to hear, and take no Notice of Discourses prejudicial to his Interest ; so that for several Reasons like *David's* Course, his Table may become a Snare. As for the design of laying up Riches for Children, if they be Sons, it only tempts them to wish him dead, and prepares Incentives to their Vices, and Fuel to their Excesses when he is dead ; and if they be Daughters, they have not only the like Effects, but vast Fortunes have often betrayed unhappy Women, being sold by their Guardians, or those that should have been their Friends ; and hath often procured bad instead of good Husbands, a great Fortune obliging her to marry a high Title ; and hath occasioned several to haunt, such being obliged to sell themselves for Money, and Court that, not the Person ; for when he hath got one he hates the other, despising her for want of Extraction ; or because she debars him from some beloved Passion. So that he was no Fool, who prayed to God, *to give him neither Poverty, nor Riches, but to supply him with things suitable to his Condition, Prov. 30. 8.* Poverty and Superfluities being subject to the like Inconveniences; a
Com.

Competency being sufficient to make us thankful, without Sensuality or Pride.

Upon seeing some Boys swim with Bladders, one of the Company made the following Reflections, *viz.* That the Circumstances of this sight may be applyed to the Education of many Young Ladies, many of their Parents out of mistaken Zeal, condemning what at Court is called good Breeding and Principles of Honour, as things below a Christian, and not sufficient to bring them to Heaven, so that they are ill bred, and not only ill humoured, but ill fashioned: So that as happy Education is requisite to make them tolerable Company: Civility which is Essential to a compleat Lady they are strangers to, or rudely despise it, their Minds being unfractured with the Principles of Friendship, Generosity and Honour, which make their Sex lovely, and so illustrious in History; but these are unpractis'd in that Suppleness of Humour, which endears conversation, especially the fair Sex; so that I have been puzzled to know how to behave my self in their Company. The Serious Discourse, such as is used in Romances they are incapable of; and in trifling prattle, they are so unfociable and indiscreet, and often so bold, that instead of the respect I have for the Sex, I find as much Exercise for my Patience as my Chastity, and being obliged to lay aside my respect to the Ladies as they do their Modesty; it is more difficult to retain my Civility, than my Liberty. The Bladders which young Swimmers use are indeed but empty things, and easily made useless, and though helpful to young Beginners, are burthenfom to those

Upon seeing Boys swim with Bladders.

that are skilful. yet they preserve Novices from sinking in the Mud : Thus Honour though it be an aery thing, and is often a hindrance to great Proficients in Religion, yet to those that have not attained higher Principles, it is an excellent Support. preserving them from mean Things, and Miscarriages into which the fair Sex are, without it, apt to fall. And though Principles of Gallantry exclude not all Vices, yet they avert those that possess them from the grossest. And though to be well bred is not to be a Saint, yet to both is much better than to be the latter only ; and they are much to blame, who, before their Children are capable of the more perfect Principles of Religion, neglect that Education which makes moral Accomplishments acceptable to them, and themselves so to good Company ; for being indisposed to Spiritual Graces, and wanting Moral Ornaments of the Mind, leaves them destitute of all good Qualities.

*Upon the
Sports being
interrupted
by Rainy
Weather.*

After so fine a Day our Sport was at the last interrupted with some black Clouds, which not only threatened but produced a great deal of Rain ; so that we were obliged to retire to a Neighbouring Village to refresh our selves ; where this unwelcome change after so glorious a Morning, put us in Mind of the Fickleness and Mutability of Fortune, and how easily and soon we may be deprived of what we cannot well part with. But one of the Company being deprived of the Sport he came for, began to repine at this Interruption which was like to continue, whilst another replied, could he disperse the Clouds with a wish, he would not do it, the parched

parched Ground proclaim the want of them ; and I had rather not escape a shower, than the Husbandman should want it, publick good being to be preferred before private conveniences ; and a lowring drooping Sky is as much to be desired in it's Season , as fair Weather. Too much fair Weather with an uninterrupted Heat, breeds Caterpillars and Diseases , and fills Graves instead of Barns ; whereas Vicissitudes of Weather, render the Ground Fruitful, and the Season Healthful. Thus constant Prosperity is apt to make the Soul Barren of all, but wantonesses, so that seasonable Afflictions are advantageous as well as unwelcome. But further as to make the Earth fruitful we must be deprived of the Pleasure of the Sun to receive the benefit of the Rain ; so our perverseness makes it necessary , that God should move us to those Works, to which he vouchsafes his Smiles, by his Frowns. But oh ! how happy shall we be in that Day, which is Everlasting without Vicissitudes. Where the Sun shall do, what both is done by it and Rain here ; and where our Joys need not be Eclipsed, to preserve our Graces, or to make our Light shine the brighter. Each Soul shall be emblemed by that *Angel standing in the Sun*, which St. John saw, and then we shall not need the consideration of their Imperfections, to wean us from inferior Objects ; since the Excellences of God will be sufficient to confine our Affections. And since our Work in Heaven will only be to admire and thank him, who is infinite in Beauty and Goodness ; the more perfect Knowledge we have of his Attributes, will proportionably increase

increase our Wonder and our Praises, and make us grateful for the State we enjoy.

C H A P. VII.

Containing the Fifth Section of Occasional Reflections.

*Upon one
making Sy-
rup of Vi-
olets.*

ONE that is unacquainted with the Medicinal Virtue of Violets, and the Charitable Intentions of the Person making Syrup of them, would think the Person an Epicure, being wholly employed to gratify the Senses, making a Composition of Flowers and Sugar, which delights more than one or two Senses, the Syrup pleasing the Eye with it's Colour, the Nose by it's Scent, and the Taste by it's Sweetness; but one that knows, that they will also purge and discharge bad Humours, knows also that their pleasantness recommends their Virtues, to those who had rather continue Sick, than take a disgusting Medicine, will rather commend his prudent Charity, than blame his Curiosity, he at once presenting and enticing them to make use of his Remedy.

