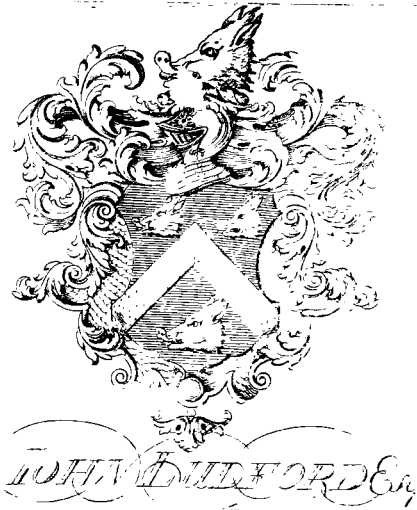




Edward Rae

Birkenhead



A
VOYAGE
TO
The World
OF
CARTESIUS.

Written Originally in French,
and now Translated into
English.

L O N D O N :

Printed, and sold by Thomas
Bennet at the Half Moon in
S. Paul's Church-Yard, 1692.

To my Friend
JAMES LUDFORD
OF
ANSELY, Esq;

S I R,

THO' all my Services and Respects necessarily devolve on you, as on the Inheriter of your Brothers Interests, yet you may lay a more immediate Claim to my Esteem and Observance, from your own repeated Favours and Obligations: In so much that I am bound by a double Tye of Gratitude, on all Occasions, to manifest my Resentments of them, and think my self unworthy privately to enjoy the Happiness, unless I declare to the World how much I am Oblig'd to you. You must needs,

The Epistle Dedicatory.

Sir, think me sincere in my Intentions, when, upon making so small and insignificant a Payment, I am willing to call the Publick to witness, I am infinitely still your Debtor. I confess the opportunity I have had of improving my Talent by the Advantage of your Brothers Tuition and Instructions, might (you may justly think) have inabled me to offer you an Original instead of a Translation, and the Transcribing his Character and Sense, might rather have been expected than my Authors. But for my Apology, I must plead my Unhappiness in the loss of him, which yet is no more peculiar to me than to the whole Society of Magdalen-College, whereof he was a Member. He is there remembered as a Person in whom the Scholar and Gentleman were so well met, that neither of them spoil'd the other: He was Learn'd without Arrogance; Genteel without Vanity; Witty without Affectation; Well-bred, Airy, Gay and Easy, yet never relax'd his Mind so far as to abate in any part of its real Improvement. And, though to instance the Graces and extraordinary Endowments of his Body, would be thought perhaps to derogate from those of his Mind, and to make the Lustre of his Vertues stand indebted to his Person, yet I can not but think so curious an Habitation

The Epistle Dedicatory.

tion was design'd to answer the Merit of the Inhabitant, whose outward Structure should represent the Quality of the Owner. But I do not mean to enlarge on his Character, for that is Work that must be wrought extremely Fine, or methinks 'tis Nauseous, even on the Dead; and, whatever I may pretend to the contrary, will look more like a Complement to your self, than Justice to his Memory. The little I have said will suffice, I hope, to shew that what I here offer you is not altogether unsuitable to his or your Genius, wherein Philosophy is divested of the Stiffness and Morosness of the Schools, and has assum'd the Garb and Air of a more Ingenuous Education than ordinary. Here is something, Sir, that will entertain your Philosophical Minutes, and something that will quicken those design'd for your Diversion; and all so mixt and temper'd, that the Author seems still to have kept his Eye on those two main ends, Pleasing and Instructing. Philosophy by this Method is become a la mode amongst the Women of greatest Quality in France, who pride themselves more in being accounted Partisans of a Sect, than Leaders in Dress and Fashion. And we may presume that the Power and Force of Imitation will reach the Minds of our English Ladies, when Learning shall be set off with the Allurements

The Epistle Dedicatory.

and Delight they meet with in reading a Romance. To provoke them therefore I have adventur'd upon this Translation, notwithstanding the Prohibition of French Commodities: But it is not from their Judgments I expect the Approbation of my Endeavours: My chief Design was to please you; And if I shall in the least succeed in that Attempt, it will be abundant Honour and Satisfaction to

Sir,

*Magd. Coll. Oxon.
May, 7. 1692.*

Your most oblig'd,
and most humble
Servant,

T. Taylor.

A D.

ADVERTISEMENT

OF THE

AUTHOR.

IT is almost three years since this Book was in a capacity of appearing; and if it were of any Concern to convince the World of this, it might be done by the Testimony of Persons unsuspected in this Affair; and such as would merit Credit when they determin'd it in favour of the Author. The Reader may perceive it in two or three places, that have some reference to those times, which were not thought necessary to be alter'd. Such is the War betwixt *M. Arnauld* and *Malebranche* Father of the Oratory, of which there is an account given, without any mention of the Cessation of Arms, or any pretence of a Truce which hath been since concluded. But it may be presum'd not amiss, to advise such as think themselves not oblig'd to so exact an Inquiry into things of that Nature, that the Map of the Moon, whose

The Author's Advertisement.

Hemisphere is describ'd at large in the Voyage to the World of *Descartes*, is no new thing, and that *Plato*, *Aristotle*, *Gassendus*, *Mersennus*, &c. are not Inhabitants of those Lands and Countries lately discover'd in that vast Continent, nor, of those wherewith the Author of this Book hath enlarg'd the Map. Our Astronomers have been acquainted with those places long ago, and have establish'd Principalities on behalf of those great Men whose Names they bear. This may be seen in the *Almagestus* of *Ricciolus*, and in many other Mathematicians, who write Observations on the Eclipses of the Moon.

Some may be farther inquisitive to demand, why *Father Mersennus* had the Honour to be made *Cartesius* his Partner, in the framing of his World, rather than so many other famous *Cartesians* he might have made choise of. To which I return, that *Father Mersennus* had the Preference, not only on the account of the particular Esteem and Love *Cartesius*, as well as other excellent Philosophers of his time, had for him, but because he was the almost only Gentleman that was in a condition to be an Assistant in that great Enterprize when he began it; the other Ingenious *Cartesians* having not left our World till after him.

A Ge-

A General View

Of the whole

W O R K.

LUCIAN, in his *Entry upon his true History*, hath taken the most advantageous Method that possibly could be thought on. He proclaims forthwith to his Reader that whatever he shall say is false. After which giving his Imagination swing, he loads the Paper with all the Extravagancies his Fancy can supply him with. By this means he secures himself from that grand Concern which attends all sorts of Composition, and consists in preserving probability in the Narration; an Obligation otherwise indispensable to every Writer that pretends to give Relations. The worst of that Exordium is, it cannot be made use of twice, and that it begins to be Thred-bare, as
soon

A general View of the

soon as it ceases to be intirely new. It is a Liberty the Publick would never pardon in any one but him that had the good fortune first to light upon it: A gentile turn that no one can imitate without passing for a Plagiary, and a Grace of Wit that admits of nothing surprizing or agreeable in a second Indevour. That Consideration joyn'd with the difficulty which may be easily guess'd, I had to preserve the strict Law of probability in my History, will persuade those that shall read it, that I envyed Lucian, more than once, this his so happy Expedient: Nor can I but acknowledge the same. Yet I must add, that a second Consideration would inevitably have determin'd me to a different Choice, although decency would have allow'd me to make use of the former. I am a Philosopher: And the Profession I pretend to, bars all admittance unto such a management. The Character of a Philosopher is always to speak Truth, or to think he does; at least indavour to be thought to speak it. For me to divest my self of all gayety of Humour, and then to affect it (to follow the Example of the greatest Enemy the Philosophers have known) would have been poorly to support a Quality, I extremely value my self upon. So that I should be cautious of using the like Preamble, and acquainting my Readers that all they were to expect of me should be false. I certify them therefore from this time forward that I have a quite contrary design, and that I mean to set off my History with an Air of Truth, such as may be able to persuade the most Incredulous, did they lay by Prejudice in the reading of it, that what I say is most undoubtedly true. But such is the Nature of Prejudice and Prepossession, that after all the pains I have taken to appear credible, I am conscious

whole Work.

notwithstanding I shall not be believ'd. Let it be how it will: For after all I will by no means offer violence to the Judgment of my Readers. Now see in few Words the design of the Work.

I therein relate the Particulars of a Voyage which I made to the World of Cartesius. I begin the Voyage very advantagiously, upon an occasion that Fortune presented me, and which seems worthy to be related. Through the whole Thred of the History, as I fall in with Emergencies, I explain with as little difficulty and as pleasantly as the Subject will bear, the most principal Points of Cartesius his Philosophy. I examine many of them in the way, and refute the greatest part of them in a manner clear, as I think, and intelligible enough; and which commonly has in it something new and unreceiv'd. I have made it my business to diversify and enliven a Subject naturally dry and melancholy, as well by the variety of Accidents, which give me occasion to digress upon them, as by some peculiar and not incurious Instances of the History of Cartesianism: And likewise with some brisk and warm Discourses of such Gentlemen, as no one will be uneasy to hear Dispute. To conclude, my last and most principal Business to the Examination and Discussion of the general System of Cartesius his World, and his managery of the chiefest Parts of it, as he proposes it in his Book of Principles, and in that which is Intituled, A Treatise concerning Light, or the World of M. Descartes, which he mentions so often in his Letters to Father Mersennus, but was not printed till after his death. And I doubt not, in that discussion, to establish this one Proposition, that hath been often advanc'd, but still repuls'd, and still, I

A general View of the

am confident, will be, as a Paradox to many, That there is scarce any Philosophical Hypothesis more unjust and incoherent, or whose Conclusions have less connexion with its Principles, than that of Cartesius.

That Proposition, I say, hath always seem'd a Paradox, because it thwarts the generally receiv'd Opinion of that Philosophy. No one will deny but that some of his Principles being but meer Suppositions without Proof, the Mind cannot find that satisfaction it demands: But what they stand upon is, That these Suppositions being once receiv'd, all the rest doth follow in so direct a Line, in so great order and perspicuity, that the evidence of the Consequences, expanding it self (as I may say) upon the Premises, the mind begins of its own accord to imbrace for Truths, what were before propos'd as bare Suppositions.

This may be true of some parts of his Philosophy, and particularly of those wherein he treats of the Nature of some Sensible Qualities, in which a Man must almost be forc'd to acquiesce, that shall read them without Prepossession. But I am of opinion, it is false in respect of the general Constructure of his World, and the Consequences he draws from it. 'Tis this part of his Philosophy which I shall more thoroughly examine, and it is this of all other, that hath hitherto best escap'd the Censure. Plenty of Objections have been made against his Metaphysics, against the New Demonstrations, he hath pretended to give, for the existence of a Deity, his distinction of the Soul and Body, his System of Light, his Rules of Motion,

whole Work.

as also those concerning Reflection and Refraction. Scarce any yet have given him disturbance upon the Hypothesis of his Vortexes, which is notwithstanding the Foundation of all he says touching the motion of the Planets, the ebbing and flowing of the Sea, the gravity and levity of Bodies; and of his whole System concerning Light, of which he himself has been so very fond.

I will not say but they have augmented the Difficulties upon each of these last Heads, since a great many have attack'd him thereupon: But I only say they have seldom or never examin'd them with relation to his general Hypothesis, by which I undertake to shew, that commonly what he writes of particular Matters, is inconsistent with the whole; and it is mostly in that, the Relation of my Voyage hath something altogether new.

For what remains, if I shall succeed in this last Affair, which was almost the only occasion of this Enterprize, I shall glory to have been the most mischievous Adversary Cartesius ever met with. For that which distinguishes that great Man from all the other Philosophers, is not the lucky Explication of some particular Phenomena's in Nature (that Praise is shar'd by an abundance of Philosophers, both Ancient and Modern) but that vastness of Capacity, and extent of Genius, whereby he could frame an intire System of the World, so well contriv'd, that taking for granted a few Principles most simple and easy to be understood, he could give a reason for all the Occurrences of Nature. It is that Attempt, as
most

whole Work.

most believe; by which he obtain'd his end, and which hath procur'd him so much Honour and Reputation. To shew then his System to be full of Contradictions, that it is incoherent, that one Supposition destroys another, is to undertake him in his strongest hold, and to wound him in the part that is most sensible. We shall see in the pursuit of the History what ought to be our Thoughts of it.

E R-

ERRATA.

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BOOKS Printed for and sold by Tho. Bennet, at the Half-Moon in S. Paul's Church-yard.

A Critical History of the Texts and Versions of the New Testament; wherein is firmly establish'd the Truth of those Acts on which the Foundation of Christian Religion is laid: By Father *Simon*, of the Oratory. Together with a Refutation of such Passages as seem contrary to the Doctrine and Practice of the Church of *England*.

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The Works of the Learned, or an Historical Account, and Impartial Judgment, of the Books newly Printed, both Foreign and Domestick: together with the State of Learning in the World. Published Monthly by *J. de la Crose*, a late Author of the Universal Bibliotheque. This first Volume, beginning in *August* last, is compleated this present *April*; with Indexes to the whole.

The Bishop of *Chester's* Charge to his Clergy, at his Primary Visitation, *May 5. 1691*.

Five Sermons before the King and Queen: by Dr. *Meggor*, Dean of *Winchester*.

A Sermon before the King and Queen, by the Lord Bishop of *Worcester*.

A Sermon before the House of Commons on the Thanksgiving Day; by Dr. *Jane*, Dean of *Gloucester*.

Waller's Poems compleat, in Two Parts.

Sir *John Denham's* Poems.

A
V O Y A G E

T O

The World of Cartelus.

P A R T. I.

IT fares with the *World of Monsieur Descartes*, as with other lately discovered Lands, whereof such different Accounts are given, as often contradict one another. Scarce Mention was made of this *New World*, but an infinite Number of *French, English and Dutchmen* resolve to go see it. The *Spaniard*, however zealous for new Discoveries, understanding it was barren of Mines of Gold and Silver, of Indigo and Ginger, seemed not much concerned about it: Wherefore those that had most contributed unto it were not a little pleased, as believing, they had no Reason to apprehend the *Inquisition's* coming there to disturb them. Among other

B

Things

A Voyage to the

Things in that World the *Earth* takes a Turn about the *Sun*, as in that of *Copernicus*: And it is known that *M. Descartes* hath more than once, *Desc. tom. 2. lett. 43.* on that occasion, reflected on the Misfortune of poor *Galileus*. I cannot tell, but it may be on his Account he hath taken so much Pains to prove *Part. 3. pr. n. 26.* this Paradox, That the *Earth* stands still, though at the same Time it is carried about the *Sun* by that Luminary's *Vortex*. Let it be how it will, many of those that give out they have best examined that Country, have made their Relations of it, but so differently, that a Man can scarce yet determine what he must believe: If you will credit one Party, they'll tell you, It is no *World* at all, but a perfect *Chaos*: That all lie in Disorder, and wild Confusion: That 'tis impossible for a Man to turn himself in it: That there is neither Light nor Colours, neither Heat nor Cold, Drought nor Moisture: That Plants and Animals *there* don't live. There you have not only Liberty, but positive Orders to doubt of every thing in Nature. Some there shall be that will dispute you out of the Name of a Man; though you have a Face like other Men; though you be made up of Flesh and Bone as they; though you Walk, and Eat, and Sleep, and, in a Word, perform all the Natural Functions of a Man; yet, I say, there are those that shall contest that Title with you, until having conversed you, and understood you speak *consequentially*, they shall be convinced that you have *Reason*.

The *Inhabitants* look Proud and Scornful, and have not the least Respect for Antiquity. *Aristotle*, especially is scouled in all Companies, and upon all Occasions, by them, being look'd upon

upon as a Vain Babler, and an *Antique* Teller of Dreams. It is said, There is neither good *Christian* nor good *Catholick* there, since they tamper with Principles too Delicate and Dangerous, in Matters relating to Religion. No Body can tell what to make of their Belief of the Creation of *Our World*, the Production of Matter and the Providence of God ; who, with them, had no other Care upon him than to order the Cubical Particles of Matter to whirl about their Center : After which he might sit Idle and Unconcerned, since all the rest could be managed without the least of his Assistance.

On the other Side, we are assured, A most excellent Conduct shines through the whole Composition ; That all is admirably contrived, and founded upon the Rules and Laws of Nature : That this *World* is indeed disburthened of an infinite Swarm of *Accidents*, *Qualities*, and *Intentional Species*, as of an unprofitable Lumber, wherewith the *Philosophers* have imbroiled and incumbred ours : But yet, notwithstanding it cannot be deny'd, but the Senses are subject to the same Impressions there as here, only with this Difference, that the Causes are more acknowledged, and better explain'd.

As to the Point of Religion, nothing seems more justifiable than the Apology of these *Gentlemen*, which perhaps some have engaged too inconsiderately for an Affair of that Weight and Moment. Can we apprehend a greater *Idea* of God Almighty, than that which *M. Descartes* hath given ? An *Idea* that he derived not from the Visible Creatures, that slight and faint Ray of an infinitely perfect Being ; but which his Mind found impressed upon it self, and which

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left no room for him to doubt of the Existence of a Sovereign Being, though he possessed neither Heaven nor Earth, nor any Body, nor indeed any other Soul than *his*: Can the Omnipotence of a Deity be advanced to a more transcendent Degree than he hath done it? God, according to him, can cause, That Two and Three shall not make Five; That four Sides shall not be requisite to make a Square; That the Whole shall be no bigger than One of its Parts; Effects that other *Philosophers* never scruple to place out of the Reach of the God-head. But has not an Author of a little Piece, called, *A Letter wrote to a Learned Jesuite*, clearly shewn, That 'tis *Descartes World* that is described in the first Chapter of *Genesis*? Another Book hath since been publish'd in *Holland*, with the Title of *Cartesius Mosaisans*, and is to the same effect. The Author of the Treatise concerning *The Influence of the Stars*, describes the End of the World upon *Descartes* his Hypothesis. Monsieur *Scottanus*, in a late Apology, that he offer'd for *M. Descartes*, against those that Endeavour'd to render him obnoxious to the Suspicion of Atheism, observes to us the Respect he had for Religion, certifying us, That one of his Reasons for the reducing his Meditations to the Number of *Six*, was the Consideration of the *Six Days* which God employ'd in the Creation of the World. If we may credit *Father Merfennus*, a Learned and Noted *Minim*, and an intimate Acquaintance of *Descartes*, we shall find nothing of a more Christian Temper, and that inspires us more ravishingly with the Love of God than *Descartes Philosophy*. In short, there is nothing more edifying than the Letter
that

that *Philosopher* wrote to the *Sorbon Doctors*, in dedicating his *Meditations* to them; which is so true, that not long since, a Friend of mine, not wont to be very Nice in those Matters, having read by chance the Letter at my House, which touched him; and finding farther the Title of *Meditations* in the Front of the Work, he feriously entreated me to lend him that Godly Book, to entertain his Devotions during *Quajion Week*.

This so strange Variety of Opinions, and Relations counter to one another, of a *World*, otherwise of no little Renown, provoked my Curiosity, and induced me to be convinced of the Truth or Falsity of the Reports, in my own Person. All the Difficulty was to find a Guide to conduct me to a Country, to which there was no Road passable either for Horse or Foot, for Coach or Barge, by Land or Sea: But presently after my Resolve, I was happily favoured with the most lucky Occasion that could be wish'd, for the undertaking my Voyage with all the Pleasure and Ease imaginable. Having sojourned some Months in a Country Town, I strook up Acquaintance with an *Old Standard*, of about eighty Years, a Man of Parts, and that formerly had conversed much with *M. Descartes*. That Commerce had begot in him an unaccountable Zeal for the Tenets of that *Philosopher*, and exasperated him to declaim against the Method and Opinions of the School, the Prejudices of Childhood, and taught him to make external Elogies on the *Cartesian Philosophy*. He had so given himself up to this Opinion, that he could no ways suffer, in Point of Philosophy, any one to deviate never so little from it. In a Con-

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ference that we had together upon such sort of Things, I desired to know if he kept up his Correspondence with any *Cartesians* of Worth and Reputation. No, (said he) I have broke with all Sorts of Persons that call themselves by that Name. I can no longer find among them that Zeal and Observance the first *Cartesians*, without Reserve attributed to that great Man. Every one now a days builds Systems according to his own Humor, and allows himself the Liberty of Adding or Retrenching what he pleases in the Platform *M. Descartes* hath laid; which is a concern of that critical Nature as cannot be once touch'd without spoiling the whole. Since the Death of the Famous *M. Chersilier*, I have forbore writing to any single Person, for I am persuaded, That the pure and unmixt *Cartesianism* was buried with him.

You Gentlemen (*reply'd I*) are of a strange Constitution. All the Prefaces of your Books are fill'd with Invectives and Raileries, against those who implicitly espouse the Sentiments of an Author, and profess they will never desert him. It looks as if you, and the rest of the new Philosophers, had banded together in an offensive Confederacy, to make continual War upon the Followers of *Aristotle* on that Account; and at the same time you fall into the same Error for which ye reproach them, and are an hundred times more bigotted to your *Descartes*, than they to *Aristotle*. For my part, I know not how to blame the Conduct of those that are somewhat moderate, which you are so enrag'd against. If their Reason hath discover'd to them another Path than what *M. Descartes* trod in, why are you angry if they follow it? *Aristotle* held Possession
a long

a long time, and reign'd absolute Monarch in Philosophy. The Prescription and Vassalage of several Ages, confirm'd his Title of Prince of Philosophers. *Descartes* is a Rebel, who durst encourage a Party against his Prince: What Right has he to demand a greater Submission unto him, than he was willing to allow to *Aristotle*?

Because (*answer'd he*) Truth and Reason are manifestly on his side. That, reply'd I, is exactly the first step Rebellion ever makes, to enforce the justice of its Cause, and proclaim the publick Welfare does depend upon it. But notwithstanding Sir (*pursu'd I*) I am more inclin'd to Neutrality in this Affair than you imagine. I have determin'd to dive to the bottom of *Descartes's* Philosophy, of which I have, as yet, but a dark and confus'd Knowledge, having never studied him in his own Works, but in the Books of his Disciples, as soon as they appear'd, and that irregularly, and without Method. But as I am oblig'd to leave this Country very speedily, and have but a short time to advantage myself by your Ability in this Affair, therefore it was that I enquir'd, Whether you had any Communication of Letters, or Friendship with any good *Cartesian* of *Paris*, to whose Acquaintance you might recommend me, and who would be willing to instruct a Scholar so apt and forward as I pretend to be?

That Proposal extreamly inspirited my *old Gentleman*, and I perceiv'd a sudden Joy diffus'd it self all over his Countenance. Ever since I knew you (*said he*, taking me by the Hand) I have observ'd in you a passionate Concern for Truth; which is the best, and first Disposition

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Descartes requires to attain unto it. Trouble not your self, you have still two Months good, which you must stay with me; and that's as much time as is required. I shall in a little time receive some News from *M. Descartes*, whereupon wee'll take such Measures as shall much shorten your Journey.

Hey day! News from *M. Descartes*! (said I) why he has been Dead this forty Years. I should be sorry, *answer'd he*, to have let that Word escape me in another's Presence, but I let it slip purposely at present, to heighten your Desire of hearing from me those Things which few in the World are acquainted with, which presently will surprize you, and the Knowledg thereof will convey you in a trice to the end you desire. Hear me then :

You must know (*continu'd he*) that *Cartesius*, like the ancient Leaders of Sects of Philosophers, avoided the publishing all the Mysteries of his Philosophy. Some he reserv'd, which he only divulg'd to some particular Friends, of which I had the good Fortune to be one. All the peculiar Discoveries he had made, which he thought might be of Use, and either contribute to Morality, or serve to make any Progress in the Knowledg of Natural Beings, he hath oblig'd the Publick with. But Prudence advis'd him to suppress such others, as some might have converted to an evil Use. The Immortality of the Soul is one of those Points, wherein he was oblig'd to observe that Method, and certainly is one of the most Important Articles in Philosophy. To prove this in a plain, familiar and intelligible way, such as shall force the Mind to give assent, and leave not the least Scruple behind

hind, is to undermine the chief Foundation of Libertinism and Atheism. This *M. Descartes* hath done, by demonstrating the distinction of the Soul and Body in a Man, by the only clear and distinct Conception that we have of those two kinds of Being. That Demonstration is one of the most fine and useful places of his admirable Meditations. And he was high-surpriz'd to see it so hotly oppos'd, especially by *Gassendus*; which, though before he had ask'd his Permission, gall'd and vex'd him, a little more perhaps than was convenient upon that occasion. Which gave rise to a Reflection in the Mouths of many at that time, and which betwixt our selves was true enough, *That M. Descartes did not understand Raillery*. But he had Moderation enough in the heat of his Conflict, to decline the submitting to the Temptation, which had often invited him to confirm his Demonstration by Experiment, fearing it might prove of dangerous Consequence: And that is the Mystery which I am about to teach you.

It was his way (as all know) to endeavour to make good by Experience, the Truths he had discover'd by the meer Light of his Understanding. He was in hopes, that having demonstrated with so clear conviction the distinction of the Soul and Body, he might make so far a Progress as to penetrate into the Secret of their Union, and at last come to that of separating, and re-uniting them when he pleas'd. The Questions that his Illustrious Scholar, *Elizabeth the Princess Palatine*, us'd to make upon that Head, and the difficulty he found in himself to invent such Solutions as might be easily understood, put him, in short, upon the Undertaking.

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One day he propos'd his Design to me, and some other of his Friends. We thought him Whimsical: And I remember I laughing made Reply, That there was but one way imaginable to effect it, which was, to find out the famous *Caduceus of Mercury*, which that God, they say, sometimes by *Jupiter's* Orders made use of, to separate the Souls from Bodies, and after a certain term of Years to joyn them unto new ones, according to the Principles of *Pythagoras's Transmigration*.

That however did not divert *Cartesius* from raving on his Project, not ascertaining himself of the Success, nor judging yet he ought altogether to despair. That was it, that engag'd him in a more exact Study than formerly of an Human Body, and occasion'd him to make those most exquisite Discoveries in Anatomy. The first Conclusion that he drew from the Idea he had of the Soul, as of a being perfectly Indivisible, was, That it was not extended through the whole Body, as vulgarly it is taught. He shew'd the falsity of that Master-Reason, which was us'd till then to confirm Men in their Prejudices, that in whatever part you prick the Body the Soul is sensible of Pain. Then said the Philosophers, It must be extended through the whole. He expos'd the Weakness of that Argument by two Experiments, that manifestly prove the perception of Pain, and the Impression of Objects in Places where our Soul is not. The first is that of those Persons who have lost an Arm, who from Time to Time perceive an Aking in the Place where their Fingers used to be, as if they had their Arm entire, although their Fingers are not there, nor by Consequence
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their Soul. The second is of a Man that's Blind, which he often instances, who makes his Staff supply the Loss of his Eyes, to distinguish the Figure and Qualities of Objects: 'Who knows by the Assistance of his Stick, whether it be Water, Earth or Grass that he touches; whether the Floor be Rough or Smooth, &c. For it is certain he perceives all this by his Staff, although no one will say, That his Soul is in it. He then demonstrated, That the Impression of Objects upon our Body consisted only in the Vibration of the Nerves and Fibres, that are spread throughout the Parts, it being unnecessary the Soul should be co-extended with them. But it was sufficient to her for the perception of Objects, that that Vibration should be communicated to some principal part where she kept her Residence; just as the Vibration caus'd by the touch of a soft, or hard, of a rough or smooth Body, communicates it self to the Hand by the Mediation of the Staff; that as the Staff extended from the Hand to the Body, which it touches, is instrumental to the Soul for the perception of the Qualities of the Body; so likewise the Nerves drawn out, for instance, from the Brain to the Hand, may be ministerial to its perception of the Body that the Hand doth touch. And that in fine, The Pain, caus'd by the too near approach of a Finger to the Fire, doth no more suppose the Souls actual Presence in that part of the Body, than does the ail of a Finger, of which a certain Maid complain'd from day to day, whose Arm, being gangreen'd, was cut off without her Knowledg. For she only felt the Pain, because the Humours, or some other Cause, made a Concussion in the

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Nerves of her Arm, which ran before to the end of her Hand, and because they strook them in a manner like to that which was formerly requisite to excite a Pain in the Finger, before she lost her Arm.

Having made this first Step, and drawn a Consequence of that Importance and Satisfaction, from so abstracted a Principle as the Indivisibility of the Soul; it was easy for him to prove, she kept her Court no where but in the Brain. There it is that the Nerves do center, or rather from thence they have their Origin. It is there that the Philosophers, if you except a few, and in those *Vanhelmont*, who seiz'd with a Whim, plac'd the Soul in the Breast; it is there, I say, that the Philosophers generally agree to be found that which we call the Common Sense, that is to say, the only place where the Soul can be advis'd of all the different Impressions that external Objects make upon the Senses. But since the Brain is of large Extent, and besides that soft and whitish Substance, which commonly goes by that Name, hath Membranes, Glands, Ventricles or Cavities, it was something intricate to resolve, and precisely to determine in what place the Soul was seated. *M. Descartes* thoroughly examin'd the different Opinions of Philosophers and Physicians thereupon, and after having solidly confuted the greatest part of their Sentiments, that were founded upon but weak and unsound Principles, he evidently concludes, The seat of the Soul must have three Conditions: First, it must be one; to the end that the Action of the same Object that at the same time strikes two Organs of the same Sense, should make no more than one

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Impression on the Soul, as to instance, she might not see two Men where there was but one. Secondly, it must be very near the Source of the Animal Spirits; that by their means she might easily move the Members. And in the third Place, it must be Moveable; that the Soul causing it to move immediately, might be able to determine the Animal Spirits to glide towards some certain Muscles rather than others. Conditions no where to be met with but in a little Gland call'd *Pineale* or *Conarium*, situated betwixt all the Concavities of the Brain, supported and incompass'd with Arteries, which made up the *Lacis Choroides*. It is that *Lacis* we may be assur'd that is the source of the Spirits, which, ascending from the Heart along the Carotides, receive the form of an Animal Spirit in that Gland, disengaging themselves there from the more gross parts of the Blood; and from thence they take their Course towards the different Muscles of our Body, partly dependently, partly independently on the Soul; as the Author of Nature has order'd it, with reference to the end he propos'd to himself in the production of Mankind.

So far *M. Descartes* took Reason along with him for his Guide; and for ought I know he might have stop'd there, had not Fortune, or rather the good Providence of God (who often encourages the laudable Curiosity of those that apply themselves to the consideration of his wonderful Works) reveal'd to him in an extraordinary manner the Secret that he was in search of. And that was without doubt one of the most strange Effects of the desires of a Philosophical Soul, which a famous Author stiles a Natural

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tural Prayer, that never fails to be heard, when it is joyned with a prudent and exact Management of our Reason.

Should you believe me, *added he*, if I should tell you *M. Descartes* had often Fits of Extasy? Why not? *Said I*; that's no such incredible thing, of so Contemplative a Man as he was; nor is it a Case without a President. Who has not heard of those of the famous *Archimedes*, in which he often lost himself, through his vehement Application to Mathematical Speculations, and in one of them his Life? *Syracuse* being taken by the *Roman Army*, whilst he was drawing Figures in his Chamber with that earnestness of Mind; the Tumult of a Town taken by Storm, was not loud enough to wake him: And he sooner was run through by the Soldiers that had forc'd his House, than he was apprehensive of their Approach.

Alas! *reply'd he*, with a Sigh, you'll see in the Consequence of what I am relating, That the Extasies of *M. Descartes* were no less fatal, tho' they were not of the same Nature, and proceeded from a far different Cause. It happen'd one Day, whilst we were at *Egmond*, a little Town in *Holland*, which he delighted in, that he entred his Stove very early in the Morning (which he had caus'd to be built like that in *Germany*, where he began his Philosophy) and set himself to thinking, as he us'd to do. Two Hours after, I came in: I found him leaning over the Table, his Head hanging forward, supported with his left Hand, in which he held a little Snuff Box, having his Finger near his Nose, as if he was taking Snuff. As for the rest he was Immoveable, and held his Eyes open:
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The noise that I made in entering the Room not causing him to stir, I had the Patience to observe him half an Hour postur'd in that manner, without his perceiving of me. In the mean while there happen'd an Adventure that much surpriz'd me: There stood upon the Cornish of the Wainscot in the Stove, a Bottle of the Queen of *Hungary's* Water; I was amaz'd to see it descend, whilst no Body came near it, and to pass through the Air towards *M. Descartes*. The Cork, with which it was stop't, came out of its own Accord, and the Bottle fastning it self to his Nose, hung there for some time. I protest I durst have sworn at that moment, there had been no small Conjuring in the Business of our Philosopher and that some familiar *Demon*, like that of *Socrates*, had inspir'd him with all the fine Things he still had taught us. But I was convinc'd not long after that there was nothing less in it, and I desire you to suspend your Judgment thereon. He awaken'd a little while after as in a start, and striking his Hand upon the Table, *This time at last*, said he, *I have it*. I thought him still in a Dream: And springing up forthwith upon his Chair, transported with Joy, without seeing me, he cut two Capers in the middle of the Room, still repeating, *I have it, I have it*. I burst out with Laughter to see that Frolick, a thing not customary with *M. Descartes*, being naturally of a Grave and Melancholy Temper; who hearing and seeing me at the same time, presently reddn'd, and afterwards fell a Laughing as well as I. And as I was urgent with him to give me the Reason of his Joy and Rapture: To punish you, says he, for having observed an *Indecorum* unbecoming a Philosopher,

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sopher, you shall not know't so soon : And with that he left the Room in which we were, and entred into his Closet, bolting it upon him. Nevertheless two days after he imparted to me the Mystery.

We took a turn together out of Town, and after occasional Discourse of several Things ; Well, said he, abruptly, without recourse to *Mercury's Caduceus*, I have found out the Secret, not only of the Union of the Soul and Body, but also how to separate them when I please : I have experienc'd it already. That was the Product of the Meditation, wherein you surpriz'd me the other day ; and when I seem'd to you to awake of a suddain, I came farther a Field than you imagine : He spoke this in so serious and positive a way, that he seem'd to be in earnest. It shall be your Fault, *added he*, if you are not convinc'd of the Truth of what I say, and of the Experiment. It is the most curious Secret in the World. I am resolv'd to commit it but to very few ; but that Adherency which you have manifested until this time unto me, will not suffer me to be reserv'd in any thing. He went on, without giving me time to complement his Generosity, and related that extraordinary Event in all its Circumstances.

He told me, that being fix'd attentively upon the Question which the *Princess Elizabeth* had propos'd, touching the Union of the Soul and Body, and revolving in his Mind his former Thoughts upon that Subject, in the midst of that extraordinary Application, he found himself in such a strange Surprizal in an Instant, that he was not capable, when he told me of it, to express himself clearly thereupon, nor could

he gain so distinct a Conception of it as when actually he was in it. All that he could tell me, was, That it resembled a Trance, because in that there is no use of the Senses; one can neither See, nor Hear, nor Feel the Impression of External Objects (unless they be extremely violent) and then there is an end of it: But herein it was quite different; since the Soul had Perceptions of it Self, and was apprehensive of the Cessation of its Organical Functions: Which in a Trance is nothing so. That she was furnish'd with a World of Immaterial or purely Spiritual Notices, of which he had sometime discours'd to us, but in an abundantly more perfect and lively manner, than when his Attention was disturb'd with the appearances of Fancy, which constantly interrupt it: That more Discoveries of Truth could be made thus in one Minute, than in ten years by the ordinary means; which Knowledg of Truth fill'd the Soul with so pure and satisfactory a Joy, that nothing is more true than what *Aristotle* says, likely upon the same Experience, That the compleat Happiness of Man, in this Life, if there is any such thing, consists in the Contemplation of God and Natural Beings.

But he told me, he had no sense of that perfect Joy, till he was fully enlightned upon the Point that then took up his Thoughts: Which was done in a Moment. He had the satisfaction not only to know, but to be sensible, in some measure, of the Truth of the greatest part of those Things which had employ'd his Meditations until that time; and of the Evidence of the Idea's he had fram'd concerning the Essence of the Body and Soul; to see her advanc'd upon her Pineal
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Gland he had conjectur'd, and to see that the Union of the Soul with the Body was nothing less, than that vertual, or rather imaginary Extension, by which she was suppos'd commensurate with the Limbs; much less those imaginary Modes, which the Schools makes use of, to confound and plague the Conceptions of Youth. But that which was of most Importance was, to see; that this Union was nothing in Effect, but these actual Commerce and Correspondence the Soul and Body had with one another. A Commerce that chiefly is maintain'd in this, that the Nerves spread through the Body, by their Vibration give occasion to the Soul of knowing the different impressions, External Objects make upon the Senses; and in that the Soul pursuant thereupon, by the Motion she immediately impresses upon the Pineal Gland where all the Nerves centre, determines the Animal Spirits to their several marches through the Muscles, to produce in the Body such several Motions as she shall please to give, and especially those that are necessary to her Preservation.

After that (*pursu'd, my old Friend*) *M. Descartes* entertain'd me with all that happen'd upon that occasion, and all the other Reflections he had made. The Principal of which was, That his Soul in that juncture no longer perceiving the Motions, external Objects caus'd upon his Body, and by consequence that Commerce, in which the Essence of Union consisted, being broken, she could behold her self as in a separate State, though in the mean time she resided at her usual Abode; that local Presence having the least share in her Union with the Body: She then had a mind to disengage her self from the
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Body, and see what would be the Event of that Separation. No sooner had she wish'd it, than it was so. And he farther experienc'd what he had often suggest'd to us before, that if the Machine of the Body had all its Organs sound and free; if it had its customary Heat in the Heart and Stomack, the circulation of the Blood, the filtration of the Humours, and all those natural Functions, all the Motions constantly perform'd in us without the notice of the Soul, would go on as regularly in her absence, as when she was there. Moreover it fell out as she was busy in contemplating the operation of her Body at some paces distance from it, a Fly fortun'd to tickle it in the Face; presently the Hand rais'd it self to the place, and unseated the Fly just as if the Soul had been actually in the Body. So true it is that the greatest part of the Motions of our Body, which we attribute to the Soul, are owing to the sole Disposition of the *Machine*.

This Soul before she durst venture to wander very far from the Body, made her *entry* and *exit* sundry times; and judging by the disposition in which she saw it, she might without any apparent danger leave it for some time, she hazarded the undertaking a very long Voyage. She arriv'd at *Beitany* in the Houses of her Relations, and from thence she made a Sally unto *Paris* to the House of some other Acquaintance. She was much concern'd to see that the People there had but an indiffernt Opinion of her Religion; the Country *M. Descartes* had chose to live in, and some unwaranted Inferences that one or other had drawn from his Principles, had given occasion to those rash Censures. It is notwithstanding true, that all the time he liv'd and

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when he dy'd, he was a sound and honest Catholick.

Finally, such was the success the Soul found in her Rambles when separate from the Body, that she could when she pleas'd in a Minute travel three or four thousand Leagues : In so much that this of *M. Descartes* parting from *Egmond* about half an hour after eight in the Morning, had travers'd all *France* in an hour and an half, and was return'd at ten.

Bless me ! said I to my old Gentleman, how expedient would that be for a Person that so passionately desires to see the Country as I do ! You shall gratify your Curiosity, answer'd he ; but hear me out.

M. Descartes Soul being return'd from her Voyage in *France*, found her Body almost in the same posture in which she left it. But as yet she was not fully Satisfy'd. She was unacquainted with the way and means that led her into this Condition: And she consider'd it was an hazardous Exploit, and that being once united to her Body, she might never, for ought she knew, be disjoyn'd again, till Death should cause a final Separation. She apply'd her self therefore seriously to consider the Nature of her Body, and the disposition of all its Organs : She found that the Nerves employ'd in Sentation, and those that serve for Natural functions, as the beating of the Heart, the circulation of the Blood, &c. were of a Nature quite distinct. She saw that these were vehemently distended, and she concluded it might be for the better communicating the Animal Spirits to the Muscles with which the Nerves are united, and capacitating them to maintain and continue those natural Motions, the Soul is not aware of
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when united with the Body; and that, on the contrary, the Nerves made use of in Sensation, and by whose Means the Soul received the Impression of Objects, were almost all unbraced, and lax, which might prevent the Motion, caused by the Impulse of Objects, from being continued unto the Seat of the Soul: The Difficulty was to find the true Cause why one should be taxed without the other, and how she might bring it about to distend those that formerly were laxed.

Mean while the Snuff-Box, which I mention'd, his Body held in its left-Hand, made *M. Descartes* call to mind, That before his Extasie he had taken Tabacco-Snuff, and he could not tell but so extraordinary an Effect might have been produced by the Vertue of that Tobacco. That which he took of was an unusual kind, which a Merchant of *Amsterdam* had brought over from an *Island* near *China*, and presented him: It was extreamly strong, and *M. Descartes*, to mollifie it had mix'd a certain Herb in it, dried to Powder, whose Name he never would acquaint me with, nor the Place where it grew, though he presented me with a great Quantity of the same: He laid a sufficient Dose upon the Back-Side of his Hand, and gave it his Body to take; and at the same Time happen'd this prodigious Effect in his Brain; for all the Vapours raised there since his last taking were dislodged and dissipated in an instant. He observed it was only the Particles of the Tobacco that scattered the Fumes of the Brain, and that those of the Herb which he had tempered with it being not so fine, and having very little Motion, fastned themselves in the Nerves that cause Sensation,

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tion, and made them looser than they were before.

Seeing that Effect, he no longer doubted, but concluded it to be the Herb, which he mix'd with the Tobacco, that caus'd his Trance, and took away his Senses; and that the Tobacco, at the same Time unharbouring all the Fumes that might benight the Brain, left the Soul with the entire Liberty of knowing and reflecting on it's self, as she had then experienc'd. After which he thought that *Hungary Water* was sufficient to brace the Nerves afresh, that serve for Sensation, since it is often used to recal those Persons that swoon away. The Soul takes the Bottle, I not long since mentioned, and brings it in the Air from the far Side of the Chamber to his Body, (and therein consists exactly the Magick of which I then suspected *M. Descartes* guilty) and moistens his Nostrils with it: The subtile Vapour of that Liquor effected what he aimed at; presently the lax'd Nerves erect themselves, and the Soul streight seats it self in the Pineal Gland, and finds itself confederate with the Body as before. It was in that instant I perceived *Descartes* to come to himself. I told you, he lock'd himself forthwith in another Room, it was to make a second Experiment of his Tobacco and his Herb, which succeeded to his Hearts Desire: Since when, it was a Business of nothing for his Soul to leave the Body; and since his imparting to me the Secret, his Soul and mine have made an hundred Expeditions together, to instruct our selves of the greatest Curiosities in Nature.

As those that read the Works of *M. Descartes* are unacquainted with all that I have been relating, they with just Cause are amazed at a thing, which you will not startle at for the future. I mean the Particulars he descends to in his *Physicks*, concerning the Properties of his three Elements, at how great soever remove from Sense they lie; concerning their Figure, their Motion, their Rank and File in the Composition of his World, and all particular Bodies, concerning the Disposition of his *Vortexes*, in which he proceeds so far as to observe the different size of the Balls of the second Element, of which they consist, in their respective Places, how those that come nearest the Centre of the *Water* are the least of all; those that are a little removed are somewhat bigger, increasing still in Bigness unto a determinate Distance, after which they all are equal. Concerning the Formation of their Parts chamfer'd in Fashion of a Skrew, with which he explains the Nature and the different *Phenomena's* of the Load-Stone, in a way so fine and easie, *Phenomena's* that till then had puzzled and confounded all the Philosophers, even those that had so ready a Method of explaining all things by the Assistance of their occult Qualities: All this he saw intuitively, and of himself; and for me that speak to you, is it possible to think, That at the Age of seventy seven, and being of so weak a Constitution as I am; I say, is it possible for you to think I should have lived to this, and preserved my Health and Vigour as I do, unless I had had a perfect Knowledge of the Machine of my Body? Unless I had still filled and made up the Breaches whereat Life leaks and runs out continually? I mean not, in applying the Re-

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medies that Medicine prescribes, whose conjectures are so very uncertain, and from the Use of which *Monsieur Descartes* has so frequently dissuaded the Princess *Elizabeth*: But in the Practice of that Critical Knowledge my Soul has of my Body, of which she perfectly is, and can be instructed as often as she pleases, by putting herself in the Capacity I have now been speaking of. I must acknowledg Sir, replied I, then, it is a most admirable Secret and of Infinite Use; I am impatient till I learn it of you, and as soon as I know it I am persuaded I shall improve it to as great a Benefit as *Adam* would have done the *Tree of Life* in Paradise, if he had continued there. And I doubt not but if *Origen* had known it, he that looks upon the History of Scripture as *Allegory*, he would have believed the *Tree of Life* to be nothing but this Mystery which God had communicated unto *Adam*: But that which you was speaking of your Health, creates one Scruple in me; How *Monsieur Descartes* having the Advantage of this fine Knowledg came to dye at the Age of fifty four? Was he so much out of Love with his Life as to neglect the repairing those effluxes of his Machine, whose Failures and Disasters he could so easily foresee?

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Do you believe then, returned he, that *M. Descartes* is dead? I know not, said I, how you understand it, but methinks the Corps of a Man should not be buried unless he was dead before; and all the World knows that in the Year 1650. the Body of *M. Descartes* was interred at *Stockholm* with great Pomp and Solemnity, by the Care of *M. Chanut*, his particular Friend, and then Embassador of *France* at the Court of *Sweden*: That since

since *M. Dalibert* hath ordered his Bones to be removed to *Paris*, and to be disposed of in the Church of *S. Geneve*, where his Epitaph is to be seen, engraven upon a fair White Marble: It seems to me once more, That all this supposes a Man as dead as dead can be.

All these Particulars are true, said my *Cartesian*; but for all that it is false that *M. Descartes* is dead; for that we call Death is when our Body becoming incapable of Vital Functions, either by the Defailure of the Organs, which are wore out in the Succession of Years, or corrupted by some Disease, or endammaged by some Hurt or Wound, the Soul is oblig'd to quit her Habitation, following the Laws of their Union establish'd by the Sovereign Master of the Universe: But *Cartesius's* Soul was by no means separated from his Body after this manner. Hear then the Matter of Fact.

About three or four Months after his Arrival in *Swedeland*, where Queen *Christina* had invited him, and did him the Honour to entertain him in her Library an Hour in a Morning every Day: He was seized in the midst of Winter with an Inflammation of the Lungs, seconded with a Giddiness in the Brain; but the Fever having left his Brain, there had been no great Difficulty in his Recovery. Himself had wrote a little Time before to one of his Friends, That he had made some Discoveries in Anatomy, that insur'd his Life for an hundred Years: And 'tis known that *M. Descartes* did not use to go by Guesling, or advance any thing without a firm Assurance; but an unseasonable Misfortune rendred his Prediction fruitless; seeing he had not rested well that Night, his Soul had a Mind to take a little

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Turn for Recreation-fake ; he takes his usual Dose of Snuff, and his Soul leaves his Body in the Bed. By ill Luck the Physician, contrary to his Custom came to visit him at Midnight; the Noise he made, in entering the Chamber, did not awake his Body, whose Senses were perfectly laid asleep by vertue of the Herb, of which I spoke, that was mingled with the Tobacco : But having put to his Nose a Vial of extremely Spirituous Liquor , to fortifie the Brain, it made a more quick and lively Sally upon the Organ of Sense than *Hungary Water* used to do, which *M. Descartes* Soul made use of when she would re-enter the Body, and conclude its Trance; it caused it to open its Eyes, and to give some Groans. The Physician ask'd it how he did? The Machine accustomed, some Days ago to answer to that Question, *That he was very ill*, made still the same reply ; but to other Questions the Physician proposed (since the Soul was not there to talk rationally, and answer to the purpose) the Answers were full of Extravagance and *Delirium* , just as the Machine was determined by the Voice of the Doctor : It talked eternally of the Separation of its Soul from its Body, because the last Thoughts the Soul entertained in the Act of separating herself were those of that Separation, which had left some Figures or Traces stamp'd upon the Brain, answering to those Thoughts, and determining the Tongue to a Motion, requisite to pronounce such sort of Words. These Symptoms enduc'd the Doctor to believe he was again transported with a Raving in his Head ; wherefore he is out of Hand blooded in the Foot, Cupping-Glasses are apply'd, and several other Violent Remedies, which

which so exhausted and altered his poor Body, that in a short Time it had spent all its Strength; it's natural Heat began to faint, and lose itself by little and little; a Defluxion of his Brain fell into his Breast; and in a Word, it became a meer *Cadaver*, and unable to perform the Duties of Life, and to receive his Soul. Thus it happened; so that you see a Man may truly say, *M. Descartes* is not dead.

Assuredly Sir (*said I*) this is not to dye according to *due Form and Method*; nevertheless the *Swedish Physician* would be held Guiltless before all the Faculties of *Europe*; for he has followed the Rules of his Art he acted according to appearance, and if he did but understand what you are teaching me, That *M. Descartes* is not dead, he might boast of the Greatest and most unprecedented Exploit that was ever known in Medicine, I mean to have killed a Man without causing him to die. But Sir, I beseech you (*continued I*) acquaint me, if you know, What was the Destiny of *M. Descartes* Soul; for, according to the uncontroverted Principles of our Faith, a Soul in leaving this World receives her Arrest for Eternity, and either has her Portion in Paradise, Hell or Purgatory for some Time.

That Question ruffled my old Gentleman; And in the Name of God (*said he*) almost in a Passion, rid your self of that Ridiculous Custom you have taken up in the Schools, of introducing Questions of Religion in Matters purely Philosophical. *M. Descartes* had once thought to renounce his Philosophy, or at least refuse to publish his Works, to save him the Trouble of answering those impertinent Objections

tions, which were made at every turn and upon all occasions. I am giving you clear Matter of Fact, and you desire me to Account for the Conduct of God. But in brief, have not I forestall'd all your Difficulties, when I told you *M. Descartes* was not Dead? And since he is not Dead, why demand you if he has submitted to a Judgment, the Dead are only concern'd in?

I beg'd his Pardon for my Imprudence; and agreed with him, That nothing was more unreasonable and inconvenient, than such sort of occasional Questions, to a *Philosopher* that had made a *System* without regard to any thing of that Nature. And that likewise put me in mind of entreating my Readers, to use the same Candor towards me. That they will not wrangle with me, upon the Point of separate Souls, whole Shoals of which I meet with in my Voyage to the *World of Descartes*, nor tye me to answer all the Scruples, they might be able to raise on that Account. For therein bottom the most agreeable Passages of my History, with which I should not present the *Publick*, but upon that Condition. I would entreat them to remember the Priviledg these *Cartesian Gentlemen* take, who when perplex'd in answering the Argument, brought against the Essence of Matter, and drawn from the Sacrament of the Host, think they have right to cry out, They are injur'd; That their Philosophy is sequestred from Things relating to Faith; That they are *Philosophers* and not *Divines*, and undertake the explaining the Mysteries of Nature, not of Religion: I would, I say, they'd do me the like Justice; or, if they had rather, the same Favour. And sup-

supposing any one so Religious, as to suspect me of the Heresie of those, who say, The Souls in parting from the Body are not doom'd for Eternity; I wish he'd consider once more, that I am in this, an *Historian* and *Philosopher*, not a *Theologist*, and give a Relation of *Descartes's World*, am not making a Profession of Faith. Which the Character of an History (such as I am upon) will bear, far more independently of the Truths of our Religion, than a System of Philosophy. Any one that knows never so little must be forc'd to acknowledg this: Which being once suppos'd, I return to the Narrative of my *Old Gentleman*, who thus went on.

M. Descartes's Soul returning to *Stockholm*, found her self in the like unlucky Circumstances, as did one *Hermotimus*, mentioned by *Tertullian*, who having procur'd the self-same Secret as *Descartes*, left constantly anights, his Body asleep in Bed, whilst his Soul went a rambling through the World. Both one and the other, at their return, found their Lodgings out of a Capacity to receive them.

L. de Anima.

The Task *Descartes's* Soul enjoyn'd her self then, was, to meet at *Paris*. She would not tell me presently of the Accident, but only invited me to take a turn or two: No sooner said than done. With one Snuff of the Tobacco, I equipt my self to wait on her. My Soul was no sooner out of my Body, but she said, in Language Spiritual, she was about to tell me strange News. I am, says she, no longer Imbody'd; my Corps is this day to be interr'd at *Stockholm*; and he gave me the Particulars of what I have been relating: Nor did she seem sad or afflicted thereupon. I then demanded of
her

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her if she experienc'd what the *Philosophers* report, That the Soul being the substantial Form of the Body, when separated for good and all, is *in statu violento*. She answer'd me, she knew nothing of that violent State, but found herself incomparably better out, than in the Body: And that she had but one Concern upon her, to know in what part of the vast Space was best to settle her Abode in. That she would take my Directions in the thing, but that she found her Will inclin'd for the *third Heaven*. The *third Heaven*, according to the division *Cartesius* makes of the World, is the last of all, and that which is the farthest remov'd from us. For the *first* is nothing but the *Vortex*, in which is plac'd the Earth, whose Centre is the Body of the Sun, about which, the Cœlestial Matter that composes the *Vortex*, carries us, and makes us turn continually like the other Planets. The *second Heaven* is incomparably larger than that in which we are, and takes up all that mighty space in which we see the fix'd Stars, which are so many Suns, and have each of them a *Vortex*, of which they are themselves the Centre, as our Sun is of this. Lastly, the *third Heaven* is all that Matter, or all that indefinite Extent, which we conceive above the Starry Heaven, and is void of Bounds, and in respect of which the space of all the other may be consider'd as a Point.

Now many Reasons determin'd *M. Descartes* to choose his place of Residence in the highest Heaven. The first was, To avoid the Company of an Innumerable gang of Souls of *Philosophers*, that were vaulting and fluttering on all parts of this our *Vortex*; for, to tell you by the
way,

way, 'tis incredible how many Souls we met upon our Journey: And *M. Descartes* was much surpriz'd to see the Secret, of which he took himself to be the first Inventer, made use of in all times, even by those of a very mean Quality, whereby they have escap'd a dying, or whose Souls have lost their Bodies by some Accident, not unlike that of *M. Descartes*. But that which made their Company so displeas'd, and perfectly intolerable to *Cartesius* his Spirit, was, That these Souls, so disentangled as they were from Matter, were tinctur'd still with Prejudice, wherewith they were prepossess'd, when united with their Bodies. That when he would have convers'd with them about the Principles of Bodies, and the Causes of several Phœnomena's, they faintly suppos'd to him, or prov'd by the Authority of *Aristotle*, *substantial Forms*, *absolute Accidents*, and *occult Qualities*, as is done to this day in many Schools. And except some few Souls of the highest Rank, which he hath converted and profelyted to *Cartesianism*, all are inveterate and inleagu'd against him with as immoderate Fury, as the Philosophers of this World when he began to publish his Doctrin here.

The second Reason that byass'd him to that Election, was, because he look'd upon those indefinite Spaces as a new Discovery, of which he was the Author. For it was upon his forming a distinct Idea of Matter, whose Essence consisted in Extension, that he concluded Space, Extension and Matter, to be one and the same thing, signify'd under different Names: And being it was necessary to admit of a Space and an Extension above our World, since we have a most clear Conception of them, it was plain, That
above

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above our World there was Matter too, and as we can have no Idea of any Bounds or Limits that Matter has, it is necessary it should be Infinite or rather Indefinite.

Finally, the third and most prevailing Reason of all, and which he intimated not to me, until we arrived upon the place, is, that well, conjecturing the Matter above the fix'd Stars to be uninform'd, and not yet shap'd into a World, he was in good hopes that he was able to set it to work himself, and fancy'd that in dividing and agitating it, according to his *Principles*, he could reduce it to a World like this, excepting that it would be destitute of real Men, and only stor'd with *Automatous Machines* in their Likeness. That Project was the Subject of the most part of his Books, especially of his *Book of Principles*, and that Entitled, *The World of M. Descartes*. We set out immediately for the third Heaven. I shall not descend to the Particulars of our Voyage. I hope in a few days you'll bear me Company there your self. I'll only say, that upon our Coasting, we found all Things exactly in that Portrait we had drawn before, without Form, without due Order, or any regular posture of the Parts, as rude and unsightly Materials, that require the Hand of the Artist. We survey'd it all about, and bewilder'd our selves a long time in the vast Deserts of the other World; which perfectly represented to me the Face of the *Chaos*, and that confus'd Mass of which the Poets speak. That interview, as much a Spirit as I was, fill'd me full of Horror, so hideously frightful it appear'd. It is notwithstanding here (*said the Spirit of M. Descartes*) that I will fix; nor will I quit

I quit this Place till the Providence of God shall dispose of me for Eternity ; he brought me into the World to reform and re-establiſh the *Philosophy* of it. I had with good Succeſs began the Buſineſs I was ſent upon ; but one unlucky Accident, not in my Power to foreſee, prevented me from proſecuting my Deſign : That ſhall not hinder me from uſing the Knowledge he hath given me to the beſt Advantage. I preſume, to accompliſh here the *System of my World*, of which you have ſeen the Draught : Matter here is plenty and to ſpare, and only Motion's wanting ; and I have all encouragement to hope, That God, who, of his Goodneſs, uſes to condeſcend, in Quality of an Univerſal Cauſe, to the Thoughts and Inclinations of his Creatures, conformably to their Nature, will not be wanting to me. Being a ſeparate Spirit, I can lay Claim to greater Motions far than thoſe that ſet the Wheels of all the World below a going : I ſhall no ſooner deſire the Moving of this Matter, but God, purſuant to the Laws of his Providence will create ſo much Motion as I have a Mind to : There will be need of nothing more than the Determination of that Motion, and the Diſtribution of it, according to the particular Neceſſities of every part of Matter. That determination, as I have heretofore explained, depends on Second Cauſes, which Province will entirely belong to me ; I know very well the Rules ; the Conſequences I have drawn from thoſe Rules will infallibly compaſs my Deſign. In ſhort, I find my ſelf in a Capacity, according to my *Principles* to warrant the Succeſs of my Enterpriſe ; ſince notwithstanding the Machine I undertake is of an unweildy Bigneſs, for I

design to make it as capacious as *our World*, and must be compos'd of an infinite different Parts, since the Engines that must be plaid are innumerable, since the *Combinations* and the different *Determinations* of Motions must be infinite, it will not be the Work of one Day, nor one Year; half an Age is not too much for an Human Spirit for projecting such a Grand Design: But I am persuaded, my Principles suppos'd, it will be sufficient. I shall take no Satisfaction in Visitors, that shall come and interrupt me, during that Space of Time: I will now begin to enjoy the Pleasures of Solitude, which I could never find on Earth, and I intreat you to manifest my Intentions thereupon to all my Friends below, whom you think it convenient to acquaint with my Circumstances, without telling them precisely where I am; for once more I say, I would not have them know exactly what's become of me, nor what I am a doing: The Men there, and especially the *Philosophers*, deserve not to be admitted to the Knowledge of these great Mysteries, they'd ridicule as fabulous what ever you should say concerning me, as they did for the most part entertain as Whim and *Chimera* all that I revealed of my Project touching the *Construction of a World*. As for you, *my dear Friend*, I would that you return to your Body, which now you have left almost two Days; too long fasting may inflame it, and introduce a Fever: Above all, take Care you never finally abdicate it, upon your own Authority, which some of my *Disciples* have been guilty of, and so many Ancient *Philosophers* that we met in diverse Places; for that is contrary to the Decree of Providence. Enquire in your Way for the Spirit of *Father Merfennus*,

Merfennus, and send him hither ; I'll take him to me for an Assistant, and to keep me company.

Having receiv'd the last Orders of this dear Spirit, and obtain'd Permission to give him a Visit once at least, in three or four Years Time ; having considered the great Violence I should suffer, in being so long distracted from him, and the Danger likewise I was in of being so for ever, in case I should dye during that great Term of Years, he had destined to the compleating of his World ; we spiritually imbrac'd each other, and I stood forth for *Paris*. I cut it through a vast number of *Vortexes* and *Planets*, without discovering *Father Merfennus* ; but at last I found him out in *Mercury*, in which he very much delighted, because that is a very jolly Planet : I intimated to him the Orders I had for him from *M. Descartes*, which he imbraced with Joy, having been all-a-long his faithful Correspondent, and especially at *Paris*. Being I was in haste for my Departure, we had not much Discourse together, so we parted ; he bent his Course towards the third Heaven, my Spirit took the Way that led to my own Home, where she reunited with my Body.

Since that Time I have paid *M. Descartes* six or seven Visits ; the last was about two Months ago. He assured me then, He had dispatched almost all his *Combinations*, and that all was as good as demonstrated : And unless the most evident Principles of *Geometry*, *Mechanicks* and *Statics* were false, he was confident of the Performance. He promised to give me notice about this Time, to come and see him, to the end we might take a Review together, and examine his

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Design, and may be forthwith fall to work in the *Production of his World*, that is to say, to afford me the most Noble Diversion, of which an human Soul is capable. I daily expect a Message to depart, and it will be your own Fault only (*added he*) if you are not a Sharer in this Voyage, and gain a greater Stock of Knowledge in one Day than the most reputed *Cartesians* have in all their Life. This is the Sum of all I had to say.

Scarce had he made an End of speaking, but a *Country Gentleman*, of no mean Rank, of a good and genteel Presence, though I disliked the impertinence of his Visit at that instant, entred his Chamber, in a Country Habit, saying, his Coach stood ready at the Gate, and that it was Time to go. It was a Design they had agreed on, to take the Air for a Fortnight; which obliged me to take my Leave of them and retire.

I knew not what to think of this Relation: I never took him for an *Enthusiast*, that had given it me: And surely (thought I) this Story is too well pursued to be a Dream. I then conceived it might be some mysterious *Allegory*, containing all the Secrets of the Sect, of which he would give me afterwards the Explication. I applyed my self however to the reading of my fine *Descartes*, and I compalled him during the Fortnight, though it cost me many a Head-ake, occasioned by the too great Intention of Thought: But I understood in the Consequence, That all he had said was far from *Allegory*, and that he ought to be taken in a Literal Sense, at the end of his *Epistle*.

My *old Friend* being returned from the Country, sent me a Letter, the next Morning, in which

which he notified, He would see me before four and twenty Hours were at an end, and that I should put my self in a Readiness for my *Voyage*. I waited all the Day, with great Impatience; but seeing at last he did not come, about ten a Clock I went to Bed; half an Hour after, being yet awake, I was amazed to hear my Curtains drawn on all Sides my Bed, the Casements of my Windows to fly open with so vast a Noise, and to see, by the Assistance of the Moon, my *old Gentleman* in the middle of the Room, and another with him, habited in an unusual Dress: I protest I was seized with such a sudden Dread, that the Hair of my Head stood upright, and I sweat all over. The *old Gentleman* then approaching to my Bed-side, said, You are fearful, take Courage a little, Don't you know me? I know you (*answered I*) in a trembling Tone, but what could I think to see you in my Chamber without entring at the Door, with such a Noise and Havock as was here? What you should, and ought to think, (*said he*) is, that a Spirit separate from the Body, may enter any where without a Key, and needs not the Convenience of a Door: And for the Noise, it was first to wake you, and then for the Pleasure of surprizing you, and putting you in a little Fright. Do not you remember the Conversation we had together a Fortnight since? I well remember it (*said I*) but was it all true you then related? Infallibly (*said he*) and I now am come to make good my Promise I then made you, of conducting you to *M. Descartes's World*: Here is the *Reverend Father Merfennus*, who is now come from him, to advise me all is ready; and that he would be glad, before he puts the Design of his *World*

in Execution, to make a Tryal in the Presence of some of his Friends; you shall be of the Party if you think fit: I advise you not to lose so fair an Opportunity. At the same Time *Father Merfennus* steps up, and bowing low to the Ground, confirmed what my old *Philosopher* had said, and added, That understanding by him the Character and Qualification of my Soul, he could undertake for a kind Reception from *M. Descartes*. Pardon Reverend Father (*said I*) my Astonishment, I am not accustomed to receive such Visits: Spirits I never saw before, and I could never have believed they had been so civil and well-bred as I now find them.

Mean while, though I us'd all possible endeavours to compose my self, I still was somewhat fearful: I was under strong Apprehensions there might be Sorcery and Witchcraft in the Case, and that under pretence of guiding me unto *M. Descartes's World*, they design'd to convey me to the *Witches Sabbath*. On the other hand I fear'd to affront these Gentlemen-Spirits, who for the most part understand not Will and Humour. And my Memory furnish'd me with a parallel Case, of some certain People cajol'd with the pretence of such sort of Mysteries, till having learn'd a part, and refusing to go on, they had their Neck writhen by the Devil or his Accomplices: I renounc'd all manner of covenanting in my self, and made use of all the Precautions my Prudence could suggest in that Conjunction; after which, I spoke to them as fairly as I could, in this manner.

Gentlemen, you make Profession of a *Sect* that gives it as a *Maxim*, That a Man must not assent to any thing but a Truth, fully and clearly manifest:

manifest : And that it is distinguishes you from all others, and especially the Philosophers of the Schools. The Conversation I had with this Gentleman a fortnight ago, and the Critical Reading of *M. Descartes* since, joyn'd with the present Circumstances, create some Scruples in my Mind, of which I should be glad to be clear'd before we go any farther. Will you take kindly what I shall propose? We will hear you readily (*answer'd they*) and you shall have the satisfaction you demand. Only settle and compose your self, for you seem a little disturb'd : And resolve your self you need not fear, and that you shall receive no harm.

Those last Words a little reviv'd me, and I began to speak with a more steady Voice. It is not many days since I read in *M. Descartes*, That the *Essence of the Soul consists in being a thinking Substance*, and that she hath neither Extension, nor Figure, nor Colour; which I know not how to reconcile with what I see at present : For you give me to understand, you be purely Spirits, yet I perceive in you different Colours, and I see you form'd in the Figure of a Man, and you look like Beings that are extended : Rid me I pray you of this Perplexity. *Father Merfennus* presently took the Word. What you propose (*said he*) stands to Reason: But it is easy to answer you, and plainly to expound the Thing by the evident Principles of true Philosophy. It is certain a *Soul* is essentially a *thinking Substance*, and that she is neither Figur'd nor Colour'd. We are purely Spirits indeed, and though we seem to have a Face, and Hands, and Feet; yet we have neither Face, nor Hands, nor Feet. He must be as addle-brain'd as was

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Tertullian, and bent on Error with as great a Zeal as he, when he engag'd himself in that Affair; Who thinks the Soul is not only Corporal, but has also Parts proportion'd to the Body, which she animates, and is therein just as a Sword is in the Scabbord: His devout Spirit that saw Souls of a blew Colour in his Prayer, had topsyturn'd his Mind upon that Subject.

To make you therefore comprehend how you see us Colour'd, Figur'd and Extended, with Face, Hands and Feet, though we have neither Extension, Colour, Figure, Hands nor Feet; you must know, your Soul, whilst she is united with the Body, cannot behold another Soul, so as in her self she is, cannot hear her Speak; or to explain my self more justly, cannot have the immediate Communication of her Thoughts. To the end then, you might know that we are here, and that we might make you understand our Thoughts, and the Design that brought us hither, it was expedient to make use of means proportion'd to the Capacity your Soul at present's in. Now I would not have you imagine, that for this purpose I was forc'd to frame my self a Body of some Matter. But only call to mind what your reading of *M. Descartes* ought to teach you, That to see an Object, with regard unto your Soul, is nothing else than to perceive the Extension, Figures and Colours, of that Object. That that perception is not caus'd immediately by the Object, which being at a distance from our Body and our Soul, cannot act upon them of it self: That therefore's done by the Reflection of Infinite Rays of Light, which rallying from every part, and every point

of

of the Object, strike and make the several Threads to quaver, of which the Optick Nerve's composed. That Concussion is communicated to the Brain, and to the place of Residence of the Soul; and it is pursuant to, and on the Account of that Concussion, the Soul forms an Idea of the Object which she perceives or apprehends in the manner we call *Seeing*. And it is according to the various Modifications of that Concussion, that she sees Objects at several distances under divers Figures, and of different Colours. From whence it follows, that the Perceptions or Ideas of the Soul, have no necessary dependence on the Objects; but only on the exterior Organ, which may be prov'd by a thousand Experiments, but especially by that of Phrenetick People, who perceive Objects quite different from what they really are; and see them where they are not.

Now that you may perceive a Body in the place where I am, when no such thing is there, it is sufficient that your interior Organ should be moved in such a manner, as it would be if a Body was really there. That's the thing I now am actually doing upon your Optick Nerve, to make you know that I am here: That is it, which causes you to see a Body, though in truth there is none to see. And what I act upon the Organ of Sight, to make a Body appear, the same I do in proportion upon that of *Hearing*, to find you Sounds and Words. I impress a like Motion upon the Strings of your Nerves of the fifth Conjugation, as would the Vibrations and Undulations of the Air, were it agitated by the Motion of a Tongue and the Mouth of a Man, who should stand where I
 seem

seem to do, and should utter the same Words you at present hear.

*F. Mag-
nan.*

Upon these Principles it was, that a *Father* of our Order has most ingeniously unfolded the Mysteries of the Holy Sacrament, without the assistance of that Medley of absolute Accidents, that could never be conceiv'd. For, says he, when we are taught the *Body* of *J. C.* is under the appearance of Bread, nothing more is intimated, than that the *Body* of *J. C.* is truly there, where the Bread was, and seems still to us to be, to the end that Bread may appear where the *Body* of *J. C.* actually is, God acts upon our Senses. He there produces the self-same Motions, and makes the same Impressions the Bread did before. So when our *Lord* presented himself to *St. Magdalen* in the form of a *Gardiner*, it was by acting upon her Eyes, just as the Visage and Habit of the *Gardiner* would have done, and not by cloathing himself with the absolute Accidents of a *Gardiner*.

But that which you may gather from this present Experience, is, the manner how the Dead appear, who sometimes by God's Permission present themselves to those alive: For they appear by the same Method as I do actually myself. And those Bodies of Air or Water, which some pretend they attire themselves withal, are only the Whymfies and Forgeries of their Imagination, who have treated of *Devils craft* in supposing the *Principles* of the *School Philosophy*. Have you any farther Difficulty, said he, upon that Point?

Ah! (*Father, reply'd I*) you have made it as clear as the Sun, and have given me infinite Satisfaction. Your Discourse is altogether Spiritual.

tual. I rely not much upon the Explication of that *Father* of your Order, upon the Mystery of the *Eucharist*. I take it for a Maxim with the wisest of the *Catholick Philosophers*, That all Novelty in such sort of Things is dangerous, at least always ought to be suspected. You have absolutely dispers'd the Doubts that troubled me. It was indeed long ago that I had a Notion, Sensation was caus'd by the Local Motion of the Organs; but that Idea was not unperplex'd. *Aristotle* had said it before *Cartesius*, but had not explain'd it. From this time forth I renounce for ever a great part of the Ideas I had fram'd thereupon. I solemnly abjure before you, all the Axioms that respect the *Active, Passive, and passible Intellect*. I acknowledg they are Terms that signifie nothing, and are of no use but to make the Ignorant to stare, who cannot understand them, but imagine the *Philosophers* can.

*Arist. in
Probl.*

After that Protestation *Father Mersennus's* Soul mov'd my *Organ* in such a manner, as gave me to apprehend he was well pleas'd. Which made me take the boldness of proposing a second Scruple. *Father* (said I) I don't well understand what that *World* is of *M. Descartes*, where you would conduct me. For in reading *M. Descartes* I did conceive his *World* was nothing else, but this of ours, explain'd by the *Principles of his Philosophy*. And I distinctly remember I have read in a Letter, he had formerly wrote these Words; That he should think himself undeserving of the Name of a *Natural Philosopher*, if he could only tell how Things might be, without demonstrating they could not be otherwise. There he Bravado's it a little. But that

*Let. 37.
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confirms me, that when he speaks the contrary, and says he pretends not to give an Account of Things as they are in the World, but only how they ought to be in a World, that he imagins he would be angry, should we credit him there-upon.

What you say is true (*reply'd Father Merfenus*) *M. Descartes* design'd not to be believed in that Particular. So that the *World of M. Descartes*, is in earnest, this World explain'd by the *Principles* of his *Philosophy*. But it is also true, that there is, or rather, will be very speedily, another World, that may more properly be call'd *Descartes's World*, since it will be of his own Contrivance. And that's the World with which this Gentleman, your Friend, has entertain'd you, and that we shall give you a sight of if you please. Nothing certainly (*said I*) will be more diverting: I would quit the Racing, or the *Festivals of Versailles*, to be Spectator of this Prodigy, which doubtless, is the compleatest Work of *Philosophy*, and the almost Master-piece of Human Nature. But Sir (*said I, turning to my old Gentleman*) the Story of *Descartes* you have formerly related, gives me some disturbance. The Voyage you know is very long; and a World like this he is about, is not to be built in one Hour's time. I know my Soul loves her Body very well, and would be much concern'd at her return, to find it incapacitated to receive her. And an hundred Accidents may happen, against which no one can give Security.

We are provided for them all (*said he:*) Look towards the bottom of your Bed. Good God! (*I cry'd out*) fear'd out of my Senses: What
is't

is't I see? The *Devil* then is one of your Club! Wretched Mortal that I am! I am lost, undone: However I'll die without any familiarity with him. *Monsieur* avaunt. I renounce utterly your Enchantments and your Magick.

Softly, softly (*said he*) why all this Alarm? He is no *Devil* that you see, though Black: He's far from being a *Devil*: This is the Soul of a little *Black* that waits upon *Descartes*. To ease you of all Scruples and Disquiet in a word or two, I'll give you an Abbreviate of him.

This *Little Black* was formerly *Valet* to *M. Regius* the famous Professor of Physick in the *University of Utrecht*, who, as is known, was then the intimate Friend, Disciple, and Admirer of *M. Descartes*. Upon these Accounts he mexited the communication of his Secret, for the separating the Soul and Body. Since that they broke with each other, in so much that *M. Descartes* thought himself oblig'd to Write against him. Because he deprav'd his Doctrin, and made it give Offence. *M. Regius*, who if *Descartes's* Character be true, was none of the most Honourable and gentilest Gentlemen in the World, to revenge himself, and shew how he scorn'd, and trampled on a thing, *Cartesius* set so high a rate upon, taught it this litle *Negro*: One time above the rest, he went to make use of it. Returning one day from the Country, where his Master had sent him, much tir'd, he fate himself under the shade of an Oak: His Soul left his Body to its repose and rambled for Diversion I know not where. Mean while some Highway-men kill'd a Man hard by him. The *Grand Provost* who was near, being advis'd of the Murder, came speedily with his *Sergeants*: The Noise they made

*Diverses
letters de
Descartes.*

A Voyage to the

was such, that it awak't the Body of the *Little Black*: And there happen'd something in the Adventure not unlike that, I told you lately, of *Descartes*. For the *Machine* determin'd by the Noise, and the strong Impression the Presence of arm'd Men made upon his Organ, began to fly. They pursue him, overtake him, and examine him. He contradicts himself at every Word, in his Answers, which, in the absence of his Soul, were not likely to be very coherent. The *Grand Provost* who was a little too expeditious in the Business, took his Flight, and the Astonishment that appear'd in his Countenance and his Words, for an Evident conviction of the Crime, and caus'd him to be hang'd upon a Tree, as an Accomplice of the Murder'd that was committed. The Soul returning not long after, found her Body hanging in that rascally Posture of a *Malefactor*. Forc'd then, as she was, to seek a new Abode, she was in a miserable condition. The majority of separate Souls which play in all the vast extent of the World, being Souls of *Philosophers*, and Souls of great Importance, and having in a Convention held by the most considerable of them, declar'd that Opinion of *Philosophy* true, that holds an equality in Souls of the same Species: They would no ways admit that the Soul of an ignorant *Negro* should enjoy the same Priviledge as they, and gave her chase througout the Universe. In short, her good Fortune would, that she should, attempt to pass our *Vortex* and arrive at the very place *Descartes's* Soul had pitch'd upon to Meditate. He had Compassion on her, and allow'd her the liberty to live with him. *Father Merisemus* brought her hither; in Case there should

should be occasion, and we'll leave her with your Body to take care on't.

The Retail of a Story so well circumstanc'd, induc'd me to credit what was said, as true. I intreated both the *Spirits* to excuse the Transport I was guilty of telling them, that the Figure and Colour he made use of to appear in, being the same the Devil furnishes himself with all, when he would be visible, had imprinted on my Mind that horrible *Idea*. I desir'd them to give me some Instructions, how I must be rigg'd to accompany them in that wondrous Voyage, that they propos'd; saying, I hop'd to make infinite Advantage of the Favour they vouchsafed me, and in their Society, to return so choice a Treasure of Knowledge, as would distinguish me from the rest of Mankind. Three things, say's *Father Merfennus*, you have to do: The first is, To dismantle your Mind of all the *Prejudices* of Childhood, and the *ordinary Philosophy*. For 'tis strange to see how the *Prejudices* the Soul sucks in but by the Senses, should make so deep impression on the Understanding, with Time and Custom; which she chooses for the Rule of her Opinions. In so much, that Souls separated from their Bodies, otherwise than by Death, although during that separation they act independently on the Senses, do yet think, judge and reason conformably to their prejudice. Without that Precaution, you'l make a'fruitless Voyage, and be but where you are, at your return.

The second Requisite before our embarquing is, That you give Orders to this *little Spirit*, after what Method he must treat your Body in your absence. Whereupon it is advisable to let you know, that when your Soul shall be in
state

state of Separation, all things will be carried on in the usual Road, not only as to Natural Functions, but as to those Motions caus'd by External Objects; provided that you leave the Machine mounted in the same manner, as it is at present. So that if you us'd to wake, and rise at the sound of an Alarm, or at a certain Hour, as soon as that Hour shall strike, the Motion of the *Timpanum* of your Ears communicated to your Brain, shall make way for the Animal Spirits to glide along the Muscles, and to produce in your Legs and Arms, and your whole Body, such Motions as daily you your self produc'd, for the taking of your Breeches, then your Doublet, and the rest of your Appurtenances, after one an other, and dressing you from Head to Foot. It shall walk as it us'd to do; traverse all the House upstairs, and down. It shall seat it self at Table, as soon as the voice of the Page crying *Dinner Sir is ready*, shall strike upon its Ears: It shall Eat, shall Drink, and in a word, perform every Action it has been accusom'd to; the Animal Spirits never failing to take their course towards certain parts of the Body, at the presence of certain Objects, and by consequence producing always certain Motions in the Body, in certain Circumstances. Now in all External Actions that we do, there is nothing but Motion, produc'd this way. And hence it is that Beasts who are undoubtedly as Meer Machines as our Body, seem to us at the same time to act both with Variety, and Uniformity.

The only Mischief that you need to fear, is, in case a Friend should come to visit you: Because the Body, without the Soul, would be incapable

ble to maintain discourse, and must answer very impertinent to the Thing in hand. For betwixt our selves it is only by Discourse that we *Cartesians* know that those Bodies we commonly call Men, are truly *Men*, and not meerly *Machines*: But herein it is this *Little Negro* will be serviceable. *M. Descartes* hath taught him all the different Motions, possible to be made upon the Pineal Gland; and all the various Determinations, of which the Animal Spirits are capable by its means: And how the Words are form'd in the Mouth, only by the motion of the Muscles that stir the Tongue, the lower Jaw, and Lips: And how particular Words are fram'd, only by the certain Motions of the Muscles, caus'd by that of the Animal Spirits, according to the different Questions, a Friend, suppose, that gives you a visit in the absence of your Soul should propound to you. The *Little Negro* by the various Motions he shall then impress upon your Gland, and, from thence upon the Animal Spirits, and Muscles, shall form without failure in your Mouth the Words that ought to be spoke, and such Answers as the Questions shall demand. And fear not he should make your Body speak any thing unbecoming of your Soul: For I'll say that for him, *Negro* as he is, he is no Fool.

Let. 53.
de Desc.
Tom. 1o

You may take yet an other way: It is but leaving your Body in the Bed, where it is, and in the Trance you'll put it by the taking Snuff for the separating of your Soul. That Trance which consists in slackning the Sensitive Nerves, is not attended with any further trouble: Mean while, this *little Negro*, shall make your Figure, and shall so exactly Personate you, as if your

Soul had made no expedition : And in that there'll be no difficulty, no more than is in my appearing in the Formalities of a *Friar*, and this Gentleman's in the same Physiognomy, and dress you us'd to see him, as I have but just now explain'd it to you. And to observe to you by the by ; you see the *Cartesian Philosophy* teaches without any Sin, what *Apollonius Thyaneus* and many other *Magicians* could not do, without first giving themselves to the Devil.

The third and last Thing you have to do, is, To take a little of the *Gentleman's Snuff*, which he has brought you ; so we'll hoise Sale, and stand off for the Road that will bring us to *M. Descartes*.

Having return'd thanks to *Father Mersennus* for the Instructions and Light he was pleas'd to give me ; I assur'd him, as for the first Article, I durst undertake ; for that I had all along been somewhat *Sceptical* in point of *School-Philosophy*, and that my Mind was free from the contagion of *Prejudice*, that commonly is caught there : And as to the *Prejudices* of Infancy, the reading *M. Descartes* had taught me to distrust them. And that whilst he was Discourfing I had arm'd my self with a fresh Resolution, of assenting to nothing but what I should most distinctly conceive, following *M. Descartes's* advice. I forbore to mention another Resolution I had made, which was, To fore-arm my self, at least, as much against the Opinionativeness of the *Cartesians* as the *ordinary Philosophers*, well knowing they were as much conceited as their Neighbours.

Touching his Directions, that respected my Body, in my Soul's Absence, I clos'd with the second Proposal ; Seeing (*said I*) *Reverent Father*

ther, it seems more simple and feasible than the former. I like it well (*quoth he*) since 'tis one of our *Maxims* in any System, to choose the most simple way, and that which costs least Trouble. However, that was not the Reason that resolv'd me, but because I thought therein less Danger, and was not so firmly persuaded that my Body would be so expert and active in the Absence of my Soul, as was pretended; and also because the Instance of Brutes which was urged, made little Impression on my Mind, unable to discard those Prejudices a Soul capable of Sense and Reason had confirmed. I desired *Father Mersennus* to give Orders to the *Little Black* to *sute himself with my Person*, to see if it would fit him: Forthwith it was done; and I beheld another *me* at my Beds Feet, as the *Sofia* of *Amphitryon* saw another *Sofia* before his Lady's Gate, at his Return from the Camp; only with this Difference, that *I* at my Bed's Feet asked very courteously to *me* in the Bed, whereas the *Sofia* who return'd from the Army was well cudgelled by *himself Sofia*, who stood before the Gate of *Alcmena*. I recommended to him above all the fast bolting of my Chamber-door, that no Body might enter, and the frequent visiting my Body Day by Day, and admonishing him to take Care it might always lye in a Convenient Posture.

Upon my *old Sophister's* presenting me a Dose of Snush, I demanded if it was the True: For I remembered I had heard a Story of one *Apuleius*, that one *Qui pro Quo* metamorphosed into an Ass at the same Time he expected to become a Bird. He told me, he carried but one sort, and that ther^e was no Danger of Mistaking: I then

presently took it, and sneezed (God bless me) three or four Times, with mighty Violence. Hereupon I fell into a Swoon, like that of *M. Descartes*, I described before, and in an instant my Soul, by the only Act of the Will, perceived her enlargement from the Body.

I intend not to enter upon the Retail of Reflections I made upon my Soul, and on my Body, when they were divorced from one another; I will only say, I began from that Moment to perceive the Strength of Prejudice and Conceit, in obstructing the Knowledge of Truth; and how wise and rational is the Advice *M. Descartes* and his Followers give, precautioning us on that Respect, and yet at the same time, how little Care those Gentlemen had to make use of the Rules they prescribe to others. For the first thing *my Gentlemen* would persuade me, whether I would or not, was, that my Soul in the instant of Separation, saw herself seated on the *pineal Gland*. As I judged it unfitting to begin with them by a palpable Contradiction; I made answer, That the Separation was performed so heedlessly, I had no Time to make that Observation. What I said was true, and was also the least disobliging Answer I could find; for I perfectly remembred, and was throughly convinc'd of what I had lately read in *M. Sisson* the great Anatomist, who was a great admirer of *M. Descartes*, and look'd upon him as the ingenious Contriver of a *Novel Man*, but shew'd and prov'd by ocular Demonstration, this *Man* of his a quite different Creature from *that* which God Created: And that the *pineal Gland* has not the Situation, much less is capable of those Motions attributed to it, upon that *Hypothesis*, That the

Vessels

Vessels with which it is encompassed, are not Arteries, which might supply it with the Matter of the Animal Spirits, as *M. Descartes* supposes; but only Veins, that by consequence the Honour and Privilege it has given it, of being the Closet of the Soul, is without Foundation; and that perhaps it deserves not to be advanced (upon any more considerable Employ it has) above the other Glands, whose Office is usually of no great Importance in an *Animal Body*.

These were my Thoughts, though I kept them to my self; and I was desirous, as much as possible, to accompany them in their Sentiments. I first observed to them how Digestion was performed in my Body, though my Soul was absent, by the only Vertue of that *Acid Humor* in the Stomach, which, by the Agitation of its insensible Parts, dissolves Meats no otherwise than *Aqua Fortis* dissolves Metals: How the most subtle Parts, separated from one another, made a Cream-like Liquor, called the *Chyle*: How the *Peristaltique* Motion of the Guts served to drive down the grosser Parts, and to give admittance to the *Chyle* into the *Vena Lactea* of the *Mesentery*, through the imperceptible Pores, proportioned to the Figure of the Particles the *Chyle's* composed of: How upon the Heats staying in my Heart, just as before, the Blood performed its circular usual Course, continuing all the consequent Effects, such as Nutrition, and the sound Constitution of the Limbs, placed at the greatest Distance: How, in short all the Motions were carried on, by the only *Clockwork* of the *Machine*.

And here the Sticklers for the old Philosophy must not resent the Compliance I used on this

Occasion ; for if all that was absolutely false, it could never have been true in this present Juncture, seeing my Body was not corrupted, tho' my Soul had left it ; but if the Motion and Circulation of the Humours once had ceased, it must of necessity have been corrupted : Whence it follows, That supposing my Soul separate from my Body, as I do then suppose it was, it is plain that all the Motions were performed, and performed only by their Dependance on the Disposition of the *Machine*.

At last we thought of setting out : I ask'd then what Names and Titles of Dignity or Respect Souls used to treat each other with in their Spiritual Conversation ; for that Souls being in *French* of the Feminine Gender, I was guilty all-a-long of an Absurdity, in calling the Soul of *M.* by the Name of *Monsieur*, yet I durst not use *Madam* nor *Mademoiselle*. As for you (*said I to Father Mersennus's Soul*) I may ease my self of that Trouble for the future, by using *your Reverence* ; so you may, said he, by addressing *M——s* Soul with *your Lordship*, both Titles are *all-a-mode* in *Italy*, and arriv'd from thence in *France*. But trouble not your Head about it, we continue the same Names we had in the World when in our Bodies, *M. Descartes* is *M. Descartes* still ; this *Gentleman* is what he was before ; I am called *Father Mersennus*, as you are *M——*, for we *Cartesians* are a little *Platonical* in the Business. With *Plato* what's a Man ? He's a Soul that makes use of a Body : And you may call to Mind a Particular Passage among others in *Cartesius his Method*, where he says, “ Examining with Attention what I was, “ and that I could conceive my Body to be no-
“ thing

“ thing——and on the contrary, if I did sub-
“ sist a Moment without thinking, I had no
“ Reason to believe I had an Existence in that
“ Moment—— I conceived I was a thing, or a
“ Substance, whose whole Nature and Essence
“ did meerly consist in thinking ; so that my
“ self (I mean my Soul, by whose means only I
“ am, what I am) my self, I say, is a thing
“ wholly distinct from my Body. And I wonder
(added Father Merfennus) the *Philosophers* and
School-Divines have escaped this Passage, and have
not before this ranked it in the *Catalogue* of his
pretended Errors ; especially since *M. Arnauld*
reflected on it by the by. But let’s be gone, said
he, and let’s make haste, we have lost a whole
half Hour already ; Time’s very precious : And
with that he Soars up in the Air with the Soul of
the *old Gentleman*, and I without any more De-
murs, set out to follow them.

A
 V O Y A G E
 T O
 The World of Cartesius.

P A R T. II.

THE Weather was very serene, the Air extremely clear, the Moon was in the Full, and the Stars glittered, methought, in an extraordinary manner, which made me wonderful impatient to contemplate those Glorious Bodies more nigh them, whose Splendor, Vastness, Number and Order have been thought a Subject of Admiration by all Ages, the worthiest Object of the Study and Meditation of *Philosophers*, and most sensible Proof of the *Divinity*; notwithstanding which, my Guides caused me to make a Halt upon the Pinnacle of a Tower, raised far above the

the

the rest of the Town, to observe the Nature of the Air of that low Region, and the Parts of which it is compos'd. Come on (*says my old Gentleman*) you shall know by your own Experience, the Truth of *Descartes* his Sentiments, in the Explication of Natural Beings. Remember what he says in his *fourth Book of Principles*, that the Air is only an Amass of branched and ragged Parts, of the *third Element*, extremely small, sever'd from one another, and floating in the middle of the Balls of the *Second Element*, whose Motions they obey. See how the Parts of the *First Element* are mingled through the whole, and fill up all the Intervals the little Globules and the branch'd Parts leave betwixt them; how the Fluidity of this Body, as well as all other we call Liquids, consists in the Motion of its insensible Parts, which have an indifferent Tendency to any Side; for being they are all in Motion, and have mostly quite different Determinations, we may readily conceive two things: First, That upon a Liquid Body's ceasing to be confin'd and bound'd by a Solid one, it must diffuse itself on every Side, since it's Parts are in a Motion every way. Secondly, That upon a solid Body's offering to pass through, finding all the Parts in Motion, it easily makes a Separation; since, to do this, 'tis only requisite to give them different Determinations instead of those they had before; it being certain that when Bodies, and especially small ones, are in Motion, a Motion so different as that in which the little Parts are found, 'tis the easiest thing in Nature to give them new Determinations, and by consequence to divide a Liquid Body, and pass through it. These two Phænomena's then of a Liquid
Body,

Body, being explain'd so cleverly and so intelligibly as you see they are, by the *Principles* of Philosophy; the *Gentlemen Philosophers of the Schools* would have a great Sway over my Mind, if they would oblige me to acknowledge Fluidity for an absolute Accident, distinguish'd from the Motion of the Insensible Parts of a Liquid Body.