When a Learned and Eloquent as well as, Pious Person, is distributing Sermons, where the Productions of the Tongue or Pen are adorned with the Advantages of Learning & Wit, I shall not blame his Expence of time, whether employed in Speculative Notions in Theology, or on Critical Enquiries into Obsolete Rites or Disputable Etymologies, or Rhetorical Flourishes of Language, or any thing

thing else that hath not a Tendency directly to promote Piety, or kindle Devotion. For as Man is subject to several Wants, and is furnished with allowable Appetites, and several Faculties and Abilities to gratify them; so the Pen may be usually employed to teach Theological Truth, or incite Zeal. Nay further, Wise Men may prosecute the same design, without doing it all the same way; & notwithstanding the particular difference of their Methods, they may have the same Aim, and proceed in a Rational way. Therefore if a Man studiously prosecutes, and spends his Time in florid Compositions, I cannot be forwards in censuring him as an Effeminate or Useless Writer; for Pious and Laudable ways may be so differently promoted, by removing Objections or other Impediments, that there may be a Rational Design, of reforming with those things that delight; a nicer sort of Readers not regarding any thing, unless well set out with Flowers of Rhetorick.

Before *Esther* attempted to rescue the People of God, she hazarded a Throne, and the greatest Crown, as well as the fairest Head in the World; and one that had not known why she acted as she did, would rather have thought her a Disciple of *Epicurus* than of *Moses*; for she put on her Royal Apparel, *Est. 5. 1.* and no doubt wanted no Ornaments to make her appear magnificent, and becoming the greatest Princes in the World, and designed to dazle the greatest Monarch of his Throne, and make him pay Homage to her Charms. And those who have been acquainted with the Asiatick Luxury, will find her solicitous about the Choice of her Sweet Meats,

Meats, when she was to treat so great a Monarch, and yet her Ornaments and Banquets concurred with *Mordecai's* Sack-cloath and Ashes to rescue her Nation from their Dangers. So that whilst she prepared her Pomp and Delicacies, she provided to Sacrifice them to the Interest of God's Church and People, venturing for Heaven such Prosperity, as Nothing but Heaven could recompence.

*Upon sight
of a Kite in
a windy
Day.*

If the Air was calm, this Kite would be unregarded, but being raised by contrary Winds, makes it soar so high, that it attracts our Eyes as well as those of the Boys, and sometimes mounts out of sight. Thus a Person of Courage or Parts living in quiet or peaceable times, may languish in an Age, that hath no need of him; but in dangerous times his Courage will surmount his Difficulties, and being raised will convert them into steps to Glory and Preferment.

These Kites may likewise shew us a Resemblance of the Errors about Religion, when maintained by Men resolute and viceless; for some of their Conceits are so fond and groundless, that they would soon vanish of themselves, if they did not meet with a too early Opposition. And as Kites disregarded in a Calm, are elevated with Contrary Winds, so erroneous Opinions would soon be disregarded if not opposed, whereas persecuting of Doctrins, not prejudicial to Government, brings them into every Body's Eye, and acquires a Repute, which nothing else could procure; Divine Truths though they might without it, thrive the better by Persecution; and though they get most by it, yet it is an Advantage to Errors too. Those who are per-
secuted

secuted for Religion are generally furnished with Arguments to defend it. The Frowns of a Magistrate, and the Eyes of Adversaries, are strong Perswasives from giving them an Advantage against their Sect, to which their Personal Faults will be imputed. Besides their Sufferings move Commiseration, so that even condemned Malefactors have their share of it. And as some Men can better Suffer than Dispute, this kind of Opposition gives them an Opportunity of fighting with their own Weapons; and as their Constancy is their best Argument, so it is what most affects Mankind, their Resoluteness representing them well meaning People, being cryed up for Martyrs or Confessors; and when their Scandalous Sins are left unpunished, and harmless Errors are punished, it gives them opportunity to insinuate, that their Persecutors had rather see Men vitious than inquisitive. And indeed Sufferings, born for Conscience sake, are like Feathers to an Eagle, which though they have a weight; yet instead of clogging they help to support him, and raise him to a height admired or wondered at.

Long have I waited for this Crow; but the sides of the Trough kept him out of the reach of my Gun; he as greedily gorging himself, as the Swinish Proprietors of the Feast; but having raised himself high enough to encourage me to fire, the fatal shot soon turned his Delight into Pangs, and his Triumphant Croaking into a Dismal Tragick Noise. Thus Divine Justice uses braw-

Killing a Crow (out of a Window) in a Hogs Trough, and immediately tracing the ensuing Reflection with a Pen made of one of his Quills:

ny incorrigible Sinners, their Souls being as black as this Birds Feathers, the Livery of the Prince of Darkness, whose Works they do, and which makes them resemble these hateful Creatures. Such Obdurate *Epicures* God often suffers to continue in their Sins, till *their Iniquities filling up their determinate Measure*, Gen. 15. 16. he often makes their Sins take them off in the height of their Enjoyments, and precipitates them from the Pinnacle of their Delights into the *Place of Torments*, Luke 16. 28. where the sweets of Sin afford *Bitterness in the later End*, 2 Sam. 2. 26. where they are convinced of the Folly of gaining any thing at the Loss of their Souls. Thus the *Israelitish* Prince found a *Nemesis* to violate the Sanctuary of his Mistresses Arms, & to extinguish his Lustful Flames with the cold Blasts of Death, Numb. 25. And those that loathed Manna and lusted after Flesh, were supplied with Quails; but *whilst the flesh was yet betwixt their Teeth, ere it was chewed*, Death choaked them with it; devouring them as greedily as they did the Birds, Numb. 11. 33. And the celebrated God and Temple of the *Philistines*, Judg. 5. 6. did but ill protect them, though they had but one Enemy, whom they designed to make sport for them. And the revelling *Belshazzar* in the midst of his Royal Feast, saw the Hand-writing on the Wall, which took away the Enjoyment without spoiling the Dainties: And that Monarch whom a Siege could not hinder from Feasting, was at the last surprized, his trembling hand prefaging his Destiny under the Ensigns of *Cyrus*; whose Sword guided by Providence, the same Night let out both his

his Wine, which he drank out of consecrated Cups, and also his Blood and Life together.