As much inclined as I was to defend the Interests of the *old Philosophy*, I must own this Reasoning, joyned with that I saw my self, made great Impression on my Mind; for though I could perceive no such Thing as the little Globules of the *Second Element*, of which he talk'd, and which was a meer Illusion of a Soul intoxicated, as much as possible, with the *Ideas* and *Prejudices* of *Cartesianism*; yet I was forced to Acknowledg in the Air those little insensible Parts loose and disingaged of one another, that undoubtedly constitute all Liquid Bodies. I plainly saw that *subtle Matter* which *Aristotle* himself acknowledged under the Name of *Ethereal Matter*, and taught to be disperfed throughout the World, in a most rapid Motion. Thereupon I could not disallow that plain Explication he had made of the Properties of a Liquid Body: And I must grant, That were *Descartes's Philosophy* as reasonable in all its Parts as this, I might be a little tempted to turn *Cartesian*, without troubling my self to dispute the Globules with him of the *Second Element*, or offering such other Doubts and Scruples as then came into my Mind; with entire Submission I complemented upon all the rest, both these Companions of my *Voyage*; that is to say, upon the *subtle Matter*, and on that *branchy Matter*, which I termed in
their

their Language without more ado, the *Matter of the First and Third Element*. I much applauded their Explication of Fluidity, and commended it for its Neatness and Simplicity; but a little Adventure turned the Discourse, and had like to have spoiled the Fruit of all my former Complaisance.

There was on the top of the Tower on which we lighted, a kind of a Twirl that was in the Nature of a Weather-Cock, about seven Inches Diameter; its Substance was of Plate of Steel, very thin and light; its Sails were exactly equal, and the Pin on which it turn'd, smooth and polish'd: So that the gentlest Gale of Wind set it a going, and at the same time turn'd about a bent Iron Rod (for the observing the point of the Wind) whose end made the Axis to the Twirl. It fortun'd that a *Soldier* of a *Switz* Regiment that quartered in the Town, discharg'd his Musket in the Air: It was loaded with two Bullets, one of which as it flew, but just glanc'd upon the end of one of the Flyers of the Twirl: And yet impress'd so considerable a Motion as lasted a long time. The Bullet continu'd its Motion almost in a right Line, and went very near as far and as swift, as the other Bullet that never touch'd upon the Weather-cock. I had good Reason to take notice of that last Circumstance. *Father Mersennus* slipt not that occasion to demonstrate to me another of *M. Descartes's* Principles. You see (*said he*) these Flyers; if that Ball had not flanted upon one of them in passing, seeing there is not any breeze of Wind, do you think they would have left that quiet Posture they were in, and turn'd themselves about? No certainly (*I reply'd.*)
The

The posture they were in a Moment since, could never have been chang'd for that they are in at present, but by the assistance of some External Cause that has made that alteration. But now (*added he*) that they are in a directly contrary State, do you believe they could quit the same, without the determination of some other Cause that should destroy their Motion, as the Bullet did their Rest? *Father* (*said I*) that Question seems more difficult than the other to resolve: I have heard it always held, as an unquestionable Axiom, That every Body, whilst it is in Motion, tends to its Repose as to its end. We'll grant you (*reply'd he*) that Philosophick Banterage every Body, whilst in Motion, has a tendency to rest, as to its end. A Body is endu'd with Reason and a Will, first to have an end, and then to make unto it. But if that Proposition is capable of receiving any tolerable meaning, it says no more than this, That in the situation and disposition Bodies have among themselves in the World, sensible Bodies that are mov'd do truly lose their Motion by Degrees, upon the opposition they receive from other Bodies, to which it is communicated, and at length they rest. For if nothing did destroy that State of Motion it would last for ever, by the same Rule, that if nothing did disturb the rest of a Body, it would always remain immoveable. And this it is of which I had a desire to convince you, by the Example of this little Wind-mill, Fortune has presented us.

Supposing this Gimcrack had turn'd in the midst of Water, as it does in the midst of Air, it is a plain Case, it's Motion would quickly have been destroy'd by the great Resistance

stance the Water would have made. If two of its Sails had been longer, larger and heavier, than the other two, the Motion had ceas'd sooner yet: Because that inequality would have been another Cause of a more forcible Resistance. Again, if you add to this, that the Pin on which it turns had been thicker, as also rusty and unpolish'd, the Motion had been lost still sooner, for the same Reason. But because it stands in Air, and in Air that's very fine; because its Sails are exactly pois'd, and its *Axis* slender, smooth and polish'd, the Resistance that it finds is less, and the Motion so much greater, and longer it will last. Whence we may thus conclude: Much Resistance destroys much Motion; a less Resistance destroys less; and a lesser yet, destroys a lesser Motion still; and so on: Hence, if there was no Resistance at all, the Motion would not flag, but continue always; hence as a Body would maintain its Rest, unless an external Cause disturbed it in the Possession of that State, so a Body would continue its Motion, as long as it should meet no Molestation in it. So then, the great Principle of *M. Descartes* is establish'd, That a Body of its own Nature stays always in the Capacity it is plac'd; if it is at rest 'twil always rest; if it is of a Triangular Figure it will be of a Triangular Figure always; if it is in Motion it will for ever be so: But for the rest this Principle is not peculiar to *Descartes*, *Galileus* before him, *Gassendus*, *Hobbes*, *Maignan*, &c. suppose it true. And I remember likewise, That in making my *Collections* for my *Commentaries upon Genesis*, where I have introduced an infinite Number of *Philological*, *Philosophical* and *Astronomical Dissertations*, I have remarked more than

than one Place in *Aristotle*, where he either teaches or supposes the same Doctrin; and *Vasques* one of the subtlest of the *School Philosophers* has proved it at large, as to the concern of Motion: It may however be said, that no one ever carried it to that Pitch, and used it so dextrously, and with that Advantage as *Descartes*; and thence it was that particular Difference and Honour was paid him rather than to others upon that respect.

I am much of your Opinion (*I returned,*) That General Principle is without Controversie one of those, the Mind of Man admits without offering Violence to itself; and the Difficulty that is found in applying it to Bodies, considered in Motion, proceeds only from that false Idea, so commonly received, of what we call *Modes* in Philosophy, and from our conceiting Motion as a *positive being*, and Rest as *its Privation*, though neither Motion is a Being, nor Rest the Privation of a Being, but one and the other are different and contrary States, of which a Body Natural is capable. But, *Reverend Father*, this Whirl-gig here has raised a Scruple in me, of which I'd fain discharge my Conscience; it is grounded on another Principle of *Descartes*, concerning which you may call to mind, if you please, that the Ball that touch'd the Sail, seeing it but glanced upon it, lost nothing, or next to nothing of its Motion, that it had so far preserved, and we saw it arrive to its Journey's End as soon as (at least was but a Trice behind hand with) the other that never touched at all; and on the other Hand impressed a very considerable Motion on the Engine: For whether we measure the Quantity of the Motion, by the Bulk
and

Compass of the Body moved; or whether we measure it by the largeness of the Space traversed by the Body, in those innumerable Circles it described, spight of the Resistance of the *medium* wherein it turned: Or likewise whether we consider the swiftness of the Motion, it is manifest the Ball communicated much more Motion to the other Body than it lost itself: And on the contrary, granting the supposition you have just made unto my Hands, to demonstrate a Proposition of *Descartes*; I mean, that the Sails had been unequally ballanc'd, and of a different Bigness, that the *Axle* had been Gross, unsmooth, or rusty, and that the Ball had grazed on one of the Sails less obliquely than it did, it is certain, in these Circumstances the Ball had lost much more of its swiftness and its Motion, yet would have impress'd or communicated much less than it hath at present. What now's become of those grand Principles of *M. Descartes*? that a Body at the same instant that it moves another, communicates exactly so much Motion to it as it loses, and precisely loses the same Quantity it communicates; for here the Bullet communicates a great deal, but loses little; and in the other Supposition it loses much, and communicates but little: What now becomes of those mighty *Axioms* that lay the Foundation of his *Physicks*, and support the whole Frame and Structure of his *World*? That God in the Creation of the World, or Matter, created at the same Time in it a definite Quantity of Motion, or *Transport* (as he himself styles it) from one Place to another, which is always the same without Increase or Diminution, although the Parts of which the World's composed, have sometimes

Part. 2.
 princ. p. 37.
 let. 72.
 tom. 1.

more

more and sometimes less of it ; forasmuch as what is lost in me, is of Necessity received into another : That God is the universal Cause of all the Motion in the World : That the Creatures have no Pretence to its Production, and can only determine that produced already, &c. For if a Body communicates more than it has in it self, God or the Body it self must needs produce the *overplus* of the new ; and if a Body loses more than it communicates, that which is lost and not communicated, must of necessity be annihilated. And this is sufficient to demonstrate that the Quantity of Motion is not always the same in the World, but on the contrary it increases and decreases every Moment. In a Word, we see here a considerable Part of Matter put into a rapid Motion that before had none at all. I will suppose it was in an *Equilibrium*, and that a little thing would turn the Scales ; that will not do our Business, it will still be true to say, there is a new *Transport* communicated to a large Quantity of Matter : That that Transport is no small one, since it carries a great deal of Matter through a great deal of Space ; yet notwithstanding the Ball hath not lost the least imaginable, seeing it is carried as far, and as swift, within a Trifle, as it would have been if it had communicated none at all. But that which seemed of most Importance was, the *Immutability* of God, that was interested in this Affair : For the Reason why *M. Descartes* was so zealous to preserve the same Quantity of Motion to a Grain, was because God's unchangable. See where this Trifle now has led us ? But what a Mischief would it be, if this petty Instance overturning the Principle of the Quantity of Motion, should shatter all those

Seven fine Rules of Motion Descartes has established with so exact a Calculation? Mean while they all take it for granted, and subsist but on the Courtesie of that Supposition; however he makes no Scruple to conclude his Explication with this remarkable Passage, *All this is so evident it needs no Demonstration.*

But not to lose Time in drawing other Inferences, methinks, my Reverend Father, I may at least with some Pretence of Reason say, *M. Descartes* here has weakly maintained his Resolution, that he made in his Stove in Germany, when he there began to play the Philosopher; I mean, of avoiding, above all things, a too heady forwardness in his Determinations, and the establishing any Principle, without examining of it with all possible Diligence, and upon greater Evidence than the most palpable Demonstrations in Geometry afford; of having so strict an Eye in every thing, and of making so exact an *Analysis* of all the Propositions he advanc'd, that he might be certain nothing could escape him; for had he guarded himself with these Precautions, before he proposed his Doctrin concerning Motion, your *Wind-mill*, and an hundred Instances might have come in to his Head, and probably have altered his Opinion, at least prevented him from saying, *These things were all so evident they seem'd to need no Demonstration.*

Part. 2.
Princip.

Meth. p.
26 & 37.

I foresaw that this Discourse would not relish well with my Companions; and I am sure my old Blade began already to repent him of his Vouching for me to *Father Mersennus*, as a Person that with an implicit head-strong Resolution embraced *Cartesianism*. The Good Father however gently reply'd, That he had observed three

F Things

A Voyage to the

Things in my Discourse, a little Malignity in my Reflections, abundance of false *Prejudice* that still stuck by me, whatever Assurance I had given to the contrary, and some Difficulties at the Bottom, for the clearing of which it was convenient to discourse *Cartesius*: But let them (*said he*) seem as Big and as Frightful as they can, they will presently disappear, upon his conversing with you; I have experienced it an hundred Times. No Man was ever more troublesome to him in Questions than my self, which I us'd to make on all Occasions, even 'till I wearied him. These Difficulties once I thought inexplicable; but one Letter, of about a Page he wrote me, dispersed all my Doubts, and gave me more Light into the Matters then in Hand, than the entire Volumes of other Men. I much expected the Reproach of Prejudice, for that's the ordinary Refuge of *Cartesius*, and the Gentlemen his Disciples, when they find themselves press'd a little home: I urged however that Point no further to him; I only excused my self from the Malignity he charged upon my Reflections, and upon the Hopes he gave me of the Solution of my Difficulties by *M. Descartes*, (*I rejoyn'd*) You exceedingly rejoyce me, Reverend Father, for I am a Cartesian in my Heart, though I am not a through pac'd one in my Mind, wanting sufficient Light to extricate my Doubts, which the Reading the Books of that Great Man has rais'd in me; but I have a sincere Love for Truth, and assure your self, I shall wholly resign my self up unto her, so soon as *M. Descartes* shall present her to me.

After that Protestation, which seem'd a little to reinstate me in their good Oponion, we
 launch'd

launch'd again : And it will not be amiss to advise my Reader here, this once for all, That whatever Room these Harangues and Disputes take up upon the Paper, they lasted but one single instant, since separate Spirits entertain each other a quite different way from that they use when in the Body, whose Tongue pronounces but one Syllable at a Time ; one Spiritual Word that a Separate Soul shall speak unto another Soul, is more full and expressive than a thousand pronounced or written : And since my taking of this *Voyage* I have made a World of fine Discoveries, for the explaining the Way that Angels discourse together ; I question not but to be in Print some Time or other upon that Occasion : I confess I shall speak many Things that for want of Use will not be understood ; but my *Book* may find no less a Welcome and Esteem for that, but rather the good Fortune Books of *Mysterious Divinity* have met with, that have been for some Time the only ones in Fashion, recommended meerly by their being unintelligible to those that read them, and pretending to be understood by the Composers ; for it is known by too manifest Experience, the Authors of those Books are not always such mighty Saints as they would seem.

We parted then from the Top of the Tower, before the Instrument desisted from its turning, and we steered towards the *Globe* of the *Moon* : My Soul perceived an unspeakable Pleasure to scud it in the Air, and to wander in those vast Spaces, she could only travel with the Eye before, when united with the Body ; that minded me of a former Delight I had sometime tasted in my Sleep, in dreaming that I whipt
F 2
through

through the Air, without ever touching Ground, above which I thought my self exalted many Yards.

We met upon the Road vast Troops of Separate Souls, of all Nations, *Laplanders*, *Finlanders*, *Brachmans*; and I then remembered what I had read in several Books, That the Secret of separating the Soul and Body was known among those People. But about fifty Leagues on this side that Planet, there is a Region very well stock'd, especially with *Philosophers*, and those *Stoicks* for the generality: And quite from that Place to my Arrival at the *Globe* of the *Moon* I descryed how swingingly History belies an infinite Number of Persons, that it supposes dead, like other Men; though, in truth, they are no more Dead than *M. Descartes* himself. I shall discourse with some of them as I go along.

*Olaus mag.
l. 3. c. 17.
Tert. de
anima.*

The *Moon* has an Atmosphere like the Earth, that by a moderate Computation may amount to three French Leagues in height. As we were just ready to strike Sail, we made a good Distance from us, three Souls that held a very serious Conference together; we judged they might be Souls of Consequence, by the deference many others in their Retinue seemed to pay them: Upon our enquiring who they were, we understood they were *Socrates*, *Plato* and *Aristotle*, that were met in Consult, for the Publick Interest; for that being advised by certain News from our *World*, That the *Venetians* had beaten the *Turks*, not only out of *Ancient Peloponesus*, but also the Famous City of *Athens*, where heretofore these three Philosophers had made so great a Figure; they had resolved in their Debate,

so soon as any *Noble Venetian's* Soul should arrive in these Quarters, to petition her to recommend their Interest to *General Morisini* and the *Republick's* Consideration; To require the replacing the Statues the *Athenians* had erected to them; To re-establish the Academy and the *Lyceum* with all their Priviledges, and to restore the Marbles in the *Prytaneum*, whereon was engraven the Justification of *Socrates*, with the Execrations charged on *Anytus* and *Nicetus* his Accusers: And in case they should push their Conquests as far as *Macedonia*, to have as great regard for *Stagyra*, at present *Libanova*, as *Alexander* the Great had formerly on the account of his Master *Aristotle*, whose Country that was. I am surprized, says *Father Mersennus*, to see these *Philosophers*; I never heard any Mention of them here, nor did I ever meet them in all my Travels: It is true, I have observed in my *Commentaries upon Genesis*, That *Plato* and *Trismegistus* used to quit their Bodies, the better to contemplate the Sovereign Good; and that *Socrates*, as *Alcibiades* relates in *Plato*, had from Time to Time such sort of Extasies: 'Tis true also, I never took *Aristotle* for so great a Fool as to throw himself headlong into *Euripes*, for the Madnes and Despair of being unable to comprehend the *Flux and Reflux of the Sea*: And many things I have read in that *Philosopher*, induced me to suspect he knew the Mystery of Separation; but I never thought to inform my self whether these Gentlemen made use of it to prevent their Dying. You'll see (*he added*) that as *M. Descartes* has determined to put the Project of his *World* in Execution, that he framed while he lived on Earth, so *Plato* will resolve upon the

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Undertaking that of his *Republick*, which we shall see fix'd somewhere in those Vast and Desert Spaces above the Heavens, where he will convoy a Colony of Separate Souls, to constitute his Government.

That supposed (*said my old Gentleman*) *Lucian* had but ill Intelligence from the other World, since in his *Dialogues of the Dead* he often talks of *Socrates* as a Man that had passed the *Stygian-Lake* in *Caron's Boat*, and as an old Inhabitant of *Hell*. But what, Gentlemen (*said I*) do you say of our Modern *Lucian*, I mean the Author of the *New Dialogues of the Dead*, that without farther Ceremony places *Monsieur Descartes* in *Hell*, and brings him on the Stage discoursing with the pretended *Demetrius of Moscow*? Is it reasonable to think, That Author, upon his entertaining us in that Work with some pretty Things, and diverting us with an abundance of choice Historical Observations, to think, I say, under that Shelter he had Right to put off all the Frolicks of his Imagination, without any regard to Truth? To place *M. Descartes* in *Hell*, at the same Time he's above the *Heavens*, is not this (to express my self in the Quodlibetique Style of our Friend *M——*) *Aberrare toto Cælo?*

In the interim we saw the three *Philosophers* advance towards us: 'Tis known they were three of the finest Gentlemen, that have bore that Character in Antiquity, and that they have always been distinguish'd from that Rascality of *Sophists* and *Cynicks* that generally were meer *Andrews*, and only purchased the Reputation of Sages at the Expence of the most abusive Extravagances. *Socrates* made the Address, and in a most

most obliging manner told us : He easily perceived we were of *France*, not only because we came that Road, but also that he saw in us the Character and *Genius* of the Nation ; which People was the most polite at present in the World ; that though he had but little Commerce with *our World*, he had yet enough to be certified of that Particular. He demanded the Occasion of our *Voyage*, and where we were a going.

Father Merfennus took the Word, and made answer, We were upon a Visit to a Friend of ours, that lived at a vast Distance ; that we were happy in timing our *Voyage* so exactly, as to have the Opportunity of paying our most humble Respects to those *Personages*, that have given Renown and Glory to Antiquity, and whose Names after the Tract of two thousand Years were still acknowledged and held Venerable by all the Nations in the Earth.

'Tis believed below we are dead, said *Socrates* ; True (*replied* *Father Merfennus*) and I my self was guilty of that Universal Mistake : But here are *two Gentlemen* (*continued he*) meaning us, that are still Inhabitants of the *lower World*, and who will undeceive it as to that Particular. I shall not be sorry, for my part, answered he ; and it would not be amiss to acquaint the People there, That the Soul of a *Philosopher*, such as I am, staid not to be dismissed from the World by the Decree of a Faction of Corrupt Judges, and the Clamours of a Multitude, incensed by the Envy and Buffoonry, of a Coxcomb of a *Comedian*. Hear the State of the Matter ; well knowing the Rage and Popularity of my Enemies, I thought it not worth while to stay, but quitting my Body, I gave Orders to my *Familiar*

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Spirit, to enter in my Room, and to put a good Face upon the Business to the End ; being more Secure of his Performance than my own, whatever Constancy and Resolvedness I found in my self. He acted his part to a Tittle ; and I scarce think 'tis yet forgotten in the World, what Constancy appeared both in my Looks and Words, when the Sentence of my Death was heard pronounced ; with what Undauntedness I was seen to take from the Executioner the Hemlock-potion that poisoned my Body, and the Fury of my Accusers, that were ready to burst with Malice, to see me a *Philosopher* to the last. It is true (*I replied*) that last Action of your Life has procured you a vast esteem among Posterity to this Day, and I question whether it will make for your Glory, for us to publish the true Matter of the Fact, as you have related it. No matter (*said he*) I have still a greater Love for Truth than my own Glory, and am more concerned for *Her* than for *my self*. Most bravely answered (*I cry'd*) and worthy of your self ; That one Sentence is worth all the Oration your *Demon* harangued your Friends with, to comfort them in your Death, and I am resolved it shall lose nothing of its Value in the Carriage. If one fine Wit of our World had but heard it, he would certainly have canonized you for't ; he, I say, that in reading your Story, was much put to't to forbear an Invocation, and crying *Sanc̄te Socrates ora pro nobis* (That Extravagance is known to be *Erasmus's*, and *Socrates* himself thought it very impertinent.)

Aristotle next obliged us to disabuse the World of those false Reports, that were current of his Death ; some making him dye of the Colick ; others

others affirming he poisoned himself; others again, That he drowned himself in *Euripus*; these last came nearest to the Truth. He told us then, That being disgraced, and banished from the *Court*, upon Suspicion he was dipt in the Conspiracy of *Calisthene*, his Friend, against *Alexander*, he retreated to *Athens*, where he opened his School of *Philosophy*; That he was there impeached of *Atheism*, as groundlessly as *Socrates*, by a *Priest of Ceres*; which obliged him to retire to *Calcis*: That one Day as he was taking a Turn upon the Bank of *Euripus*, and recollecting in his Mind the glorious Advantages he had lost, of making his Fortune, seeing all his Hopes unravelled, that he was for ever discarded from the *Court*, and discharged from *Athens*, the Melancholy that seiz'd him made him resolve to leave the World; that, to that intent, he made use of the Secret *Æsculapius* had left him, from whom he had the Honour to descend in a Right Line by his Father *Nicomachus*, formerly Physician to his Majesty King *Amyntas*, the Grand-Father of *Alexander*; he made use of it, I say, to separate himself from's Body, which he left in a Place where the Sea, in a high Tide, chanced to carry it off. Upon the finding of his Body drowned, every one made his Conjecture: The *Court*, that understood what Impression Disgrace would make upon the Spirit of a Courtier, whose Nature it is, more than may be supposed, upon Temptation, to dispatch themselves out of the World, concluded very rationally on the Point; but the Opinion of *Aristotle's Disciples* carried it. At that Time he was about explaining the Phenomenon of the *Flux and Reflux* of the Seas: He had

had confess'd contrary to his custom, that he did not throughly apprehend it: And that vex'd him to the heart. Thence they readily concluded *that* the cause of his despair. One of them confidently proclaim'd it in several parts of *Greece*. And as if he had been behind him, when he threw himself in the water, added the words he spoke unto the Sea, just upon his jump; *Since I can not comprehend thee, thou shalt comprehend me.* The *Antithesis* seem'd very pretty. That gave Legs to the report, and by that Pass-port it arriv'd to us.

There is something strange and new in these Particulars as well as in the Story of *Socrates*. And many of the Circumstances are left out in most of the Authours that have treated on this Subject. That encourages me to hope they'll meet with a kind Entertainment from the Publick; since tis this that now a days lifts our Historians unto Reputation, and sets 'em above the common herd of Writers: And nothing takes so much as Paradox in History; since a Manuscript that shall thwart the long receiv'd Opinions of Mankind, is the only piece in fashion, especially if slanderous and invective, and the Extracts sent to the *Compilers of the Holland-Journals*, and the *News of the Republick of Learning* to advance the Rate of these Books, are fill'd with hardly any thing but rare and admirable Discoveries. But tis not on the faith of *Manuscripts* I ground my Reports, things commonly subject to be question'd, but on the Testimony of the Persons mainly concern'd in the History, and who have either done or suffer'd the thing therein related. And I challenge all the *Burnets in England* to evince me false in any thing, by all the *Histories of the Kingdom of the Moon*. As

As for *Plato*, he told us, It did not so much trouble his Head, what were the Sentiments of Men concerning him, and thank't us for the offers of our Service that we made him: But Experience convinc'd us of the truth of *Father Mersennus's* conjecture, touching the *Republick*; and also that had his *Reverence* been a little more conversant in the Affairs of the *Globe* of the *Moon*, he would have made no wonder at his finding *Plato* and *Aristotle* thereabouts; since the first had effectually establish'd his *Republick* there, and the second his *Lyceum*, both which we see geographically describ'd in the Mapps of that Country by *Father Grimaldus* a *Jesuit*, one of the Notablest Mathematicians of the Age. We have nothing of certainty as to *Socrates's* abode; but 'tis more than probable his ordinary Resort is in his belov'd Disciple *Plato's* Commonwealth.

Cartes Selenographiques.

After this little Entercourse, as we were taking leave of these Gentlemen, *Socrates* demanded what Friend it was we went so for to wait on? *Father Mersennus* answer'd, that it was *Descartes*: *Descartes*! (reply'd *Aristotle* :) What that mad Blade that came from the other World above thirty years ago? He that was made the Owl of all the Philosophers, not able to endure him here, and that forc't him to seek out for other Quarters! Truly a very pretty Fellow, that to have treated me so Bully-like, and with that disdain I am told he did: Me, I say, that have been the *Tuteur* to the greatest *Prince* and greatest *Conquerour* that ever was! Me, to whose Honour *Philippe* and *Olympias* erected Statues! Me, that have taught *Philosophy* in *Athens*, that have wrote so many *Books* and had a whole *Regiment* of *Commentatours*

mentatours ! Me whose Words had pass'd so long for Oracles, and the decisions of the Schools ; Me, in fine, that all the Philosophers plume them selves as having gain'd unto their Party, and not willing, nor indeed daring to confess, I take the contrary side ! I would fain see that bold Merchant venture on the Benches. I have seen his Books and pity 'em. Would you guess (*said he*) turning hastily to *Socrates* and *Plato* ; what is the first step he would have his *Wise men* make, in order to his safer conduct to the attainment of Truth ? He makes him doubt of every Thing, and bids him take for false the most self-evident Proposition in the World, that Two and Three are Five, that the Whole, is greater than its Part, &c. You know Gentlemen, *said he*, what work the World have made with him thereupon. For my part, I'd only ask the Gentleman one Question, Does he suppose a Man can doubt of every thing, or does he not ? If not, Why makes he it the leading precepts of his *Method* ? For in point of Precept and Method, 'tis necessary they be such as can be put in Practice. If he does suppose it, how is it he more than once mantains in his *Meditations*, and his *Method*, that the arguments of the *Scepticks*, which were next a kin to those he brings to fetter us in doubts, were never capable of staggering one single person, that was in his Senses as to those apparent Truths ? Does he think that those he has to deal with, have lost their Senses ? Or does he imagine that the Arguments of the *Scepticks* would be more effectual in his Mouth, or in his Writings than in theirs, whose only Design, for the generality, was to torture and plague the other *Sophists* and to make themselves sport

*Is Synopsis
Bardit.*

*Exp. max
Inst. de
Cognit.*

sport with those as should endeavour seriously to confute them? But never dream'd of one *Monsieur Descartes* that should one time or other Martial their *Sophisms* in the Van of his *Method*.

But now supposing *M. Descartes* had induc'd me to doubt that Two and Three made Five; and that the Whole was bigger than its Part; I would fain know what Method he would take to rid me of this doubt, and to replace me in the *Statu quo* of certainty where I was before? This could not be done without the aid of another Proposition, more evident than the other; which must serve to convince me, that what I began to doubt, was undoubtedly, not to be doubted of. Now what is with him that high and mighty Proposition, that must brandish its Light on all the rest, and act the Sun among the other Stars? Why: *I think, therefore I am*. For, says he, 'tis impossible to think unless I am. Most admirably concluded! And is it less impossible that Two and Three should not be Five; that the Whole should not be bigger than its Part; than 'tis impossible I should be mistaken, unless I think, and that I should think unless I am? If I could bring my Mind to doubt once of the two first Propositions, should I be much pain'd to make question of the third? Or if a *Sceptick* should be so impudent to deny me those, need he be more, to deny me this? And should not I find my self equally empower'd to demonstrate to him all the three? *Descartes* in that procedure pretends to silence a *Sceptick* that challenges him to demonstrate any thing; or to shew him the evidence of a Proposition, himself pretends to have made him doubt of. The *Sophist*, resolv'd to deny the evidence of the prin-

est Proposition, baffles him: And so will I; telling him, I stay in the maze of Doubt into which he led me, and am like do to so, since the Proposition he brings to expedite me thence, is as blind and dark as those which he made me boggle at before.

But probably (*in pursuance of his humour*) you are charm'd with the wonderful progress he makes in his following *Method*. Reflecting, *says my Great Philosopher*, upon that first Conclusion, *I think, therefore I am*. I observe I am no other way assur'd of the certainty of it, than by having a clear and distinct *Idea* of what I there affirm: So that I can take it for a general Rule, that whatever I can clearly and distinctly conceive, is true. But is this the peculiar of that favourite Proposition, only *I think therefore I am*? Supposing that *Descartes* had left me in the capacity I was, and where I must be still, in spite of Fate, as to the certainty of these Propositions Two and Three are five, the Whole is bigger than its Part; might not I make the same reflection on these Propositions as he makes on his? And being not oblig'd to invent a Rule of Truth for the *Gentlemen Scepticks*, but only for my self, which I might make use of in forming all my Judgments, might not I be allow'd to argue upon my Propositions as he does on his? The reason why I am ascertain'd of these Propositions, that is; why I not only doubt not of them, but perceive, I cannot doubt of them, if I would, is, that I have a clear and distinct perception of what I there affirm: And seeing I have such an one, can I still doubt whether I have or not? When to have and to judge I have, or rather to be sensible I have it, is the self
time

same act of the Understanding. For in effect, from thence it is; from my own Conscience it is proceeds the impossibility of doubting of that Proposition, two and three are five, as well as of that other, *I think therefore, I am*, as all will agree that we are able to judge any whit nicely in such Cases. I might then equally from these and a thousand other Propositions draw the same Inference, *Descartes* concludes from his, to make a Rule of Truth on, *What I clearly and distinctly conceive is true*. And it is as trifling as absurd, to make the Certainty and Evidence of such sort of Propositions, depend on the Certainty and Evidence of any other, since they are thus certain and evident of themselves, not from any thing prejudicate or antecedent to them. All of them stand on the same Square as to their Conviction, and nothing's more unreasonable or against the Rules of Method, than to go to prove them by one another: Hence it is they are called Immediate Propositions; and even *Descartes* himself will own, That that General Principle, *What I can distinctly conceive is true*, is no ways a Rule of Truth for such kind of Propositions; but that their Rule of Truth, *i. e.* that which convinces me of their Truth, is, as I have been saying, the only Experience, and internal Sense alone my Mind has of that Truth, at the instant of forming those Propositions.

Aristotle, whom the very Name of *M. Descartes* had put in Humor, staid not long in so pleasant a Road, but pursued to push his Criticisms home. The greatest Pleasure (*said he*) I had in reading that admirable Piece, was to see a Man so foil, and perplex himself, as to lie open, not only to the most subtle *Sceptick*, but

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to the meanest *Logician*, that with three Grains of Wit and Sense, knew how to enforce the Rules of Logick he has learn'd: With that he run through his *Method*, his *Meditations*, and the first Part of his *Book of Principles*, so as to let us know, he had attentively examined them. He shewed us, in presenting the Order and Array of *Descartes's* Propositions, that no Man ever went so preposterously to work as he, for the Inventing and Establishing a Rule of Truth: For that after having made us doubt of all Things, and next, in this dark Passage introduced one Spark of Light, *all that we can distinctly conceive is true*: He presently makes us suspect that again by Discourse drawn from his third Meditation. "But
 "many things which before seem'd evident, are
 "become again uncertain; which has determin'd
 "me hitherto to question, whether Two and
 "Three are Five: Hereupon it came into my
 "Mind, That possibly there was a God, that
 "could have made me of such a Composition, as
 "I might be impos'd upon in Things that seem
 "most clear and evident: And as often as that
 "Thought recurs of the Power of God, it is
 "impossible for me not to own, but that, if he
 "pleas'd, he might easily have fram'd me so,
 "as to be mistaken in the Things I most clearly
 "conceive: But otherwise, upon my steady be-
 "holding those Things I distinctly conceive, I
 "am urg'd with so clear Conviction, as to be
 "unable to forbear exclaiming. Deceive me
 "who can; It is impossible, so long as I think,
 "I should not be, or that I should not have been,
 "since it is true at present that I am; and per-
 "haps it may be equally impossible that Two and
 "Three should not make Five, and so of other
 "Things

“ Things, wherein I see a palpable Contradi-
 “ ction. And indeed having no inducement to
 “ believe there is a God, a Deceiver, and not
 “ knowing as yet whether there be any at all,
 “ the Reason that makes me doubtful, being
 “ grounded but on that Suspicion, is but weak,
 “ and, as I may so say, *Metaphysical*. But to take
 “ away this Doubt it self, it is necessary to en-
 “ quire, Whether there is a God? And sup-
 “ posing there be, Whether he can be a De-
 “ ceiver?

Here *Aristotle* began to descant, That *Descartes* had no longer Right to put off that *Axiom* for a Rule of Truth, *All that we distinctly conceive is True*: Seeing he had rendred it suspicious by that Reason, drawn from the Power of God; a Reason that appeared to him so forcible, that it was impossible, whilst he reflected on it, not to own, that God, had he pleased, could most easily have made us so, as to be mistaken in things we most distinctly conceive. This supposed, the Strefs he laid upon the Evidence of his other Propositions, could at best but ballance it, and render his *Rule of Truth* a *Probability*: Nay it could not do so much, since it was not to be done, but upon the Strength of the Evidence of the Propositions; a Rule that became a most uncertain and fallible, by that sole Argument, which he found impossible to resist, when he reflected on it: And that the Argument that made him suspect his *Axioms*, though founded on the bare Supposal of the Existence of a God, which as yet he had not examin'd, ought not to be regarded as so weak and trivial, in reference to a Man, that in pursuit of his *Method* acknowledges the Power of God, in case he does exist, extends

to every thing, and possibly to the making us such sort of Creatures as might be deluded in things they most distinctly conceive. And that, lastly, it thwarted all the Rules of Method, for a *Philosopher*, that was yet in Doubt of the Truth of that Proposition; *All that I distinctly can conceive is true*: To dream of proving the Existence of a God, to clear him of that Doubt: For how would he be convinc'd of the Existence of a God, but by some evident Demonstration? And how shall he be convinced by some evident Demonstration, so long as he shall doubt, if what a Man distinctly conceives is true?

From whence *Aristotle* concluded, *Cartesius* made a Circle in his Method; which is the most vile and unpardonable Fault that reasoning can be guilty of: For, according to him, he could no ways be perfectly sure of that Principle, *All I distinctly conceive is true*: But because there is a God, and because that God is no Deceiver; nor could he know there was a God, and that that God was no Deceiver, but because he knew distinctly the Existence of a God, by the Idea he found in himself, and because he distinctly conceived, That to Deceive was a thing unworthy of God. In a Word, that he proved the First Proposition by the Second, and the Second by the First, without having the Right to suppose the Truth of either. But Gentlemen (*continued he, in an insulting way*) upon your Consideration, I pardon your *Worthy Master* that his unhappy Stumble: It was only a false Step he chanced to make in the Dark, notwithstanding which, he recovered himself, and stood upon his Legs. He concluded, For the Existence of a God, and many Truths that we undoubtedly
and

and clearly know; the Conclusion is true though the Inference be false. But you must not take it ill if I add one Word more, a disgracing his *Principles* and *Axioms* one by one, make you sensible how ill founded is the Reputation of a Philosopher, said to Argue conclusively and closely. I remember I have read in that *Author* a Proposition pleasant enough; *viz.* That God could change the Essences of things; That the Propositions we call necessary are only True, because God will have them so: And if God had willed it, as he might have willed it, if he pleas'd, that Two and Three should not make Five, that Proposition, Two and Three are Five at this Day would be false. When *Descartes* advances that *Paradox*, he would fain be believed to own a vast Respect for, and most humble Submission to the Omnipotency of God, and is angry with the other *Philosophers*, and impleads them of almost Blasphemy, for presuming to say, God was not able to cause, that Two and Three should not make Five: Yet if you track *Descartes* a little, you'll quickly find, That 'tis not altogether for his Devotion-sake he maintains that *Thesis*, but because that absurd Tenet was the evident Result of some other Points of his Doctrin: To have admitted of a Proposition so harsh as that, upon Constraint, and as a Conclusion drawn naturally from a Principle of his laying, would not have made much for his Honour, and would besides have discouraged others: That made him think it his best way to be beforehand with them, to make the Out-cry first, and to wonder how the *Philosophers* could be so rash and inconsiderate as to prescribe Boundaries to the Almightyness of God. I shall not at present

*In resp. ad
object. 1.*

meddle with the Absurdity of that Proposition ; I design not to correct all the Blunders of that Knight Errant of a Philosopher ; it will be too Glorious for him to understand I have condescended to criticise upon him. But to enlarge a little on the Business in Hand, I say, Should all I have urged against his Method be false ; should all the Arguments wherewith the World has baited him, be Void and Null, that *Paradox* alone would totally overthrow him ; and let him suppose it true, 'tis impossible he should give us any Rule of Truth : For if it hold, That the Truth of Propositions so depends on God, as that he could have caused those esteem'd necessarily true, to have been false, it was in his Power to have made these two be false ; *What I conceive distinctly is true : To deceive is an Imperfection.* If God was able to have done it, how knows *Descartes* but he actually has ? What greater Reason has he to believe he hath not, rather than the contrary ? Hath God revealed it to him ? Upon his Principle, I'll doubt, not only as a *Sceptick*, but now I'll doubt in earnest ; Thus his two Rules of Truth are no longer Rules of Truth. What now betides his Glorious Proposition, *I think therefore I am* ? I have no need to be a *Sceptick* to discredit it : Why ? Because I know not whether God from all Eternity designed it true or false. Nor could I purchase that knowledge without a Revelation ; and still it must be questioned whether Revelation could serve for a Rule of Truth, in these our Circumstances. Thus *Descartes Wiseman*, who had already made so far a Progress as to know, he *thought*, and that he *was*, is here unfortunately *non-plus'd*. I have a world of Reflections more to
make,

make, and I should never be exhausted if I would enter upon his egregious Metaphysics, his new Demonstrations he pretends to give for the Existence of a God, the Distinction of the Soul and Body : Upon his way of answering Objections made against the rest of his Method, if I would trouble my self to let you see how (when his Propositions are attacked, and at once the connexion of them, or the Method he takes to come to the knowledg of Truth) he contents himself sometimes to defend his Propositions well or ill, without endeavouring to justify his Method, though that is the Piece in which he has pretended most to shew his Excellency ; and which is the most despicable of all at Bottom, as I think I have sufficiently proved to you : But this is enough to satisfy you, I have not pass'd Judgment on your Master without sufficient Knowledg of the Cause : And since I have delayed you too long, *Gentlemen Cartesians*, I am your most humble Servant; recommend me to your *Illustrious Doctor*.

Socrates and *Plato* followed him, taking Leave more civilly, and more like *Gentlemen* than he : And *Plato* added, he was transported to see *Aristotle's* Reputation so run down in the World ; and that he deserv'd it were it for nothing, but his Behaviour towards the *Philosophers* his Predecessors, and especially for his ill-natur'd Carriage unto *Plato* himself : That he had used all Endeavours possible to suppress the Reputation with which they flourished in the World, and had used less reserve toward him than all the rest, although he had been his *Master*; and meerly by his Calumnies in Point of Doctrine, he had raised himself to the Character of *Prince of Philosophers*.

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You know not, said I, what Time may still bring forth, and you need not despair of coming in Play again. *Aristotle's* Philosophy has had many Turns of Fortune within this Fifteen hundred Years; and I'll tell you, as a Piece of News from our World, That hardly more than fourscore Years ago, the *Sovereign Bishop* of the *Christian Church* was upon putting forth a *Placate*, commanding your *Philosophy* should be taught at *Rome*, instead of *Aristotle's*, and he had gained the Point, but for a great Man of that Time, called *Bellarmino*. If that had once passed at *Rome*, there had been a Fatal Stroke to *Aristotle's* Philosophy, and *yours* had carried it all the World over. You at once surprize and please me, (*replied Plato*) I am extremely Glad, and most highly obliged to you for this News: *Aristotle* shall know it, and I'll imploy it to revenge the Insult of his late Discourse.

Mean while my two Guides were enraged to hear their *Master* treated in so vile a manner; they had waited the End of his Discourse, to answer it, but observing him troop off without giving them the Opportunity, they endeavoured, what they could to stop him: As they saw it was in vain, the *old Gentleman* raillyng, hollow'd him at a Distance, So ho, *Good Monsieur Aristotle*, where may a Man find your *Sphere of Fire*? we have not met with it in our Voyage; though your Books give us Intelligence it was placed above the *Air*, and yet below the *Moon*. For my part I was highly gratify'd with that Encounter, and Discourse; I had the Pleasure to observe, That *Spiritual Philosophers* no more than *Corporal* could forbear disputing, and were no less jealous of their Sentiments and Reputation.

I had

I had the Happiness of this Diversion more than once in my *Voyage*, upon several Occasions; of which I shall give account.

After the Departure of our *three Philosophers*; well, (*said I to Father Mersennus*) what think you, *Father*, now of *Aristotle*? Indeed he seem'd to me a litte hot; but after all, methinks he's no ill Disputant: That way of tracing *M. Descartes* step by step in his *Method* of the re-search of Truth, is very maliciously design'd, and capable of raising Scruples, especially that last Argument taken from the Truth of Necessary Propositions, that with *Descartes* have their Dependance upon God, seem'd perplexing enough: And I do not remember that any one has before hit upon the Use that he hath made on't.

Stuff! meer Stuff! (*he replied*) All that *Aristotle* has said, scarce any thing was tolerable but the Circle he charged upon *Descartes*; and that's an antiquated Objection; I my self have touch'd upon it heretofore, as you may see in the *Second Objections*, that come after his *Meditations*, which are my own as well as the *Sixth*. I am glad I know so much, (*I returned*) they be both most worthy of you, and admirably propos'd, and I am very well satisfied, That Circle is something more than imaginary; for 'tis not to be suppos'd, that *Father Mersennus*, *Aristotle*, *M. Arnauld*, who is the Author of the *Fourth Set of Objections*, and several others, had all met in the self-same Point, but that there was something in it very like at least, what they there apprehended. But under the Rose, do you take that answer *M. Descartes* gives to get out of that unlucky Circle, and that no one ever yet has

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took in hand to be satisfactory or fit to be received? He answers, That in saying, We knew nothing certainly, before our Conviction of the Existence of a God, he had expressly noted, That he only meant it of some Conclusions that might come into our Mind, at the same Time we reflected not on the Principles, from which they were derived.

It would perhaps be somewhat difficult to make that Proposition capable of any tolerable Sense; but 'tis the easiest thing of an hundred to shew it to be a meer Fetch and Evasion; and to disprove the Truth of the thing itself, it is but reading the same Place *Aristotle* now cited, of his *Third Meditation*, Page the *thirty fifth and thirty sixth* of his *Method*, Number the *fifth* of the *first Part* of his *Principles*; and one shall see he there makes us doubt of all, even of Principles that carry with them their own Evidence; including that Principle itself, *What I distinctly conceive is true*, by the Suspicion we have there is a God, who could so have constituted us, as we might be mistaken in things most clearly apprehended: So that when he says, We know nothing surely, before the Knowledge of a God, he speaks not only of some certain Conclusions that strike upon our Mind, separately from their Principles, but of all sorts of Knowledge, and of that it self, *What we distinctly conceive is true*. And hereupon it is your self, *Aristotle*, *M. Arnauld* and others, have trapt him in a Circle.

I own, That Answer may be found in some of his Letters, occasioned by the same Objection started to him afresh. I know that he repeats it not by way of Answer, but couching it cunningly

ningly in the *First Part* of his *Principles*, where he gives us an Abstract of his *Method*, and his *Meditations*; but that's no *Salvo* to the Business. Besides, those Words have a very ill Effect, in the *First Part of his Principles*, for they unhappily stand so near the other, that make us doubt of self-evident Propositions, because of the Suspicion we have of a God, that, may be, employs his Power to deceive us; that the Contradiction plainly strikes our Eyes.