We cannot but reflect on the Mutability of *On the* Worldly Affairs. This Crow a little before, *same Subject.* little thought his Body should be as much Car-
 rion as that he fed on, and that his own Quills should write the History of his Misfortunes, and his Feathers prove his Mourning. But since the healthiest Bodies are soon breathless Carcasses, and put those things into the Hands of their Enemies, which they relied on for their safety, it is madness to confide in Transitory Possessions, or treacherous Advantages. We are not to wander from God, supposing Death to be far from us, but in the height of our Jollities should remember, that those that feast themselves to Day, may be one themselves to Morrow to the Worms.

If this Worm had been as despicable as the *Upon a* rest and obscure, he might have still remained *Glow Worm* in the Hedges, and his Obscurity had preserved him from Confinement; and might have *included in* escaped if he had withdrawn that Luminous *a Crystal* Liquor as they sometime do. *Vial.*

Rare Qualities may be Prerogatives, without being Advantages, and though needless Ostentation of Excellences may be glorious, a modest Concealment may be safer; and unseasonable flashes of Wit may direct his Adversaries how to mischief him. And though this Worm is lodged in a Prison, where he is beheld with a great many Eyes, more shining in the Day than his are by Night, yet no doubt he thinks himself unhappy, his Excellency procuring him both Admiration and Captivity; the former
 delighting

delighting others, but the later creating misery to himself. Thus great Wits are so much opportun'd by other Mens Curiosity, that their Prerogative is turned into a Trouble. The Light of his Mind makes inquisitive Men disturb his Rest, his conspicuous Fame being an Enemy to his Quiet; having much Praise, but little Rest. They attract the Eyes of others, without shutting their own, and part with their Liberty for Fame. And as this Creatures being imprisoned in a Glass, does not hinder him from diffusing his Light; so there are Truths so self-evident, that no distresses or spight can restrain them; but shines forth in spight of Prisons; and procures the Teachers Admiration, though it cannot procure them Liberty.

*Upon a
Court's be-
ing put into
Mourning.*

We need not doubt, but that those that personate sadness, are Courtiers; for tho' their Cloaths are Mournful, their Faces do not appear so, their Discourse being as unconcerned as when they wore other Cloaths; and as their Grief hath neither Influence on their Looks, nor Words; it seems strange that Courtiers cannot disguise and dissemble Sorrow without an over difficult Constraint. But as Men may seem to Mourn without doing so, so we may be thought to dissemble when we do not. But what Duty can there be to Mourn for a Prince whose Subjects we are not, from whom we have received no Obligations, and who laid it out of the Power of his Successor to do good, because himself did none. And if we should ask, why we should put on black, it may be answered, that Custom hath established that Ceremony in the Courts of Princes in Amity, and that the O-

mission

mission is an Affront and a Provocation, therefore black is out of respect to the Living, not Grief for the Dead; and therefore this Mourning is not Hypocrisy, but Prudence and Civility and it would be so odd for one in another Habit to come to Court, that he would be stared at as a stranger, and one unacquainted with the place; & though there is no Law made to the Contrary to forbid such things, yet not to comply with Custom and the Rules of Civility, not only makes a Man look like a stranger, but a Player rather than a Courtier. This may give us occasion to think, since Customs are so prevalent, what a happiness it would be, if those who have the Power to introduce Customs, would make good ones; the imposing and reforming of Fashions being more Noble if well used, than the Splendour and Pleasure they live in, the Authority of raising Armies, or the Happiness of being Victorious; and it is a much more improveable Prerogative to introduce good Customs, than to coin Mettles into Money and make it current.

And though Princes do well in making good Laws, and taking care to execute them to preserve the Peace of Human Societies, and to restrain them from doing Mischief, yet there are a Thousand Rules of Reason or Christianity, which Laws have no Influence on, as Pride, Envy, Covetousness, &c. which are contrary to the Laws of Nature and Christ, and Multitudes may pass uncited before Man's Tribunal, which may receive Condemnation at Gods. But though Laws cannot prevent such Sins, yet Example may do much; and a Princes Declaration
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of what he approves or disapproves, will have a great Influence on those about him; which will be further Examples to the rest of his Subjects.

Upon hearing a Lute tuned and then well played on.

A Grand Seignior hearing an Embassadors Musick tuning their Instruments, thinking they were playing, commanded them to be thrust out of his *Seraglia*, the Jarring strings making so unpleasant a Noise, but when our Lute was tuned, this was soon recompenced with a Charming Melody, their nimble and skilful fingers making the innocentest pleasures of the senses to be one of the greatest; so that this Instrument did not delight but ravish us, and made it difficult to moderate the Transports of our Passions, though impossible to restrain our Praises or Satisfaction. And if the Musitian had been hindred from proceeding with his Lute he would have lost a great deal of Pleasure and Applause.

Thus when the Faculties and Passions of the Mind are discomposed, whoever attempts to bring them into order must meet with Opposition, and expect the beginning of a Reformation more troublesome than the past disorders. but these Difficulties ought not to discourage our Endeavours; for when once the Faculties and Affections of the Soul are tuned with Reason and Religion, the composed Mind will afford a Satisfaction which will recompence the Trouble of procuring it, not to mention that more ravishing Melody amongst the Saints, that Sing the Song of the Lamb and the Hallelujahs of the Celestial Choir.

This

This Present though paid for, I shall think not sufficiently rewarded: it's pity such Flowers were not worn by Nature's Master-pieces, with whom they might exchange a graceful Lustre, and be Ornamental to each other; but one that had not been a Lover, might think, that With more Civil to the Flowers than the Ladies, of which there are few, which those soft polished Skins and Orient Tinctures would not out-do, rather than return an equal Lustre; for this Rose hath all the Charming Varieties any Colour in the Spring can give it, and the flowers are above the flattery of Rhetorick; besides there are three unmixed Colours so bright, they exclude the Wish of Diversity; and the Dye of the various Flowers are so nicely mixed, that each flower seems a Variety. The Blushing Charms of this surpasses *Arabia's* Odours, ravishing both my Nose and Eyes, yielding more sweetness than the Bee can extract, and were they more lasting would make me more frail. This Gardner sure must be happy, *Adam's* primitive Profession which employed and recompenced his Innocence, being his Inheritance, and such a Gay plot of *Eden* as seems not touched with the General Curse, instead of Thorns and Thistles affording Lillies, and Tulips with Chaplets of Flowers.

But we are not always to Judge of the Delightfulness of a Man's Calling by the fragrant Productions of it; for we see not what Pains it cost to bring these Flowers to perfection out of despicable Seeds, for a Gardner must endure the violent Heats of the Summer, as well as the bitter Cold of the Winter; must be careful to

Upon being
presented
with a rare
Nose-Gay
by a Gentle-
man.

prevent the ill Effects of Frosts in the Spring, and must not only Prune, Water, and Weed the Ground, but to raise these Flowers, must deal in stinking Dung, besides other hardships which make that Employment bear Thorns as well as Roses.

Thus we are apt to envy a Learned Preacher for an Eloquent Sermon or a Discourse handsomely written for being able to say some things that please us ; but we consider not what trouble it cost the Author, to bring it to that Perfection ; for Learning is not like a fine Collection, where any thing may presently be supplied by a Confectioners Shop; for to write one good Book on some Subjects, a man must have the trouble to read a hundred, and where Eloquence is conspicuous, the Author hath not his Satisfaction so easy as the Reader. And even in those Composures which are designed to express Wit and move the Affections, a Man though never so rich in Natures Gifts, will think himself obliged to study Rhetorick, that he may be sure he does not transgress the Laws of it ; for though Natural Parts may supply Wit, yet a Book without Art will not be without Fault ; besides to find out apt Similitudes ; the Ornaments of fine pieces, requires as much pains as to contrive Useful Notions, as one must search amongst Briars and Weeds, to find Medicinal Herbs, Prim-Roses and Violets so that if we consider what pains it costs Authors to write Books, we are more obliged to them that write them, than otherwise we should think we are. And unless they find some recompence of their Labours, in promoting

moting Piety, or self Satisfaction otherwise, some we think so happy may rather deserve our Esteem than Envy.

None can be more delighted with the sight of those Stars that adorn the Skies, than this Child; nor were the Persians who adored the rising Sun, more charmed with it, than this Child, with those twinkling Lights; but this was but an unquiet Pleasure, the querulous Child in vain stretching forth his Hands,

*Upon a
Child that
cried for
the Stars.*

Thus in a Starry Night fond Children cry
For the rich Spangles that adorn the Sky.

Mr. W.

But the Water in his Eyes, and his Cries, make it much different from the Musick of the Sphæres, supposed by the Platonists; whereas though I take a great deal of Delight in Astronomy, yet I can look upon the Ornaments of Heaven with a Mind as serene as the Nights fit to observe them in. Thus those who are of an Amorous Disposition of Mind, and delight to gaze upon a Constellation of Fair Ladies, their Heart commonly pays for their Pleasure, and they meet with so many Disappointments that they rather Languish than Live; whereas, one that hath his Reason and Affections at Command, can look upon such Objects with pleased, and yet not dazled, Eyes, he looks upon such curious Productions and admires them for the Workmanship, adoring the Divine Artificer, and what hath been said of these is applicable to all other Objects. So that he that looks upon such Objects with the Eyes of a Philosopher and a Christian,

stian, makes them contribute to his delight, without occasioning him disquiet.

*Upon a Ladies fine
Closet.*

The variety of Objects in this Closet, both distract and delight the Eye. The Number, Choice, and Order, shew the Possessors Skill and Magnificence, and deserves Plenty, because she knows how to make Use of it. Some are scarce to be matched, and all so pretty and excellent in their kind, and so curious a Collection, that each seems a Rarity, and the Possessor can scarce see finer things than her own Closet affords, except she looks into her Glass. It is not strange, that the fair Sect should delight in handsome things about them, since that Quality they find admired in themselves; nor is it commendable that Persons of Quality should have a retiring place so neatly adorned, that it may invite them to be alone, to Read or Meditate, provided these Ornaments are not so costly as to hinder Charity, or so gawdy as to distract Devotion; for the old Serpent hath not only a variety of Wiles, but suits them to the Temper of the Person he hath to deal with; and if he cannot eradicate the Inclinations of Ladies Virtuously inclined, from the best Part of Religion, Charity; he will endeavour to blast and render them fruitless; and he thinks he hath done a great Part of his Work, if he can but hinder them from doing Good, if he cannot tempt them to do Evil; and encourages them to lay out so much in unnecessary Expences, that it disables them from applying any considerable Part of their Estates to the End God bestowed them; for by that time their House, Closet, &c. are furnished with the Ornaments

that

that Vanity and Emulation call for, they have nothing left for Charity, nor perhaps for Justice, the Creditor being often turned back as well as the Beggar, if not made a Beggar too by ruinous delays. And great Fortunes may be exhausted by gratifying Ambition, nothing putting Limits to it but Discretion; Custom having not yet regulated that Vanity.

But most Persons think this excusable, since as it is not forbid in Scripture, it cannot be sinful; but though these Sumptuous Closets are not unlawful in their own Natures, yet Circumstances may make them so, that being in Effect ill, which hinders us from doing well; and our Saviour who discommended a Woman for wearing Gold, would never countenance Sumptuous Ornaments upon the Walls. These cannot pray for us, but the poor may, or cry out against us. *Dives* in Hell is charged by the Scriptures with no other Crimes, but that he fared Sumptuously and dressed Fine, and neglected the Poor; & a few such Closets as these might easily be enlarged into an Hospital. A small part of these Superfluities might relieve the Necessities of many Families, and purchase Heaven at an easier rate than to furnish a Closet. Besides, this Practice goes not without punishment in this World, since they often live in Want, in the midst of Plenty, these trifles costing so much, that they are forced to deny themselves things necessary or convenient for those that are neither; and often sacrifice their innocent desires to their Vanity. But those that find their Happiness in making others so, take more satisfaction in feeding hungry Mouths

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than

than idle Eyes. And he that encourages expensive ways of Vanity, is worse to the Poor, than one that destroys Alms-Houses and Hospitals; and by Example is uncharitable after Death, and does harm, when Misers are wont to do good. To conclude, we ought not to make the Dictates of Piety, comply with those of Custom; and it is better to want a fine Closet than Charity.