Nor has his famous Proposition, *I think therefore I am*, any better Success; for having given us that Proposition as the first of which we could be assured, we might demonstrate to him, That cannot be the first, since its certainty necessarily supposes the Truth of some others, and in those of these: *It is impossible that that which thinks should not be; it is a Contradiction for any thing to think, and yet not be in the instant that it thinks.* The Proposition (which is very remarkable) by which he proves that other, *I think therefore I am*, at the same Time he pretends it to be the first of all. He declares then, That when he says, that Proposition, *I think therefore I am*, is the first and most certain of all those which offer themselves to the Mind of a Man, who observes Method in Philosophy; he pretends not to deny but that he must be certain of this before; *It is impossible that he that thinks should not be*; as also of divers others. Joyn this Acknowledgment with what he says in the foregoing Page, "We
" must likewise doubt of other Things, which
" we held most certain, of *Mathematical Demon-*
" *strations*, even of Principles that we thought
" self-evident until now: What are then self-
evident Propositions if not these? It is a Con-
tradiction,

tradiction, That a thing should be and not be : A thing cannot be, and not be at the same Time, cannot act, and not be, and the like. He then supposes not the Truth of these Principles, because he doubts of them. And in Truth, the Reason he brings to make us doubt of self-evident Propositions extends equally to all. We must doubt, says he, of Principles that we call self-evident, because we have heard there is a God, who can do all Things ; and who knows, but he may have so contrived us, as we might always be deceived, even in things that seem most evident ? And be pleased to recollect, *my Father*, what *Aristotle* said in Concluding ; That *Descartes's* Propositions were less to be found Fault with than their Connexion and their Disposal in his Method that he takes to come to Truth ; and that the Truth of some certain Propositions was not absolutely contested, but only with reference to the Method that he takes, by which he forfeits the Priviledg to suppose them, be they as true as may be, since according to that Method he is disabled from acquiring the Knowledge of their Truth. And it is upon that account, probably, he was put so out of Humor with *Gassendus* and *Father Bourdin* a Jesuit, who were those that chiefly closed with him in that Lock. Their Scruples are proposed in a lively manner in *Latin* ; and it were well if the *French Translation* equalled the *Original*. But upon the mentioning the *French Translation*,

Give me leave to add one little Remark, I made a few Days since, and thought not fit to communicate to others. *M. Descartes's* dear Disciples being possibly put to it (at least I so imagine) to disengage their Master of those petty

petty Perplexities, of which I have been speaking; in the *French Version*, that has been put forth, of his Works, and which had his own Approbation, have somewhat sweetned that distastful Proposition, in the first Part of his Principles. The *Latin* has it thus, *Dubitabimus etiam de reliquis, quæ antea pro maxime certis habuimus: Etiam de Mathematicis demonstrationibus, etiam de iis principiis quæ hætenus putavimus esse per se nota.* It would be natural to render it: We will doubt of other things, which before we held most certain; also of Mathematical Demonstrations; also of those Principles which hitherto we thought self-evident: They have turned it so, I say, in *French*, as to make us believe, That *M. Descartes* spoke not of self-evident Principles in general, but only of Mathematical: *Nous douterons aussi de toutes les autres choses qui nous ont semé autrefois très certains: Même des démonstrations de Mathématique, & de ses principes, encore que d'eux-mêmes ils soient assez manifestes.* We will doubt also of all those things we heretofore esteemed most certain, even of the Demonstrations of Mathematicks and their Principles, though they are sufficiently manifest of themselves. If this was designedly done, as one may reasonably suppose, it was a little Innocent Legerdemain, that obliged *Descartes* and injured no Man; and prevented at least the Contradiction should be visible. But to return to the Answer *Descartes* made to the Circle alledged, What think you *Father*, is't a good Defence? Or is it not to make a Retreat and Capitulate with his Enemies? Or rather, to speak more plainly and truly, to un fay and contradict? In good Faith, *Father*, declare it ingenuously; you have treated

Monsieur

Monsieur Descartes somewhat like a Friend, or rather as a generous Enemy, you have disarmed him: He was a Man that scorned to beg his Life; you foresaw too how high he'd carry it after the Combate, and still would challenge all he met with; yet for all that, you have thought fit to give him Quarter, as a Man that did deserve it in Consideration of those other great Services he has done Philosophy: I applaud your Generosity, and you have no reason to repent on't.

That little Softning, with which I temper'd the Harshness of my Criticks, had its design'd Effect, which was not wholly to sowre *Father Mersennus*. He took it graciously enough, and only answered in a rallying way, You are a very Wrangler, and delight to find a Quarrel; and the Humor that I see you are of, had you lived in *Descartes's* Time, you had certainly incurred his spending a whole Chapter on you. But all that you say comes to just nothing, as I could easily convince you; but the Discussion of Fact, and Contradiction is too tedious an Employment for us Travellers. I perceive too *Monsieur* is tired already with it, continued he, in shewing me the *old Gentleman*, and only wants a Mouth to yawn. Come, says he, *Monsieur*, you seem something Melancholy, brighten a little, brighten; What do you think of?

Think? of nothing said he. How *Monsieur*, (*I replied*) What's that you spoke? certainly Blasphemy against the Doctrin of our Master: If *Aristotle* had heard you, what would he have said? Do you *think* of nothing? So, What's become of the Essence of the Soul, that according to *Descartes* is *thinking*? I had as lieve you'd
tell

tell me that you have no *Being* as that you do not *think*.

He took me up in a very ferious Air, which sufficiently bespoke a greater Displeasur, my Words had given him, than *Father Descriptions* before. You put a perverse Construction on my Proposition, which meant no more, than that my Mind was not possessed with Melancholy *Ideas*, as you thought: I am heartily glad, *Monsieur*, said I, for Gayety and Briskness are never more necessary than in a *Journey*: But since we are fallen bechance upon the Essence of the Soul, I could wish you'd plainly expound what *Monsieur Descartes* has said thereon; for as pure a Spirit as I am, I have no clear insight into my own Essence; and I wonder at it. A very ill Sign, said he, that's as much as to say, your Intellect is benighted still with Prejudice, and which I have already too much perceiv'd in you: And I well observe, that Novice which we lately met has raised fresh Scruples in you by his *Sophistry*. *Monsieur*, I replied, to use no Disguise with you, I'll frankly lay open the Disposition of my Soul, in which I find it. I am ravish'd in my Thoughts to meet with those that contradict *Descartes's Philosophy*; that opens and enlarges my Mind: But how strong soever their Arguments appear, I secure my self against them, and still reserve my Mind docil and tractable for the Instructions of that great *Genius*, supposing he has the Leisure or the Goodness to bestow some on me, when I shall have the Happiness to see him. As for the Preconceptions of the Schools and Childhood, I have for the most part quit them, as I passed my Word before I undressed me of my Body: Yet I confess some
still

still remain, concerning the Effence of the Body, and the Effence of the Soul, which I hardly can call by that Name, in the signification you employ it, since they seem grounded upon Experience and on solid Reason. I have however too great a Deference for *M. Descartes*, to be throughly confirm'd that they are not false; so that I am willing to acknowledg, to speak in finer Language, a gloomy kind of Darknes overcasts my Mind in those Particulars; and I have not yet obtain'd the Priviledg of *Cartesian Souls*, to have most distinct *Ideas* of those two kinds of *Being*, which make up the World. But once more I shall submit to your Instructions and *Descartes's*.

He then began to explain the Doctrin of *Cartesius* thereupon, but said no more than I before had read in his *Meditations*, in his *Method*, in the *first part* of his *Principles*, and in some of his *Letters*. I shall not here give any Exposition of that Doctrin, because I shall have an occasion to speak of it upon an Adventure that besel us in the Globe of the Moon. I pretended out of Complaisance to have a better Taste of it than before, and to find more Solidity in it than when I read it by my self. That acknowledg-ment restated my Companions in their jocular Humour, who after much Merriment and Droll, upon *Aristotle's* Philosophy, wheel'd about unto his *Sphere of Fire*, which according to his Map of the World ought to be situated under the *Moon*, of which yet we saw not the least sign or footstep in our *Voyage*. They were very Severe and Witty thereupon, and reminded me of a Suit commenc'd some years ago, by the *Peripateticks* against the *new Philosophers*, for disturbing them

them in the possession of that *Sphere*, warranted by the Prescription of so many Ages; and of a Decree made in favour of the *Aristotelians*, pursuant to a falsely suppos'd Survey they had taken of the place. 'Twas ordered that the *Sphere* of Fire should still remain where *Aristotle* had pitch'd it. Now as that Decree, say they, was a Decree upon *Request* and not *Contradictory*, the new Philosophers may revive the Action, and bring the Process to a second Hearing: And in that Case you are able to give evidence of the Truth, and convict the Peripateticks of the invalidity of their Titles, in a Concern of that Importance.

You may say what you please, said I, tho' that *Sphere* is not now to be found; If I was to judge in that Action, I should not so readily condemn *Aristotle*. It may have been dispers'd, and spent in the space of almost two thousand years: For that many Stars that have formerly appear'd in the Heavens now disappear: What's become of the seventh *Pleiade*, and of that seen the last Age in the *Constellation* of *Cassiope*? And supposing any one, since its ceasing to appear, should bring his Action against *Tycho Brahe* and others that observ'd it, as false Intelligencers, that abus'd the credulous World, do you think it would not be thrown out? And does not *M. Descartes* himself give us to apprehend that our *Vortex*, infinitely greater than the *Sphere* of Fire, shall be sometime swallow'd up, when one least thinks on't? And when by that Absorption the Sun shall become an Earth, and perhaps at once the subtil Matter which is confin'd in the Centre of our Earth, forcing its Passage through the Crusts that cover it, shall make that a Sun;
 grant-

granting that the Books of *M. Descartes* existed in another *Vortex* where are Men, would not they look on all he has wrote of our World as Fabulous and *Romantick*?

However, granting that there never was a *Sphere of Fire*, it was ever admirably suppos'd. Never was *System* more exactly contriv'd than *Aristotle's* of the Elements. They all are rang'd according to the Dignity or Meanness of their Nature. The *Earth* as the most unactive and ignoble Element, has the lowest Seat. The *Water*, less course and heavy than the *Earth*, takes place above it. The *Air*, by reason of its Subtilty, is exalted higher than the *Water*. And the *Fire* the most noble and most vigorous of them all, owns no Superior but the Stars, and the subtil Matter in which swim the Planets. The extent of each is likewise proportion'd to the Merit of their Nature: Like Brethren they have divided the Estate of the four Qualities, each of them has two, one of which in the Superlative Degree. The *Earth* is cold and dry, the *Water* is cold and moist, the *Air* is hot and moist, the *Fire* is hot and dry. And to the end they may bear up still, in the perpetual Combats they give each other; if the prevailing Quality of one's more active, the predominant Quality of the others put them in a good posture of Defence against the effort of their Enemy. Could any thing be more justly or ingeniously imagin'd? In fine, with how many fine Thoughts has that *Sphere of Fire*, and that orderly Disposition of the Elements, furnished our Preachers heretofore, and still supplies those of *Italy*? But to mention something better in its kind, that one *Devise* of *Father le Moine*, of
which

which the *Sphere of Fire* is the Substance, deserves there had been one, and would deserve there should be one still, and that it should endure for ever. Designing to signify the more pure are Friendships, the more *durable* they are, he painted the *Sphere of Fire*, with this *Spanish Motto*, *Eterno porque Puro*. This Fire's Eternal, because it's pure. What an unhappiness it is that that Thought so fine and solid as it is all over, should at last be false for want of a *Sphere of Fire*?

Thus I was defending as well as I could, the *Peripatetick Interest*, whilst we arriv'd at the *Globe of the Moon*. I shall not be tedious in giving a large Description of it, since others have don't before me. I will only say that the *Earth*, look't to us that view'd it from the *Moon*, as the *Moon* appears to those that view it from the *Earth*, with this difference, that the *Earth* seem'd bigger far, because it really is so. So we judg'd that the *Earth*, in respect of those that behold it from the *Moon*, had the same *Phases* as the *Moon*, in regard of those that behold it from the *Earth*; that it had its *Quadratures*, its *Oppositions*, its *Conjunctions*, except that it could never be totally Eclips'd, by the reason of its greatness in comparison of the *Moon*, whose Shade could not have a Diameter so large as the *Earth* then in Conjunction.

The *Moon* is a Mass of Matter much like that of which the *Earth* is compos'd. There you have Fields and Forests, Seas and Rivers. I saw no Animals indeed, but I am of Opinion if there were some transported they would thrive, and probably multiply. 'Tis false that there are Men there, as *CYRANO* reports; but 'twas

*Empire de
la Lune.*

undesignedly that he deceiv'd us, having first been deceiv'd himself. One of the separate Souls which we found in great Multitudes, and which were there at his Arrival, told me the Original of that Error. A great Company of Souls surpriz'd to see a Man with his Body, in a Land where the like was never seen before, had a mind to know the meaning of it. They agreed together to appear in Human Shape to him: They accost him, and enquire by what Method he accomplish'd so great a *Voyage*: Made him relate what he knew of *our World*; and as he seem'd equally inquisitive as to the Transactions of the *World* of the *Moon*, and the Life the Inhabitants led there, the *Familiar Spirit* of Socrates, who was among the rest, took upon him to answer: And having declar'd who he was, as that *Historian* himself relates, he made him upon the Spot, a Fantastical System of the Republick and Society, which is the same he gives us in his Relation, where he seriously tells us, There are Men in the *Moon*; characters their Humour, describes their Employments, their Customs and Government. But 'tis worth the knowing that some Fopperies he has insert'd, he brought not from that Country, as the Soul assur'd me; and that many Profane Allusions and Libertine Reflections he there makes, were only the Fruits of a debauch'd Imagination and a corrupt Mind, such as was that *Historians*, or of the Imitation of an *Author*, yet more Atheistical than himself. I mean *Lucian*, one of whose Works was made the Plan to his *History* of the *Moon*.

The Inequalities we found in the *Globe* of the *Moon* are partly Isles, wherewith the Seas there are pleasantly chequer'd, and partly Hills and Vallies

Vallies in its Continent. They belong to several famous *Astronomers* or *Philosophers*, whose Names they bear, and who are the high and mighty States there. We landed in *Gassendi*, a Seat extraordinary fine and very apposite, and such in a Word as an *Abbot*, like *Monsieur Gassendus*, could make it, who wanted for neither Genius, Art nor Science, and who had no use for his Revenues, in gaming treating and living high. The Lord of the Mannor was then absent, whom we should have been glad to have waited on, since we heard that he still continu'd his Civility and Moderation, which were his Natural Endowments. And though formerly there were some Misunderstandings betwixt him and *Cartesius*, yet he always very obligingly, and with a Mark of Distinction, entertain'd the *Cartesians* that came to pay a Visit, and especially *Father Mersennus*, who was his peculiar Friend. He was a Man that equall'd *M. Descartes* in capacity of *Genius*, excell'd him in the reach and extent of Science, but was less heady and conceited. He seem'd somewhat a *Pyrrhonist* in Natural Philosophy, which in my Opinion is becoming enough of a Philosopher, who provided he looks into himself, must know by his own Experience the Limits of a Human Understanding, and the short Sightedness of its Views.

From *Gassendi*, *Father Mersennus* conducted us to the *Land* that bears his Name. It is very conveniently situate upon the same Coast, as *Gassendi*, bordering upon the round Sea, which others call the *Sea of Humours*, which is a great *Gulph* of the *Lunary Ocean*, bounded on one side by the Continent, on which lies *Mersennus*, and on

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the other by an *Isthmus*, at the end whereof, Northwards, is a *Peninsule* call'd *Dream-land*. *Mersennus* is only commendable for its Situation and Prospect, being a very hosky and barren Country by the reason of the abundant Heat there, from which it has taken a Name, and is call'd *Hotland*.

We staid in this place about half a quarter of an hour, when I intimated to *F. Mersennus*, that before we profecuted our *Journey*, I should be glad to traverse the *Hemisphere* of the *Moon* wherein we were. That *Hemisphere* always faces our *Earth*, and 'tis false that the *Moon* turns upon its Centre, as some imagine: It only has a Motion of Vibration, which weighs it from East to West, and from West to East, which Motion *Galilaeus* first perceiv'd, having observ'd by a Tube, that the place we call *Grimaldi*, is sometimes nearer and sometimes farther off the Oriental Zone of the *Moon*, and that the *Caspian Sea*, opposite to it, is sometimes nearer and sometimes farther off the Occidental Zone. *Father Mersennus*, willingly consented to my Proposal, for as much as he himself had never made that *Voyage*. We cross'd the *great Ocean*, leaving on the left Hand the *Isle of Winds*, and on the right, that of *Copernicus*, and pass'd over that of *Pitheas*, still pushing on quite to the *Sea of Rains*, which is bounded by a vast *Land* stretch'd from East to West, much like that of *America*, as it is decypher'd in the Maps; whose Eastern part is call'd *Fog-land*, and the Western *Hait-land*, both seem'd like two mighty Deserts. Towards the middle of that Land, upon the Shore of the *Sea of Rains*, we discover'd a kind of a large Town, of an oval Figure, which

we had the Curiosity to go to see ; but we found all the Avenues guarded with Souls who deny'd us Entrance, tho' civilly and obligingly enough. We demanded of one of them, What Town that was, and why there was no Admission ? He answer'd, it was call'd *Plato*, and was the same where that *Philosopher*, whose Name it bore, had establish'd his *Common-wealth* ; that no Persons were admitted there, which he himself had not first examin'd, which Caution he observ'd, for fear some Stranger should bring thither the dangerous *Maxims* of the *other World*, which were the only Pestilence that *Republick* had to fear ; that *Plato* was not at home at present, but would return in a little time ; and in Case we desir'd to have Admission, we might, waiting the return of *Plato*, commence our Quarantine at *Lazaret*, which was a little Seat upon a rising Ground, we saw some distance from the Town ; that that Quarantine was not a Quarantine of days, but a Quarantine of Years ; because the Contagious Diseases a *Spirit* was tainted with, were purg'd off with far greater Difficulty than the Pestilential Airs of *Bodies* are dispers'd, which come from infected Places. We thank'd him for his offers, and told him, We came not there with a Design to settle, but that we were going farther ; that if *Plato* had been in Town, he probably would have had some Condescension towards us ; that we had met him in our Journey, and had receiv'd great Civilities from him : And that we must endeavour to be contented upon the disappointment of our Curiosity, on that occasion. So we bent on our Journey, dissatisfied enough, from the *Republick* of *Plato*, where we little thought they had treated Strangers as they do in *China* and *Japan*. H 3 From

From thence we travell'd over all that Land from North to South, after which we discover'd another Sea, call'd the *Sea of Cold*, in which stood a very fair *Island*, which they said was *Aristotle's*; we made no Debate whether we should take it in our Road: The only Question was, Whether if we were ask'd who and what we were, we should declare our selves *Cartesians*? It was my Sentiment not to carry it so high in an Enemies Country: But Father *Mersennus* and my *old Gentleman*, concluded for the contrary, without more ado adding, there was nothing we need to fear; that if we were beset we had wherewithal to defend our Selves, and in point of Spiritual Assaults, the Number came not in the Account; that it was not the first time, there had been seen a *single Cartesian*, that fronted with good Success a *Class* of four hundred *Peripateticks*, marshall'd by a *Regent* of consummate Experience. Only we must keep a strict Guard upon our selves, to offer no Insult or Raillery, that might give Offence to those we conversed with.

But it was a great Surprize to us upon our Approach, to see this Island under a stricter Guard than that of *Flato*. They were there in Battel Array, as in a Town that had the Enemy at the Gates, and expected the next News should be of being begirt with a close Siege. There was your Court of Guards advanc'd far into the Field, your Centuries upon all the Hills round about, and Scouts and Intelligences in all parts of the Air. As we came within three hundred Paces of the place, we saw a Detachment of about a dozen Souls, drawn from the Court of Guard, approach us. He that commanded them

gave

gave the Word, Stand, who's there, and to what Sect do you belong? Our old Veteran undauntedly cry'd, Long Live *Descartes* and the *Cartesians*. He was amaz'd at the Reply; ordered us not to stir a step, and forthwith dispatch'd an Advice to the *Officer* of the Guard.

No sooner the Advice arriv'd to the *Officer*, but all his Troops at a Signal given, were arm'd *capape*, and gave us to understand by their looks they were in readiness to receive the Enemy: That is, they were accoutred with *Syllogisms*, in all sorts of *Modes* and *Figures* whereof some concluded for the *Soul of Beasts*, others for the necessity of *Substantial Forms*, in mixt Bodies; others for *Absolute Accidents*, and such like Things, against which *M. Descartes* had declar'd. The *Officer* himself coming up, we presently knew him. He had been an ancient Professor in the *University of Paris* and formerly my *Regent* in Philosophy: O God! said he, adressing himself to me, and must I have the Affliction of seeing you on the side of our Enemies condescending even to the servil Office of a Spy? Is this the Recompence you make for the Pains I have taken? Have you met with a course of Philosophy, comparable to mine, which was then reputed, the most gentile and solid in the whole *University of Paris*? Where's that Respect and Submission you own'd in your greener years, for the Prince of Philosophers? What Obligation had you to take up arms against him? *Monsieur* (I reply'd) I still preserve that Respect, that Esteem and Friendship for you, which I owe, inviolable, and I take it for a peculiar favour of Fortune to meet you here, to make a fresh Protestation of them. And I assure you, that

I am neither come in quality of a Spy or Enemy, but if you please so to receive me, of a *Voyager*: 'Twas purely curiosity that brought me hither, by the way. As to the concern of Philosophy, I must acknowledge I am a little *Sceptical* in that Matter, and know not at present what I am. I am resolv'd to try all Sects before I am determin'd; so that you may, Sir, look upon me as a Man of an uninterested Country, and that contrives no Plot or Mischeivous Design against your *Commonwealth*: These *Gentlemen*, indeed, are profess'd *Cartesians*, but they are *Philosophers* and Men of Honour, and have Esteem for Merit though it be on the contrary side; and who hold, that *Liberty of Conscience* in point of *Philosophy*, is the unviolable Charter of all honest well bred Men: But (*I pursued*) I am highly surpriz'd at the bustle and disturbance in this Country: There's no *Spanish Town* in *Flanders* so readily Alarm'd as yours; What is't you so much dread?

That which we so much dread, *said he*, is, that Implacable *Enemy* of our *Sovereign*, your *Descartes*, who when on *Earth*, did all imaginable towards the extirpating the *Peripatetics*, and only desisted there, as we are from good Hands inform'd, to come to ruin them in *this Country*. It is now more than thirty years, so exact a Guard has been observ'd, to prevent a Surprize consequent to the Advice we have had, that in all this time he hath been forming a Party, and gathering all the Forces possible, in order to a Descent. This is the Intelligence we have receiv'd from a *Dutch Professor* of *Philosophy*, who acts here as *Generalissimo* in *Aristotle's* Absence. But *Descartes* may come as soon as he pleases; you see we are in a capacity to receive him. Well,

Well, *Monsieur* (said I) if that be all, you may sleep secure ; *Monsieur Descartes*, I assure you, has no Design of an Invasion in his Head ; he's a thousand Times farther off this Place than 'tis from hence to *Earth* ; he is thinking of Building a *New World* above the Heavens ; he has invited us to see the Execution of his Grand Design, and thither 'tis we are going : And to convince you of the Truth of what I say, 'tis but deputation, when we part, some Souls to bear us Company, and they shall bring you an account of what they there shall see.

You rejoyce me mightily, said he, for we *Peripateticks* are tired with these long Fatigues : but take it not ill, that I execute my Orders, and conduct you to the *Governour* of the Place, according to the Custom, That all *Philosophers* of a different Sect from ours, arriving here, give him an account what Project brought them hither ; we have used this Course but since *Descartes* has given us these Alarms. So we took the Road that led to the Place, convoyed with a Detachment of about fifty Souls, *Academiques* for the most part and *Collegians*, who look'd as if they did not wish us very well ; that Place was only a great Garden that represented the *Lyceum* in *Athens*, where *Aristotle* used to teach his Scholars walking, whence they derived the Name of *Peripateticks* : 'Tis of a great extent and very finely kept, it is cut into abundance of Allies, whereof the four greatest meet in the middle of the Garden, at a round large Fountain, whereon is raised a stately Pedestal of the most delicate Marble I ever saw, on which stands the Statue of *Alexander the Great*, crowned by *Victory* with Lawrels, trampling under Foot Scepters and
Crowns,

Crowns, and Bucklers and broken Arms, and the Treasures of *Asia*. Four great Statues, chained to the four Corners represent the Principal Nations *Alexander* conquered. I found that Monument so like that of the *Place des Victoires*, that I should have believed one had been the Pattern to the other, had not I at the same Time made Reflection, that the near Resemblance of those two Hero's, might easily have furnished the Minds of both the Undertakers with the same Ideas. All the Figures of the Monument, no less than the other Statues in several Parts of the Garden, as those of *Philippus*, *Olympias*, and many other illustrious Personages, who formerly honoured *Aristotle* with their Friendship, are of *Silver*, for *Silver* is very cheap and common in the *Globe of the Moon*; and it is probably for that Reason *Chymists* who always affect Mystery in their Words, call that *Metal* by the Name of the *Moon*.

As we were admiring that noble Monument, we were astonished to see all of a sudden, four Water-Spouts rise from the four Angles of the Pedestal, the largest and the highest that ever were; they mounted at least four hundred Poles in height, and they were brought from a River behind a neighbouring Mountain that was higher than the Wells of *Domme* in *Auvergn*; over which the Water was carried by the admirable Contrivance of the Old Philosophy, that in supposing the Horror of a *Vacuum* in Nature, shew'd how with Pumps to fling Water infinitely high, which Secret is unfortunately lost in our World; for since the Time of *Galileus* we can raise Water no higher than three or four and thirty Foot. We saw these Water Spouts on
every

every Side, the least of which exceeded the highest Trees that encompassed the Garden. From the middle of the Garden we observed four Halls of different Figure and Architecture, one at the End of each of the four Alleys: We were conducted to the biggest of them, which was of exquisite Beauty and Magnificence, being of Gold, Azure and Precious Stones. On both Sides, in the Intervals of the Windows was your Imbossed Work of Silver, excellently carved; but that made a Gallimawfry odd and humerous enough; for on one Part on the Right-hand were represented the famous Exploits of *Alexander*, the defeat of *Darius* near the City *Arbela*, the Attack of *Porus* his Army, the Passage of *Granicus*, and the Taking of the City *Tyre*. On the other were *Triumphs* of *Aristotle* over the rest of the *Philosophers*, and the Extravagancies of those that went for Wisemen before his Time.

The first on the Left-hand exhibits *Pythagoras*, doctricing his Disciples, and presenting them with a sort of Table-Book, wherein, among others, were written these three *Precepts*: First, That they were to *hear* him full *five Years* without speaking a Word to contradict him. Secondly, They must lend an attentive Ear, especially in the Night, to the Musick and Harmony of the *Celestial Spheres*, which only Wisemen are priviledged to understand. And, Thirdly, they must abstain from eating *Beans*.

The Second shews you *Democritus* laughing with Might and Main, and *Heraclitus* weeping in warm Tears, and a Troop of little Children hooping after them as after two Fools.

A Voyage to the

In the Third we had *Diogenes* the *Cynique*, habited like a Morris-Dancer, mounted upon a Cross-way-stone, at bottom of which lay his *Tub*, expounding to an Auditory much like that of the Singers *du pont neuf*.

In the last fate *Aristotle* on an exalted Seat, that looked more like a Throne than a Magisterial Chair, and at his Feet stood all the *Philosophers* that lived before him, in Admiration, and listning to him as an *Oracle*. Before the Throne of *Aristotle* were heaped the Books that represented the Writings of those same *Philosophers*, his *Predecessors*, which one was putting Fire to, to sacrifice them to the *Goddeſs Wisdom*, whose Head resembled a Sun, brandishing abundance of Rays upon the Face of *Aristotle*, and making a Glory round about it.

At the Bottom of the Hall, upon a kind of Altar, stands a large Silver Statue of the beautiful *Pythias*, formerly *Aristotle's Lady*, for whom his Passion was so strong, as to Sacrifice unto her.

At the Top of the Hall was a Ceiling, enrich'd with admirable Paintings, lately done, divided likewise betwixt *Alexander* and *Aristotle*, agreeable to the Embossings; for on one Side was the *Hero* receiving a Thunderbolt from the Hand of his pretended Father *Jupiter Ammon*, to fulminate all the Princes of *Asia*; and on the other the *Philosopher* receiving another from the Hand of *Amirvus*, to thunderclap all the *Chieftains*, of the New Sects of Philosophy, among which we easily knew *M. Descartes*, *M. Gassendi*, *Father Maignan*, and many others.

As we were taken up with the Curiosity of all these different Pieces of Sculpture and Painting, the *Vice-roy* of the Place came in to give us Audience.

dience. Never was Man so much surprized as my *old Gentleman*, at first Sight of the Governour; he had formerly known him in *Holland*, when he there accompanied *M. Descartes*: He was called *M. Voetius*, the most resolved *Peripatetique* in the World, and the most avowed of all *Descartes's* Enemies; he that most disturbed the Quiet he came to seek in *Holland*, and the most obstinately as successfully opposed his Design of gaining a Party there: Whereas that Man acts the greatest part in the *History of Cartesianism*, of which, at the Entrance of my Relation I engaged to give some Particulars when occasion served; and seeing at the Intercourse of which I speak, we fell upon a Negotiation with him, as to a Project of Peace between the *Peripatetiques* and the *Cartesians*; it will not perhaps be troublesome and impertinent, briefly to insert the Difference he had with *M. Descartes*, and the Motive that determined him to fix in the *Globe* of the *Moon*.

M. Descartes, after he had finished his *Course* of *Philosophy*, in the *Colledge de la Fleche*, ceased not to be a *Philosopher* thereupon; nay pretends he commenc'd one but from that Time. As he was fully convinced there was far less to be gained from the most curious of Books and Libraries than from the great Volume of the World, the most Compleat and Instructive of all others, to such as know how to study it as they ought; he pitch'd upon Travel. During nine or ten Years he run through most Countries; frequented the Court, as also the Armies of most Foreign Princes: But still as a *Philosopher*, *i. e.* continually making serious Reflections upon the Intellectual and Moral Part of Man, upon the different Customs of Coun-
tries,

*Dissert.
Meth.*

A Voyage to the

tries, upon the contrary Judgments Men make of the self-same things, conformably to the different Notions they have imbibed concerning them, endeavouring always herein to alembick Truth from Falshood, and to advantage himself equally by the Folly and Wisdom of other Men; that he might collect a System of Life, composed and regulated by defecated Reason, whose Happiness, as far as possible, should be independent of the Turns and Wheels of Fortune.

He began to put his Project in Execution, in a certain Place in *Germany*, which he does not name, where he passed the Winter, at his Return from the *Coronation* of the Emperor *Ferdinand III.* where closeting himself whole Days together in his Stove, he recollected in his Mind all the Observations he had made, upon the Conduct of Mankind; which he employed to constitute his Rules of Morality, as they are at present in his Book, entituled, *Dissertation de la methode de bien user de sa raison.* From whence passing to *Metaphysical Notices*, and those of *Natural Philosophy*, he laid the Scheme to the most part of his Works he since hath left us; making at the same Time an Essay of his Physicks, in the Mechanical Explanation of the Motion of the Heart and Arteries, which certainly is not the worst Piece we have of his Works.

Next he deliberated what Place was most convenient for a Settlement; he was byassed against his stay in *Britanny*, his Native Country, where his Family then bore, as it does to this Day, a considerable Port, foreseeing the Incumbrances he should find among his Relations, would inevitably retard his vehement Pursuit of *Philosophy.* In fine, he resolved on *Holland*, as a Retreat
free

freest from Disturbance, where every one, *said he*, minds his own concerns, without meddling with other Men's; and where the Maintenance of those numerous Troops, served but to recommend with more Security to the whole Country the Advantages of Peace, in the midst of a raging War.

He passed near eight Years in Peace and Quiet, making his ordinary abode at *Egmond*, a little Town on the Coast of *Holland*, insomuch that during all that Space he never left the Country, but on the account of his Domestick Occasions, that indispensibly oblig'd him to make some Journies into *France*. Happy, if his Zeal for the Publick Good, and his Compassion for the Miserable Condition of Philosophy, had not made him transgress that excellent *Moral Maxim* he had prescribed himself, to leave the World as he found it, without endeavouring to reform it, or rectifie its Ideas, to think only of finding Truth for himself, and of conquering his own Passions; but he was worsted first by that of Printing, and after by all the other, Authors are subject to, when they find their Opinions contradicted: For it must be confessed, although *M. Descartes* had formed an Idea of a Wise-man to himself, much like that of the *Stoicks*, yet any one may see in reading some of his Works, he was not yet arrived to that *Apathy* and *Indolence* which makes their Essential Character.

No sooner had he impressed his *Dioptriques*, and his *Meteors*; Next that, his *Dissertation concerning Method*, and since his *Meditations*: But he found himself set upon from all Hands; all the *Universities* of *Holland* took the alarm. Doctor *Revinus* for that of *Leyden*, *Voetius* and *Dematinus* for *Utrecht*,

Ibid.

Ibid. p. 202

Utrecht,

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Utrecht, Schook for that of *Groiningue*, ratified a triple Alliance against this upstart Enemy; who for his Part, before he declared and set up his Standard against *Aristotle*, had made underhand a considerable Party. *Revius* having engaged Doctor *Tkill* on his Side, a hot and active Man, undertook the Censuring his *Meditations*, throughout his Divinity; and the Affair was carried on so far that *M. Descartes* Friends advised him to interpose the Authority of the *Prince of Orange* and the *French Ambassador*, to put a Stop to its Progress: But he satisfied himself, to proclaim he was injured, and to demand Justice of the *Procurators of Leyden*, who thought they had done him a special Favour, in obliging their Doctors Silence, and prohibiting them the mentioning *Descartes* and his Opinions in their *Academick Exercises*; a Proceedure that was not very Satisfactory to *M. Descartes*. He was a little better satisfied on the part of the *University of Groiningue*, which at the Solicitation of the *French Ambassador*, severely check'd *Schooks* Outragious Conduct.

But all this was nothing in comparison with his great Concernment at *Utrecht*, where *Voetius* fell like a Lion loose upon him. *Voetius* was one of the Supports of the *University*; whom the Quality of *Divinity Professor*, as also that of *Minister* and *Rector*, joyned with his Reverend Grey Hairs rendred awful and venerable to a Town, in which the Corporation of the *University* maintained a very considerable Grandeur: He had learn'd how to employ these Advantages to the gaining absolute Authority and Command over the Minds of Men, infomuch that his Sentiments were the Decisions in the *University* and Oracles
in

in the Town. 'Tis known what they were in regard of the *New Philosophy*, which was the Reason why those of *Descartes's* Party durst not declare themselves: Notwithstanding, at last, *Regius* the Physician, whom *Descartes* styles, his *Proto-martyr*, could no longer stifle the Hatred he had conceived against Substantial Forms; he affixed his *Theses*, wherein he had banished them, to substitute in their Room the different Configuration of the insensible Parts of every Body. This makes a great Noise in the *University*, some take one Side some another: This is the whole Discourse of the *Town*, News and Politicks are hush'd, and the Exchange now rings with nothing but *Substantial Forms*.

Let. de Desc.

Mean time *Voetius* slept not in an Affair of this Importance; he went to the first Disputes of *Regius*, suborned a great many Scholars he had gained, and placed them in several Parts of the Hall; who as soon as *Regius* his Disciple began to talk of *Subtil Matter*, of the *Balls of the Second Element*, of *Ramous and Chamfer'd Particles*, burst out a Laughing, set up an Hiss, clapt their Hands, and were seconded by the *Doctors*, the Friends of *Voetius*: That tumultuous Outcry dismounted poor *Regius*, and obliged him to cut off his Disputations. He wrote to *M. Descartes*, desiring Counsel in this Conjuncture, and how he ought to behave himself in respect of *Voetius*, who had forthwith put up *Theses* in Defence of *Substantial Forms*; and against the other Points of the *Cartesian Philosophy*: He had particularly address'd them to the *Faculty of Medicine*, and the *Professors of Philosophy*, imploring their Protection of *Substantial Forms* against *Regius*.

Tom. I. des Let. de Desc.

Tom. 1.
Let. 89.

M. Descartes's Advice was, That he should forbear Publick Disputations, endeavour to draw over *Voetius* to answer his *Theses*, but with all the deference and civility imaginable, to manifest a grand Respect and Esteem for his Adversary, yet so as still couragiously to maintain the Cause of Truth. *Regius* took that Method, not without Fear it might cost him his Chair; and certainly he ran a great Risque. *Voetius* undertook him; put young *Voetius* his Son, and *Schook*, upon writing against him: And a little more had caused him to be condemned as an *Heretick* by the Divines: He had him before the Magistrates; nor had he so escaped, but upon giving Security for the exact Performance of what they ordered in a Publick Decree, Never to teach *Descartes's* Philosophy, to hold fast to the ancient Dogma's and to make no Attaque for the future on *Substantial Forms*.

That Blow went with *M. Descartes* to the Quick, though he seems in his Letter to *Regius* to make slight on't, insomuch that he could not forbear revenging himself; venting a *Phamplet* under-hand, called the *History of Voetius*; in which he scurvily treated him, and ridiculed him severely. That turned the Bent of *Voetius's* Fury on himself, who quitting thenceforward *Regius*, whom he saw foiled and groveling, and looked upon as a Forlorn-Hope, sent out to Piqueer and Skirmish, by *Descartes*, thought he must double his Forces to make an On-set on this New Sect, and assault it in its Leader. As ill Fortune still would have it, *Descartes* and *Regius* fell to Swords-points, and sharpened their Quills against each other, as if it had been the Fate of that *Philosopher*, at that Time, to have all the Learned

Learned Men of *Holland* for his Enemies, whose Names did terminate in *Ius*, *Revius*, *Demmatius*, the two *Voetius*'s and *Regius*.

The first thing that was done at *Utrecht*, was to damn *Descartes* in all Companies as an Atheist, as another *Vaninus*, who under pretence of establishing by his Arguments the Existence of a God, aim'd only to rout and confute it. *Voetius* declaim'd eternally against him in his Lectures, in his Disputations, in his Sermons. He pitch'd purposely on Theses of Atheism, where he brought in every thing that might bring an Odium on *Descartes*. And so successfully did they decry him, that when the News of his Death arriv'd several Years after at *Utrecht*, Prejudice was so deeply rooted, as to make an addition of dreadful Circumstances, and it was the Current Report of the Town, That he dyed the most impious and wicked Villain in the World, without Faith, without Religion, like *Julian* the *Apostate*, casting up a thousand Blasphemies against *Jesus Christ*.

Let. de Desc.

*Creighton
Ep. ad
Regium.*

Voetius endeavour'd to un cement the most intimate Friends he had, and as much a Protestant Minister as he was, wrote to *Father Mersennus* in *France*, to enter in a League with him, and to excite him to write against *Descartes*, but sped not in that Negotiation. He accus'd him of being a *Clandestine Enemy* to the Religion of the Country, and seem'd by that to be willing to impeach him as a *Traitor* to the State. He added, he was an *Emissary* and *Spy* of the *Jesuits*, and held an *Epistolary Correspondence* with them, and produc'd one Letter, especially against him, which he had wrote to *Father Dinet*, sometime after *Confessor* to the King. So true it

*Tom. 2. des
Let. de Desc.*

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is that *Titus Oats* is not the first that thought of persuading the *Protestants* of his Country, the *Jesuits* gave Commissions in *England* to levy an Army, in which they had the Disposal of all places of trust, and made general Officers, Colonels and Captains.

In short; *Voetius* partly by his Reputation and Vogue, partly by his Intrigues, brought it about, that *Descartes's* Philosophy should be condemn'd throughout the University, of which he was Rector: He cited him by the order of the Magistrates, with a great noise, at the sound of a Bell, by the notice of a Bedel, to come and answer to the Calumnies he was said to have written against *Voetius*. In so much that his Friends advis'd him to be upon his Guard, as being scarce secure in the place where he was, though it was out of the Reach and Jurisdiction of *Utrecht*. Two Papers, wherein *M. Descartes* mention'd *Voetius*, one of which was the Letter he had wrote to *Father Dinet*, were declared diffamatory Libels. That Declaration was Printed, and affix'd and sent to the principal Towns of the United Provinces. If we may believe *M. Descartes*, there was no less Design on Foot, than the Banishing him all the Provinces by a Decree, the loading him with prodigious Fines, the burning his Books by the Hand of the common Hangman, to which, some said, *Voetius* had resolv'd to make so great a Fire in burning of them, as the Flame of it should enlighten all the Countries thereabouts. In a word, *M. Descartes* was forc'd to get clear of these Troubles, to imploy the credit of his Friends, and the Interest of the *French Ambassador*, that might hinder it from proceeding any farther.

These

These Quarrels were kept up many Years ; and *M. Descartes* foreseeing the Apologies he he design'd to have presented to the Magistrates of *Leyden* and *Utrecht*, to justify himself, and demand the reparation of his Honour, would be ineffectual in the procuring such satisfaction as he pretended due to him, thought often of leaving *Holland*, where he found not the Repose he at first propos'd to himself. The Letters he received from the *Court of France* at that time, with the promise of a good Pension, if he would come and live at *Paris*, determin'd him to depart : But the Troubles of the Kingdom unluckily stop'd the Career of his good Fortune. Letters were sent him in Parchment curiously seal'd, and full of the greatest Praises in the World : But that was all ; nor had he his Letters gratis. Never Parchment, as he pleasantly says, cost him so dear, and was so unuseful as that : Nothing could hinder him from returning to his beloved *Holland*, without fear of falling afresh into the Hands of *Voetius*, *Schook* and *Revius* : But not long after, the *Queen of Sweden* sent for him to *Stockholm*, where 'tis vulgarly said he dy'd.

What I have hitherto said of the difference of *Voetius* with *M. Descartes*, has been taken for the most part out of the Letters of that Philosopher. *Voetius* inform'd us in the *Globe* of the *Almon*, of the other Particulars that concern'd himself, to wit, That after *M. Descartes's* Departure from *Holland*, he grew reconcil'd to *Regius* the Physician, who in the Feast of Reconciliation, as a Badge of the real Intentions of his future Friendship, presented him with some of *Descartes's* *Smush*, which he often made use

of, but especially to come to the *Lyceum* in the *Moon*; that having highly merited of *Aristotle*, by those famous Exploits manag'd against *Regius* and *Descartes*, in the Defence of the *Peripatetick* Philosophy, that *Prince of Philosophers* had offer'd him the Imploy we saw him in possession of; that he nevertheless wav'd the accepting of it, till, understanding that *Descartes's* Soul left no Stone unturn'd to bring the Souls of these Parts over to him, his Zeal for the *Ancient Philosophy* had wrought upon him to quit his Body, in order to oppose the Designs of that dangerous *Enemy*.

This is that very *Voetius* that was formerly the Hero of *Peripatetickism* in *Holland*. Our Greeting notwithstanding was extraordinary civil on both Hands; and after our mutual Compliments to each other, he express'd the Joy he had to hear *M. Descartes* was hatching no ill Design upon the *Lyceum of the Moon*. He confess'd likewise the Regret he had for urging that Philosopher heretofore so far: But that his own Reputation in *Holland* was incompatible with *Descartes's*. That if he had once permitted the *new Philosophy*, to take Footing in the *University of Utrecht*, he must either have been oblig'd to learn it, or hold his Tongue in all Disputes: And he found much uneasiness to consent to one or the other: That he was then too old to become *Descartes's* Scholar; and that it was easily guess'd how ungrateful a Task it had been for an old *Philosophy Professor*, to hear all his Decisions disputed, without the Priviledg of defending them, at least by way of Arguing; for that *Descartes* having thrown out of Doors the Terms made use of in the Schools, he had been oblig'd

oblig'd in all publick Acts, to stand as a Person that was Deaf and Dumb: He that had always been renown'd for his Subtilty and Penetration. That he had observ'd in his Philosophy many good Things, among abundance of others that seem'd somewhat hard. And that having often discours'd *Aristotle* concerning that Philosophy, they had both concluded it would not be impossible to make some Accommodation, and if we were willing, it would be no trouble to him, to enter in a particular Conference thereupon: We gladly embrac'd his Offer, and after having order'd his Attendants to retire, he spoke as follows:

You may easily see, *Gentlemen*, by the Rank I hold there, I have a great share in the Favours of the *Prince* our *Sovereign*: I have yet a greater in his Confidence: You will readily think so, by one Profession he has made me, and which I am well assur'd I may safely venture to make you in his Name. It is this, That his Interests are indeed closely united with the Interests of those Philosophers that write themselves *Aristotelians*, but at the bottom they are no more the same than are their Sentiments in point of Philosophy: But notwithstanding he hath hitherto dispens'd with the Promiscuous confounding of them. The Pleasure, and at once the Honour to see himself Marching at the Head of all the *Philosophers* in *Europe*, that with an unanimous Consent attributed to him the Quality of their Prince, was well worth the trouble of conniving at the diametrical Repugnance he saw in the reasoning of most of those, who declar'd to be intirely his. That division it self, which was to be found among his most zealous *Partisans*,

who took it to be a greater Honour, and made it of more Concernment to have engag'd him on their side, than Truth it self, did not a little contribute to his Glory: To see himself independently on Reason, by the sole weight of his Authority made Umpire of all the disagreeing Philosophers; to enjoy peaceably the Priviledg of *Infallibility*, among those that disputed it with *Pope* and *Councils*, had something charming in it, that induced him to think it best to be contented, without being much concern'd at their taking or mistaking of his meaning; seeing, whatever they say, he only, by the Voice of both Parties was always in the right. But since that *M. Descartes*, *M. Gassendi*, and some others, have thrown off the Yoak of his Authority, and to justify their Conduct have undertook, and with Success enough, to shew the Absurdity, or the unsoundness of some Opinions of the Schools, of which they pretend to make him the Warantee, because the best of his Disciples have awarded them unto him with an universal Consent: He hath thought fit to declare himself on the first occasion, and to intreat the *Publick*, as also those *Gentlemen* the *new Philosophers*, to do him Justice in that Particular. He protests then to separate his Interest in many Articles from theirs, that style themselves his Disciples: He declares that in the *Questions* of the *Schools*, many things go under his Name which are none of his; as is for Instance, that most Childish Notion of the *Horror of a Vacuum*. That he himself hath certify'd and prov'd by Experience, the Pressure of the Air, which at this Day is made a Principle in the Physical Explication of such *Phenomena's*, as have most alliance

ance to the Question of a *Vacuum*. That he is no ways the Father of an infinite little Beings, introduc'd in the School Philosophy. That his Writings have often been mis-interpreted, and Men have commonly taken for Natural Beings, what in his *Idea* were only Denominations and Metaphysical Attributes.