Upon his
seeing a
Lark stoop
to and
caught
with Day-
Nets.

Poor Bird! who just now soared out of sight, and seemed at thy descent to bring a Message from Heaven, which so relished of the Place that I should be sorry to see thee rudely entertained, if that Circumstance were not necessary to the Instruction of thy Message. Different Birds are caught by their appropriated Baits, but the Lark is a Natural though not a Native *Persian*, and the Sun seldom visits our Horizon without Clouds, but is welcomed with its grateful Notes, and her aspiring flights, as if she would meet her; nay she loves Light so well that Fowlers have contrived a way to catch her and to convert it to her ruin; for by placing broken Looking-Glasses upon a moveable frame betwixt their Nets, the unwary Bird delights so much in that glittering Light, that she comes within the reach of the surprizing Nets, which suddenly cover her, whilst the Light so much dazzled her, that she could not see it.

The Devil, like this Fowler, had ensnared many a one. had not Divine Providence interposed, and snatched them away, when they were almost taken; for it always hath been the Practice of this Old Serpent, exactly to suit our Inclinations with Temptations; so that a Devil within

within conspires against Us : And *things divided against themselves are ruinous*. So that if common Temptations will not work upon them, instead of Chaff and ordinary Baits, he will aim to catch you with Light. If he knows, you have a desire after Knowledg, he will let you sport about the Intellectual Glass of Philosophy, and will suffer you to spend your time that way so much, that you shall scarce have any left for heavenly Subjects, and the Meditation of Death, if Providence did not rescue you before you was quite involved ; if Sicknes or some other means did not divert you, from that which might have betrayed you into that Light Net, rather than have shewed it you: which hath been the Fate of a great many Scholars, who have been so much taken up with their Studies, that Death hath come upon them unawares: So that they have been the surprizing Instances of what *Seneca* hath observed, *Plerosq; in ipso vite apparatu vita destituit* : or like *Archimedes*, who was so engaged in tracing his Circles, that he was not aware of that Victorious Enemy, that put an end to his Life.

It is indeed the innocence as well as pleasure of Knowledge, that deceives Men of Learning, and the wholsomest means may be surfeited on, the best living being unwholesom without Exercise. And it may be said of the intellectual World, as of the Other, *it profits not a Man to gain the whole World and loose his own Soul*. And though Philosophers say a Wise Man, cannot be banished any where, because a Citizen of the World, a Christian is every where an Exile, being a Citizen of the Heavenly Jerusalem, and
but

but a *stranger and sojourner here*. The *Father of Lyes* boasted, that the Earth was his Dominion, and our Saviour call'd him *The Prince of the World*, which he hath so much at his command, that he can lay in ambush any where, and hides his Snares with Light it self. We ought therefore to stand upon our Guard in an Enemy's Country, against such Fondness as may be injurious to Piety and dangerous to the Soul, that we may say, *surely in vain the Net is spread in the sight of any Bird*. Let no study prevent the Thoughts of Death, and though we visit *Athens*, let us dwell at *Jerusalem*, and *Mount Calvary* rather than *Parnassus*: Let us never busy ourselves about many things, and neglect that good Part which shall not be taken away from us.

CH A P. VIII.

Containing the last Section of Occasional Reflections.

Seeing a Child picking the Plumbs out of a Cake his Mother had given him for his Breakfast.

THIS Child is so Humourfom, that he despises Bread, though Nourishing and Wholesom, except disguised in the form of a Cake, to make the Nutritive Part go down by something that is Toothsome. But the Child disappoints her Plot, and picks the bait off the Hook, and eats the Sauce neglecting the Meat. Thus when first I wrote Books of Devotion, I ventured them out in an Ordinary Habit, thinking that Piety and Vertue had Native Charms

to command Adorers in any dress, but since Eloquence and Rhetorick are necessary to recommend such things, I endeavoured to Cloath Virtue in a fashionable though not in a gaudy dress; and endeavoured to mix Instructions with Delight, that they might both go down together.

But it often happens with Fishers of Men, as it did with those Fishers mentioned in Scripture, who complained, *we have toiled all Night and have taken Nothing*, Luke 5. 5. for Men grow witty enough to evade what they cannot despise, and like the deaf Adder, stop their spiritual Ears to the Voice of the Charmer, charm she never so wisely; and the best Influence Eloquence can have, is to make what was said of the Prophet applicable to the Preacher, *Lo thou art unto them as a very lovely Song of one that hath a pleasant Voice, and can play well upon an Instrument, for they hear thy Words but do them not*, but we deal with a Master that knows Intentions, and judges of the Affections that Events flow from, and the Ends we aim at.

The Disciple is not above his Master, nor the Servant above his Lord, and therefore since the ill Success of my Endeavours proceeds from the Obstinacy of others, it will not be imputed to me for a fault by him who complained, *That all the Day long he had stretched forth his hands to an unperswadable and gainsaying People*; for Men read Sermons only to pick out Wit, and hear Sermons not as Christians but Orators; and if they praise the Rhetorick, they think it excusable to overlook the Divinity. In fine, they remember nothing, but what hath an Impression
ON

on the Phancy; and what tends to reform them, and works not on their Affections.

*Upon the
sight of
Sweet
Meats.*

These Sweet Meats are so well imitated, that they seem to rival Nature rather than imitate her, so that one that looked upon them would be tempted to desire them; but if one should come too near, or endeavour to eat them, though they pleased the sight, they would but be disfigured, and perhaps might be in danger of choaking; and he would sooner wish them out of his Mouth than he wished them in.

There are some Pleasures and Conditions in the World, which shew well enough at a distance, and are not only desired, but stir up Envy, so that he that calmly looks upon them alone enjoys them, since that which at a distance promises Satisfaction, on a nearer Fruition, would be far from appearing so, and would as little gratify the Palate as the Eye, and would be more uneasie and troublesom than desirable.

*Upon the
eating of
Oysters.*

Whilst some were very greedy of eating Oysters, and commended them very much, others were only Lookers on, and used them rather as flowers to gratify the Phancy, than to please the Palate; which may give us Occasion to take notice of the strange Power and Custom of Education, which makes me less apt to censure the Customs of Foreigners, as absurd and barbarous, because they differ from ours, & since we are apt to think the Customs of eating and drinking in other Countrys barbarous and brutish, I shall proceed to some Instances of that Nature.

And *First*, we are apt to think it barbarous in the *Indians*, because they eat raw flesh, when we do the same in eating Oysters; nay our way seems more

more barbarous than theirs ; for they kill their Meat before they eat it ; but we scruple not to eat Oysters alive and swallow them so, which begin to be digested, before they are dead ; nay when we dip them in Vinegar we swallow great Numbers of Animals for sauce, which with Glasses I have seen in a small Quantity of Vinegar.

Secondly, we despise others for feeding upon Caterpillars, Grasshoppers and other Insects ; and others for feeding upon Carrion and stinking Food ; and yet we do as bad when we eat rotten Cheese, whose Colour shews its Putrefaction, and whose odious Smell is offensive to some Mens Nostrils ; and when it is so rotten as to please the Critical Palates, we swallow hundreds of Mites alive, which are but crawling Insects.

It is counted inhuman to feed upon Man's Flesh as the *Cannibals* do ; and indeed it is barbarous to kill Men to eat them ; yet Women's Milk, which some esteem but blanch'd Blood, is the Food of Children ; and Mummy is commended, and given as an useful Medicine in Falls and Bruises. And if we say, that we use Man's Flesh not as Food, but Physick, an *Indian* might say, that the Use of it often protracts sickness and pain ; whereas, the Use they make of Man's Flesh preserves Health and Vigour. And it scarce seems reasonable to eat broth in a Consumption, and to condemn the Use of it to preserve Health.

But the Custom of the *Soldanians* at the Cape of good Hope is thought the greatest Degree of Brutishness, who not only eat the Meat, but the Guts with the Dung in them. And yet we in the Gout or Scurvey often drink our own or Boys Urin.

Urin. And *Sperma Ceti*, and *Album Gracum* are frequently used Medicinally. And Sheeps Dung in *Holland* is often mixed with their Cheese to give it colour and relish. And we our selves in Oysters devour Guts, Excrements and all ; and our Courtiers and Ladies make sawce for Lobsters of that green stuff, which is but their Dung ; and this Company take a Delight in eating raw Fish. And no doubt, should a Foreigner make his Remarks upon the Customs of *England*, he would represent them as extravagant as we think theirs ; and we our selves seeing them so represented, would be as apt to condemn them, and laugh at them ; for most Nations are guided by Education and Partiality in judging one anothers Manners extravagant and obsurd, the whole World being byassed by their own Customs and Manners.

Upon a
Lanthorn
and Candle
carried by,
on a windy
Night.

It hath been much disputed, whether a publick or private Life be preferable ? which is much alike the other Question : Whether a married Life or a single ought to be preferred ? which are to be determined by particular Circumstances , for though one may be better than the other in respect of their Advantages, yet particular Circumstances may make either of them eligible to particular Persons. Those who are able to serve their Generation in publick Capacities, and can resist Temptations, are not only fit to entertain such Opportunities, but to seek them. But those who are not able to govern others, nor themselves, or to manage their own private Matters ; or whose Vertues are less able to resist , than their Power is to shun the Occasion of Sin ; they had better de-

ny themselves the Opportunities of doing good, than to expose themselves to the Temptations. For there is the like difference betwixt Vertue shaded by a private, and shining out in a publick Life, as a Candle carried in the open Air, and in a Lanthorn: In the former it affords more Light, but is sooner blown out.

I see the Magnificent Appearance hath answered Expectation; and as at Shows the Lookers on make up the greatest Part, so here the Concourſe of People of both Sexes is greater than usual on ſuch Occaſions. Moſt of the Ladies wear little leſs lively Colours in their Ribbons than in their Faces, adorned with Jewels almoſt as ſparkling as their Eyes; and the Men are dreſs'd, as if they came to be ſeen as well as to be Spectators. And if the Embaſſador be a Perſon, who knows the Manners of Men, he is not ignorant, that we value our own Faſhions ſo much, as to think Men in a *Ruſſian* Dreſs like Anticks, or ſome new Northren Animals. And though ſuch a Number of Spectators are enough to put a Stranger out of Countenance, yet they think not fit to alter their Habit, but appear as if before their own Monarch being not diſcouraged from this Manly Proceeding, by the Number of gaudy Spectators, whoſe Cloaths and Ceremonies are ſo unlike their own. And whatever others may think, wiſer and intelligent Men will not blame him for not diſparaging his own Country Faſhion, being prudent in pleaſing his Maſter, rather than Strangers, expecting the recompence of his Embaſſy at home.

Upon the firſt Audience of the Ruſſian Extraordinary Embaſſador, at which he made his Emperors Presents.

Thus

Thus when a Christian, who is a *Citizen of Heaven*, and but a *Stranger upon Earth*, converses with *Men of the World*, though as much Complaisance as is consistent with Innocence be allowable; yet when he cannot comply with their Customs, without disobeying his Master, and derogating from his Dignity, he will less regard what the Multitude do or think, than his Master's Commands, who forbids Men to follow a *Multitude to do Evil*; and therefore he rather chuses to displease Men than God, and acts as *seeing*, as well as being seen by *him that is Invisible*.

A Continuation of the Discourse.