This Calm, *continu'd he*, with which I speak, after that ungovernable Obstinacy you formerly knew me guilty of, might stand for my Credentials, as to you, in *Aristotle's* Absence: But I will farther add, that since you meet him out of the *Globe* of the *Moon*, he hath dispatch'd an Express, in which he gives orders, that if you pass'd this way, I should not fail to inform you of his Thoughts and Intentions, and to let you know that whatever Warmth appear'd in him in his Discourse against *Descartes*, he would notwithstanding gladly hearken to some Accommodation with him: Furthermore this is no unpremeditated Resolution. The Expedient has been form'd, and written long ago, and the Fault will not be ours if you do not see it, and take upon you the presenting it to *Descartes*, if you so think convenient. We return'd, we most joyfully accepted it, and that we thought our selves happy any ways to contribute to the Reconciliation of the *two greatest Philosophers* the World has known, and the Reunion of two Parties, that were at present the only considerable in *Europe*. He took forthwith out of a Cabinet that was at the end of the Hall, and where, upon handsom Shelves, stood a good sight of Books, excellently bound, and that look'd exactly like Books the new Philosophers have compos'd, within this thirty or forty
Years,

Years, and that *Aristotle* and *Voetius* had undoubtedly read; he took, I say, from a Cabinet, a kind of *Memoirs*, with this Title in Latin Words, *De Consensu Philosophiæ Veteris & Novæ*. We have, said I, an Ingenious Man of our World, that has wrote a Book with the same Inscription. I my self have read it (he replied) and a Man may easily see by the way it is wrote in, the Author is well vers'd in all parts of Philosophy. He is a Gentleman unbiassed as to one side or other, is throughly acquainted with the Interests of each Party, and therefore the fittest Person that I know to mediate in that Affair. A preliminary Point is taken from his Preface, which is much in the right on't, and whereto *Aristotle* and *Descartes* must forthwith accord; that the Sect-Leaders of Philosophy, *Neque omnia, neque nihil viderunt*. With that he presented us the Project of Accommodation, and desired us to read it at our leisure, in our *Voyage*; as also to take with us, as we had offered at our Arrival, some *Aristotelian Souls*, to accompany us to *Descartes's* Place of Residence, to the end he might know by them, what that *Philosopher* had resolv'd upon the Propositions laid down in that Treaty. We thanked him for the Honour he did us, in intrusting us with so Important a Negotiation; assured him, we would do all that lay in us towards the facilitating its Success; and after much Expression and Acknowledgment of his Civilities, we beg'd his leave we might persue our *Voyage*, since we had a vast way still to go, and had spent many Hours in that we had pass'd already. He conducted us out of the *Lyceum*, and giving some Instructions to two Souls of
the

the Country, that seem'd Spirits of Note and Fashion, ordered them to wait on us, so made his *Conge*.

Designing to run over that whole *Hemisphere* of the *Moon* that is oppos'd to our *Earth*, we kept on our Road to the North, and leaving *Democritus* on the left, we pass'd through *Thales*, and drove on quite to *Zoroaster*; from whence we made a double towards the West, through desert Lands, where we saw the ruins of some ancient Towns, as of *Atlas*, *Cepheus*, *Hermes*, without meeting Man, Woman or Child, till we came to the *Lake of Dreams*, on whose Banks we found three separate Spirits, with whom we were taken up one Moment in Discourse, as we pass'd along.

We surprized the two first, stoutly Cursing and Banning their Wives they had formerly in the World. One of which was, that *Hermotimus* mention'd by *Tertullian* and *Pliny*, who leaving his Body abed, to make a Ramble, as his Custom was, his Wife, that did not love him, slipt not the opportunity of calling up her Servants, to whom she shewed, not without tearing her Hair and playing the Mad-woman, the Body of her Husband unsoul'd and breathless, and carried the Humour on so well, that the Body was burnt, according to the custom of the Country, before the Soul return'd, who was from thenceforth forced to seek another Habitation.

The other Spirit was a *Roman Senator*, whose Name was *Lamia*, whose Wife had trickt out of the World by the same Project, though, a little more it had miscarried. For as he related it, The Soul being returned to look its Body, where
 'twas

A Voyage to the

'twas left, not finding it, and seeing the Family Mourning, begun to smell how the Matter stood: It Posted presently to the place where was built the Funeral Pile to burn the Body, and arriv'd there, just as the Fire began to seize it. The Soul thought it inconvenient to reunite her self with it, for fear it might be obliged to be burnt alive, she only mov'd its Tongue, so as many of the Standers by heard these Words twice distinctly repeated, *I am not dead, I am not dead.* But seeing the Masters of the Funeral Ceremonies, who had undoubtedly received an *Item* from the Dame, unconcerned as 'ere, she left it to be burnt, and came to fix in the *Globe of the Moon.*

The third, whom we found two Leagues farther in a ghastly Grot, was the famous *John Duns Scotus*, commonly called *Scot*, or the *Subtil Doctor*. He has pass'd for a dead Man unto this day, on which Account some have given out most ridiculous Stories, and highly disadvantageous to the Reputation of so worthy a Person, and which have still been well confuted. But the truth is that he is not dead; and that having by the subtilty of his Mind, found out the Secret so many others have procured, his Corps was taken for dead, and was buried in the absence of his Soul, which took Sanctuary in the *Globe of the Moon.* He was incompass'd by a Croud of little (I know not what you call them, for they were not *Beings*, but I think) *Formalities.* He was the first Father of them in the *Philosophical World*, and he that gave them first Repute. They be the prettyest, littlest, slender,——you'd think them next to *nothing.* Perceiving we were Philosophers, to be a little
more

more affable than ordinary, he began to ask us what we thought of an *Universal a parte rei*, and whether we did not take it to be *Objective Precisions*? Our old Gentleman, who besides his *Cartesian Ideas* upon Philosophy, had still a Relick of that gruff and surly Humour *Aristotle's* Compliments had provok'd, answered him in a careless Air, We concern not our Heads much with such insipid Trifles; that it was but *Irish Gibbrish*, and that none of us had any Pretensions to the Elogy *Buchanan* gives his Country Philosophers, otherwise Men of Sense and Worth,

Gens ratione furens & mentem pasta Chimeris.

Trifles and Chimera's, reply'd *Scotus*! They are the finest and most solid Questions in Philosophy. By this it was we distinguished our selves in my time; by that Subtilty wherewith I handled these Questions, I was advanced to the quality of *Doctor Subtilis*. Trifles and Chimeras, quoth a! You *French* Philosophers, have you ever read the History of the *University of Paris*? If you have not read it, read it: You will see if these things were look'd on heretofore as Trifles. You will see under the Reign of the young *Lewis*, one *Rousselin* of *Britanny*, at the Head of the *Nominals*, disputing Hand to Fist in the *University of Paris*, against those who held an *Universal a parte rei*, and from Arguments they came to Swords, that there was Man-slaughter in the Case. You will see, what I have been told is done, since I quit your World. That in the reign of *Lewis the Eleventh*, the Court and Parliament interposed themselves in

in Philosophical Differences, which you call Trifles; that by the order of the King, the Books of the *Nominals* were chain'd and padlock'd, strictly prohibiting the opening them ever after: And I would to God, those Decrees had not been repeal'd by the Asserters of that empty Philosophy, which will have Universality consist in Names and Conceptions: Then at this day I should have reign'd absolute in the Schools.

But (*continu'd he*) taking Courage, Are not you of that Party of Philosophers I have heard talk of some time since, and whose Works I have likewise seen in a Visit I made *Aristotle*, who have a certain *British Cavalier* for their Leader, called *Descartes*? Yea verily, *reply'd our old Cartesian*, and we take it as an Honour so to be. Be gone, cry'd he, all in a Rage and Passion! Away with you! Hence Hereticks, as you are, who take it for an Honour to be of a Sect, which by its Principles is oblig'd to renounce the Faith of our most Holy Mysteries. Your *Descartes* holds that a determinate Extension is essential to a Body, and that a Body being once of the size of a Cubical Foot, it would be as great a Contradiction to lose that Extension, as to conceive a Mountain without a Valley. It will be then a Contradiction that the *Body* of the *Saviour* of the World which had the bulk of many Feet, should be comprehended in the space of the least Particle of the Consecrated Host. Once more be gone Excommunicates: And since you will stay here in spite of me, I abandon the place; and forthwith he march'd off.

That

That his extraordinary Zeal was no less surprizing than diverting. But that which pleas'd me most, was, That upon our leaving that place, the two *Aristotelian Souls* which *Voetius* had deputed to accompany us, began by the way to resume the Argument of *Scotus*, and to urge it vigourously against *Father Merfennus* and my *old Man*, who were much perplexed to rid their Hands of it. But they propos'd an Argument against the manner whereby *M. Descartes*, and after him *M. Rohault* undertake to explain the Mystery of the Eucharist, without the assistance of *absolute Accidents*; which may merit a place in this Relation.

M. Descartes in his Answer to the fourth Set of Objections, propos'd against his Metaphysical Meditations, explains the Mystery of the Eucharist as follows. He says, That the Body of *J. C.* after the Consecration, is in the self-same place the Bread was in before; but that it is so precisely in the same space, that in what place soever, it was true to affirm before the Consecration, here is Bread; it is true to say after the Consecration, here is the Body of *J. C.* So that if we conceive that before the Consecration there was, whether in the Surface or in the Substance of the Bread, little Piramidal, Cubical or Triangular Spaces, fill'd with Piramidal, Cubical or Triangular Parts of Bread, we must conceive, after the Consecration, those little Spaces are possess'd in the same exactness by the Body of *J. C.* From whence it follows, according to him, That when 'tis said the Body of *J. C.* is comprehended in the same Dimensions, and the very Superficies as the Bread, by that word Superficies is to be understood,

food, not only that external Surface that terminates the total Figure of the Bread, but also that which terminates all the parts which are in the depth and substance of it, separated from one another by the Pores, and little Intervals that are fill'd up with Air, or some other Heterogeneous Bodies: In so much that should some insensible parts of the Bread be put in motion by the Air, or some other Body, the new Substance, that takes the place of those insensible Parts, is equally put in Motion.

Upon that Supposition *M. Descartes* argues thus. Whatever makes an Impression upon our Senses is only the Superficies of a Body. Every Body therefore that has the same Superficies as the Bread, will make the same Impressions on our Senses as the Bread. Therefore since the Body of *J. C.* is so precisely in the same space as the Bread, that it hath the same Superficies to an Hair, it must inevitably make the same Impressions on our Senses as the Bread, that is, it must reflect the Light, as the Bread did, and with the same Modifications: And from hence we see in it the same Colour and the same Figure. It must be press'd towards the Centre of the Earth, by the Impulse of the same Matter that press'd the Bread before, because of the Figuration of its Parts of which it was composed; and hence we perceive in it the same Gravity. It must vibrate the Nerves of our Tongue, and insinuate it self into the Pores, just as did the insensible parts of the Bread; and hence we apprehend in it the same Taste, &c. From whence he concludes, That Mystery may be admirably explained, without the incumbrance of absolute Accidents, which are kept in service without any occasion for them.

See

See then one Difficulty among many others our *Peripateticks* proposed against that Explication; we will demonstrate (*said they*) that, granting that *Hypothesis*, the Bread is not at all changed into the Body of *Jesus Christ* in the *Eucharist*, but that after the Consecration, the Bread still remains in the Host.

In order to their Demonstration they demanded of *Father Merfennus* and the old *Gentleman* : I. Whether by the Principles of *Descartes*, the Matter of all Bodies considered in it self, and independently of the different Modifications of its Parts was not of the same Species? They answered, Yes. II. If that which constituted the Specific Difference of Bodies was not, according to them, the different Configuration, the different Situation, and the different Motions of the Parts of those Bodies? They acknowledged it. That supposed, *said they*, we'll evidently prove, That the Substance in the *Eucharist*, after its Consecration, is nothing else but Bread; for the Matter or the Substance, which hath the same Configuration of Parts, the same Motion, and in a Word, all the same Modifications that constitute the Essence of Bread, is Bread, according to the aforesaid Principle: But the Substance found in the Dimensions of the Host, after the Consecration, has all those Modifications; and 'tis only by the Means of those Modifications we conceive it to have the same Superficies as the Bread, taking the Word Superficies in the same Sense *Descartes* gives it: And 'tis in vertue of those Modifications that that Superficies makes the same Impressions on our Senses as the Bread did before the Consecration: And 'tis from the same Reason that it reflects its Light precisely to the same

Angles as the Bread : That it receives all the same Impulses, and the same Determinations of the Matter, that pushes it towards the Centre, as the Bread : That it communicates the same Vibrations to the Nerves of the Tongue as the Bread : Therefore the Substance that is in the Space of the Host, after the Consecration, according to *Descartes's* Principles, has the Form or the Essence of Bread ; therefore it is Bread, which was to be demonstrated. And from thence our Catholick *Peripateticks* concluded, It was not without good Ground that Recourse was had to *Absolute Accidents*, in the Explication of that Mystery.

They made yet one Reflection more upon a Saying *Descartes* adjoyns to his Explication, and which ruins his Answer. “ Notwithstanding, says he, “ the Body of *Jesus Christ*, to speak “ properly, is not there, as in a Place, but Sacramentally. For, said they, What is it, for God’s sake, to be in a Place in proper speaking, but entirely to fill a Space ? to hinder the Passage of other Bodies that present themselves ; to reflect the Light, to be pressed downward ; to have Motion, &c. But all this, according to *Descartes*, agrees to the Body of *Jesus Christ* in the Sacrament of the Host. And on the contrary, the Notion commonly received of a Sacramental Existence attributes not to a Body in that Capacity all those Properties ; for none of those that have spoke of the Body of *Jesus Christ* in the Sacrament, have supposed it was that which reflects the Light, &c. Nay, they say the quite contrary.

So they concluded, deriding the Vanity of the Applause *M. Descartes* assumes to himself in that Place,

Place, upon the Intelligible Manner, wherewith he pretends to have explained that Mystery, and upon the Obligations he has laid on the *Orthodox Divines*, for having furnished them with an Opinion more agreeable with *Divinity* than those usually received. Applause, as well grounded as the Prophecy he made a little after, by which one Day it shall come to pass, that as soon as the World shall be reclaimed from the *Prejudices* of the *School*, all the Opinions of our Old *Philosophers* and *Divines* thereupon, shall disappear and vanish as Shadows, at the Approach of that Light, wherewith those Glorious Principles of the New Philosophy shall fill the Minds of all such as know how well to use them.

For my part, I was of Opinion, upon hearing *Monsieur Descartes* so refuted, that he had better have stuck to his general Answer, be it as bad as it will, That he was a *Philosopher* and not a *Divine*, and that he pretended not to explain the Mysteries of our *Religion* by the Principles of his *Philosophy*. I was astonished too in that Occurrence, That such sort of Answers had the good Luck to meet with no Reply, especially having to do with *M. Arnauld*, who would never willingly take the last Blow in Point of Disputes and Books. But I am persuaded I have since found the Solution of that Difficulty in a Letter *M. Descartes* wrote to a *Father of the Oratory*, a *Sorbon Doctor*. He says, speaking of *M. Arnauld*, That his only Judgment, as young a Doctor as he was, was of more Weight with him, than that of half the Ancient *Doctors* of the *Sorbon*. Was not a Clearing of that nature able to disarm the most incensed Adversary in the World?

During that Dispute, wherein *Father Mersennus* and the Old Blade thought it unnecessary to keep to Mood and Figure, and were content to evade the Objection by much railery upon *Absolute Accidents*, alledging they ought to be banish'd to the Desert of *Scotus*, to make up his Train and Attendance, with all his little *Formalities*; We crossed the *Calm Sea*, and turning short to the Right, we passed through *Hipparchus*, *Ptolemaeus*, and the *Peninsula of the Stars*, and from thence we cut through the *Sea of Clouds*. We entred into the *Demy-Island of Dreams*, I mentioned in the beginning; so called from the little Mansions in the Globe of the Moon, inhabited for the most Part with *Chymists*, that are in Pursuit of the *Philosopher's Stone*, having not been able to find it upon Earth; and a World of *Judicial Astrologers*, who still are as great Asses as they were in the other World, and spend all their Time in making *Almanacks*, and correcting by exact Supputations the false *Horoscopes* they made in their Life time.

Among others we found *Cardan*, who though he was possessed of a good Copy-hold Eastward, on the Shoar of the *Ocean of Tempests*, could not yet forbear making frequent Visits of his Brethren of the same Society. He passed away his Time but discontentedly, having not yet conquered the Shagrin and Melancholy, occasioned by that Notable *Horoscope of Edward VI. King of England*, whose most remarkable Fortunes and Adventures he had foretold, quite to the Fiftieth Year of his Age, who yet had the confounded Luck to die at Fifteen. Two other things, much of the same Nature, entertained his Thoughts in that deep Melancholy: The first was the
 Death

Death of his Son, whose Horoscope had proved Faulty, he having not foreseen what yet came to pass, That he should be executed at *Milan*, in the four and twentieth Year of his Age, for poysoning his Wife. The other thing was the uncharitable behaviour of *Scaliger* and *Monsieur de Thou*, in publishing in their Books to all Posterity, That he was suffered to dye with Hunger. For after all, *said he to us*, they are Lyars, for were *I dead*, 'twas impossible I should be here. I must confess, that having foretold the Day of my Death, in my Horoscope, I made my self, and finding I was mistaken, seeing at the Time prescribed no Sign or Symptom of approaching Death, I shut my self in my Closet; and not having Confidence to appear from thenceforth in the Sight of Men, since every Moment of my Life to come had been the continual Reproach of my Mistake, I even resolved to quit my Body, and come and inhabit here. And this, *Gentlemen*, is the real Truth of the Matter. We took occasion to extenuate the Causes of his Affliction, by telling him of the Reputation he always had, with a *non obstante* to all that, in the World, as an extraordinary Man, and distinguished from the Vulgar: After which we took our Leave of him, and posted from thence to *Mersennus*, where we launched for our Voyage over the Moon. There it was that the two Philosophers stepping aside for some Moments, we read, altogether, the Project of Accommodation betwixt *Aristotle* and *M. Descartes*, which *Voetius* had given us charge of, and whose principal Articles I shall here relate. It was divided into two Parts; The first was to regulate the Method, how the *Aristotelians* and *Cartesians* must for the future

demean themselves towards one another, in their Books, Disputes and Conversations. The Second, which was very long, contained several Propositions, that the *Aristotelians* remitted, to make some Advances nearer the *Cartesians*, demanding the like Abatements from the *Cartesians*, whereby they might approach better the *Aristotelians*. That Second Part was rather a Confutation of many *Cartesian* Opinions than a Treaty of Accommodation, which gave me to conjecture it would fail of the Success they promised to themselves, or at least pretended to propose themselves. 'Tis easie to see that *Aristotle*, or at least *Voetius* his Secretary was well informed of our Sublunary Occurrences, and what was for and against his Party and his Adversary's.

*A Treaty of Accommodation betwixt
Aristotle, Prince of Philosophers,
and M. Descartes, Chief of the
New Sect.*

P A R T I.

THEY shall not for the future Abuse or Vilifie each other; that Way being unphilosophical, and being likewise already exploded the Schools, by the Worthiest and best of the Professors.

The Ladies and knowing Women must no longer treat *Aristotle* on their Besides as a Fop and a Pedant: They ought to know he has been a Soldier, a Man of Courtship and Intrigue, who, before he became a Philosopher, took his Pleasure and spent his Estate, that was no little one, being Son of the Chief Physician to *Amyntas*, Grandfather of *Alexander*; and perhaps there was never a Philosopher in the World more a *Courtier* and a *Gentleman* than he.

On the other Hand the Old Professors of Philosophy must remember to be more sparing of their Epithets, of which they are commonly too liberal on *Cartesius* his Account; constantly styling him *Enthusiast*, *Madman*, sometimes *Heretick* and *Albeist*. *Voetius* from henceforth voluntarily makes him an Authentick Satisfaction as to all those Points, in default of that which the Procurators of *Leyden* and *Utretcht* denied him, corrupted by the Friends of the aforesaid *Sieur Voetius*; who is his most humble Servant.

Aristotle shall disclaim all those Books composed against *M. Descartes*, in an Injurious and Abusive Way, such as is that Tract entituled, *Deliriorum Cartesii Ventilatio*. At least he shall order, That they be corrected, and that in the New Edition Care be taken to retrench some Expressions a little too strong and biting.

M. Descartes also, on his part, shall give Orders, That in the New Impressions of the Works of some of his Followers, some Prefaces be lopt off, or rather some Malicious Satyrs against the *School Philosophers*, not caring to distinguish them from one another, and throwing unjustly upon all, the Faults of some Particulars, such as are the Passion of Wrangling, Confusion, Equivocal

Terms, and Ignorance in the most Curtious Parts of Physicks.

It shall be prohibited all the *Cartesians* to give a Character of *Aristotle's* Merit, before they have read him, especially before they have seen his *Logick*, his *Rhetorick*, his *History of Animals*, and others, where he treats Natural Philosophy in Particulars: And they shall take heed of giving a Judgment on that *Philosopher's* Parts by his Books *De Phisico auditu*, that are not so clear and perspicuous as his others; the Author having his private Reasons for his writing in that manner; which have yet been more confounded in Tract of Time, by a swarm of *Translators* and *Commentators*, who often talk *Greek* in *Latin*, and whereof some understood neither.

Be it prohibited likewise all the *Peripateticks* to be angry at *Descartes's* Philosophy before they have throughly examined it, under the Penalty of rendring themselves ridiculous, as some have done, who have placed him in the Catalogue of *Atomists*; that is, of such as fancy Bodies composed of *Atoms* or indivisible Parts; or as another that wrote ingenuously to *M. Descartes* himself, he had plainly seen with his Eyes the *Subtil Matter*, having by the luckiest Accident imaginable observed an abundance of little Bodies playing in the Air, by the Advantage of a Sun-beam, that passed through a chink of one of his Casements.

Lastly, *Aristotle* entreats the *Gentlemen Cartesians*, not to father upon him whatever they find in the Books of his Disciples, without consulting himself; promising on his part, to give no one the Title of *Cartesian* but upon mature Deliberation, especially in regard of certain young
Abbots,

Abbots, Cavaliers, Proctors and Physicians, that call themselves *Cartesians* in all Companies, for a Pretence to Parts and Ingenuity, which they sometimes get the Repute of, by that only Confidence of talking at all rates of *Subtle Matter, Globules of the Second Element, Vortexes, Automata's* and *Phenomena's* without understanding any thing but Terms.

The Second Part of the Treaty.

WHEREAS the Article of *Substantial Forms* hath occasioned the greatest Noise and Division between both Parties, as may be seen by the Registers of the Universities of *Utrecht, Leyden, Groninguen, Angers*, and as would be testified by those of the University of *Paris, Caen*, and several others, had Care been taken for the Recording all the Acts and Deliberations held upon that Affair; it is therefore necessary both one and the other, each as to their particular, should remit something for Peace and Quietness-sake.

Aristotle complained forthwith of the Delicacy of the first *Cartesians*, who thought it advisable to take Disgust at the very Name of *Substantial Forms*. For suppose, said he, that no more was meant by that Word than the Principle of the Properties of every Body, and that which is the Cause why one Body so differs from another, that Use has given it a particular Name, and made it a Species distinct from other Kinds of Bodies: What hath that Term so Distastful and Extraordinary?

dinary? As to the Idea the *Peripateticks* have affixed to it, making it to speak, an *Incomplete Substance distinct from Matter*; he said, That Definition being no where to be found in his Writings, at least in express Terms, he might, if he thought good, disown it, and devolve upon the *Arabian Commentators*, as on the Creators of that *Being*, all the Railleries and fine Things pretended to be spoke by the *new Philosophers* on that Chapter. But that he was not yet in that Humour, the *Cartesians* having concluded nothing rationally against that System. That an *Incomplete Substance* was no *Chimera*, since the reasonable Soul in Man is undoubtedly so. That their grand *Axiom* brought to demolish *Substantial material Forms*, viz. Whatever is Material is Matter; was palpably false, as they have been answered an hundred times, seeing Motion and Figure, which are material Things, are notwithstanding devoid of Matter; and also that he lookt upon the ordinary Doctrin of *Substantial Forms*, as his true Doctrin. Nevertheless, adjoyn'd he, we shall see what use *M. Descartes* will make of it, and what Advances he will offer on his part. When he shall have granted Brutes a Soul, the *Peripateticks* will consider whether they shall recede from some other Point.

Upon which, he brought many Arguments to persuade him to be less hardy and intractable thereupon. He represented how that Article of his Philosophy had shockt the whole World. That his earnestness and zeal for that Opinion had been excusable, if he had been the first Author; but it is well known a Spaniard, called *Pereyra*, first lit upon that Notion; and some were

were so malicious as to say, he had drawn it from the Spaniard's Book before he deduc'd it from his own Principles. That he had already gain'd, by that Opinion, as much Honour as could be expected ; that it was lookt upon in the World as an Ingenious Paradox, on which he and his Disciples had descanted very subtly, and had sufficiently plagu'd and tormented the School Philosophers ; but that the latter and more intelligent sort of Men could not forbear Laughing, when they seriously undertook to maintain it as a Truth. That 'twas known this was the first Effect the Preface to a Book, Entituled, *The Soul of Beasts*, produced in the Mind of its Readers. A Book wrote indeed with a great deal of Wit, but wherein the Author too seriously drives at the Conversion of the Philosophers upon that Subject. That no one had brought one substantial Reason to destroy the prejudice of all Mankind in that particular. That no one had yet demonstrated that a middle Being, betwixt Spirit and Matter, was a thing impossible. That the Promise the *Cartesians* had made, to explain all that we see admirable in Beasts, by the sole disposition of the *Machine* was whimsical, and not to be relied on, since it never had been put in Practice. That when they talked of these Matters in general, they sometimes spoke plausibly enough ; but when they descended to Particulars, they were either much to be pitied or not endured. That the only Idea of the manner of Brutes acting on infinite occasions, compared with that Paradox, made it look extravagant. That whereas 'twas answered, that Argument prov'd too much, and made for the reasoning of Beasts ;

it

i? Ame
des Betes.

it must be acknowledged that Instance perplex'd the Philosophers, and gave them trouble to get clear off; yet after all, whatever pain it put them to, their Argument lost nothing of its Force; and the Instance on the other hand infinitely increased the difficulty. For if it be hard to comprehend, that Beasts should not have Reason, upon seeing them act in so admirable and methodical a manner, how much more difficult would it be to deny them bare Perception? And lastly, for *Descartes* to give up that point, would not be construed to retract; having himself declar'd, he could not demonstrate, that Beasts had not an apprehensive Soul, no more than it could be demonstrated unto him, they had.

Lect. 67.
Tom. 1.

After that, *Aristotle* passed to another Point, which had some Connexion with the former; which was, *The Essence of the Soul*, made by *M. Descartes* to consist in actual *Thinking*, as he makes the *Essence of a Body* to consist in actual and determinate *Extension*. He tells them, That though he has many Scruples, as to his Method and Manner whereby he offers to demonstrate the distinction of the Soul and Body, and that many People continued dissatisfied a little with the Answers he gave to the Objections of *Gassendus* and *M. Arnauld*; notwithstanding he would not dispute him that Glory of having said something thereon, wholly New and very Ingenious. That he is likewise disposed to follow his Opinion touching the Essence of the Soul, provided he would satisfy him as to one Difficulty taken from Experience.

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Many Persons, said he, have made you that Objection: That if the Essence of the Soul consisted in actual Thought, it were impossible she should exist without thinking; and thus it would follow, we should have Thought whilst we were in our Mother's Belly. You will not scruple in the least that Consequence: And as to what's rejoyned by them, that had we constantly Thought, whilst we were in that Capacity, we must necessarily have remembred some one of those Thoughts, at least, that we had there: You answer, The reason of our Non-remembrance, is, because the Memory consists in certain Traces, which being made in the Brain, upon thinking of an Object, are there preserv'd; and that the Brain of Infants is too moist and soft for the preservation of those Traces, at least in such a manner as is requisite to cause remembrance. But you are pressed upon that Answer, for as much as in several places of your Writings, you distinguish Memory into two sorts, whereof one depends upon the Body, and those Tracks or Footsteps impressed upon the Brain; and the other, which is purely intellectual, depends upon the Soul above. You also distinguish Notices into two kinds: The one that depend upon the Organ, and the other Immaterial, that are wholly Independent on it. Now we can easily apprehend that the disposition of the Brain of an Infant, may be in the cause why the Soul recollects not those Thoughts which have their dependence on it; but in regard of the Memory wholly intellectual, those pure Conceptions, those immaterial Notices which are altogether independent on the Organ, and the different Plaits or Impresses of the

Brain,

*Lettr.
Tom. 2.*

Brain, the humidity of the Brain can be of no Moment, and we must undoubtedly remember those Thoughts, and the Motions of the Will that have pursued them. You will say, that an Infant in the Mother's Womb is destitute of those pure Notices, and of the use of the intellectual Memory. But that is the thing I am asking a sufficient Reason for, and of which I should be highly pleas'd to be convinced. In effect *Voetius* had given express Orders to both his *Envoys*, to see that *M. Descartes* gave a clear Explication of the Point.

Tom. 2.
Let. 4. 38.

From the Essence of the Soul they proceeded to the Essence of the Body. *Aristotle* entred on that Article with an acknowledgment of an Error he formerly fell into, advertising at the same time *M. Descartes* to take care to avoid the like Misfortune. I believed, said he, the World was from all Eternity, upon a false Principle I suffered my self to pre-possessed with, to wit, That God was a *necessary* Being in his *Actions*, as well as in his *Existence*. You have one also, of which the self same Error is the necessary Consequence: And I am not the first that has put you in mind of it. You not only affirm, That the Essence of Matter consists in Extension, but farther, That *Matter*, *Extension* and *Space*, are but three different Names of one and the same Thing: From whence, with you, it follows, That wherever we conceive Extension and Space, there must necessarily be Matter. And from thence you conclude, the World is boundless and infinite, or, as you choose to speak, indefinite in Extension. Your Adversaries of the Terrestrial World have indeavoured to demonstrate, That bot-

bottoming on those same Principles, the World and Matter must always have been, and that Matter must necessarily continue always. For as there is Matter at present, where we conceive at present Space and Extension, so by the same Reason there always has been, and ever will be, Matter, where we conceive there ever has been, and ever will be Space and Extension. But we conceive that there always has been, and that there always will be Space and Extension, where the World at present stands. This is a nice Point, and might justify the Conduct of the *Doctors* and *Magistrates* of *Utrecht* on your Respect. Betwixt our selves (*continu'd he*) the reasoning that bewildered you in that unextricable Maze is a meer Sophism. A *real* Attribute, say you, cannot comport with *nothing*. Now to be extended, is a *real* Attribute, it cannot therefore agree with *nothing*. It agrees notwithstanding with Space, and with what we imagine above the Firmament, and call by the Name of Space. Therefore that which is above the Firmament is real. Therefore that which is in the Indefinite above the Firmament, is Matter. Therefore Matter, Extension and Space, are the self-same thing.

You ought to have apprehended the defect of that Reasoning from two Respects. First, from the Consequence that is taken from thence, concluding for the Eternity of the World, and which voluntarily offers it self to the Mind. Secondly, that supposing it false, as indeed it is, that the World should be Eternal, they'd demonstrate to you by an Argument, exactly like yours, that another Attribute, no less real than that you term so, comports with nothing.

For if the World is not Eternal, it is plain a Man may truly say, that *nothing* is Eternal; since, excepting God, there has *Nothing* been from all Eternity. Now to be Eternal, is methinks, as real an Attribute as to be extended. But as it is a manifest Absurdity to affirm, a real Attribute can accord with *nothing*, it is necessary to reconcile it all, that you agree with your Adversaries, that those Words, *Extended* and *Eternal*, when attributed to *Nothing* and to *Space*, make in our Minds quite contrary Ideas, to what we have upon our attributing them to a *Being* or a *Body*. When we attribute them to a *Being* or a *Body*, they signifie something *Positive*; when we attribute them to *Nothing* and to *Space*, they give a *Negative* signification. In a Word, when 'tis said, nothing is Eternal, no more is meant, than that there has been no *Being* created from all Eternity. And when 'tis said, There is only an extended *Space* beyond the Firmament, it is understood there is no *Body* there, and that there may be one to fill up that *Void*, and nothing of a *Body*, which we there conceive. We cannot speak of *Nothing* and of *Space*, but we must speak *Something* of them. We cannot express what we think of them, but by the Terms in use: Those Terms are the same we imploy to speak of *Beings*: But if we make Reflection on the Ideas, we shall see they are wholly different, nor are they ruin'd and destroy'd by one another, as is pretended.

This puts me in Mind of a little Instance, subtil enough upon this Subject, which formerly Dr. *Mere*, an English Gentleman, gave you,
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he whose Elogies went so far as to apply to you what *Horace* said of *Homer*; *Qui nil molitur inepte*. He propos'd this Question to you. Suppose that God should destroy the World, and reproduce it a little after, might not it be said there would be, or at least, that we conceive there would be some Interval between the Destruction and Reproduction of the World, although nothing of real interceded betwixt them both? From whence he proceeded to conclude, That supposing in a Chamber God should annihilate all the Bodies that are between the Walls, there would yet be Length, Breadth and Depth, although at the same time there was nothing real there. He thought to have foil'd you, supposing you would readily have assented to his first Proposition, of which there seem'd no Doubt or Scruple: But I am persuaded he found himself well enough Match'd, when you deny'd him that we could conceive in his *Hypothesis*, any Duration or Interval, between the Destruction and new Production of the World.

The Author of a Letter wrote some years ago to a *Cartesian* Philosopher, afforded the Reader Sport and Diversion enough upon that Point, by several very pretty *Hypotheses* which he offers. But as I am not given to Trifles, and 'tis unbecoming a Philosopher of my Character to be merry, I shall only make use of your own Principles. I'll take that *Hypothesis* that supposes the Air in a Chamber to be destroy'd by God, without any admittance or production of another Body there. That *Hypothesis*, once receiv'd, makes it manifest, That Extension may be conceiv'd without a Body, and by Consequence;

quence, that the Essence of Matter consists not in Extension. You will not admit of this Hypothesis: But I am going to shew, that it implies no Contradiction, by a reasoning much like one of those you make use of in another Case, and take for Demonstration.

For according to you, seeing I distinctly conceive a thing that thinks, not conceiving Extension, and because I distinctly conceive Extension, not concerning a thing that thinks; I have good Grounds for my Conclusion, that a thing which thinks is distinguish'd from Extension, and that Extension is distinguish'd from a thing that thinks. Thus it is you demonstrate the distinction of the Body and Soul, and thus it is evident, one may exist without the other, without a Contradiction; and that from this grand *Maxim*, That the difference of Ideas is the only means we have of knowing the real distinction of Things, and their Independence upon one another. Upon that Principle thus I argue. I most distinctly conceive the Destruction or Annihilation of a Body, without conceiving the production of another Body. Therefore it is no Contradiction a Body should be destroy'd without another Body's Production. Therefore it is no Contradiction the Air betwixt the four Walls of a Chamber should be destroy'd, and yet no other Body produc'd in its room.

Or thus, which turns to the same Account. I most distinctly conceive a part of Matter, setting aside all others, and I most distinctly conceive all other without that, for Instance without conceiving the Air inclos'd in a Chamber. My *Hypothesis* then is establish'd, as well as the Consequences that naturally follow, against
your

your Opinion, touching the Essence of Matter. So that if you have any Inclination towards a Peace, you will be content to say, that considering Things in their natural Capacity, Matter is necessarily extended; but will willingly give up that Expression that hath disgusted all the World: That Extension, Matter and Space, were all the very same thing.

That Insult which *Aristotle* made upon *M. Descartes*, in bandying one part of his Principles against another, worsted my *old Gentleman's* Patience, and rattled him so, that 'was ten to one but he had tore the Paper on the spot. He propos'd our going off without acquainting *Aristotle's* *Embassadors*, who were stragled a good way from us, telling us, the Company of such sort of Cattle was not very pleasing: But we represented to him how dishonourable a thing, and unbecoming of *Descartes* that would be. That that Paper was not so much a Project of Peace, as a Challenge and Defiance, *Aristotle* had sent him; that probably he might slight it, and probably he might think it worth while to answer it: That *M. Descartes* had so wonderful a Gift of persuading and captivating Spirits, and the production of a World was a thing of that surprizing Nature, that doubtless the two Souls that bore us Company, must be converted to *Cartesianism*, provided *M. Descartes* would be at the pains of explaining his *System* to them in a plausible and familiar manner. These Reasons settled him again, and we pursued in the reading of the Paper, in expectation of the two Souls.

From the Essence of the Body and Soul, *Aristotle* passed on to their Union, and the Relations they have betwixt themselves. He began with great Encomiums on *M. Descartes* for having opened the Eyes of the Philosophers, and shewing them the Unusefulness as well as Absurdity of their Intentional Species, in many cases, *alleging*, That he had taught nothing on that Occasion, that ought to be held so strange and incomprehensible by the Peripateticks, had not they deserted the Sentiments of their acknowledged Master, to follow the Whimsies and Imaginations of his Commentators. That he himself had remarked in many Places, That the Sense of Feeling was dispersed throughout the Body, and through all the Organs of the other Senses: That Vision, Taste, the Perception of Sounds and Smells were only caused by the local Motion of some Bodies, that touch'd and moved the Organs of the different Senses; that in effect, if that Motion were insufficient for the Soul's perceiving Objects, those intentional Species substituted in their Place, would be as far from serving Turn. That he was not for rejecting *M. Descartes's* Doctrin concerning the Seat of the Soul in the Pineal Gland, were it proposed only as a pure *Hyp thesis*, since all that others say amounts to nothing better; but it was insufferable that System should be urged as a settled and demonstrated Truth. And that the Respect *M. Descartes* still pretended for Truth and Experience ought to make him qualify and moderate his Assertions thereupon.

He intreated him likewise to be more Human and good-natured towards those who taught the Soul was expanded through the Body; and this

is what he added to shew the *Cartesians* were a little Unreasonable in that Affair: For, said he, when you assert the Soul is placed in the *Pineal Gland*, either you suppose she takes up all the extent of that Gland, or that she only possesses one indivisible part of it; if she possesses all the Capacity of the Gland, she herself must thence be extended; for that Consequence entirely resembles yours, which you draw against the Philosophers, who make the Soul expanded throughout the Body. If she only possesses an indivisible Part thereof, there must necessarily be some part of Matter that is indivisible, and not extended: And thus in admitting that disjunctive Proposition, you appropriate to the Soul, what you affirm belongs to Matter only, otherwise you grant an Attribute to Matter, which on all other occasions you deny, and pretend according to your Principles, however we understand it, that it is the only peculiar of a Spiritual Soul. Besides, all the Nerves, where are the Radiations of the Spirits, that enter in and out of the *Pineal Gland*, can neither part from the same indivisible Point of the Gland, nor meet there; so that if the Soul was in an indivisible Point of that Gland, she could not have the Perception of all Objects there. But if you reply, The Soul is not in the Gland as a Body is in another Body, or as a Body is in a Place, but that the Soul in quality of a Spirit is not in that *Gland*, but because she acts there, because she thinks there, wills there and perceives Objects there; and that, since the Different Impressions of Objects terminate in divers Points of the *Gland*, where she is advertised of them, it may be said, the Soul is in all the Gland: The Philosophers that undertake you,

are ready to take you up with a fresh Objection: For if the Soul acts, wills, thinks, apprehends Objects in all the Gland, that is to say, in a very devisible Space; and if that be sufficient to affirm she is in all the Pineal Gland, it will be true, according to their *Hypothesis* to say, The Soul is in all the Body, since it acts and perceives Objects in all the Body; she sees them in the Eye, as you say, she perceives them in that part of the Pineal Gland, where the Optick Nerve doth point, or the Rays of the Spirits that proceed from that Nerve; she perceives Sounds in the Ear, or as you say, she perceives them in another Point of the Pineal Gland, where the Nerves do center, or the Rays that serve for that Perception.

Thus that pretended Bug-bear of Philosophy, I mean the Presence of the Soul throughout the Body, that causes her to feel in the Hand, when that is prick'd, and makes her move it presently, and withdraw it, upon the Sense of the Compunction, that makes her stir the Foot in order to advance, methinks is no longer monstrous or frightful, nor a Prejudice of Infancy evidently false, seeing that Presence of the Soul throughout the Body is no other than that which is allowed her in the Pineal Gland, the Pineal Gland being extended as well as the whole Body; for the Diminutiveness of the Extension makes nothing to the Purpose: Why therefore should that Vertual Extension of a Spirit be turned to a Jest and Ridicule, when 'tis the same as is admitted by the *Cartesians*, when both are well explained? and undoubtedly all the Sensations may very near be as justly explained upon this *Hypothesis*, as upon that of the Pineal Gland.

From all which *Aristotle* concluded, That *M. Descartes* had better acknowledg with the wisest and least conceited of the Philosophers, that the Relation the Soul had with the Body in the Perception of Objects, was an incomprehensible Mystery to the Mind of Man : That the manner of Objects acting on the Senses, as also how their Action was carried to the Brain, might be very well explained, but that a Bar was put to all farther Progress, unless a Man would run himself into an unintelligible Jargon, or advance Propositions dangerous in themselves, or in the Conclusions that might be deduced from them.

He went on in commending *M. Descartes* for his Integrity, manifested in his declaring there was nothing in the Idea of a Soul, or a Spirit, that included an Impossibility of the Production of Motion by them; and at once he blamed the Inconsiderateness of the *Cartesians*, who fool-hardily advanced, That no Creature whatsoever had the Power of producing Motion. It is true, adjoyned he, with a little dash of Malice, that Paradox, as ill founded as it is, is one of the Principal Pillars of the *Cartesian System* : For without it how should an equal Quantity of Motion be kept up in the World, where there are so many Souls, so many Angels, and so many Devils, whose greatest Pastime it is to produce and create Hurly-burlies every Moment? But *M. Descartes* is so much more Praise-worthy for preferring the Interests of *Truth* before those of his own *System*, as dear and beloved as it was.

Lett. de Desc. Tom. 1. Lett. 69.

The next Article was upon that grand Paradox of *M. Descartes*; That the Essences of Things and Truths commonly called necessary,

In resp. ad 5. object. Let. 110. Tom. 1.

are not independent of God, and that they are only eternal and immutable, because God hath will'd it so: That God is the total and efficient Cause of the Truth of Propositions: That it was equally arbitrary for God to cause that it should be false, that all the Lines drawn from the center to the Circumference should be equal, as to create the World: See then the Abridgment of what *Aristotle* spoke at length upon that Subject.

He said, He did not well understand what was the Sense and Meaning of those Words, *God is the efficient and total Cause of the Truth of Propositions*: For the Truth of a Proposition, since it is not a Being, but a meer Relation of Conformity that it hath with its Object, could not, to speak properly, have an efficient Cause; and if in some Sense it might be said to have an efficient Cause, that could be nothing but the Mind or Tongue of him that Frames and Pronounces the Proposition. Again, he demanded if *M. Descartes* spoke in general of all Necessary Truths, or only of some Particulars. He could not (*continued he*) speak of all: For doubtless he did not believe that God was, or had been able to make these Propositions false, *There is a God; God is the free Cause of all Beings; God is a necessary Being*. He must therefore only speak of Propositions relating to the Creatures, because according as he expresses himself in one of his Letters, God is the Author of the Essence as well as the Existence of the Creatures: But that he had made a Reflection, That the Truths which respect the Essence of the Creatures have a necessary Connexion with those that appertain to the Essence of God; and that if it was possible

possible for the one to be false, the other might be so too : As, for example, this, *The Creature essentially depends on God*, is a Proposition belonging to the Essence of the Creature, which if it could be false, that other would fall into the same Circumstance. *God is the absolute Master and free Cause of all Beings* ; for neither the one could be true without the other's being so, nor could the one be false unless the other was likewise false : Whereupon *Aristotle* advised *M. Descartes* to have a special Care, lest the profound Respect he affected towards the Omnipotence of God, should not only degenerate into Superstition, but should proceed so far as to bring him to Blasphemous Conclusions.

After that *Aristotle* made a frank and honest Acknowledgment, That *Descartes* had explain'd the Nature of most sensible Qualities in a finer and exacter way than he had done : As of the Hardness of Bodies, of Liquidity, of the Power of the *Elavterium*, of Cold, of Heat, &c. And to manifest he had no other Concern than for the Interests of Truth, he retracted, without Ceremony his Position of the Eternity of the World, and *his Sphere of Fire*. But since that Sphere of Fire makes one of the principal Parts of the *Peripatetick* System, and is one of the chief Ornaments of his World, he presumed that *M. Descartes* could do no less than abandon all his *Vortexes* in Exchange, against which he urged many Reasons : But *Voetius* having understood from us that *M. Descartes* was ready to put his World in Execution, and the Design of our Journey was, that we might be Witnesses of that mighty Action, he wrote a Postscript in the Margent, in which he promis'd to submit himself to that
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Experience ; and supposing it should answer the Pretensions of *M. Descartes*, his *Vortexes* should be received, at least as a good *Hypothesis*, for the explaining the Phenomena of the World, which God hath made. But he farther adjoyned, That in case *M. Descartes* should fail in his Attempt, he should be oblig'd thus far to condescend, That his Physicks, which turn for the most part upon those Hinges, is an Edifice without Foundation : And that he should rest contented with the Praise common to all the Leaders of a Sect, *viz.* That his Philosophy had something that was Good and True in it, and that he should avow with the rest of Mankind, that to *build a World*, and establish a System of Philosophy, true in all its Principles and Conclusions, was a Point the Mind of Man in its utmost Endeavours could never reach.

Lastly, as to *M. Descartes's* Demonstrations touching the Existence of God, the Rules of Motion, and some other Opinions, for which that Philosopher had engag'd a greater Zeal and Earnestness, and which required a more thorough Discussion : *Aristotle* propos'd to him the pitching on some Neutral and Unprejudic'd Place, where they might confer together before disinterested Arbitrators, to whose Determinations they should submit themselves.