And as the *Russians* refuse our Modes and Customs, not because they are worse, but different from their Country Customs, so a Christian refuses the Customs of this World, because bad and condemned by him that cannot err, whereas the Opposite Practice contains *those things that are good and profitable unto Men*, *Tit. 3. 8*. And as these Strangers see nothing in our Fashions, which they despise, but shew respect to some who deserve it upon other Accounts than their wearing of a Crown; those that are loyal to Vertue, look upon those they despise, as having forfeited the Dignity of their Nature, and the Title of Christians; and as the *Muscovites* know, we shall never forsake our Fashions for theirs, so we know that those who live contrary to the Rules of Christianity, will at the last, wish they had imitated what they scorn. And as these *Russians* preserve their Rites from being undervalued, by boldly appearing in them, so Christians ought not to blush at their unfashionable Practices, since those they differ from, value
Confidence

Confidence in others, because a Quality upon which they esteem themselves. But Christians have no reason to be ashamed of a truly Christian Deportment, since being *fellow Citizens* with Saints, they ought not to be unlike them here, whom they would be perfectly alike hereafter. And if the Angels are Witnesses of our Actions, good Men may say to one another, as the Prophet did to his Servant, when surrounded by the Heavenly Host, *fear not, for they that be with us are more than they that be with them*, 2 King 6. 16. And the Approbation of Glorious Spirits is better than of Sensual Men. And the Day will come when those that despise this singularity will envy their Happiness; and a Smile from Christ, will make amends for those of scornful Men. And the Sentence of Bliss pronounced before God, Angels and Men, will recompence their disdain in this World, and make it appear they did not deserve it.

It seldom happens, that Tulips last till Roses *Upon the sight of Roses and Tulips growing together.* are blown, the Disparity of those Flowers being like the Fate of those Young Ladies, who are only very handsome, and those whose less Degree of Beauty is recompenced by Wit, Discretion and Vertue; for Tulips, whilst fresh are more delightful to the Eye than Roses, but they soon decay, and when that gawdiness is gone, they are as distasteful; whereas Roses, though they appear but moderately beautiful to the Eye, retain their Colour longer, and when that decays lose not their Odour, nor other useful Qualities all the Year round.

Thus those beautiful young Ladies, who despise all other Qualities, and that regular Diet, which

which is requisite to continue their Beauty, soon decay, and that which was an Object of Wonder and Love, becomes one of Pitty and Scorn; whereas those that strive to adorn their Minds as well as their Faces, are not only desireable as long as that continues, but when that is gone, the fragrancy of their Reputation, and those Ornaments of the Mind, which Time improves, will always make them valuable to those, that discern such Excellences; and whose Esteem and Friendship is alone valuable. To conclude, Those Ladies are happiest, who, whilst young, neglect not those Qualities, which Age cannot take away.

Upon the sight of a Branch of Coral amongst a great Collection of Curiosities.

What we may observe in Coral, pretty well represents the Condition of a Christian, especially a Martyr; for it grows in an obscure Region of the world, and is always surrounded and covered with the brackish Sea-water, and often exposed to the irregular Motions of it's waves. Besides under water this Plant is soft and tender and of a dark unlively colour; and Men sail over it without thinking they have any thing under their feet; and the Fish pass by it unregarded. But when it is torn from it's root, and raised into a more elevated Region, not like common shrubs, which degenerate into fading colour, and offensive smells, and then perish, it acquires a delightful redness, and becomes solid & durable, so that it is an Ornament for the Cabins of the Curious, and is valued by Men; tho' slighted by meaner Creatures, and is placed amongst the Curiosities of Princes.

Thus a Christian in this Life is often in a mean obscure Condition, always exposed to Oppressions and Afflictions, and those that take notice of him

him are apt to despise his homeliness. Thus the *Psalmist* complained, that *all the waves passed over him*, nor are his sorrows removed in the Intervals of tempestuous Distresses. But when Sickness or Persecutions have taken away his Life, and he is translated into a higher Region, Afflictions and Distresses will be left behind. And when the sensual are cloathed with Bodies as loathsome as the Mind, and as restless as their Consciences, his Body will acquire Noble Qualities, and the *Mortal part shall be swallowed up of Life*, that Perfection which is but in part shall be done away, 2 Co. 5. 4. Which new Excellences will never decay. And he who was slighted upon Earth, shall be received into the blest Society of Celestial Spirits, and be dignified by the Son of God. We are not therefore to judge of a Christian's future state, by the present, since *Mal. 3. 17.* it is said, *they shall be mine in the Day when I make up my special Treasures*, so that we may judge of the Christian's Condition, as *St. John* hath said of it, *we are now the Sons of God*, and it does not yet appear what we shall be, but we know, that when we shall appear we shall be like him, 2 John 3. 2. which far transcends the most glorious things here.

Many good Men are not so well inclined as they ought to be, to admit the Precepts of Virtue; when those that teach them do not practise what they teach. And few are willing to take Advice from one, who does not follow it himself. And some will scarce read a Book except it come from the hand of an Angel, like that of *St. John* in the *Apocalypse*; but it would be much to the Injury of Scripture and Reason, if personal Faults should hinder them from doing good.

*Upon the
sight of
Effects of
Burning
Glass.*

And since the Gospel according to the *Ætymology* of the Word signifies, it's being welcome News, and it is a pity, those that teach it should not answer *David's* Character of *Achimaaz*, *he is a good Man, and brings good things*. But there is no Reason, why Truth should lose it's esteem for the Faults of the Proposer; when *Noah* rose from his Wine and Prophecyed, the Event answered his Predictions. Our Saviour instructing his Disciples, about the Scribes and Pharisees, who sat in *Moses's* Chair, ordered them to conform to their Doctrin, but not imitate their Example: And the Wise Men found Christ at *Bethlem*, tho' the Priests and Pharisees did not go along with them. And the Prophets Prescription, though conveyed by *Gehazi*, cured the *Assyrian* General of his Leprosy, who by his unworthy carriage in that Matter, transplanted that Distemper to himself and his Posterity. We are therefore to consider Sermons more than Preachers; for as in a burning Glass the Sun beams, only illustrate but do not heat in their Passage, yet kindle Subjects duly disposed; so Truths which do but enlighten the Preacher may inflame the Hearer, & kindle the Love of God; and as Perfumes set on fire by a burning Glass are as odoriferous, as if fired by a burning Coal; so Devotion kindled by an indevout Preacher is as acceptable to God as if otherwise. And what is said in *Kings* of *Elisha's* Bones contains a greater Miracle in the Historical, than the Allegorical Sense; it being no such wonder in that Sense for a dead Prophet to raise a Man to Life.