He concluded with a gracious Offer of associating him in the *Empire of Philosophy*, upon those only Conditions compriz'd in that Project. He admonish'd him to fix some Bounds to his Ambition, assuring him of the Vanity of his Hopes if he pursu'd to carry them any farther ; for that his own *Authority* was too well establish'd throughout all *Europe*, to be indangered by
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the Enterprizes of a new Comer : That almost all Universities and Colleges had renew'd the Oath of Allegiance to him, and had made an Offensive and Defensive League against the New Philosophy : That some Ladies and fine Wits of the great World, that seem'd to set up for Patrons and Protectors of a new Party in *France*, were not such as much stress might be laid upon : That a Philosophical Dress of Mind would be as changeable among the *French Ladies*, as the other Modes and Fashions for the Body : That few were to be found already that valu'd themselves thereupon : And that 'twas said, since the Play of one *Moliere*, the Name of a *Learn'd Woman* was become a kind of an Affront. That though several Learn'd Men, and many Mathematicians were taken formerly with the new Ideas, there were a very few at present, that car'd for the Name of *Cartesians* : Some having presently deserted, to take the part of the *Gassendists* : Others having cut out Systems for themselves, compos'd of what they thought best in both the ancient and new Philosophers : And almost all affecting to be *Originals* without tying themselves to any Seat Ancient or Modern whatsoever. An effect of more pernicious Consequence than is imagined, of an ill Example which has been given, by the new Schism made in Philosophy.

Scarce had we made an end of reading our Paper, when the two *Paripateticks* re-entred in *Mersennus*, and told us, That from the Western Coast they descry'd something as an Opaque Body, that they knew not what to make of, sailing through the Air with wonderful Speed. I'll venture my Life on't, says our *old Gentleman*,

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it is some incruſted Star, that tumbles from *Vortex* to *Vortex*, after having loſt its own ; and is become a Comet. We made towards it with all haſt, and the *Carteſian* Conjecture of the good old Man gave us good Diverſion, when a few Moments after we perceiv'd it was nothing but a Man mounted on an extremely black and condens'd Cloud, whoſe whole Accoutrement look'd exactly like that of a *Magician*, that was either going to or coming from the *Devil's Sabbath*. In effect, *Father Merſennus*, who knew him, inform'd us that he was a *Chineſe Mandarin*, the Preſident of the *Magicians* of his Country, whom he had often met in our *Vortex*, and about a year ago, had had a Conference with him upon the Exiſtence of a God, and that he had provid'd it to him by the Demonſtrations of *M. Deſcartes*, that as reſolv'd and caſe-harden'd an Atheiſt as he found him, his Demonſtrations had ſtock'd him ſo as he had promiſed to examine them at his leiſure. He mov'd us to proceed to meet him to learn what was the Succeſs of his Conference, and whether the *Mandarin* was converted. So we advanc'd towards him ; but only *Father Merſennus* put on a viſible Countenance. They ſaluted each other, and after ſome Compliments paſs'd, *Father Merſennus* demanded, Whether he ſtill doubted of the Exiſtence of a God ? He answered, he was throughly convinc'd ; and that he own'd himſelf under a great Obligation to him, for having put him upon the Examination of a Point, of which he was aſham'd to have ſo much as doubted, for want of making ſome Reflections, with which a moſt ordinary capacity might have furniſh'd him. God be prais'd (*exclaim'd Father Merſennus*) what Joy is here for

for *M. Descartes* when we shall certify him that his Philosophy has convey'd the Knowledge of God to the ends of the Earth! It was certainly with very good Reason he wrote to me upon a time, that he was undetermin'd whether he should publish his Works of Philosophy, but that he thought himself oblig'd in Conscience, not to deprive the *Publick* of five or six Sheets, that contain'd the Demonstrations of the Existence of a God.

Tom. 2.
Let. 37.

Father (*reply'd the Mandarin*) I would not advise you to communicate to *M. Descartes* the Success his Demonstrations had in *China*. They pass'd there for pure *Paralogisms*, at least two of them that are most in his Esteem, and that are drawn from the Idea of a God, and a Being absolutely Perfect. And my Obligation to you consists not in your having communicated to me those Demonstrations, but in that having communicated them, in order to my examining them, it took me in the Head, after having observ'd their weakness, to discuss some other which that Philosopher makes light of in comparison of his own, and which yet are those, I owe my Conviction to. A certain *European Doctor*, by the Name of *Thomas Aquinas*, whose *Sums* the Jesuits have translated into *Chinese*, which I consulted upon that occasion, and the explication made me by the *Mandarin Verbieft*, who arriv'd in *China* out of *Europe*, some years since, have made a hundred times more Impression on my Mind, than all the *Cartesian* *Visions* that seem'd extremely shallow.

That Answer Thunder-struck the poor *Father Merfennus*, who demanded hastily of the *Mandarin* what fault he found with *M. Descartes's*

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Demonstrations? He set himself presently to refute them, in so much, that we had the pleasure of seeing their Civilities and Complements chang'd into a real Dispute.

To let you see, *said the Mandarin*, that it is not on a groundless Supposition, I condemn your Demonstrations for Paralogisms, you must know that after I had heard them from you, I fortun'd to find them in the Hands of a young *Hollander* in *China*, who was upon a Voyage with his Country-Merchants, your *Descartes's* Meditations. Seeing I was already in part acquainted with their Contents, and wish'd to be more satisfactorily instructed, he made me a Present of them, and there I read afresh all those Demonstrations, all the Objections made him thereupon, and all the Answers he returns. The first Reflection that I made in general upon my Reading, was, that those Demonstrations and Answers given to the contrary Objections, left me wholly, at least very much, in doubt, and my Mind fluctuating in as great uncertainty as before, concerning the Point that was in Dispute; and that though I did not see forthwith the Faults of them, yet methoughts I saw them. Upon that I presented them to two of my Friends, of the *Tribunal* of *Mathematicks*, constituted of able Men, that are accustom'd to a *Geometrical* Method, especially since the European Mathematicians arriv'd in *China*. After they had run them over, one of the two assur'd me, without deciding any thing, that if those Demonstrations were true Demonstrations, they were admirable, since they were extremely plain and simple: The other adjoyn'd, that that Simplicity it self rendred them suspicious,

for as much as, said he, the more simple they are, the more they ought to have of the ordinary Effect of Demonstration, on the Minds of those they are propos'd to. Now I am insensible of that Effect: My Mind finds not the evidence so strong as to be carry'd away with it: On the contrary, I perceive, I know not what Doubts and Scruples, that stand in the way of my Assent, and that induce it to believe those Reasonings are false. And I remark, added he, that all, as well Friends as Enemies, of that Philosopher, that have wrote their Opinion of his Demonstrations, have made the same Reflection, and Experimented the same thing, as I my self. We set our selves therefore to a serious Examination of them, and began with that which *M. Descartes* proposes first of all in the Geometrical Abridgment of his Meditation.

An Attribute which we see distinctly contain'd in the Idea of a thing may be truly affirm'd of that thing. But in the Idea of God, that is to say, in the Idea of a Being absolutely perfect, I distinctly perceive necessary Existence is contain'd; since necessary Existence is a Perfection, and a Being infinitely perfect, comprehends all sorts of Perfections. Therefore I can affirm Existence of a Being absolutely perfect, and say with Truth and the greatest Assurance, that God exists.

Upon a second reading of that *Demonstration* and Examination of each particular Proposition of it, whatever appearance of Truth they seem'd to carry with them, all our Scruples began to grow in us afresh. We apply'd our selves to the finding out the Cause: We examin'd our selves, according to the Council of the *Author*

of the *Demonstration*: And we descended into our own Breast, to see if we had not hoarded up some Prejudices that might block out those Propositions, whose Evidence, we thought, deserv'd admittance. We found none at all there, having been to that Instant very indifferent as to the truth of that Conclusion; and supposing the Ballance was not in an exact Equilibrium, we certainly inclin'd towards the side of the Existence of a God, rather than the other. So that the Prejudice which favoured that Existence, was more to be fear'd on our Account, than on the contrary. Moreover we were conscious to our selves, we were not concern'd at the reputation of *Descartes*, and that we were untouch'd with Envy, with which he seems to suspect some of his Country-Men tainted, who had declar'd against his Demonstrations. That encourag'd us to believe, our Scruples proceeded from the Demonstration it self, which by Consequence, must only carry a seeming Evidence; since a real and true Evidence of a Demonstration or a Proposition, is necessarily accompanied with a satisfaction and tranquillity of Mind, that perceives it self enlightened in so lively a manner, as makes it impossible to doubt or withstand the Truth. Hence it is that maugre the Wranglings of those *Descartes* calls *Septicks*, it is impossible to have any Scruple concerning *first Principles*, any ways to doubt, if the Whole be bigger than its Part; and whether it is impossible that the same Thing should be, and not be at the same time. Reflecting therefore upon that Argumentation, we suppos'd it must needs seem evident, and at the same time we experienc'd from within our selves;

selfes, that nothing was less really so. All the Difficulty was to discover the Spring of that false Light, and to find out what it was that dazled, instead of cleaning our Perspectives. We presum'd we might be understood, and our meaning thereupon be clearly explain'd by these Reflections.

The *Axiom* that makes the first Proposition in *Descartes's* Reasoning, is true but upon the Supposition of two Things. First, that the *Idea* of which he speaks be a real one, that is, such a one as represents a real, at least a possible Object. Secondly, that the Mind, which forms that *Idea*, be clearly convinc'd that it is real. Thus because the *Idea* of a right-lin'd Triangle is real, and a Geometrician acknowledges it as such, perceiving distinctly the equality of the three Angles with two Rights, upon that *Idea* he may truly affirm of that Triangle, that it has three Angles equal to two Rights.

But if the *Idea* is not real, or if I am not evidently assured it is so, it is false that I can affirm a real Attribute of it, which I distinctly perceive in it. Take for Instance, that imaginary *Idea* of *A Mountain without a Valley*, in as much as it represents a Mountain to me, I have an *Idea* of an Height; yet I can truly and absolutely affirm, that a Mountain without a Valley is high.

If the *Idea* is real, and yet is not evident to me that it is so, it is true that the Attribute I distinctly apprehend in it, agrees to the thing it represents: But it is false that I can affirm that Attribute of the thing in Hand, or that I can demonstrate to my self that property from that *Idea*. As supposing this *Idea* was a real one,

A Horse that has Perception and Sense: *Descartes* that thought it was not real, could not conclude from thence, That an Horse was capable of Pain and Pleasure; although that property is distinctly contain'd in the Idea of a Being furnish'd with Sense and Apprehension.

That once suppos'd to the end, I may demonstrate the Existence of God, by that sole Idea (*A Being absolutely perfect*) it is not only requisite it should be a real Idea, as it certainly is, but that it be evident to me, abstractedly from all the usual Demonstrations, that that Idea is a real one, that is, that it represents to me a real Object, at least a possible one, and no *Chimera*. Now I maintain, before *Descartes*, that Idea is not evidently real, before the ordinary Demonstrations: For if it be evidently real, it is either so of its self, or from the Disquisition I make of the Ideas it is compos'd of. It is not so of it self: For if that Idea were manifest of it self, our Mind could never make a Problem of it, nor demand seriously of it self before the Demonstration; Is a Being infinitely perfect, a real Being, or an Imaginary one? No more than it could make a Question of these, Is the Whole bigger than its Part? Can a Thing be and not be at the same time? Since they are manifestly real of themselves. But our Mind before Demonstration, can make it self this Demand, whether a Being absolutely perfect, is really a Being, or in Phancy only? And a Man that never had reflected on the things that prove the Existence of a God, would not be in the least surpriz'd, to hear that Question seriously propos'd, as he would be, should any one ask, as if he were in Doubt, whether the
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Whole is bigger than its Part. That Idea then is not manifestly real of it self. It remains then that the Evidence of its reality must be fetch'd from the Examination that we make thereon. If so, *M. Descartes* ought to have minded us of that Precaution, before we entred on his *Demonstration*. But I prove that antecedently to *Demonstration*, the reality of that Idea can neither be evident to us of it self, nor by the discussion of the Terms contain'd in't. First, because the Attribute is not comprehended in the Idea of the Subject: Since it is not essential to a *Being* to be absolutely perfect. Secondly, because that Discussion affords me many seeming Contradictions, which my Mind knows not how to reconcile before the ordinary *Demonstrations*. For to examine and unravel that Idea, which of its self is very general and confus'd, is to retain all Perfections, whereof not one must be wanting to a *Being* absolutely perfect. Now among those Perfections, there are some that blunt and repulse the Mind, because she has not so great a reach as to conceive them. For Instance, that that *Being* should be of it self, that that *Being* should be Almighty and Independent of every thing in its acting, even to the Power of producing *Beings* out of *Nothing*. There are others that seem to her inconsistent in the same Subject. For instance, she conceives Liberty and Immutability, Immensity and Indivisibility, the Properties of Bodies and of Spirits, as so many Perfections. She sees that the Perfections which agree to several *Beings* separately, must all be united in that absolutely perfect *Being*. Conceiving therefore a *Being* absolutely perfect, she represents it at once as a free *Being*, and an

Immutable, as one that can desire and be averse to the same thing, though its Will be always Unchangeable, that is, Omnipresent, without being extended or divisible, that is, a pure *Spirit*, and at the same time includes all the Perfections of *Bodies* possible to be produc'd.

Nay I dare presume to say, that this Idea thus analyz'd, in respect of a Mind, that never made any Reflection on the Reasons that conclude the Existence of a necessary Being, discovering so many Contradictions in that necessary Being, would as soon represent it as an Imaginary Being, as a real one, and that, not supposing those usual Reasons, that prove to us a first cause of all Beings, and the Reflections that follow them, we should as easily regard that Being as impossible as possible. From whence I at least conclude, that the *Idea of a Being absolutely perfect*, cannot be look'd on as an Idea undoubtedly real, by him that examines it, before his Acquaintance with the ordinary Demonstrations. Consequently, that he that examines it cannot absolutely attribute Existence to that Being, and which is the same thing, cannot demonstrate to himself the Existence of a God, from the Idea of a Being infinitely perfect.

The defect therefore of *Descartes's Paralogism*, consists in this, that he supposes, before any Demonstrations, the Idea of a Being absolutely perfect, to be taken by the Mind for real, and as having a real Object, which is palpably false.

All this discovers the Original of the Scruples all the World have had, as to that Demonstration, and which those themselves have not been clear of, whom the difficulty of resolving
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so subtil a *Paralogism* hath drawn over to *Descartes's* Party, who doubtless had they been honest and sincere, must have confess'd they still felt some disquiet in their Mind on that Particular ; and that it was by meer Violence they had at last accusom'd their Understanding to tell them, that Demonstration was evident. This was the Fault which some felt, rather than saw, that made them deny Existence to be inclos'd in the Idea of a Being infinitely perfect. For absolutely speaking, although it is compriz'd in the Catalogue of Perfections, appropriate to that Being, yet the Mind to which the Idea was not manifestly real, took it not in, and excluded it, in making that very Problem, *Does a Being absolutely perfect Exist?* Until the Arguments independent of that Idea had resolv'd the Problem, and convinc'd it that such a Being did Exist.

And let not *Descartes* say, that that *Idea* including nothing but *Perfections*, it is evident it includes nothing but what is *Real* ; for a *Chimerous Idea* may be compos'd of only *Real Ideas* ; here then is one exactly like that we are in dispute of, *A Triangle that hath all the Perfections of Triangles.* That *Idea*, though it includes nothing besides real Perfections, is notwithstanding a *Chimera*, since for Instance a *reftangled Triangle* has opposite Properties to those of an *Equilateral*, and that Opposition is the reason they are inconsistent with one another. So, though all the Perfections of Beings are real, it does not follow that that *Idea*, *A Being that hath all the Perfections of Beings*, should be a real *Idea* ; and the Opposition I observe betwixt some of those Perfections, naturally influences my Mind,

unless prevented by the ordinary Demonstrations, to doubt, at least, whether that Idea is not a Chimera, as well as the other I have been speaking of. From hence it is that in pursuance to the Demonstrations that convince me of the Existence of that Being, but that give me no clear and distinct Knowledg of its Essence, I confine my self to say, That Being must contain the Perfections of all other Beings eminently, that is to say, in a way I don't conceive, and which would never have come into my Head, or at least would never have been look'd on by me as certainly and evidently possible, unless I had been convinc'd of the Existence of the first Being, before the discussion of its Essence.

That Solution of *Descartes's* first Paralogism, made way to the discovery of that other Default of his, where he concludes the Existence of God from the *objective reality of the Idea* (as he speaks) which we have of God. That Idea, (says he) which I find in my Mind, has an infinite objective reality, since it represents to me an infinite Being. Therefore it has that infinite Being for its cause; therefore an infinite Being exists: For otherwise the Effect would have Perfections, that were not in its cause.

Those who have undertook that arguing, give us to understand, they have found it to be a greater Paralogism than the former, and bring many Reasons for it, which *M. Descartes* refutes as well as he is able: For my own Part, my Opinion is, That *M. Descartes* supposes in that Reasoning, what lay on him to be proved: For he not only supposes that that Idea has an objective reality, but farther, that I
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can be ascertained independently of the common Demonstrations, that it effectively has an objective Reality, or that it has a Real and not an imaginary Object: But I am incapable of knowing whether its Object be real or imaginary, before the Demonstrations, as I have already proved: And if I can doubt whether that Object is not a *Chimera*, I cannot suppose it has an *Objective Reality*, but ought to fear it has an *Objective Vanity*, if I may be allowed so to speak; and in that Case I can by no means conclude, That God has impressed it on my Mind, and consequently that there is a God: But I ought to think, That probably it proceeds from *nothing*, as *Descartes* expresses himself, That is, from an Imperfection of Mind that hath produced it, as it could produce this same a *Mountain without a Valley*. Hence it is clear and manifest, that those two pretended Demonstrations are meer Paralogisms, and that both are maimed and lame in the same part, and defective on the same account.

Besides, *M. Descartes* can never demonstrate to me the Truth of the Proposition, on which all his reasoning depends; *viz.* That the Cause of an Idea ought to contain formally or eminently all the Perfections which the *Idea* represents; for when 'tis said, The Cause contains all the Perfections of the effect, that is not meant, nor is it evidently true, but of such Perfections as the effect possesses, and not of those it only represents; for the Perfections the *Idea* represents, are not the Perfections of the *Idea*, the only Perfection of the *Idea* being to represent all those Perfections: A Quality that hath nothing of

Infinite in it, and consequently supposes not an infinite Cause.

I say that Quality includes nothing of Infinity, because the Perfection of an Idea is not measured by the Dignity of the Object that it represents, but by the manner wherewith it represents it; which being most imperfect in the Case before us, cannot be infinite. And this single Instance which I subjoyn to all that *Descartes's* Adversaries have said upon the Matter, is sufficient to shew, That the Proposition on which is grounded his whose Reasoning, will not pass for a Principle of a Demonstration.

Lastly, continued the *Chinese*, Supposing the Reasonings of that *Philosopher* were not false or *sophistical*, they would scarce merit the Name of *Demonstrations* in the Subject they proceed upon: There never can be Demonstrations of the Existence of a God, whilst they are not received as such, that is, whilst they are not received as convincing Arguments beyond reply, the Truth of which is so prevalent as to destroy all contrary Prejudice. Now *dark* and *clouded* Minds can never be pierc'd by that *Metaphysical Subtilty*; Those of a *middle Rank* find themselves perplex'd, whether by their Prejudices, or for want of Penetration; most of those of the *first* and most *exalted* Order, discover in them, or think they do discover very knotty Difficulties. All this put together makes one general Prejudice on their Consideration, that never read them, and which might warrant their Prudence to conclude, if there were no other Demonstrations of the Existence of God, there were certainly none at all. So that my Advice to your

Philosopher

Philosopher and his Followers is, Not so highly to prefer his *Demonstrations* before those commonly made use of: For if it be true that all others are inevident in comparison of these, very mischievous Consequences might be drawn from that Principle, against the Existence of a First Being, of which the *Libertines* (if I may judge by those of the *Empire of China*) would not fail to make advantage

Whether the Spirit that drove on the Cloud, on which the *Mandarin* was horsed, and which was one of the grimmest and blackest *Devils* in all *Hell*, grew sowl'd and uneasie at these Discourses, from which Inferences might be drawn very prejudicial to the Interests of the *Sabbath*, or whether the *Mandarin* was himself in haste, and expected to hear nothing new upon that Affair, he had no sooner uttered that last Sentence, but we saw him on a sudden hurried towards the East with an incredible Swiftnes.

Father Merfennus, that stood on Thorns to give him Answer, could not forbear following him, and kept him Pace for above thirty Degrees. He returned to us about a quarter of an Hour after, and spoke a little angrily. It is strange how the Enemies of *Descartes* make their Insults, and treacherously fall upon us, then betake them to their Heels, without giving us so much as Time to put our selves in a Posture of Defence, and to reply to that noisy Trumpery which they think to put off at the rate of Oracles: If the *Mandarin*, no less than *Aristotle* had rely'd upon their Forces, and believed, as they pretend, their Arguments a Match for *Descartes*, they would not have shrunk when they were to grapple, and would at least have carried the Answer that was to be made them; but these
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are *Donquixots* of *Knight Errants*, that bravado it by discharging a Pistol in the Air, and never stand to it before the Enemy, which they make as if they did encounter. But in the Time that I have accompanied our *Mandarin*, I have overturned his *Ideas* : He has promised me that this Day twelvemonth he will be again in *Mersennus*, where we shall have a fair and leisurely Conference upon *Descartes's Demonstrations*; then, *Gentlemen*, I desire your Company, *said he*, and if I do not convince my *Gentleman*, so as to stop his Mouth for the future, I'll commence *Peripatetick* on the Spot, and utterly renounce *Cartesianism*. We promised him to wait on him at that Time : But, *Father*, *said I*, we have been long upon the Road, yet have made no great Progress in our Journey, I desire we may dispatch it as soon as possible, for I am in fear for my Body, and would not for a World it should stay without me above four and twenty Hours. With that he looked towards the Earth, to see what Hour it was, and told me, it was but seven Hours since we left *France*, and provided we made no Halts in our way, in five Hours, at latest, we shall arrive in *Descartes's World*.

So we left *Mersennus*, and departed from the *Moon*, by the Northside of that *Globe*; we made towards the *Starry Heaven* with all the Speed we were capable of; that is to say, in one Minute we compass'd many thousand Leagues. It is a prodigious, and inconceivable thing, the multitude of the Stars; a Man can discover from the Earth, with the best Glasses, but a very inconsiderable Part, in respect of those that lie out of Sight. We cross'd the Sign *Sagittary*, where I took pleasure in observing the principal Stars,
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that are usually describ'd on the Celestial Globes; that *Sign* resembles an *Archer* near as much as I resemble an *Houfe*; whereof you may imagine my two Eyes the Windows, my two Arms the Jettings that flank the Main of the Lodgings, represented by the rest of my Body.

Had I a mind to divert my self, as *Ovid* does, in his Description of the Chariot of *Phaeton*, I might make a thousand pretty Astronomical Allusions, and could create in my Road many new *Zodiacks*, in which a multitude of Animals celebrated in the Fables that some have left behind them upon Earth, might take place, and have Reparation made for the Wrongs done them by the capriciousness of *Poets* and *Astronomers*, that have given the Preheminence to others of perhaps not half so great Worth and Magnitude: But the Reader may easily imagine to himself all that. I shall say no more of the Conferences we had in the rest of our *Voyage*, where I was little more than *Auditor*. The two *Peripateticks* held a Dispute almost all the way with *Father Mersennus* and the *old Gentleman*, upon several Points of the *New Philosophy*, but all they said amounted to little more than may be seen in *Father de la Grange* and other Books, that treat of such sort of Things. It pleased me to see with what Heat each maintain'd his Party, and endeavour'd to draw me over to it; but I was satisfy'd in praising first one and then the other, without giving up my self to either, and only took upon me the Quality of Arbitrator, (which they seem'd by common Consent to award me) for the moderating the too great Vehemence and Zeal for the Sect that sometimes transported them a little farther than
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was allowable. Mean while I took notice, That *Father Mersennus*, that conducted us, made us still leave, from Time to Time, the direct Road, to fetch a Compass about, and aim'd to keep us at a Distance from the Body of the Stars, or, to speak in the *Cartesian* Phrase, from the Centre of the *Vortexes*. I demanded the reason of his doing so; telling him, one of my greatest Curiosities would be to contemplate a Star at hand, and to consider the Motion of the subtil Matter in the Centre of the *Vortex*, and that, that was the readiest way to convince me there were *Vortexes*, such as *Descartes* has describ'd. He answered, it would be more convenient to satisfy my Curiosity as I returned, after that *M. Descartes* had himself explained the different Determinations, the Subtil Matter is capable of, in a *Vortex*; that thereby I should better take his Meaning, and before that it would be but a new Subject of Confusion to my self, and of cavilling to the *Peripatetick Gentlemen*. It behoved him to hold to that, and I had from thence forward but a very ill Opinion of the *Vortexes*, of which I saw no likelihood in the Motions of the Matter at a good Remove from the Stars. But at last we arrived to the *Third Heaven*, which was the End of our *Voyage*. The Occurrences that happened in my Stay there, shall be the Subject of the Third Part of my *Relation*.

A
V O Y A G E
T O
The World of Cartesius.

P A R T III.

THE *Third Heaven* of the *World of Descartes*, is the same with what the Philosophers heretofore called the *Imaginary Spaces*; but seeing the Word *Imaginary* seemed to import nothing but what was *Chimerical*, and in the *Imagination* only he chose rather to term it the *Indefinite Spaces*. There have not been wanting some that have started *Difficulties* upon the Term *Indefinite*, which in several Places he seems to substitute in the Place of *Infinite*, without any *Necessity*; but at last his *Disciples* have made it *al-a-mode*, and *Custom* hath warranted its Use.

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As soon as I set Footing in those vast Regions, I descry'd indeed the finest and most advantageous Place possible to be imagin'd for the Building of a *World* in, nay for the Construction of *Millions* and *Infinite Worlds*, but I saw no Materials proper to begin, or to make the least Part of so great an Edifice.

Having travell'd six or seven thousand Leagues without any News or Tidings of *Descartes*, we agreed to separate our selves, that we might find him out the easier: *Father Mersennus* took one way, the Old Gentleman and I, with the two *Peripatetick* Souls the other. In short, *Father Mersennus* found him, and quickly after we had parted, we saw them both together, making towards us. The obliging way wherewith he receiv'd me, certified me, That *Father Mersennus* had given him a good Character of me, and spoke of me as a Man that in Time would prove one of his most zealous Followers. He likewise very respectfully saluted the two *Peripateticks*, but gave them to understand the Pains they had taken, in coming to treat of an Accommodation with him, were manifestly to very little purpose: That *Father Mersennus* had already sufficiently advis'd him of the Propositions they design'd to offer, which he assured them he should not be very forward to condescend to; notwithstanding he would give them a favourable Audience, and satisfy them beforehand he had no ill Design upon the *Kingdom of Aristotle*; thereupon, giving Orders to *Father Mersennus* to entertain the two *Gentlemen*, he accosted the *Old Sage* and my self in particular.

The Discourse began with the ample Protestations of Friendship, *M. Descartes* and the *Old Stager* made
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made each other, mutually expressing the Joy they had in seeing one another: The *Old Gentleman*, out of hand took upon him to make my Elogy, speaking a thousand fine obliging things of me to *Descartes*; especially he cry'd up the uninterested Love I had for Truth, the Desire of Learning that always had appear'd in me, and the Readiness I had promis'd, to imbrace the Instructions, in the Inquest of which I had made so long a *Voyage*. I wav'd, as modestly as possible the other Praises that were given me; but added, That for the Love of Truth and Desire of Learning, I must stand up, as for my only considerable Accomplishments; that as to the Readiness I had engag'd to receive *M. Descartes's* Instructions, that ought not to come into the Account, since a Master of his Character and Worth, and a *Genius* so Admirable and Transcendent beyond all others, as his was, had Right to demand and require that entire Submission from all that pretended to Wisdom or Equity in the World.

You are pleas'd to carry your Compliments a little too high, *reply'd M. Descartes*, and I question whether the generality of those that are reputed the *Wise* and *Equitable* Persons of the World, would subscribe to that Homage and Submission you their Representative vouch for them: I question too, according to the Rules of *Physiomy* of Spirits, whether I ought to build much upon that pretended Tractableness, wherein you pride your self so much; methinks I perceive still at bottom of your Soul some kind of, I know not what, Prejudices, that indispose it for the Knowledg of Truth. Tell me, in beholding this vast *Space*, (*continued he*) what
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is't you think you see? Monsieur, (*I reply'd*) that is a perplexing Question, but to convince you that I speak from my Heart, in promising to be instructive, I will make Answer to your Question just as my Thoughts are of it: According to you I ought to say. That beholding the great *Space*, I see a *Body* or *Matter*, but without *Dissimulation*, methinks, in effect I see just *Nothing*.

At that my *Old Sophister* tipt the Wink upon me, which I took not at that instant, nor understood the Meaning of it till after. 'Tis enough, says *M. Descartes*, let us talk of something else: Give me an account, pray, how goes *Philosophy* in your World, if you have any News of it; for these many Years I have been ignorant almost of all the Concerns there, as well from the Indifference and Disregard I have found in me ever since my quitting the Body, for the Sentiments of Men, as that Monsieur here, who is the only Person that has visited me since, having retired in the Country many Years ago, has been incapable of hearing the Particulars of Affairs that concern *Cartesianism*, contenting himself to learn, and to assure me from Time to Time, my *Philosophy* continued still to have very many Friends, and very many Enemies.

And I am not much better instructed, *I answered*, with what regards your Sect, having but begun to interest my self in its Affairs, since those few Days I have had the Honour of this Gentleman's Acquaintance; however, I will inform you of all that I could hear, or that has come to my Knowledg, without giving my self much Trouble of Enquiry. Your *Philosophy*, as
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you know, was set up with all the Advantages and Disadvantages of *Novelty*, and it has experienc'd the Fortune which all *New Doctrins* use to find. Many there are that have imbrac'd it with Admiration, and defended it with Earnestness and Passion. It hath met with the Patronage and Protection of Persons commendable for their Parts, Capacity and Politeness; but almost all *Bodies* and *Universities* have rejected it, and declared against it: Each acted in that as in all things else, according to the Principle of Self-interest: Some took your Side, as apprehending themselves thereby distinguish'd and advanc'd above the Herd; others deny'd it, as fearing the diminution of their Credit: The Motive and Pretence of both Parties was the Love of Truth and uncorrupt Doctrin. The Posture of present Affairs hath almost the same Face still; yet if we judge by the Books, whether of *Philosophy* or *Medicine*, brought from *England*, *Holland* and *Germany*, *Cartesianism* hath made very considerable Progress in those Parts. Scarce once in an Age is printed any *Course of Philosophy* according to the Method of the Schools; and almost all the Works of that Nature, that at this Time are publick in *France*, are Physical Tracts that suppose the Principles of the *New Philosophy*: Such Books as treat of an *Universal*, of *Metaphysical Degrees of Ens Rationis*, create Fears in the Booksellers Minds; they'll cumber themselves with no more of them, and endeavour to rid their Hands of all that they have left, at any rate, as Merchants do their Stuffs when the Fashion's over. All those Questions, heretofore so famous, wherewith the Presses have groan'd for almost two hundred Years,

and that have found Employment for so many Printers, are no where heard of but in the Schools of the Publick Professors. Out of the Desks there is no talk of the *Thomists*, the *Scotists* and the *Nominals*, at least there is no Distinction made betwixt them; all are numbred in the same Predicament, and on the same Side which they call the *Old Philosophy*, to which is oppos'd the Philosophy of *Descartes*, or the *New Philosophy*.

You have had the good Fortune with your Lustre to efface all the New Philosophers that have risen both in and since your Time; and to make use of a Comparison, that bating the *Odium* of the Subject it is taken from, hath nothing in it but what makes for your Renown; As in *Spain* the Name of *Lutheran* is indifferently given to all *Hereticks* of whatever Sect or Faction, so the Title of *Cartesian* is attributed to all those that have undertaken to make Refinements in Point of Natural Philosophy. I have seen more than one bold Venturer, that in full Dispute hath list'd *Gassendus* among your Followers, though you was undoubtedly his Junior by several Years: And I know a certain *College*, where the Professor durst not speak of *Insensible Matter*, of the *Rules* of Motion, of the Per-spicuity of *Ideas*, lest he should be forthwith accused of *Cartesianism*.

For the rest (excepting in the Exercises of some Honest Religious Persons, that doubtless have no ill Design, but not having read you, would yet assume to themselves the Honour of engaging you) that treating you as an Atheist, is quite out of Doors, as is the making that Proposition a Precedent for your Religion, which
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you advance in the Entrance on your *Metaphysics*, That we must doubt of every Thing; yet some of the finest and clearest Heads do not stick seriously to affirm, That the late Conversions of the *Huguenots* in *France* have robb'd you of many Disciples; for upon their Conviction of the Real Presence of the Sacred Body of *J. C.* in the *Eucharist*, they confidently assert the Falsity of some of your Principles, which they are at a Fault to reconcile with the Reality of that Mystery.

But no matter, all such as have a sound and unprejudic'd Notion of Things, though they stand diameter to your Opinions, do you Justice; and give you an *Encomium* that seems none of the least; which is, that they acknowledg you have open'd the Eyes of the Philosophers of our Times to the Discovery of the Rises of their Method in Philosophy, by that just and reasonable Reproach of the little Concern they had, for the most part, to dive to the Bottom of the Things they treat of, whether in *Metaphysics* or in *Physicks*, and the little Application they bring with them, both in framing to themselves and giving their Disciples clear and distinct Ideas of the Things disputed of; the Abuse that was made of the subtilty of Mind, perverted only to the multiplying Wranglings and trifling Disputes, to the inventing of new Equivocal Terms, to the confounding rather than enlightning certain abstracted Questions, prudently enough introduc'd the Schools, for Exercise and an Occasion of Dispute and Emulation, to the Minds of Youth, but ridiculoussly made the main Stress and Essentials of Philosophy, that from thence had degenerated into an Empty Science; com-

pos'd of Words and Terms that signifie nothing: The little Observation made upon *Experience*, that is the Mother of Philosophy: The implicit Dependence they had on the Sentiment of another, often superficially considered and ill understood.

I can also assure you, that kind of Advice, though enviously at first receiv'd, has not fail'd of its Effect. The *Desk-Philosophy* has chang'd its Countenance in the principal *Colleges* of *France*. The most ingenious of the Professors affect to treat of the ordinary Questions, and those that are most crabbed with greater Solidity and Method, with more Justness and Exactness, persuaded that those Questions thus hand'd have a greater Power than is imagined to form a Juvenile Mind, if it is capable of it, to render it Correct and Just, to accustom it insensibly to make those so necessary Abstractions, in order to the avoiding Mistakes and Fallacies in the Train of a Reasoning, spun through a Discourse, in the Examination of a Mathematical Demonstration, the Discussion of a Physical Experiment, or perhaps a Political Interest or Concern.

Since when Men are more shy of calling the Proofs they bring for their Opinions, *Demonstrations*, they are not so eager to declare War against those that talk otherwise than themselves, and that often say the same thing. They have learn'd to doubt of certain Axioms that have hitherto been held Sacred and Inviolable, and upon Examination have sometimes found them unworthy of so great a Title. *Occult Qualities* are under a Suspicion, and a Cloud, having lost considerably of their Reputation. The *Horror*
of

of a *Vacuum* is no where receiv'd but in the Shools, where no one will be at the charge of Glas Tubes, and certain Instruments which manifestly prove the absurdity of that hackney'd Solution, that hath been constantly given to the most curious and extraordinary Phenomena's of Nature. All sort of Experiments are daily made. That of the Gravity of the Air is try'd a thousand different ways; and there is scarce any little Pretender to Physick in the Town, but has at his Fingers ends the History of *M. Paschal's* Experiment.

Here *M. Descartes*, interrupting me, demanded what was that Experiment of *M. Paschal*? I answered, it was that made in the year, 1648. upon the *Well of Domme* with *Torricelli's Tube*. Wherein the Quick Silver was observ'd to fall a great deal lower at the top of the Mountain, than in the middle, or at the bottom; from whence hath been evidently concluded the Gravity of the Air. Does that, reply'd *M. Descartes*, go by the Name of *M. P——'s* Experiment? It is then, because he put it in Practice, or rather because he occasion'd it to be practic'd by *M. Ferrier*; for assuredly it is not because he invented it, or foresaw the Success. And if that Experiment ought to bear the Name of its Author, it might more truly be intituled, the Experiment of *Descartes*. For it was I that desir'd him two years before to make the Trial, and assur'd him of the Success, as being intirely conformable to my Principles, without which it had never come into his Head, being he was of the contrary Opinion. That Man is Fortunate, continu'd *M. Descartes*, in point of

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Reputation. A great many Persons were formerly made to believe he had compos'd a Book of *Coniques*, extract'd from himself by the meer dint of Reason, at sixteen years of Age: That Book was sent me; and before I had read it half, I concluded he had made great Advantage of *Monsieur des Argues's* Instructions; which Conjecture, a little after was confirm'd by his own Confession. What you say (*reply'd I*) a little surprizes me; for in the Preface to a Tract, *De l' Equilibre des Liqueurs*, Printed after *M. P——*'s Death, your Testimony is quoted upon that Particular, and it is not altogether conformable to that you give at present: For there is no notice taken of the assistance he receiv'd from *M. des Argues*. It is only said, the thing appear'd to you so prodigiously incredible, that you would not believe it. But that you was perswaded that *M P——* the Father, was the genuine Author of the Piece, but was willing to confer the Honour on his Son. I know not, *said he*, what they have made me speak or think in that Preface, but I am very well assur'd I say nothing at present, but what I had wrote in plain Terms to *Father Mersennus*, after I had seen the Work.

After all, *said I*, *Monsieur*, I am not much surpriz'd that *M. Paschal* at sixteen years of Age, without any foreign Succour, wrote a Book of *Coniques*, and by chance jump't in his Thoughts with *M. Descartes*; he that at twelve years old, before the sight of any Books of *Geometry*, made himself particular *Definitions*, *Figures*, then *Axioms*, and push'd on his Notices so far, that when he was caught at his Operations

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tions, he was already arriv'd to the thirty second Proposition of the first Book of *Euclide*, which he had never read.

Do you credit that, said *M. Descartes*? Why should I not, said *I*! It is so affirm'd and circumstanc'd in the Preface, I have mention'd, as leaves no room to doubt of it. *M. Paschal*, the Father, desirous that his Sons first time should be employ'd in the gaining of the *Tongue*, which he taught him himself, was cautious to conceal from him the very Names of things, that are us'd in *Mathematicks*, and constantly forbore to mention 'em to his Friends when he was present: Notwithstanding according to the Author of the Preface, " The Passion that Child had
 " for such sort of Science, joyn'd to his pierc-
 " ing Understanding, serv'd him instead of a
 " Master; seeing his Tasks that were order'd
 " him, rob'd him of all other opportunities,
 " but his Hours of Recreation (a Circumstance
 " very remarkable) he laid out all he could
 " of those in these Speculations. He was con-
 " strain'd, says he, to make his own Definiti-
 " ons, calling a Circle a *Round*, a Line a *Bar*,
 " and so of the rest. After his *Definitions*, he
 " made him *Axioms*; and as we proceed from
 " one thing to another in that Science, he car-
 " ried his Researches so far, that he was arriv'd
 " to the thirty second Proposition of *Euclide*.
 " As he had made that Progress, his Father ac-
 " cidentally entred the Room he was in, and
 " found him so attentive on the Proposition he
 " was upon, that it was a good while before he
 " took notice of his Approach. But it was a
 " far greater Surprize to him, upon his Demand,
 " What he was a doing? To hear him say, He
 " was

“ was in search of such a Thing, which was ex-
 “ actly the *thirty second Proposition* of the *first*
 “ *Book of Euclide*. He ask'd him-then, What
 “ made him think of that? He answered, it
 “ was his Discovery of such an other Thing;
 “ thus, as it were, analyzing and explaining
 “ his meaning still, by the Names of a *Barr* and
 “ a *Round*, he came down to the *Definitions* and
 “ *Axioms* of his own *Contrivance*. *M. Paschal*
 “ was so astonish'd at the greatness and force of
 “ his Son's *Genius*, that leaving him, without
 “ speaking another Word, he went at the
 “ same juncture to a Friend's House of his, one
 “ *M. Pailleur*, admirable in the *Mathematicks*.
 “ When he came there, he stood immoveable as
 “ a Statue, and as a Man transported. *M. Pail-*
 “ *leur* observing that, and seeing him in Tears,
 “ was very much affrighted, and pray'd him to
 “ conceal no longer from him the cause of his
 “ Displeasure. I weep not, said *M. Paschal*,
 “ out of any Grief, but Joy. You know what
 “ pains I have still taken to prevent all Know-
 “ ledg of *Geometry* in my Son, for fear it should
 “ take him off his other Studies. Yet see what he
 “ has done; upon that he related all to him that
 “ I have said: And *M. Paschal*, by the Advice of
 “ his Friend, desisted to offer violence to his
 “ Son's Inclinations, who was yet but a dozen
 “ years of Age, and gave him an *Euclide*.

Seriously, said I to *M. Descartes*, do you
 think a Man could have the Face to circumstan-
 tiate a Lye so methodically as this? Could any
 thing seem more probable than the Circles he
 calls *Rounds*, and the Lines that he calls *Barrs*?
 Is not that enough to persuade us of the Truth
 of his *Axioms*, and the *thirty second Proposition* of
 Euclide?

Euclide? What can be more Natural, than the Surprizal of *M. Paschal* the Father, excepting perhaps it was a little too long, who took thereupon his Cloak, and order'd his Horses to be put in the Coach, yet remain'd, at his Arrival at *M. Pilleur's* House, in so immoveable a posture, as was capable to scare him? After all it is very fine and extraordinary, and it would be great pity it should be false.

And I say (*reply'd M. Descartes*) it is greater pity that it should be true, and that any should believe it: For if once it be credited, that a Child of twelve years old, that hath never seen a Book of Geometry, and in whose Presence all endeavours have been us'd to suppress the very Name of it, whose Mind all day long was taken up with quite different Notices, who had no time to spare but his hours of Recreation, which no Body probably order'd him to pass away in Solitude, should be able to frame to himself a Method of *Geometry*, invent *Axioms*, and arrive at last to the *thirty second Proposition* of Euclide, I say, if such like things be once receiv'd for Truth, the *Publick* will become the Subject and Game on which, in a short time, the most *Romantick Panegyrists* shall sport the Extravagancies of their Imaginations. That way of praising is injurious to the Persons prais'd, and a Commendation so improbable as that, renders the Truths themselves suspected, that shall be found in Company with it. *M. Paschal* was a Man of a most exalted Capacity, but was far from being an *Angel* or a *Devil*. I told *M. Descartes* thereupon, I chanc'd into a Company not long since, where one was speaking much to the same purpose as he had done, upon this Topick, and

and there fortun'd a Gentleman to be there, a Friend to a Society that was under no mighty Obligations to *M. P.* who seeing all People ridicule that Fable, said, in a careless leering Air, that the Author of the Preface and his Friends, did, at most, but Justice to *M. Paschal*, and that they had rather been too backward in that they had said no more; and as he was urg'd to unmask himself, as to the meaning of a thing every one perceiv'd he was not very serious in, he added, That *Hyperbole*, as extravagant as it look'd to him, appear'd but a very mean return for the Obligations they were under, for his Letters to the *Provincial*, in which he had done 'em very signal Favours that were worth these, and that were on a more important Occasion. To which all agreed; and 'twas acknowledg'd *M. Paschal's* Services to those Gentlemen could not be repaid in a better Coin. Yet I must needs tell you *M. P.* wrote only, by the Memoirs that were given him, and that he thought true, as false and precarious as they were, not knowing the Spirit of a Party wherein he was engag'd. Undoubtedly he was rather over-reach'd himself, than any design he had to impose on others. Let us say no more on this occasion; and *M. Descartes* recall'd me to the Chapter concerning *Cartesianism*.

He inquir'd then, what Strength he had in the *Universities*, and most celebrated *Colleges* of *France*? And how his Doctrin was look'd upon there? I told him, without Ceremony, what I knew concerning it: That I knew no College that openly profess'd his Doctrin, that most of them were discharg'd from Teaching of it: That in the *University* of *Paris*, extream care was

was taken lest the Professors should give too much liberty on that side: That *Cartesianism* had been the Debate of several *Assemblies*, and how that I had heard, from some Body, that it had been talk'd of putting it down by an Act of *Parliament*; it was propos'd to the late *Chief President, M. de la Moignon*, but that that Expedient was not prosecuted. That the *University of Caen*, which next to that of *Paris* is the most flourishing, at least, for Philosophy, had in *one Thousand six Hundred Seventy seven*, declar'd against that *Doctrin*, and condemn'd it as contrary to *Orthodox Divinity*; denying all hopes to any that should undertake to maintain it, of their admission to any Degree in the *University*; and forbidding all such as were already admitted, the teaching it *viva voce*, or by Writing, upon pain of forfeiting their Priviledges and Degrees; that the Example of *Angers* had been imitated therein, that two years before had made the like Decrees, which had been confirm'd by a *Placat* of the King put forth at *Versailles* in the year, 1675. and that most of the other *Univerities* had gone in imitation of the same Proceedings.

This News chaf'd *M. Descartes*. And what, said he, has no one in these occasions undertaken my Defence? Would no *Corporation*, no *Community* declare for my *Doctrin*? We have seen whole *Orders* take on them the quality of *Scotists* and *Thomists*, and to carry the Interests, some of an Universal *a parte rei*, others of an Universal *a parte mentis*, sometimes beyond the Bounds of a laudable Emulation; whilst a Philosophy so Solid and Curious as mine, shall be abandon'd to the Humours and Caprice of the

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Universities. I had pardon'd the *Hollanders*, that their ill-natured Behaviour, who were not oblig'd indeed to have those Considerations for a Stranger, as I was in respect of them; but I could never have believ'd they would have treated me so in *France*, my Native Country; to which I am sure I have given much Honour and Reputation. Why were my Bones translated from *Sweden* to *Paris*, if at the same time they intomb'd them with Pomp and Funeral Elogies, they blasted my Memory throughout the *Kingdom*? I quitted, it's true, the World, a little with the soonest: But after all, I left it not before I had acquir'd a most wonderful Esteem. I had taken infallible Measures for the securing my Party: And my Affairs had never been reduc'd to so damn'd a Plight, had my Disciples trod in my Steps, and kept their Eye exactly on my Views and my Designs.

For I must confess, said he, I was not exempt from the Weakness and Blind Side of all Leaders of a *Sett*. I was concern'd for the Progress of my *own*, though I feign'd to seem as indifferent for that as any thing else; and the Hopes I had one Day to see it take Place of all the rest, serv'd as an Incentive to encourage my Endeavours: I had drawn up my self a System of my Management, for the accomplishing my Design. My first Prospect was that of cajoling the *Jesuits*, and founding them, to try if I could engage them in my Interests, or at least make a Party among them; that would have been a Parting-Blow indeed, and my Affairs for ever after would have stood secure of any Rival or Competitor: They are possess'd of the *Colleges* of the principal *Towns* in *France*, and there are among them
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a great many Men of excellent Sense, and capable of protecting my Opinions, if once they were admitted. I sent them my Works, desiring them to examine them, and assuring them, I would submit them to their Judgment. Circumstances were very favourable at that Juncture; their *Provincial* was my Countryman, my Friend, and my Relation: My *Regent* in Philosophy, who was still living, and whom I had observ'd to be a better *Naturalist* than most of the Philosophers of that Time, wished me very well. In short, I question'd not my Success; but I was highly surpriz'd upon *Father Mersennus* his acquainting me from *Paris* that *Father Bourdin*, the Mathematician of the *Jesuits College*, had publish'd *Theses* in opposition to my *Doctrin*. Those were the first that appear'd against me in *France*; such a Thunder-clap as that gave me quickly to understand how the Society stood affected, and how little Stress I ought to lay upon the Friendship of some Particulars. Not long after the same *Mathematician* wrote against my *Meditations*, in no very ferious Style, turning them to Droll and Ridicule; which occasion'd on my part a very smart and vigorous Answer. I complain'd thereof to *Father Diet*, in a Letter that I printed with my *Meditations*: In a Word, an open Breach was made betwixt the *Jesuits* and my self. I desir'd *Father Mersennus* very carefully to watch the Behaviour of the *Fathers* towards me, and to give me Intelligence of all. I made a Resolution too to fall upon them, and confute some one of their Printed *Courses* that was most in Vogue; but I desist'd from that Design for some particular Reasons.

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Mean while I had another String to my Bow : There was set up a Party at that Time in *France*, diametrically opposite to the *Jesuits*, compos'd of those who write themselves *S. Austin's* Disciples, and who were zealous Sticklers for *M. Jansenius*, the Bishop of *Ypres* his Doctrin. *Monsieur Arnauld*, as young a Doctor as he was, had already got an extraordinary Fame : In the concern I had with him upon account of some Objections he rais'd against my *Meditations*, which I answer'd with the greatest Expression of Esteem I had for his Intellectual Capacity, I found out what he was, that is, a Man ambitious of *Distinction* and *Novelty*, and of whom one might be sure, if once one had engaged him in a Party, recommendable with those two Temptations : Therefore I was well assur'd of him ; and I believe the Resentment I expres'd towards the *Jesuits*, was that which most endear'd him : This fell out so well, that from thenceforth you should not see a *Jansenist* Philosopher that was not a *Cartesian*. It was likewise these Gentlemen that brought Philosophy in Fashion among the Ladies ; and I had Advice from *Paris* at that Time, That nothing was more customary in their Dressing-Rooms than the Parallel of *Monsieur d'Ypres* and *de Molina*, of *Aristotle* and *Descartes*.

I dream'd next of hooking in some *Fraternity* or other ; well-remembering what I us'd to hear the late *M. Jansenius* say, *That such sort of People espouse an Interest without knowing what it is ; and he was of Advice it would be of no small moment for his S. Austin to be seconded with some such Hird ; because, added he, when they are once imbarqu'd, nothing can put a Stop to them pro & contra*

contra. I had an Eye upon the *Minim Fryers*, upon the Score of *Father Merfennus*, who was my intimate Friend, and in great Repute with the Order ; but I consider'd that though those *Fathers* had Men of Parts and Learning among them, yet they were little abroad, and taught not publickly : Again, *Father Merfennus* assur'd me, That if the Matter was brought before the Chapter, *Aristotle's* Party would infallibly carry it, 'cause of the Old ones, who had for a long Time equipt themselves with all sorts of Philosophical Furniture, and would never be at the Charge of futing themselves afresh.

You did well in avoiding that Game (*interrupted our Old Gentleman*) for since that a *Father* of their Order, one *Father Magnan*, a Rational, Understanding Man, striking a little out of the Usual Road, and treading in a new Track, has, as I am inform'd, been chastis'd in a General Chapter, and Prohibitions have been made for any to imbrace his Principle ; and since the main of their Studies as well as of other Seminaries, are *Metaphysicks* and Divinity : What is properly called *Physicks* is not very current ; the Offensive and Defensive League entred by several Orders for *Physical Predetermination*, against *Mean Science*, is the grand concern that hath found them Employment for almost an hundred Years.

And it will continue them in Employment still, (*reply'd M. Descartes*) for the same Reason as made me take those Measures I speak of, that is, because *Predetermination* and *Mean Science* are become the Sentiments of the Order and Community ; a Quality I designed to give my Philosophy, to eternalize it : But, however, when I quitted the World, I left Things in so good a tendency

tendency that way, as encourag'd me to hope I had a main Party in the *Congregation* of the *Fathers of the Oratory*. It is a considerable Body in *France*, whose Business is Study, many whereof have rendred themselves Famous by their Knowledge and their Writings. The Emulation that is between them and the *Jesuits*, with a *Salvo* to the Esteem and Respect they have for one another, was enough to procure me an Hearing in their *Congregation*: What, have those Fathers forsaken me?

You make me call to Mind, said I thereupon, some Passages in that Business, that may be worth your Hearing. I know not whether you have reason to be satisfy'd or dissatisfy'd with the *Reverend Fathers*, you shall be Judge your self. About ten or a dozen Years ago there happen'd some Divisions in the University of *Angers*, occasion'd by the *Fathers of the Oratory's* defending certain *Theses*, wherein much New Philosophy was interwoven, partly according to your Principles, partly according to the particular Notions of the Professors: The University took alarm at Sight of those Innovations, and would not suffer the *Theses* to pass: She gave the Court an Account of it, and the *Father General*. The Court was inclin'd for the University, which oblig'd the *Father General* to order in the *Congregation*, That no one should swerve from the Ancient Opinions, or any ways teach the New Philosophy. But here comes a Cup of Comfort for you; speedily after came out a Printed Letter, penn'd in excellent Latin, to the *Reverend Father Senault*, *General of the Oratory*, entitul'd, *Epistola eorum quotquot in Oratoriana Congregatione Cartesianam doctrinam amant*: Wherein, after
having

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ce qui s'est
passé en l'
Université
d'Angers.

having laid down the Motives that induc'd them to beseech him not to straiten and infringe their Minds ; on that Particular were addea these Words, *ut noris quam late Cartesiana hac labes, (si labes est)— grassetur. Plusquam ducenti numero sumus, quos pestis ista infecit.*

Hereby you see what Strength you had in that *Congregation* : Which yet was no Impediment to the Proceedure and Decree of the *General Assembly* of the *Oratory* in 1678. declaring she imbrac'd no Party ; but that she always had, and would still maintain that Freedom and Priviledg of preserving Sound and wholesome Doctrin ; and that she laid restraint on none but such as were censur'd by the Church, or as favour'd of the Sentiments of *Jansenius* and *Baius* in Divinity, or of the Opinions of *Descartes* in Philosophy.

Oh the Base and Cowardly——cry'd *M. Descartes*, all enrag'd. Softly, *Monsieur*, I reply'd, if you your self had headed a Corporation, whose Essential Interests you had engag'd to maintain, you would have had very different Thoughts from those you now have under the Quality of a Leader of a Sect. Neither Prudence nor Conscience could oblige a Man to become the *Martyr* of a Philosopher. Matters are of a quite distinct Nature in Point of *Philosophy* and *Religion* : A Man may allow of the Opinions of a Philosopher, consider'd in themselves, and at the same Time be included in such Circumstances as make it prudence to Acquiesce.

But two things there are, which I have already observ'd to you, which should make you overlook those Paltry Affronts your Philosophy has met with. The first is, that what is in it

more choise and better than ordinary, begins to be authoriz'd in the Schools of the most zealous *Peripateticks*; who no longer oppose the Truth, that you have infus'd into them, but only so husband *Aristotle's* Stake, as it may not be said that ever any Philosopher had a clearer View than he. You know the Adventure of the last Age in *France*; the wisest Heads of the Kingdom could do no otherwise than approve the greatest Part of the Regulations made in the *Council of Trent*, notwithstanding there were Reasons that obstructed the adhering to that Council, on Discipline-account. What was done? The States of *Blois* made Ordinances exactly like a great Part of the Decrees of that Council: Thus, without admitting the Council, they follow'd in effect the Purport of it. The *Peripateticks* have in some sort transcrib'd the Conduct of those grave *Politicians*. 'Tis a Crime among them to be a *Cartesian*, but 'tis an Honour to make good Use of the best Part of *M. Descartes*. And to compare the Fortune of your Doctrin with that of another that in our Days hath made such a Bustle in the World, before the Propositions of *Jansenius* had been condemn'd at *Rome*, his Followers highly complimented him upon them: His was the Pure and Uncorrupt Doctrin that was copied from the great *S. Augustin*; but they had no sooner been censur'd as Heretical, but they vanish'd in a Trice, and could not be found in *Jansenius* his Book: No one could heartily believe they ever had been there, and in Spight of Bulls of *Popes* and Ordinances of *Bishops*, 'twas reckon'd a Mortal Sin to sign a Condemnation of Propositions, and a Form of Faith, without the Distinction of *De Jure & de Facto*.

Facto. The quite contrary happen'd in the Affair I am speaking of.

At first, when the *Cartesians* made Mention of *Subtil Matter*, and ridicul'd the *Horror* of a *Vacuum*, talk'd of the *Elastick* Vertue of the Air, the Pressure of its Columns, and the manner of the Impression of Objects on our Senses, *Aristotle* was brought to confront them with a quite contrary Doctrin.

Since that Time, upon Examination of the Reasons on which your Propositions in those Instances depended, they would not say that you were in the Right; but many undertook to affirm, That *Aristotle* had taught the greatest Part of that before you. There hath been since discover'd in his Writings an *Ethereal Matter*, the manner of *Sensations* by the *Concussion* of the *Organs*; the Demonstration of the *Gravity* of the *Air*, and the most delicate Truths of the *Equilibrium* of Liquors: So instead of the *Jansenists* abandoning, or seeming to abandon the *Right*, and sheltering themselves under the *Fact*, the *Peripateticks* fall on Possession of the *Right* by the *Fact* itself; that is, the *Peripateticks* now find in *Aristotle* what according to themselves had not been visible for these thirty Years. On the contrary, the *Jansenists* have lost Sight of the Propositions they had pointed to us heretofore themselves, before they were condemn'd: So that would you make any Abatements, as I hope you will, that I may make good my Promise I made *Voetius* your Old Friend in *Holland*, we should see *M. Descartes* turn *Peripatetick*, and *Aristotle* *Cartesian*.

The other Thing, that is Matter of Consolation to you, and that in Defiance to all the Efforts of your Enemies must encourage you to hope for the Immortality of *Cartesianism*, is the uncontrollable Liberty that's left to every one of Writing for and against it: And that at this Day the most Solid and Ingenious Patron of the New Philosophy, is a celebrated *Father* of the *Oratory*, whose Books are in great Reputation. He forthwith requir'd his Name and Character. He is call'd, said I, *Father Malebranche*: He's a Man of an extraordinary piercing Judgment, of profound Thought, that has a wonderful Gift at methodizing his Reflections, which he opens and displays in the neatest and most lively manner imaginable; that knows however to give an Air of Truth and a probable Turn, to the most extraordinary and abstracted Notions; that is skill'd to the utmost Perfection, in preparing the Mind of his Reader, and inter-essing him in his own Thoughts. In short, he is the most charming *Cartesian* that I know. His principal Work is called, *The Search of Truth*; and it is from that in particular that he hath been acknowledg'd for such as I have describ'd him: Yet I cannot conceal from you a little Accident that may somewhat allay the Joy that News must excite in you; which is, That this Illustrious Champion of the New Philosophy, has been sometime since at Variance with *M. Arnauld*, whose Friend he had ever been before, which made a kind of Civil War. The Onset and Defence on both Sides is manag'd with Vigor and Courage; each of them combate in their own way: Volumes of five or six hundred Pages apiece are sent out by *M. Arnauld* in
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the turning of an Hand: The other is less luxuriant, but more strict and pressing: He takes those Captains for his Precedent, who only make use of some select Troops, without any regard to Number, that always march close and in good Order, who let the Enemy wheel about as often as they please, but are sure to break their Ranks whenever they see an Advantage. Discourse is various concerning the Motives of that War; *M. Arnauld* is the Aggressor: The most refin'd Politicians, who, as you know, never fail to make the best of their Talent on such Occasions, say, It is a Trick and Evasion of the *Old Doctor*, who has several other such at command. Some Years ago there appear'd two Books against him; one was titul'd, *The Spirit of M. Arnauld*, wrote by a *French Protestant Minister*, retir'd to *Holland*; that's a very roguish Book, I must confess, and full of Venom and Gall, but he leaves *M. Arnauld* inextricably in the Briars; he not only turns his own Weapons upon him, but also against the *Catholick Religion*, and concludes directly from the Principles and Practice of *M. Arnauld*, that most of the Arguments he takes to be most forcible and Advantageous to the *Catholick Religion*, are nul and insignificant, are meer Shew and Out-side, fit only to dazle the Eyes of the Ignorant, and such as cannot penetrate to the Bottom of Things.

The other Book, which was printed the first of the two, but was not made publick till some time after, was written by a *Jesuite* against a *French Translation* of the *New Testament*, commonly call'd, *The Mons New Testament*, done by the Gentlemen *du Port Royal*, and whereof *M. Arnauld* took upon him the Patronage and

Defence. That Book of the Jesuite is Solidly, Scholar-like and Politely wrote. It very pertinently comes over *M. Arnauld* on many Occasions, and adds from time to time, in those Places, he challenges him to give an Answer to such and such a Point: Notwithstanding, those two Books found no Reply; and no one could say they were unanswer'd, because they were despis'd and did not deserve the Pains. Religion it self was engag'd, that Answer should be made the first (as hath since been done by another Hand) and *M. Arnauld's* Honour and Reputation were interest'd to satisfy the Scruples, the Evidence of Fact, and the Force of Reasons in the second, had rais'd in the Minds of Men. See then what was the sense of the *Politicians* of the *Commonwealth* of *Learning*.

'Tis known by long Experience, that *M. Arnauld* never us'd to be very Dormant in the case of Books wrote against him. Whence then proceeds this extraordinary Patience, he would fain seem to have at present? Whence comes it, that instead of defending himself against his Enemies, that make voluntary Insults to attack him, and fall so foully on him, he makes himself new Adversaries, and out of a gayety of Humour falls to Daggers-drawing with his Friends and Allies, whilst his Country is abandon'd to the Pillage and Descretion of his Enemies? Here is, say they, the short and the long of the Business. Those two Books *Non-plus M. Arnauld*. The first upon several Articles presents you with an *Argumentum ad Hominem*, and is beyond Reply. The second is penn'd with that Circumspection and Exactness, as Wards off all Passes, gives not the least hold,
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and blocks up all the out-lets, where ere his Adversary might escape him. It would be no part of Prudence to engage on so disadvantageous Terms. He must not, however, be seen to baulk or decline the Challenge; (and besides *M. Arnauld* had resolv'd to leave the World, whenever he desist'd to make a noise in it, and to Write and Dispute whatever it cost him :) Therefore he cunningly procures himself a Diversion. He picks a random Quarrel with *Father Malebranche*, threatening an Attack on a Treatise of his, concerning *Nature and Grace*, which he had presum'd to publish contrary to his Advice. He compiles a great Volume, against two or three Chapters of the *Research of Truth*. That Book is answered. *M. Arnauld* thereupon makes his Reply. *Father Malebranche* charges again. *M. Arnauld* makes yet another Onset. Here some are inquisitive, why *M. Arnauld* neglects to answer both *M. Jurieu* and the *Jesuite*? Hey day! cry others, how would you have him answer them? Does not *Father Malebranche* find him his Hands full? Whose little Volumes he's forc'd to overwhelm with bulky Books, to obstruct the entrance of that monstrous Impiety into the Church, viz. the Doctrin of a Corporeal God: Without which no Man can find out what he means by his intelligible Extension, that is, he says, in God. However the other Concern is urgent and requires Dispatch. But what would you have a Man do? they add. Is it possible he should be every where at once? Whilst the *King of Poland* march'd with all the Forces of his Kingdom to raise the Siege of *Vienna*, was he not necessitated to suffer the

A Voyage to the

Garrison of *Kaminiec* to over-run *Podolia*, and the *Tartars* to inflave *Ukraine* ?

If that Conjecture is not true, said *M. Descartes*, it is however very probable, and those Gamesters play the Politician not amiss. But what (*purfu'd he*) is the Subject of Dispute betwixt those two famous Authors ? For I assure you, I perceive a Concern upon me, upon their Account. The Matter in Debate (*I answer'd*) is of the *Nature of Ideas*, and the manner of our apprehending Objects that are without us. *M. Arnauld* would have it, that our *Idea's* are nothing but the Modifications of our Soul. *Father Malebranche* pretends, that that Opinion is unwarrantable, and maintains we have no other perception of Objects than in God ; who being every where, is intimately united with our Soul, and who following the general Laws of the Union of the Body and Soul, communicates to us the Idea of the Object that he hath in himself, and at once makes us apprehend the Impression of it. Both one and the other strive upon occasion, to ingage you on their side, or to shew rather, that they advance nothing contradictory to your Thoughts upon Ideas : But I am of Opinion, you never penetrated so deep in that Affair, as that either of them can gain much by your Authority.

What you say of me is true (*reply'd M. Descartes* ;) but which at last of these two Combatants have got the better on't ? I answer'd him, I was not rash and inconsiderate enough, to set up for a Decider of the Difference and Advantages of those two Hero's : That I could only say that they fell to't in earnest : That though

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M. Arnauld had propos'd to himself the encountering *Father Malebranche's* Tract of *Nature* and of *Grace*, he thought it advisable to begin with the Confutation of what he had written touching *Idea's* in his *Search of Truth*, looking on that part (to use his Thought and his Expression) as the Outworks of the place he had a Design to ruin. That the Subject being very Abstracted and Metaphysical, and above the ordinary Capacity of Men, and *Father Malebranche's* System on that Particular, requiring a very great Attention to comprehend it, *M. Arnauld* seem'd to have taken designedly that Method of Assault, for the making a more advantageous Effort on his Adversary ; but that *Father Malebranche*, without giving up his Outworks, wherein he acquit himself admirably well, had drawn them into the Body of the place, that is to say, had incorporated them with the Interests of *Grace*, which is very disadvantageous Ground, and too slippery a stand for *M. Arnauld*, where he was very closely press'd. Yet that I durst not undertake for the Success of *Father Malebranche's* Self on that Side, because of the great Experience of *M. Arnauld* in such sort of War, wherein he undoubtedly merits the Encomium *Admiral Chatillon* used to give himself, viz. He had wherewith to be distinguish'd from the greatest Captains that ever were, in that having been always beaten by his Enemies, having lost all the Battles he had been oblig'd to Fight, after all his Misfortunes, he still stood upon his Legs, in a capacity to relieve his Party, and bearing still a Part and Figure, able to disquiet those by whom he had been worsted. I might likewise add, without
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affronting *Father Malebranche*, he is already sensible of the loss he has sustain'd since that first Breach: For before that unhappiness, and whilst he was a Friend of *M. Arnauld*, he was every where extoll'd for a sublime and infinitely penetrating Genius; and at present, he's a Man that speaks nothing but Perplexities and Contradictions, whom one can neither understand nor follow without danger of Error: So true it is that *M. Arnauld's* Friendship is at this day, as it ever has been, a prodigious bank of Merit to those that are so fortunate to enjoy it, and that Societies, no less than particular Persons that were destitute of that Advantage, would be very little better for their Reputation.

As I was thus entertaining Discourse with *M. Descartes*, I perceiv'd in an Instant a change in me, that carry'd something in it much like what we experience in some sudden Faintings, wherein all things seem to alter and turn colour. I could never have believ'd a Soul separate from the Body, had been capable of such an Accident. *M. Descartes*, who was aware of it, and well understood the cause, left me for a moment to wait on *Aristotle's* Embassadors. I knew not what Intercourse they had, till the *old Gentleman's* Information, on our return to th'other World. He told me *M. Descartes* declin'd entering all Dispute and Business with them; only assuring them he had not the least Design of making any Inroad into *Aristotle's* Dominions; but that he thought it a difficult piece of Work to effect a through Accommodation; and that it would be proper for each to preserve their Liberty in Opinion, as before, without being restless, and concern'd to bring over that of others

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to it ; notwithstanding to the end their Voyage might not be wholly ineffectual, he promis'd to see that the *Cartesians* behav'd themselves with greater Respect and Esteem towards *Aristotle*, upon condition *Aristotle* would restrain the *Peripateticks* from flying out with that out-rage against *Cartesianism*.

To come to my Spiritual *Metamorphosis*, I knew not the reason of that neither till my return ; and it was this. We must suppose that as long as our Soul is united with our Body, the most part of its Ideas and Conceptions depend on the disposition of our Brain. The diversity of that Disposition consists, as say the *Peripateticks*, in the difference of the *Species*, Apparitions or Images of Objects, contain'd in the Cavities of the Brain, or imprinted on its Substance. The *new Philosophers* more truly say, That those kind of Pictures are nothing but the Traces and Footsteps stamp'd on the Brain, by the ordinary Current of the Animal Spirits, that flow in great Plenty, as in little Rivers, and wear themselves a kind of Channel, to which they usually keep. In what way soever that different Disposition causes the different Idea's and different Judgments of the Soul (for it is an inscrutable Mystery) it is certain it is done, and that different Ideas suppose different Traces. So that should a dissection be made of a *Peripatetick* and a *Cartesian* Brain, with the help of good Microscopes, for the discovery of those Prints that are exquisitely fine, one should see a prodigious difference in the Complexion of those two Brains. I never indeed question'd that Truth, but I thought that dependence of the Soul lasted no longer than it was in the
Body,

Body, and that as soon as the Separation was perform'd, it had no more Correspondence with it : But I experimented the contrary, and my Fellow-Travellers assur'd me that so long as the Body has its Organs found and free, let the Soul be ten thousand Worlds apart, it will receive the same Impressions, as if it resided in it : And that if *M. Descartes's* Snush had not lax'd the sensitive Nerves, I should have seen, whilst I was in *Descartes's* World all the Occurrences, the Eyes of my Body were presented with. I should have heard every noise that beat upon the Drum of my Ears : And so of all the rest.

So astonishing an Effect as this makes no Impression on *Philosophical* Souls : For if they be *Peripateticks* they presently explain it by the *Sympathy* betwixt the Soul and Body of the same individual ; and if they be *Cartesians* they expound it by the general Laws of the Soul and Bodies Union, which is in cause that God on occasion of such and such Motions made in the Body, produces such and such Thoughts or Perceptions in the Soul ; and say they, one of these Laws is, That whilst the Organs of the Body are capacitated for Employment, the Soul wherever she is, receives the Impressions of Objects that affect them ; it being as easy a thing for God to advertise the Soul of that Impression, when she is remote from the Body, as when present, proximity of Place being wholly insignificant in the thing ; since, according to them, the Motion of the Organs is not the real cause that produces *Sensations*, but only the occasional cause, that is, that which offers an occasion to *God Almighty* of producing them in the Soul.

My Old Gentleman then, as I was saying, in our Return confess'd the Trick *Father Mersennus* and himself had agreed to play me: They had given Instructions, before they departed, to the *little Negro*, that was commission'd to guard my *Corps*, at such an Hour, in which they easily foresaw we should be arriv'd to *M. Descartes's World*, to take Care so to determine the Animal Spirits in my Brain, as they might no longer keep the beaten Tracks they had been us'd to, for the exciting *Peripatetick Species* in my Mind, but to make them glide in such a Current as was necessary, and as he knew how, for the implanting *Cartesian Ideas* in their Room; which he perform'd with that Dexterity, that whether it was by the *Legerdemain* of *Sympathy*, or by vertue of the *General Laws* of *Union* of the Body and Soul, my Notions were all in an instant turn'd topsie turvy: And I, that a Moment since could see nothing in that *Immense Space*, in which I was, began to perceive *Matter* there, and to be convinc'd that *Space*, *Extension* and *Matter* were all one and the same thing. After which, as often as *M. Descartes* bade us to conceive how such and such Motions were effected in Matter, I saw them more distinctly than your most clarify'd *Cartesians* do your *Chamfer'd* Parts of Matter wreath'd in shape of little Skrews, by the Struggle they have to squeez betwixt the *Balls* of the *Second Element*, or to constitute a little *Vortex*, round the *Loadstone*, and to cause that wonderful affinity that is found betwixt that Stone and the Poles of the Earth, and with it and Iron.

It is plain that an Universal Revolution of Ideas, like this, cannot happen in the Soul, without causing an extraordinary Commotion in
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its Substance, no more than a general Alteration of Humors can occur in the Body, without a Change of its Constitution. I was therefore infinitely surpriz'd at so prodigious a Change, being wholly unable to give any probable Guess at its Cause, but could not help attributing it to some Secret in *M. Descartes's* Philosophy; who returning quickly after, address'd me in a more Familiar Air than at my first Reception. Well, what, shall we begin to fall to work upon our World? I see you are at present capable and worthy of reaping that Satisfaction. Monsieur, *said I*, I know not where I am, nor what I ought to think of my self: But certainly nothing can more effectually dispose me to a Belief that you are capable of becoming the Creator of a World, than that Power you manifest over Spirits. Yes, *Monsieur*, I acknowledg *Space, Matter and Extension* to be the self-same Thing: I see plainly in that Space, Materials for the Building a *New World*; and if you once accomplish so vast and prodigious a Work, from this Time forward I renounce my Body to live here with you for ever and ever, to the End of the World, nothing seeming comparable to the Advantage of living with the most Wise and Puissant Soul, that ever came out of the Almighty's Hands.

You'l be better advis'd than that, reply'd *M. Descartes*; it behoves you to expect the Orders of the *Sovereign Being* for an entire Dismission from your Body; nor is there any Necessity for it, to have all the Satisfaction that you wish. In less than two Hours Time I'll make you a *World*, wherein shall be a *Sun, an Earth, Planets, Comets*, and every thing you see more Curious and observable in yours; and since this World

I am about to make is not to stand for good and all, but is only an Essay of another I intend to build at my Leisure, of far greater Capacity and Perfection; I can easily interrupt and break the Motions, to let you see in a little Time the different Changes, which occur not in the Parts of the great World, but in the Process of Years

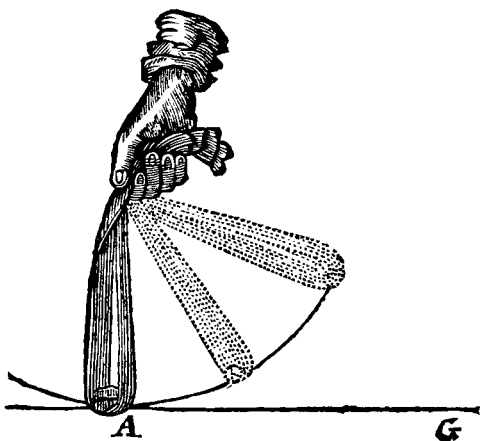
Come on then, let us begin, said he, but follow me exactly in the Principles I lay down, and the Reflections I shall make you observe: Above all interrupt me not. After these few Words *M. Descartes* prepar'd himself for the executing his Projection: Which was by the Exposition, or rather Supposition of some of his most Important Principles, thought necessary to qualify us for the comprehending the Dispatch of that grand Master-piece.

Conceive, in the first Place (*said he*) that all this *vast Space* is *Matter*: For this Space is *extended*, and *nothing* is not capable of being so. This Space therefore is an extended Substance, or which is the same Thing, *Matter*. Whoever can doubt of this Truth, can doubt if a Mountain can be without a Valley. Conceive in the second Place, That in Nature there are two inviolable Laws: The first is, That every Body will ever maintain the Post and Capacity it has once been put in, will never change it till some External Cause shall force it; if it is in rest, it will be in Rest eternally; if it is in Motion it will continue eternally in Motion; if it is of a Square Figure it will preserve its Square Figure always.

The Second is, That a Body always naturally continues its Motion in a right Line, though the
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rencounter and juggling of other Bodies frequently disturb it from its Regular Course, and from hence follows an indisputable Principle, confirm'd by infinite Experiments; *viz.* That a Body, circularly moved, constantly endeavours to get farther from the Centre of its Motion; and if it fortune to get rid of a Body or Bodies, that constrain it to move circularly, it is always sure to make its escape by the *Tangent* of the *Circle* it describ'd, in its Motion.

The Line A G is the Tangent, the Stone would describe, supposing it to be freed from the Sling at the Point A.



These Principles are the rich and fruitful Sources of that Infinity of admirable Truths, of which *True Philosophy* is compos'd, and the only Rules I will and ought to follow, in the Production of the *World* I am about.

This short Speech ended, I was wonderfully edify'd in seeing *M. Descartes* fall to Prayers, and make an humble Acknowledgment to God of all those intellectual Gifts and Blessings he had vouchsaf'd him.

Sovereign Being (*said he*) thou bearest me witness, That never Mortal acknowledg'd that absolute Dominion thou hast over all thy Creatures, with greater Respect and Submission than my self: So long as I had my Being in the Land of the Living, I made it my Business to convince Men of that entire Dependence they have on thee, having perswaded many of that important Truth, That thou art the only Being which can produce every thing in the World: That it is a punishable Pride in Men to conceit themselves capable of causing the least Motion imaginable in Matter; and that the very Motion their Soul supposes she influences on the Body, which she animates, is purely the effect of thy Almighty Power, that in concurrence with the Laws thy Wisdom itself has confirm'd, moves the Members of the Body with such exactness and celerity, on occasion of the Desires and Inclinations of the Soul, as perswades her, it is herself that moves them; though at the same Time she confesses her Ignorance of the manner whereby it must be done. That bright and lively influx, wherewith thou hast enlightn'd my Understanding, hath guided me out of that Laberynth of common Delusion, and open'd me the way and Method I ought to take, in the Study and Contemplation of thy wonderful Works. Though I at present undertake to work upon that immense Matter, which thy infinite Bounty seems to have left at my Disposal, and though I have

assum'd the Freedom of warranting my Disciples the *Production* of a *World* like that of thy own Making ; yet it is wholly in Dependence on thy Power I have made this account. Yea, Lord, I shall contribute in no wise to that Operation, but by the Desires of my Will, which thou out of thy gracious Goodness wilt be pleased to second, by impressing so much Motion on this Matter as I shall wish for, and by giving this Motion Determinations necessary to the End which I propose ; Reason and Experience having taught me, That every pure Spirit, such as am I my self, by one of the Universal Rules, to which thou conformest thy external Actions, hath Right and Priviledg of so much Motion as is sufficient to move the Matter of a World. Manifest then, Lord, thy Power in Condescension to a Spiritual Creature, that makes this humble Confession of his Weakness, and give us farther occasion to praise and glorifie thy Name.

Having finish'd his Devotion, *M. Descartes* mark'd out a round Space, of about five hundred Leagues diameter, for the making a little Sampler of his World, whereupon thus he spake.

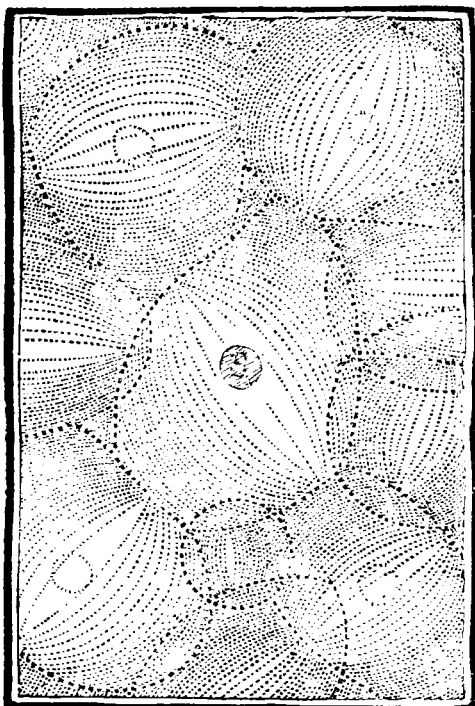
Gentlemen, I shall at present only represent you the *Solary Vortex* of your World, and all that is therein ; that is to say, the *Sun*, the *Earth*, the *Planets*, the *Elements*, the Disposition of its principal Parts, and the different Relations and Dependences they have on one another ; if you will honour me with a Visit some Years hence, you shall see the *Great World* finish'd.

The first thing I shall do is to divide in almost equal Parts all the Matter comprehended in the Space I have chalk'd out. All those Parts shall be very Small, but yet they must be less before I have done with them : They must not all be of a Spherical Figure, 'cause if they were all so shap'd, there must necessarily be an Interval, or *Void* betwixt them : But a *Void* is impossible ; they must therefore be of all Shapes and Figures, but angular for the generality.

Secondly, whereas the Union of the Parts of Matter purely consist in that Repose they are in, one by another ; that Division I propose to make, will last no longer than I shall agitate them several ways, and drive them on every Side.

Thirdly, Since the Fluidity of Matter is nothing but the Motion of its smallest Parts, agitated different ways ; upon my Division and Agitation of it in that wise, I shall make it fluid, as hard and consistent as it is at present.

Again, this round Space of five hundred Leagues, which I have cut out for the building of my little World, being once made fluid, I shall divide it into twenty Parts, or twenty *Vortexes*, that shall be severally constituted of infinite insensible Parts of Matter.

S The Vortex of the Sun.

For the comprehending what I mean by this Word *Vortex*; imagine to your self a round or oval Space of Matter, which I divide in a thousand or ten thousand little Parts. Suppose these little Parts, so many little Giggs, each made to turn about their Axle or their Centre; and
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and bowl'd at the same time about the Centre of that round or oval Space; and this is what I call a *Vortex*.

Finally, you must conceive each *Vortex* as a kind of *Firmament*, at whose Centre will be an *Astre* or fix'd Star; so that in making *twenty Vortexes*, in the Space which I have laid out, I shall make *twenty fix'd Stars*: But at these *fix'd Stars* you'll be surpriz'd, and will have the pleasure of observing, that but one in *twenty* will continue, which will represent your *Sun*: All the rest will become partly *Planets*, partly *Comets*: Nor will there of those *twenty*, above one great *Vortex* remain, which will be that of the *Sun*, in which will be form'd two little new ones, to represent the *Vortex* of your *Earth*, and that of *Jupiter*. This will be sufficient, *Monsieur*, said he, addressing himself to me in particular, to qualify you for the comprehending the Work I am going to compleat. For the rest of my Principles and Conclusions, which you have seen in my Physicks, I shall more commodiously explain them in the performance it self, as occasion shall be offer'd.

With that *M. Descartes*, *Father Mersennus*, and my old Gentleman, betook themselves to three different Stations in the Space, and began to agitate and churn the Matter with a prodigious Alacrity. The *twenty Vortexes* were come in an Instant, each having their Motion determin'd on every side, and being so order'd that the *Poles* of one *Vortex* were terminated at the *Ecliptick* of an other. And hence it is that *M. Descartes* calls the *Circle* of a *Vortex*, that which is remotest from its *Poles*.

Part. 3.
Princip.

Whereas the parts of every *Vortex* were seen out of hand to be figured Angularwise for the generality, and to move round about their Centre, there was a mighty grating and clashing occasion'd by the Fraction of Angles, that necessarily followed the Struggle every Part made to turn its self about its own Centre. And that was the first Reflection *M. Descartes* occasioned me to make, for the explaining to me the Origin and Production of the *Elements*, as they are distinguish'd in his *Physicks*. You see, said he, how from the agitation of Matter necessarily issue the *Elements*, at which the Philosophers of your World have blanch'd and bogled so. From a *Cube* or any *Angular* Body whatsoever, to make a *round* one, what more is required than the paring off the Angles and Inequalities that are found in the Surface of it? And what but this is done in the Motion I have impressed on all the little parts about their Centre? Is it possible they should turn thus without a mutual Unhorning one another? And can that continual rubbing of one against another, fail to polish them more exactly than if they had been turn'd in a Lathe? These little Balls constitute that kind of Matter which I call my *second Element*.

But now in the Interim of the shivering of these Angles, you see (and 'tis impossible to be otherwise) there is a World of little *Filings*, prodigiously less than the *Balls* of the *second Element*; and it is that diminutive Dust which I call the *Matter* of the *first Element*. But lastly, among the parts of the first Element, as minute as they are, there are some less than others, and whereas they are nothing but the Scrapings of the second Element, they are of
very

very irregular Figures, and full of Angles : Which is the reason they entangle and fetter themselves with one another, and cake into a rugged and gross Mass, which I call the Matter of the *third Element* : And these are my *three Elements*, which as you see, I had reason to defy the World to find a fault with.

Here *M. Descartes* was some Moments without speaking to me, being extraordinary busy in the management of his Project, and the critical regulation of the first Motions of his *Vortexes*. Mean while the little parts of the Matter of every *Vortex*, by the means of their turning on their Centre and rubbing against each other, even'd and polish'd themselves by little and little, and still as they became perfectly Globular, they lost of their Bulk and decreas'd in Size. Then it was that I began to see the Consequences of the Rules of Motion, which *M. Descartes* had readily suppos'd. For seeing these little Balls took up less room than formerly, and seeing they kept still a turning round, and their Figure rendred them more fit for Motion, I perceived them presently to quit the Centre of the *Vortex*, and to gain the Circumference. By that Effort obliging the Matter of the *first Element*, that was dispers'd through all the *Vortex*, to fall down to the Centre ; and to constitute a Mass of that extremely fine and powdered Dust, that still whirl'd round, and attempted to recover the Circumference from which the *Balls* of the *second Element* had chas'd it : But all in vain, because the *Figure* of the parts of the *second Element* maintained them in their Post ; and all that could possibly be done by the Matter of the *first*, was upon occasion

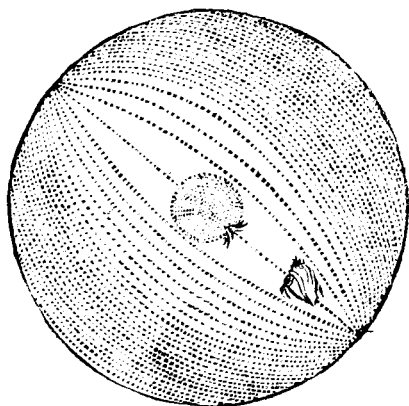
to slip into the Intervals, the Balls in the Circumference of the *Vortex*, sometimes left betwixt them.

The Satisfaction *M. Descartes* observ'd I took at that petty Play, and the Facility I manifested in perceiving or conceiving whatever he commanded me, highly pleased him, and engaged him to explain to me one of the most curious Mysteries in Philosophy. I could wish, said he, you had your Body here, you would let in those admirable Deductions from the Principles I have laid, with a greater *Gusto* and Delight. Now you only see in the *Centre* of the *Vortexes* a heap of Dust or of subtil Matter, of the first Element; but had you your Body and your Organs with you, capable of the Impressions that heap of Dust would make, you'd see for every heap of Dust a *Sun*. *Monsieur* (*continued he*) that very *Sun*, whose Splendour and Beauty you so often have admir'd in your World is nothing, in affect, but an Amass of that same Dust; but Dust instigated with such a Motion as I explain in my Philosophy, and you at present see.

To give you a clear Insight in this Matter, I need only suppose one thing; which I am sure you wont deny me; and which, on occasion, I could shew you in *Aristotle* himself, to wit, that *Vision* is caused meerly by the *vibration* of the *Threads* wherewith the optick Nerve is wrought. And it is on Account of that *vibration*, that a Man falling rudely on his Head, or who walking in the dark, runs his Face against a Post, sees a sudden flash of Light like the glaring of a Candle. It tortures the *Naturalists* to explain the manner how that vibration causes us to perceive all luminous and bright Objects. Upon
what

what *Hypothesis* soever they proceed, they meet with unconquerable Difficulties : But at the bottom, and in earnest it is no more than this.

See here the Matter of the *first Element* ; it turns round : And consequently wrestles to get at a distance from the Centre of the *Vortex*, in which it is ; in making that Attempt to deviate from the Centre of the *Vortex*, it forces the Matter of the *second Element* to circulate, that possesses all the Circumference, and shoves and pushes it every way imaginable, since there is not a point in the Circle that the Matter of the *first Element* describes, in its Motion, wherein it does not strive, to make its escape from the Centre, and by Consequence does not press against the *Balls* of the *second*. Imagine then you and your Body were in some part of the Circumference of the *Vortex*, and that you cast your Eyes towards the Centre. There are an abundance of Lines of the Matter of the *second Element*, that terminate in the bottom of your Eye. How comes that to pass ? Why the Lines are driven towards the Circumference, and consequently forced against the bottom of your Eye, by the subtil Matter, that is, at the Centre, and is endeavouring to make its *Exit*. Being thus pushed it presses upon the bottom of your Eye ; pressing it in that manner it shakes the Strings of the Optick Nerve, and from this quavering follows the perception of the Object ; and this is one of the most curious *Phænomena's* of my *Physicks*, where I maintain that the Nature of Light consists in that restless endeavour of the subtil Matter to remove its self from the Center of the *Vortex*, whence succeeds that



that pressure which causes the most delicate and admirable Sensation that we have.

He then went on in explaining to me all the Properties of Light, and the Demonstrations he hath given concerning the Reflection and Refraction of its Rays. He was very large and copious upon that Subject: For that piece of his Philosophy, together with that where he explains the *Phænomena's* of the Loadstone, is his darling and beloved Theam. I shall not descend to the Particulars of that Discourse, for fear of wearying my Reader, as also frightening some, to whom Lines crossing one another with A. B. C. are as terrible as Magick, and the sight thereof enough to make them shut the Book, and never open it after. And this is the Reason I will make use of them as little as possibly I can.

He would not for any thing whatever have forgotten to remark to me those little channel'd
Parts,

Parts, whose Service is so very necessary to him, nor the way that they are wrought. Amongst the Parts of the *first Element*, which are made of the *filings* of the *Second*, there are some, that by reason of their irregular Figure, are not so rapid as the other. Those of this Nature easily hook themselves together, and make up little Bodies larger than the other parts of the *first Element*; and as in their turning about, they are often obliged to pass betwixt the Balls of the *second Element*, they accommodate themselves for that Passage, and as they squeeze betwixt them, wrythe themselves into the Shape of a *Skrem*, or become like little Pillars chamfer'd with three Furrows, or gutterwork'd and tourn'd as you see the Shell of a Snail. They are chiefly to be found toward the Poles of the *Vortex*, having their Determination toward the Centre. Now whereas some of them enter by way of the Northern Pole, others by the Southern, whilst the *Vortex* turns upon its *Axis*; it is apparent to every *Cartesian*, that those which proceed from the North-Coast must be turned Shell-wise a different way, from those that proceed from the South. An Instance *M. Descartes* took care to inculcate thoroughly in me: For it is principally upon that, the Power and Vertue of the Loadstone do depend: But it shall not be long, *said he*, before you see some particular Effect of these little channel'd Parts.

Numb 90.

Numb. 91.

Take notice, *said he*, how things go in that *Star* that's next you. How some of the chamfer'd Parts that come fromward the *Poles* of their *Vortex*, mingle themselves with the Matter of that *Star*, and not being able to keep pace with it in Motion, are thrown out of the *Star*;

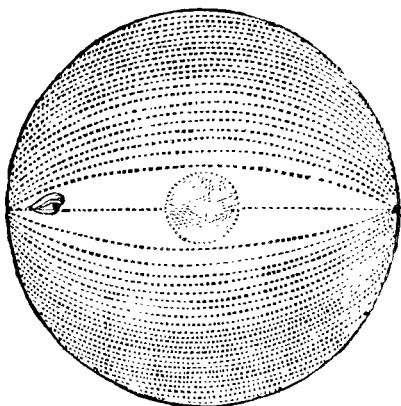
Star; just as the scummy Parts of a boiling Liquor are separated from the other, and rise above the Liquor. See how they link themselves to one another, and by that Union lose the quality of the *first Element*, and take on them that of the *third*. Upon their gathering and condensing in a very great quantity, it is manifest they must hinder the action of the *first Element*, whereby it pushes the *Balls* of the *second Element* to the Circumference, and consequently must interrupt that Motion and Pressure in which *Light* consists. And now you may see exactly what those Stains are which you sometimes discover on the Face of the *Sun* of your World. They are nothing else but the droffy and scummy Parts of the *third Element*, gathered in Heaps and expanded on its Surface.