Upon finding a Horse shoe in the High-way

They say it is lucky to find a horse shoe. And I find some thing that justifies the Tradition; for

For if horse shoes, tho' wore out, had a Sense of their condition, it might be some consolation, that what wore them made them useful and bright; but that I have found, though not worn with travelling is eat away with rust; which makes as much waste without the like Lustre. The wise Man's Council was, *whatever our hand finds to do, we should do it with all our Might* &c. but most Men endeavour to prolong Life, being more solicitous to live long than well, and would not endure the least hardship to do the greatest good; and would rather loose a hundred opportunities of serving God than an hours sleep, with a pretence of regarding their Health. And those jelly People, who use successive Diversions to avoid serious Thoughts, make their Lives only uselefs, but not immortal. And acute Diseases as well as those that are contagious, besides Accidents, shorten so many People's Days, more than Diligence and Industry; destroy, by the Duties of Religion or Curiosity, that we need not fear to Use our Bodies for the Interest of our Souls; for our Saviour said it was *Meat* to do the Will of God that sent him, and to accomplish his Work. The trouble of Thirst, Sweating and Undressing are just recompenced by eating and drinking and sleeping: and to confine an honest Man from the Exercise of Vertue, & the Pursuit of Knowledg, in hopes to lengthen his Life, is to destroy the end and use of it, and is all one as if a Horse was offered, which he must not ride; or a Perspective Glass, with a Caution not to pull it out, lest the Air should damnify the Glasses. It would scarce be worth a Rational Soul's while to tend the Body, if not allowed to use it. And they who are so

much

much afraid of spending their Spirits are worse than Misers, both being to be parted with for the Uses they were designed; for the later by their nearness may avoid spending their Money, but Laziness will not hinder the Consumption of Time. Yet Profuseness in the one is to be avoided as well as in the other. But if I had my choice, whether I should live long and a lazy Life, or to have my Life glorious, though in a shorter Number of Days, I had rather spend my Life quickly than uselessly; for he that shortens his Life with seeking after Eternity, sooner enters upon an inexhaustible stock of it; whereas those that would lengthen their Lives by Laziness, add to the number of their Years, rather than the length of their Lives.

*Upon the
Shop of an
ugly Pain-
ter, very
well stocked
with Pi-
ctures, of
very hand-
som Ladies.*

Beauty here seems to have assumed all Varieties of Features and Complexions, so adapted to all sort of Gazers, that he must be incapable of Love, that can protect himself from that Passion. If the Originals equal the Transcripts, and Art hath not flattered Nature, rather than imitated her, these Apologies for Love may secure Pardons, as well as Profelytes; there being more Sun than one, whose brightness can dazzle by reflection. Here are Princesses whose Blood in their Face, is more illustrious, than that in their Veins; and can gain Conquest, and captivate by Proxy.

But though the Limner hath drawn some of them as handsom as Lovers think or wish their Mistresses, and some as Natural, that they can scarce be distinguished from the Originals, yet the Painter is so deformed, that he might draw a Lovelier than any here, if he would draw one just opposite and perfectly unlike his own. Which
shews

shews the difference betwixt writing fine Characters of Vertue and possessing of it, and it would be ridiculous for the Painter to think himself handsom, because he can draw Faces so; and it would be the same to be proud of devout compositions, and to fancy our selves Masters of Piety, because we could make others in Love with it. The Devil will let us write well, if we will forbear doing well. Our Wars against Vice are much like *Alexander's*, not out of Anger, but Glory; and often use the Enemy with more Curtesy when conquered, than those for whose sakes we conquered; and Vanity as often as Zeal moves us to oppose Vice; and if we are proud of them, we do but like Witches, when they turn Exorcists, joyn with Satan to cast out the Devil.

To this we shall add, that it happens to us in this Case, as it once did to *Gideon*, *Judg.* 8. 24, 25. who of the Spoils of *God* and *Israel* made an *Idol*, which in the End was his, and his house's Snare. It was Instructive and a Divine Admonition our Saviour gave his Apostles, when they told him their Power of casting out Devils, *Notwithstanding in this rejoyce not, that Spirits are Subject to You, but rather rejoyce that Your Names are written in Heaven*; and though *Judas* had this Power, yet afterwards *Satan* entred into *Judas*, and that it had been good for him, that he had never been born. And tho' as *Solomon* tells us, *he that winneth Souls is wise*, yet he that does as he teaches, shall be called great in the Kingdom of Heaven, *Mat.* 5. 19. and we are told, many in the last day will plead, that in his Name they have not only prophesied or preached, but cast out Devils, *Mat.* 7. 22, 23. and yet they may do many wonderful Works, yet be Workers of Iniquity.

quity. A true Christian should always be willing to communicate useful discoveries, and should consider the best Notions he can frame of Vertue, more as Engagements to it, than Arguments of it; and in devout Instructions, Charity ought to begin at home, so that he ought to make himself a Votary, as well as an Advocate for Piety. And as the Wise Men informed those at *Jerusalem* of the Star in the East, and followed it themselves till it came to Christ, so to get a Title to our Saviour; *A good Man out of the good treasure of his Heart brings forth good things, Luke 6. 49.* his Celebrations of Vertue being taken from his Experience, as Nurses feed themselves to nourish their Infants, giving nothing to them, which hath not first been digested in their own Breast, lest whilst he preaches to others, himself becomes a Cast away.

A Continuation of the Discourse.

It is a happiness to be able to convert mean things to Noble Uses, and make every thing serviceable to Piety, to procure Vertue. Lovers, and your self Friends; for her Votaries are so ingenuous in their Amours, that they love their Rivals, as well as their Mistress. And indeed some Persons are so inflamed with celestial fire, that their own Incentives make their pious Thoughts flame higher and higher; and when once a flame is great, tho' it sprang from never so small an Origin, it will create a Wind, even in a Calm, which will blow up and increase the flame, and make it aspire towards Heaven. But tho' the Mind be disposed never so much to pious Meditations, it cannot be supposed to be wholly taken up with such, since we may have other thoughts, as well as Religious and Moral ones; since those may not be produced by a constant frame of Mind, but by Occasional Devotions. To conclude, it is easier to make Ten good Sermons, than to put one into Practice, and to argue against Sin, than to forsake it; and we can more easily comply with the Precepts of *Cicero* than of Christ; and it is much easier to excite other Men's Passions than to command our own.

E I N I S.