Fig. Seq.

Now the wreek and scattering of those Stains which are still a gathering, and as easily dissipated, diffusing it self far and near throughout the Circumference of the *Vortex*, will constitute a thin and rarify'd Body, like the *Air* about your *Earth*, at least, the finest part of it; and I have formerly observed, that that of the *Vortex* of your *Sun* is extended as far as the *Sphere* of *Mercury*.

Numb. 92.

Whilst



Whilst *M. Descartes* was thus buſied in diſcloſing to me all his Myſteries, *Father Merſennus* and the *old Gentleman* were diverting themſelves, by Vaulting from *Vortex* to *Vortex*, and were but very ordinary Company to *Ariſtotle's Plenipotentiaries*, who ſtar'd confuſedly, and were exceedingly out of Countenance, and who now, and then joyned them, now and then came to us; comprehending not a Syllable all the time, in that Galimauphry of *Vortexes*, of the *firſt*, *ſecond* and *third Element*, of *ragged* and *branched Parts*, &c. for having only *Peripatetick* Ideas they ſaw not ſo much as a Pins Head of all we ſaw in that immenſe Space: And they were much ſurprized to hear us entertain our ſelves ſeriously, with ſuch idle Fopperies and *Chimera's*; for ſuch they reckoned all we ſaid, ſo far as to believe we meerly deſigned it to expoſe and banter them; and doubtleſs they had highly

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A Voyage to the

resented it, had not *M. Descartes* forestall'd them, by telling them, separate Spirits conceiv'd things only in reference to some principal Ideas they had formerly been possessed with; and as they saw no *Matter* in the *Space* where we most distinctly beheld it, so he himself with all the Eyes in his Head, was never able to perceive *substantial Forms* in *Bodies*, *absolute Accidents* and *intentional Species*, though at the same time the *Peripateticks* talkt of them, as Things they saw as clear as the Noon-day.

Mean time of these Occurrences, the *old Gentleman* in haste, came and acquainted *Descartes*, That on that Coast he had been on, there were three or four *Vortexes* that began to jumble and fall to *Loggerheads*; and that if he did not speedily come and part them, there needed nothing more to tear and shatter all his *World* in pieces.

Poor honest old Gentleman, said *M. Descartes*: That which makes him so solicitous for my *World*, is one of the finest *Phenomena's* that can possibly be seen, and by which I'll demonstrate to you how *Comets* are begot in yours; and how, in time, a *fix'd Star* may become a *Planet*. Let us go and cure him of his Fears.

When we came there we found *two Stars*, whose Surface was almost wholly overgrown with *Scurf*, and whose *Vortexes* began to be drain'd and suckt up by those round about them. If you have read my *Book of Principles*, and my Treatise concerning *Light*, says *M. Descartes* to me, you will easily conclude in what this little bustle and disorder ought to end; and I strange, said he to the *old Gentleman*, you should be frighted at it. Call to mind then what I
there

there teach, how that which preserves a *Vortex* in the midst of several others, is that impulse caus'd by the Matter of the Star in its attempt to obtain a remove from the Centre towards the Circumference : For the Star, by that Impulse, pushing and supporting the Matter of its *Vortex* keeps the other Vortexes within their Bounds, and loses no Ground in the Dimensions of its Circuit. For, we must consider all these *Vortexes*, as so many *Antagonists* that dispute it to an Inch, and so long as their Forces are equally match'd, gain no Advantage over each other ; but as soon as one of them is any ways weakned or disabled, it becomes a Prey to all the rest, each taking in a part of its Space, and at last usurping it all. Now when a *Star* begins to be over-run with this Scurf, and crufted with a mass of the parts of the *third Element*, it can no longer push with so much force as it did before, the Matter of its *Vortex* towards the Circumference ; and then the other that surround it, and whose Matter is endeavouring to get as far as possible from its Centre, finding no longer so much Motion, nor by consequence so much Resistance, ex-patiate and stretch themselves out, and oblige the Matter of that impoverished *Vortex*, to circuit along with them, and by little and little each enrich themselves. In so much, that some Moments hence, you shall see those *Vortexes* increase their Circumference with the Spoils of this poor *Vortex*, till at last they come to the *Star* it self, which will be made their Sport : That is to say, it will descend towards the Center of some one of those *Vortexes*, there to continue in the quality of a *Planet*, to turn with that *Vortex*, and to observe the Mo-

tions

tions of the conquering *Star*: Or it will be constrain'd by the Motion that shall be given it, to bound from *Vortex* to *Vortex*, and to make a long Pilgrimage in Habit of a *Comet*, until its Crusts shall break: And then perhaps it will recover the eminency of a *Star*, and will take its revenge on some other, by appropriating its *Vortex* to its self.

We waited then some Moments, and saw happen what *M. Descartes* had foretold; all the the *Vortex* was drain'd dry, the Matter of one of the neighbouring *Vortexes* furrounded the crufted *Star*, and influencing it with a violent Motion, carried it clever off: But since that *Star*, by reason of its Solidity, that consisted partly in its Figure, most proper for Motion, partly in the close Connexion of the Parts of the third Element, that cover'd it, and the paucity of its Pores in the Superficies: I say, since that *Star*, by reason of its solidity, was capable of a far greater Motion than the Mass of Celestial Matter that incompass'd it, and carried it along; having by degrees arriv'd to a mighty Speed, in the turning of a Hand it gain'd the Brink of the Circumference of the *Vortex*, and out it flew amain, and continuing its Motion by the *Tangent* of the *Circle* it had begun to describe, pass'd on to another *Vortex*, and from that to another, till I knew not what became on't: For *M. Descartes* interrupted the Attention I was in to pursue it, to instruct me, That the Adventure I had seen at present usually happen'd, and would still from Time to Time in our World: And that what we there call *Comets*, were nothing else but *Stars* that have lost their *Vortex* and Light by that congealing Matter, and then pass'd from *Vortex* to *Vortex*,

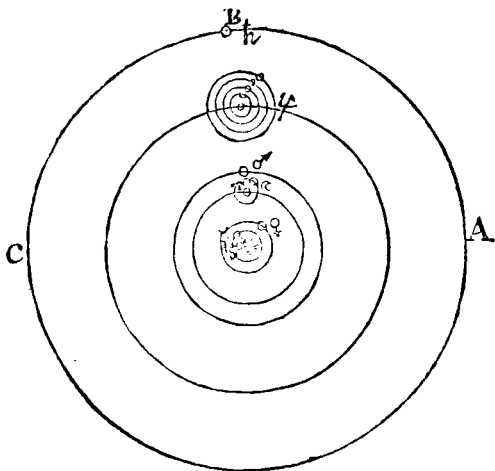
rex, becoming visible to us all the Time they traverse our *Solary Vortex*, and ceasing to be seen as soon as they entred in another. V. Fig. Vort.

Immediately after the Ruin of the *Vortex* I have been speaking of, there were seven others that ran the same Risque, and became seven Comets. Whereupon *Monsieur Descartes* pursu'd: It is not amiss, in order to your better understanding the Effects that are speedily to follow, to give Names to the Principal Stars that are left: We have still a dozen of them, but we will trouble our Heads at present with no more than eight. That then, continued he, pointing out the greatest *Star* of all, and which had the greatest *Vortex*, we will call the *Sun*; that other shall be *Saturn*; let the next on the Left-hand be *Jupiter*; that on the Right shall be named *Mars*; that other wee'll name *Earth*; and the nearest to us of all shall be christned the *Moon*: Of these two little ones, the one shall be *Venus* and the other *Mercury*. By and by I will name the other four. Having for some Time consider'd the admirable Disposition of all these *Vortexes*, that, in spite of their Fluidity, did not at all mix and incorporate with one another, a thing no one would believe unless he saw it, and which cannot be comprehended but by a *Cartesian* Soul; for no other Philosopher 'till this Day hath been able to conceive it possible. We saw *Mercury* and *Venus* begin to be overspread with the rising Scum, and forthwith the *Vortex* of the *Sun* with the other neighbouring *Vortexes* to get ground prodigiously on those two Stars, till at last their Heaven or their *Vortex* being entirely swallow'd up, they fell in with that of the *Sun*, somewhat near the Centre, and

began to turn about him, floating in the Matter of his *Vortex*. The same thing happen'd a little while after to four petty *Stars*, whose *Vortexes* border'd upon that of *Jupiter*, where they were oblig'd to descend, and take the same Lot therein, as *Venus* and *Mercury* in that of *Sol*. *M. Descartes* called these four the *Satellites* of *Jupiter*, because they represent the four *Planets* that turn about *Jupiter* in our World. Lastly, the *Earth* in like manner made herself *Mistress* of the *Moon*, and oblig'd her to attend her in quality of her *Planet*; for that is the Name which is given to degraded *Stars*, because of their only Employment that is left; which is, to wander in the *Zodiac*, and to turn eternally about those that have rob'd them of their *Vortex*.

That which distinguishes their Condition from that of *Comets*, is nothing but the Difference found betwixt the Solidity of one and the other; for as they are less solid than the *Comets*, in entering the *Vortex* that receives them, they are not agitated in their Turning with so strong and violent a Motion, as to toss themselves out of the *Vortex*, but swim with the Current of Celestial Matter in which they are plung'd. In like manner, the Disproportion of Solidity that is betwixt many *Planets*, carried in the same *Vortex*, is the cause that some remain more remote from the Centre or Star, and others approach nearer to it; for a *Planet* descends towards the Centre, as long as the Celestial Matter that's below it, is better able to mount farther from the Centre, the one necessarily following the other, according to the Laws of Motion. Thus, because *Mercury* was less solid than *Venus*, he came nearer to the *Sun* than she; and the Celestial

stial Matter that's above him, forc'd him to that descent, because it had more Strength than he to get at a Distance from the Centre, and it oblig'd not *Venus* to sink so low, because the Ballance betwixt it and *Venus* was equally pois'd, the one having neither more nor less Power to deviate from the Centre of their Motion than the other. But as it sometimes fortunes in *our World*, that *Petty Princes* making War with one another; after having fought some Time, and the *Conquerors* as well as the *Conquered* drain'd themselves of Men and Mony, a common and powerful Enemy comes thundring upon them, and devours them all: So here happens a sudden Revolution in *M. Descartes's World*, that reduc'd *Jupiter* and the *Earth* to the same Condition they had reduc'd the other Stars, whose Vortexes they had demolish'd: Both the one and the other

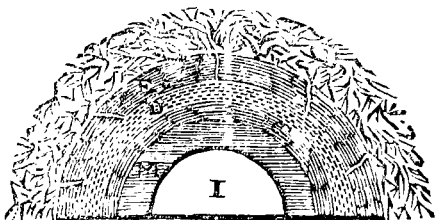


no less than *Mars* and *Saturn* became *Planets*, and the Sun, the sole and universal Conqueror, extended his Vortex over all the Space the other had possess'd before, and constrain'd them all to turn about himself.

M. Descartes exemplify'd this Matter by certain *Whirl-pools* we sometimes see in Rivers, whereof one *great* one, that often contains in it many *little* ones, represents the great *Soluy Vortex*, and the *little* ones represent the *Vortexes* of *Jupiter* and the *Earth*. Those little *Whirl-pools* are carried along by the Motion of the greater, and turn about its Centre, whilst themselves make every thing that comes in the Reach of their Circumference, suppose *Straws*, or little *Chips*, to turn about their own: Thus the *Earth* carries round the *Moon* in her *Vortex*, and *Jupiter* his *Satellites* in his.

Having seen so many fine diverting Sights, and so near a Resemblance of this *little World*, with our *great one*, our Curiosity tempted us to a more particular Enquiry, and thorough Instruction in all Things that concern'd the Planet representing the *Earth*, which we inhabit. But *M. Descartes* told us, That in case we would see all Things in Order and Succession, as they should be, it would be several Hours Work to put that *Planet* in the Posture and Circumstances our *Earth* is at present in, and besides we should see nothing more occur in it than he had observ'd, in the *fourth Part* of his *Book of Principles*, in describing the Formation of the *Earth*, as he at that Time conceiv'd it. Besides that *Subtil Matter*, whereof it was compos'd, whilst it was yet a *Star*, which Matter is lodged in the Centre, and besides that *Shell*, infinitely hard, that

that dams it in, I conceiv'd, *said he*, a kind of *third Region*, constituted of the Parts of the *third Element*, not very strictly united: And I yet farther divided that *third Region* into *three Stories*, before I imagin'd to my self the Earth in the Capacity it has at present, and in which I am going to put my own.



I *The Centre of the Earth, full of the Matter of the First Element.* M *the internal Shell that covers it.* C *the Place of Metals.* D *Water.* E *Earth, on which we tread.* V *Air.*

The *lowest* of these *Subordinations* was, according to my Position, an Arch of very Solid and Heavy Matter, and there I place the origin of *Metals*. The *Second*, which I rang'd above it, was a Liquid Body, constituted of the Parts of the *third Element*, pretty long, very flexible and pliant, as it were little Eels, temper'd with an abundance of the Parts of the *second Element*, which was nothing else but what we usually call *Water*. Lastly, above all this I suppos'd a *third Vault*, made of the most clinging and craggy Parts of the *third Element*, whose sensible Parts

were only Stones, Sand, Clay and Mud, and which was very porous: And this is the outward Surface of the Earth, on part of which tread Mortal Men.

Next, I explain'd, how in that *upper Vault* of the *Earth*, by its being expos'd to the constant Beating of the *two first Elements* against it, that rush'd through its Pores with Violence; there were made a World of Crevices and Chinks, which being in Time enlarg'd by little and little, its structure at last, all of a sudden fail'd, and broke in Pieces; whereupon its Ruins fell in part of the Water below it, of the *second Story*, and forc'd it above them, because it was less weighty; and that's the *Water* which constitutes the *Seas*. Some Parts of the Vault were still upheld, and remain'd suspended, as it often happens in the downfall of great Buildings; these were not drown'd, and they were these that made the *Plains*, and level Parts of the Earth. Lastly, some Pieces, as they fell, were shelv'd and supported against one another, and rais'd above the rest; and thus came the Inequalities of the Earth, which we call *Mountains*.

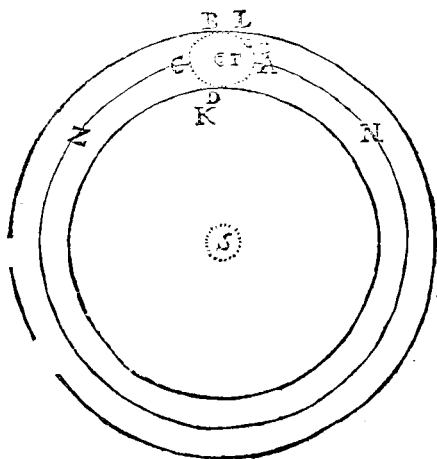


You plainly see then, said *M. Descartes*, that to shew you the Train of all these Things would demand a great deal of Time: But the Hour of your Departure hastens on, I remit you therefore to my Book for Satisfaction in all those Particulars. I am going now to make an Abridgment of all those Motions, and to shew you in as little Time as we are speaking on't, this Earth, exactly like yours, with Mountains, Valleys, Plains and Seas. No sooner said than done: He falls to determining the Motion of an infinite Number of those long and flexible Parts of the *third Element*, and agitating them, by playing among them the Parts of the *second*, in the several Places, where he had heap'd them together, we saw presently a kind of Sea diffuse itself over the Face of the Earth; it was a less Trouble to him to raise Mountains, by only amassing together an abundance of the *branchy* Parts of the *third Element*, and causing them to link and grapple with each other, whereby there stood in many Places great and mighty Piles, nothing differing from our *Mountains*. That Earth look'd very bare and naked, without Trees, without Herbs, without Flowers; for to produce all those Things that are the greatest Ornaments to our Earth, was a Business that would take up longer Time.

This done, he employ'd the rest of the Time that we staid with him, in the consideration chiefly of two Things: First, of the *Gravity*, or rather of the Motion of Bodies we call Heavy, towards the Centre. And secondly, of the Manner of the *Ebbing* and *Flowing* of the Sea. He began with the first, and explained it at this rate,

A Voyage to the

Take notice, *said he*, that this Earth turns upon its *Axis* in its *Vortex*; it has not that Power of Moving of itself, but it is carried about by the Stream of the Celestial Matter that surrounds it, which whirling with a more rapid Motion than the *Earth*, spends the overplus in making other Motions in all Parts, and especially in squeezing and pressing Terrestrial Bodies against the Earth; a Pressure so necessary, that take it but away the whole Earth would crumble all in Pieces, and all the Men and Animals on the Surface of the Earth of your World would be hurl'd into the Fluid Space, according to my grand Principle of Motion; that every Body that turns circularly, as does the Earth with all that is upon it flies fromward the Centre of its Motion, if not prevented by the other Bodies that keep it in, as does the Pression of the Celestial Matter.

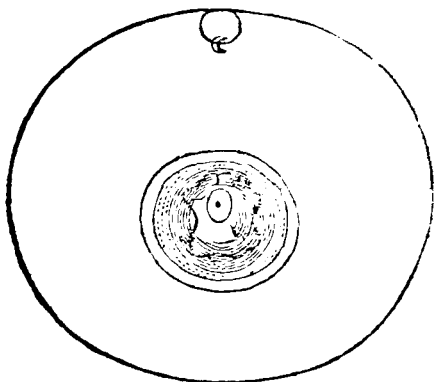


S the Sun. T the Earth. ABCD the little Vortex of the Earth. NACZ the great Orb wherein the Earth is carried round the Sun.

And it is for the same Reason, that a Terrestrial Body forc'd into the Air, is oblig'd to descend towards the Centre of the Earth, because it has less Force to digress from the Centre than has the Mass of Air, which it ought to dismount to get into its Place: And the Reason why it hath less Force to digress from the Centre is, because it contains much more Matter of the *third Element*, and much less of the *second* than the Mass of Air equal to it in Bigness. Now the Matter of the *third Element* is dull and more unactive, and unable to get rid of the Centre, than the Matter of the *second*, it must therefore descend. Your *Peripatetick Quality*, *continu'd he*, and *Democritus*, and *Gassendi's Chains* made of link'd *Atoms*, are not worth a Straw, in comparison of what I say, and with that he cast a Stone on high, to shew us by Experience the Truth of what he had been Teaching.

The next thing was the *Flux* and *Reflux* of the Sea: For the better understanding this, he bade us first conceive, That the *Vortex* of the Earth was of an oval Figure. Secondly, That that of its *Diameters*, in which was the *Moon*, both in the *New* and in the *Full*, was the least of them all. Thirdly, That the Centre of the *Earth* was not the Centre of the *Vortex*, but was a little distant from it, 'cause of the *Moon*, that in whatever Part of the Circumference she was found, made the Space betwixt her and the Earth more strait; and by consequence hindred the

the Celestial Matter from flowing in so free a Course betwixt



I *The Figure of the Vortex of the Earth.*

them ; and hence it follows, That the *Earth*, whose Place and Station, is no otherwise determin'd, than by the Equality of Opposition, that presses it on every Side, ought to recoil a little towards that part of the *Vortex* that is opposite to the *Moon*. Fourthly, Whereas the Celestial Matter, that circuits with far greater Speed than the *Earth* and *Moon*, must find the Passage that lies betwixt them very narrow, in comparison of that Liberty and Room it had before, it must inevitably flow more rapidly in that Place, and at once press more violently upon the Air and Water : And to conclude, there ought to be an almost equal Pressure in the opposite Part of the *Vortex*, by the same reason of that Recoiling of the *Earth*.

He made us forthwith acknowledg the Truth of all those Principles and Effects that naturally follow them; for upon his placing the *Moon* perpendicular to the *Equator* of the Earth, we immediately saw first the Sea press'd by that Matter to sink lower, and its Waters thus press'd and crowded hurry towards the Poles, and spread themselves successively on the Shores, proportionably to their Distance from the *Equator*. 2. The Terrestrial Globe rowling on his Axle from West to East, we beheld the Pressure of the Moon to light on several Places after one another, according to the Succession of *Meridians*. 3. That successive Pressure of the different Parts of the Sea had this necessary effect, *viz.* to cause it to swell and fall in several Places, according to the plain and evident Rules of *Statics*, which gave us a most exquisite and natural Idea of the *Flux* and *Reflux* of the Sea, consisting in this, that by how much it is mounted, by so much it is depress'd, and as often as it mounts in one Place it is depress'd in another; all these Motions going on regularly after each other, and being set, and punctual, as to Space of Time.

Again, since the *Diameter* of the *Vortex*, wherein this little *Moon* must necessarily be in its Conjunctions and Oppositions, was the least of all; and on the contrary, that in which it would be found in its *quadratures* the greatest, it was evident to us, that the depression and sinking of the Waters must be far greater in the *Conjunctions* and *Oppositions* than in the *Quadratures*, and consequently that the Sea must flow with greater impetuosity and Vehemence towards the Shore, or which is all one, that the Tides be far greater
in

in the *New* and *Full* Moons than at any other Time, and in the *Equinoxes* than in the *Solstices*, as it really happens in our World.

He next observ'd to us the particular Phenomena's of the *Flux* and *Reflux*, founded on the same Principles, and minded us especially of the Reason, why we never see any Ebbing and Flowing in Lakes and Ponds, let them be never so great, unless they have some Communication with the Sea: For if, said he, those Lakes and Ponds be beyond the *Tropicks*, they are never at all press'd by the *Moon*; and for those that are under the *Torrid Zone*, within the *Tropicks*, they take not up a compass of Ground, enough to cause that one Side of their *Superficies* should be more press'd than the other by the *Globe* of the *Moon*. Now that Inequality of Pressure is the only cause of that Vicissitude of Motions, which we call the *Flux* and *Reflux* of the Sea.

I was wonderfully taken with this Explication, and that way of solving the Flux and Reflux is so handsome, that those that demonstrate to *M. Descartes* the *Earth* cannot have a *Vortex*, at least an Oval one, ought upon that Consideration to shew themselves a little merciful to him: *But these Philosophers are a very ungentle and brutish sort of Creatures, and know not what it is to be generous towards their Adversaries.*

Mean while all the other Motions were perform'd in the little World with all possible exactness, *Mercury*, *Venus*, *Mars*, and the rest of the Planets, having once obtain'd their Post in the *Vortex* of the Sun, were extraordinary punctual to their Courses. He began to exhale Vapors, and to form them into Clouds, about the little *Earth*. To say no more, I was charm'd with

with all these Prodigies: But we must now resolve on our Departure, and 'twas high Time we were a going. It was well-nigh four and twenty Hours since we left the Earth, and *M Descartes*, who, as I have noted before, disapprov'd of their Conduct that deserted their Body before *Death*, and the Orders of the *Sovereign Being*, had dismiss'd them, advis'd us himself to defer the entire Satisfaction of our Curiosity till another Time. I made him a courteous Acknowledgment and Resentment of his Favours, assuring him of the vast Esteem I had both for his Person and Doctrin. I beg'd the Favour of proposing to him the Scruples that might occur hereafter upon his *Philosophy*, whenever I had an Opportunity of sending a Letter to him. He express'd on his Part a World of Kindness for me, exhorted me to a most sincere and hearty Love of Truth, and presented me with two *Hyperbolic Glasses* to make me a Perspective Glafs, wherewith, he assur'd me, I might stand on the Earth, and discover all the Curiosities of the *Globe of the Moon*, and the Animals themselves, if there were any. He hath demonstrated in his *Dioptricks* the Excellence of that Figure, for the Glasses of a *Telescope*, beyond all other. He endeavour'd to have them made in *Holland*, and contriv'd an Engine for that Purpose, but he could not find Artists capable of accomplishing his Design and his Idea with that Exactness as was necessary. He brought us on our Way as far as the *second Heaven*, which is that of Stars, and left *Father Merfennus* with us, to conduct us Home.

*Let. de
Descart.*

Some distance from the Stars, *Aristotle's* Embassadors meeting some Philosophers of their Country and Acquaintance, desir'd us not to take it amiss, that they accompanied them, and took their Leave, but indifferently satisfied with their *Voyage* and Negotiation. Seeing we were in great haste, we stay'd no where on the Road, and avoided all Harangues and Disputes with every Person whatsoever, though we met in diverse Places very many Spirits, that would willingly have joyn'd Discourse with us. *Father Merfennus*, as we pass'd along, made me observe the Disposition of the *Vortexes*, and the situation of the different Elements that compos'd them, and especially the Balls of the second Element, that I had no Apprehension of so long as I was stock'd with *Peripatetick* Notions, but that I saw take up the greatest part of the Universe, since I was turned *Cartesian*. In less than six Hours Time we arriv'd at my House, where there fell out a most unfortunate Disaster; for in pitching with a most violent descent, and not considering the Glasses I had with me, as I pass'd athwart my Chamber-wall, and my Glasses in *Bodily Quality*, could not enter, they were stopt, and dash'd in a thousand Pieces, by the reason of the unaccountable Swiftnes wherewith they flew against the Stones; and thus I was depriv'd of the Pleasure of making the Experiment, that *M. Descartes* had warranted, of seeing from our Earth all the Occurrences in the *Globe* of the *Moon* as distinctly as if I was personally there.

I found my Body somewhat fainty and very feverish, by the reason of a Fast of above thirty Hours. Before I entred I would have persuaded

ded the little *Negro* to reinstate my Brain in its *Quondam*-capacity, fearing lest he had unhing'd some *Clock-work* there: For that there must be something more than ordinary in that *Machine*, to cause such prodigious Alterations in the Soul of Man; and I had been very finely serv'd, if having been reunited with my Body, I had found my self a Fool; but the little arch *Devil* of a *Spirit* refused to do it, telling me withal, That I was highly oblig'd to him, for setting me right in my Ideas. I must therefore venture on't for better for worse; so that having thank't *Father Merfennus* and my *old Gentleman*, for the favour vouchsaf'd me by their Company in so fine a *Voyage*, my Soul entred her Body, and fail'd not in quality of a *Cartesian* Soul, to seat her self in the Pineal Gland of my Brain.

I had request'd *Father Merfennus* to oblige me so far as to see me again before he return'd to *M. Descartes's* World, that I might convey a Letter of Thanks by him to that great Philosopher, that had treated me so generously and gently. He promised me he would, and accordingly returned at a Months end, which he spent partly in the World, in dispatching some Commissions of *M. Descartes*, partly in the several Planets and different Places of the wide Space, which he travers'd in search of some old *Cartesians*, on that Philosopher's Account, to inform them of his Place of Residence, and of the grand Design he was ready to put in Execution. I gave him the Letter, which I have joyn'd to this Relation, and with which i'll finish it.

A
V O Y A G E
T O
The World of Cartesius.

P A R T IV.

MY Soul thus seated on the *Pineal Gland* of my Brain, as a *Queen* upon her *Throne*, to conduct and govern all the Motions of the *Machine* of my Body, was extremely pleas'd with the change of her Ideas; and complimented her self with the honourable new Character of *Cartesian*, wherewith I began to be distinguisht amongst the Learned. I found my self immediately dispos'd for the Humour and Spirit of that Tribe of Philosophers; and could not mention, without disdain, the *Philosophy* of the *Colleges*, good only, said I, to corrupt the Mind, and fill it
with

with empty and confus'd Ideas, and fit for nothing but to entertain the vanity of a Pedant. *Descartes* was the first, and indeed the only Philosopher, the World has ever known; the rest in respect of him were mere Children Wranglers and Legendaries. Being invited some days after to a *Thesis* of Philosophy, it cannot be imagin'd what Violence it was to me to resolve to go. I could not forbear gaping all the while I staid, looking down from the exaltation of my Soul, with pity on all I heard. One of the first things I did, was the degrading the *Suarez's*, *Fonseca's*, *Smigletim's* and *Goudin's*, &c. in my Library, cashiering them of the considerable Post they held, and abandoning them to a mouldy Chest of Lumber, there to lye at the Mercy of the Dust and Vermin, to be succeeded by *M. Descartes*, bound in a fine Turkey Cover, and all his illustrious Disciples.

Before my Conversion to *Cartesianism*, I was so pitiful and Tender-hearted, that I could not so much as see a Chicken kill'd: But since I was once persuaded that Beasts were destitute both of Knowledge and Sense, scarce a Dog in all the Town, wherein I was, could escape me, for the making *Anatomical* Dissections, wherein I myself was *Operator*, without the least inkling of Compassion or Remorse; as also at the opening of the Disputes and Assemblies of the Learn'd, which I thought good to keep at my House, for the inhancing and propagating the Doctrin of my *Master* in the Country; the first Oration I made before them, was an Invective against the Ignorance and Injustice of that Senator, the *Arcopagite*, that caus'd a *Noble Man's* Child to be declar'd for ever Incapacitated from

entring on the Publick Government, whom he had observ'd take pleasure in pricking out the Eyes of Jack-Daws, that were given him to play with.

Notwithstanding, I must ingenuously confess, that as resolv'd a *Cartesian* as I was, I was not insensible of some weighty Scruples, the more Ingenious sort rais'd in me, in our Conferences. I perceived also that the farther I went, the more they increas'd, and if *M. Descartes* does not settle and compose the Fluctuation of my Mind, by a just and clever Answer to the Letter I have wrote him on that Subject, I have great Fears the Traces of my Brain will change, and the Animal Spirits resume their wonted Current. This is the Copy of the Letter I sent to *M. Descartes*, that contains the principal of those Difficulties, which I thought not unworthy of the Publick.

A Letter to M. Descartes.

Monsieur,

I Cannot sufficiently express my Acknowledgments, of the Honours and Civilities I receiv'd from you, during that transitory Stay I made in your Parts of the *highest Heavens*: The few good Qualities and Accomplishments, you must necessarily find in me, prevented not your treating me as a Person qualify'd with the greatest Merit. For you to build an intire World before my Face, and to give your self the trouble of making me comprehend the whole Contrivance, to see all the Wheels and Springs of
so.

so admirable a *Machine*, was an Honour greater in its kind, than what the *King* vouchsafes *Embassadors*, *Princes* and mighty *Personages*, by commanding all the *Water-works* to be plaid for them at *Versailles*. You may infallibly reckon from that time, that I am devotedly at your Service; and that having made your self absolute Master of my *Understanding*, by those sublimated Notices you have communicated, you have yet more irresistibly captivated my *Will*, by those extraordinary Favours you have heap'd upon me.

The Reverend Father *Mersennus*, who readily condescended to the trouble of this Letter, will inform you more at large, both what my real Sentiments are of your Person and your Doctrin. My Behaviour, since my return, hath throughly convinc'd him, that there never was a Disciple more Zealous than my self, for the Honour, Growth and Advancement of the Sect. In less than a Month, since my Arrival from your World, I have cast Terror and Confusion in the Face of *Peripateticism* throughout the Land. I have inspirited with new Life and Courage, those few drooping *Cartesians* that remain'd, but liv'd in Obscurity and Silence, solacing themselves with the private enjoyment of Truth, but were very remiss in promoting her Interest there, where she had been but ill receiv'd. Twice every Week I hold publick Disputes at my Houſe, and endeavour therein, as much as possible, to give Vogue and Reputation to your Doctrin; I have already made some Conquests among the *Peripateticks*, many whereof appear there, and excepting two or three, who are ungovernably headstrong and conceited, they will

all be my own, as soon as I shall have answer'd some pretty substantial Objections, they have propos'd against several Points of your Philosophy. The chief of which respect the general *Construction* of your *World*. And whereas in that Affair, they pretend to destroy your Conclusions by your own Principles, and some amongst them are Men of Parts, that give a specious and probable turn to their Arguments, in so much that I have sometimes been put to't to find the Fallacy, I thought my self oblig'd to have recourse unto the Oracle, and that I could do nothing better than consult *You* your self, as you gave me Permission, and intreat you to communicate your Thoughts, as soon as possible thereupon. A Voyage from the *third Heaven* to this Place, is no great business for your little *Moor*. Thus then these Gentlemen, to my best Remembrance, fell to Work.

They began by proposing two or three trite Arguments, daily made use of in the *Desks*, to confute your *System*; and to shew that it is a meer *Chymera*, and not to be suffered as a simple *Hypothesis*, should they grant the Principles you your self lay down. *M. Descartes* (say they) supposes, first, That God creates Matter; secondly, That he divides it into infinite little cubical Parts; and lastly, determining several great Portions of this Matter, he puts them in a circular Motion, and at once makes the little cubical Parts, of which the great Portions, call'd by him *Vortexes*, are compos'd, to turn about their proper Center. But it is impossible, they adjoyn, to conceive the *division* and *motion* of Matter upon his Principles.

For as to the *division*, it can be conceiv'd but by one of these two ways; either by supposing betwixt the Parts divided some empty Spaces, or imagining those Intervals fill'd up with some Bodies or Matter of a different Nature from the Parts. And thus though Nature every where is full, we conceive four Dice laid close to one another, as four distinct cubical Bodies; for though there is nothing of a void betwixt them, we yet perceive a little Interval fill'd with Air, that hinders our Conception of them, as of one single Body: But by the Principles of *Cartesianism*, we can conceive it neither one way nor the other. For we must not suppose a Vacuity betwixt the Parts divided, since a *Vacuum* is utterly thrown out of that System. Nor is it easier to conceive a Body of a different Nature, since the distinction of Bodies, according to the Author of the System, is not to be conceiv'd, till after the agitation and motion of Matter. That division therefore is an Absurdity.

As to the business of *Motion*, that's in a worse Case still; for how is it possible to conceive that all those cubical Parts, that are universally hard, impenetrable and incapable of Compression, should turn about their Center, and break in pieces, unless they find or make a *Vacuum*? For the diminutiveness of them will not help us out; since let them be as little as you can suppose them, they are still hard and impenetrable as Adamant, and all combine together to desist the Motion of each Particular. That *Hypothesis* therefore is indefensible, and *Descartes* his very first Supposition is deny'd.

These, *Monsieur*, were the first Passes these Gentlemen made at me, the first Blows I was to ward off, in the Defence of the *System of your World*. They had been taken out of the Books of very Ingenious Men; and whereas the Gentlemen, your Disciples (as if it was their Maxim and their Method, never to be put out of their own Road, which is barely to give an Exposition and a Proof of their Doctrin) trouble not much their Heads with Objections that are made them, since they are not oblig'd to the formal Answer of the Desk; these Arguments pass'd for unanswerable, and such as at the very entrance of Dispute baffled the *Cartesian*. But the more impregnable my Adversaries appear'd in so good Accoutrements and Arms, the more my Honour was advanc'd in disabling and disarming them.

As I had diligently read your Works, and above all, the Book of Principles, and that Intituled, a *Treatise concerning Light*, or *M. Descartes's World*, I answer'd the first Argument, by pleading a false Indictment charg'd on you, for making a distinction of Instants betwixt the *Division* and the *Motion*, as if you had held that God divided the Matter in one Instant, and mov'd it another: I said you never suppos'd that Matter was divided before its Motion: That the manner of proposing your System in the *third Part of Principles*, suppos'd no such distinction, and that in the *Treatise of Light*, where you describ'd the formation of the World, you said positively the contrary; advertising your Reader, That that Division of Matter consisted not in God's separating its Parts, so as to leave a Vacuity betwixt them; but that all the distinction,

stinction, you suppos'd God made in them, consisted in the diversity of Motions that he gave, causing some from the first instant of their Creation to commence their Motion one way; some another; so that in this Instance Division and Motion were the same Thing, or at farthest one could not be without the other. That you would be as forward as any of them to confess, That nothing was more absurd, in reference to your other Principles, than to suppose the Parts of Matter still and in Repose, and yet divided, since, according to you, the Union of the Parts of a solid Body, such as Matter must be conceiv'd before its Motion, consists in that Rest they enjoy by one another: And farther, that it was full as easie to comprehend how Division was made by Motion, and yet cotemporary with the same Motion, as to understand how I can tear a Sheet of Paper, by dividing it in two half Sheets, one whereof I hand towards the East, the other towards the West. I hereupon produc'd the Books that I had cited, and shew'd them the very Places in dispute: They were convinc'd by plain Matter of Fact, and had no more to urge against it.

But we had not so soon done with the Motion of Matter; we must necessary still dispute, tho' very calmly, without the least Passion or wrangling, since the generality of those I had to deal with were well bred, honest Gentlemen, that would submit to Reason. The Question was, to explain, how the Parts of Matter, which we conceiv'd so closely press'd against one another, as not the least Interval was left betwixt them, throughout the Mass, and which we also suppos'd solid, from a settl'd Rest could skip into Motion.

After these Gentlemen had copiously discours'd upon the Subject, I ask'd them, If as stanch *Peripateticks* as they were, they were throughly convinc'd, that the Fluidity of Water, for instance, Was an *absolute Quality*, that when it was congeal'd it became Solid, by an *absoute Accident*, call'd Solidity, and that when it was dissolv'd, it became Liquid by an *absolute Accident* call'd Fluidity? That one of these Accidents made Lead run when heated, and the other fixed it when it began to cool? And on the contrary, if having read the Delicate Natural and Intelligible Way of *M. Descartes's* explaining the Nature of Fluidity, and the Properties of Fluid Bodies, by the Motion of the insensible Parts of those Bodies (a Motion which the meer Dissolution of Salts in common Water, and of Metals in *Aqua Fortis* evidently demonstrates) they were not at least come over to us in that Point? The most of them answered, That as they were perswaded there was no doing without *absolute Qualities*, in the explication of an abundance of *Phenomenas*, that which they could most easily part with was *Fluidity*, and that they would not quarrel with me thereupon.

This suppos'd (*said I*) Gentlemen, you shall be speedily satisfied, or more perplex'd than *M. Descartes*; for in short, in your own *System*, the World is full, there's an Abhorrence of a *Vacuum* through the whole: Motion, notwithstanding, both is and does continue, the Sensible and Insensible Parts of Bodies are mov'd, nor does their Hardness and Impenetrability stop their Progress. Why may not *M. Descartes's* Matter, that is no more impenetrable than yours, enjoy the same Priviledg and Charter? Why
must

must his Motion be more impossible? both you and us suppose the self-same Thing, and we have no more to do than defend our selves against the *Epicureans*, who think they demonstrate by Motion, the Necessity of their little insensible Vacuities interspers'd throughout all Bodies. Their pretended Demonstration amounts to this; To the end a Body may move, it is necessary it disturb another Body from its Place: That other cannot stir, because it has not where to go, if all is full: Therefore Motion will be impossible, if there is no Receptacle or a *Vacuum*. On the other Hand, supposing a *Vacuum* among Bodies, they may be compress'd in lesser Room, and consequently may make Way for such as press against them; and thus Motion will be made. This is a meer Fallacy of theirs, which both you and we can easily unriddle, by only telling the *Epicureans*, That to conceive how Motion is perform'd without a *Vacuum*, we need only understand, That a Body is never mov'd alone, but that in the same Instant one Body quits its Place, another crowds in and takes it: And when I conceive one Body may in the same Moment take the Place another Body leaves, I perfectly conceive Motion, for there lies all the Mystery.

My *Peripateticks* seem'd surpriz'd to see me come over them thus readily, with so neat a Conclusion, drawn from a Principle they had so freely granted me, and doubtless repented them of their Condescension: But I proceeded, by telling them, I scorn'd to take an Advantage over them from their Courtesie, though they were oblig'd to it by the Evidence of the Truth, and I was unwilling they should reproach me,

as perhaps they did already in their Hearts, for having us'd Surprize, and abus'd their good Nature to insnare them ; and therefore I would endeavour by their own Principles to enforce to them, at least the Probability of the Truth I was defending.

Gentlemen (*said I*) there are Prejudices in the Case that we are upon, proceeding from the Imagination more than Reason : We imagine, in the first Place, That a Body which we fancy in the midst of the Matter of the World, is far more press'd, if we suppose that Matter Solid, than it would be upon Supposition it were Fluid, which is manifestly false: For if the World be full, whether with Solid Matter or with Fluid, there is neither more nor less of it, but an equal Quantity in each Supposition ; and consequently its Parts are no more close and crowded, supposing it Hard than if you suppose it Fluid. Again, we are apt to believe, That a Body, whilst it is Liquid, is ever ready to give way to the Motion of another Body ; and on the contrary, whilst 'tis Solid, it is incapable of that Compliance, if incompass'd with other Solid Bodies. The first is prov'd evidently false, by a very common Experiment : Fill a Glass Bottle with Water, whose Neck is long and slender, then turn the Mouth of it downwards, placing it perpendicularly upright, the Water by its own Weight is forc'd towards the Earth, it meets no other Body in its Way but Air, that is still more Liquid than it self ; yet notwithstanding the Gravity and Propensity of the Water to put itself in Motion, notwithstanding the Fluidity of the Air that is below it, its Motion is impossible, and the Air makes as great an Opposition as could
a Solid

a Solid Body, wherewith you should have firmly stopt the Orifice of the Bottle: What is it then that thus obstructs the Motion of the Water? 'Tis the Air and Water's being in such a Situation, as no Tendency or Attempt whatsoever of the Water can determine the Air, or any other Body, to come and fill its Place in the same instant that it leaves it: For as soon as it can, that is to say, as soon as you shall incline the Bottle a little Side-ways, and consequently make Way for a little Line of Air, to wind itself in by the Side of the Water, the Motion will follow proportionably to the Space that the Air shall fill. We must not then suppose that a Liquid Body is ever disposed to yield to the Motion of other Bodies: Nor ought we more to imagine, that when a Body is Solid, and surrounded with other Solid Bodies, it never is inclinable to be mov'd, which I thus prove.

Let us suppose an hollow Globe perfectly full, partly with Water, and partly with a vast many little solid Bodies, of every Make and Figure, dispers'd all over this Mass of Water. Let us conceive all these Bodies settled and at rest; being that the Water fills all the Spaces betwixt these little Bodies, we imagine the Parts of this Water of all sorts of Figures, as are the Spaces which they fill. Thus we conceive in those Spaces your little *Globes* of Water, little *Triangles*, little *Cubes*, little *Hexagons*, &c. Let us suppose now, that Water and all those little Bodies put in Motion.

Making then Reflection on the Figure of the Parts of this Water, before the Motion, we easily conceive an Alteration in all these Figures, in the instant of Motion; that is to say, the
little

little *Globes* of Water are divided in two *half-Globes*, the *Cubes* of Water lose their *Angles*, and so on. Of these little Parts, whether Solid or Liquid, some receive more Motion, some less, and briefly all so determine one another, as not the least empty Space is left, but upon one's forsaking of a Place another repossesses it in the very instant: And all this is easily perform'd by the proneness of the watery Parts to break and disengage themselves from one another. Thus in the first instant of the Motion, we imagine that there happen'd a Change of infinite Figures; that this Change was made only by the Fraction or Separation of the Parts; that that Fraction was occasion'd by the Motion, and that the Motion was impossible without that Fraction: That the Impulse that serv'd to put these Bodies in Motion, was the Cause of both the Motion and Fraction: That the Fraction of a Part was caused immediately, whether by one of the Solid Bodies, or by another part of the Water; for instance, the Angle of a Cube was no otherwise separated from the rest of the Mass, or any other Part to which it was joyn'd, than by another part that slipt in betwixt them both, or so exactly seiz'd its Place, as to fit it to an Hair; and finally that nothing could prevent the Motion and Fraction of the Parts, except such a Situation among themselves, as rendered it impossible for one Part to take the Place of another in the Moment of Desertion; For all being full before the Motion, it is necessary in the Motion all remain full still.

Let us suppose at present, all this Water and all these little Bodies restated in the same Condition they were in before the Motion: And let

us conceive instead of the parts of Water, that possess'd all the Intervals betwixt the solid Bodies, some other solid Bodies that precisely take up the same Space the Watry parts took up before: Or let us only suppose the Water congeal'd, but without any diminution or augmentation of its Mass. Let us farther suppose, that God made an attempt to move this Matter; and that he endeavour'd at once to divide all its parts exactly in the same manner as the parts of Water, whose place it fills, were divided in the instant of their Motion. I suppose not any Motion yet, but only an Effort for the producing it, and there's no Contradiction in that Effort: But I maintain, that from that Effort or Attempt, Motion and Fraction must inevitably follow: And thus I argue.

From that Attempt which I suppose, Motion and Fraction must needs follow, if nothing hinders: But nothing hinders: For the disposition to Motion and to Fraction is the same in this Hypothesis, wherein I suppose nothing but *solid* Bodies, as it was in the foregoing, wherein I suppose *liquid* Bodies mixt with *solid* ones; and if the repugnancy to Motion and to Fraction, which some imagine in the latter, be invincible, it would be invincible in the former too.

For if in the first *Hypothesis* of *liquid* Bodies mingled with *solid* ones, we imagine the parts so crowded and determin'd, as that one going to move another is unable to gain its place, in the same instant we imagine that the Motion and Fraction of parts can never be: As it happens in the Experiment of the Bottle before mentioned: Because an absolute fulness being sup-

suppos'd, all the parts combine in the resistance of the Motion of each Particular : But whilst we conceive the parts of this Matter so push'd and determin'd, that supposing one to move, another in the same Instant takes its place, and another the place of that ; thus we conceive Motion and Fraction infallibly must follow the Impulsion. But in the second *Hypothesis* of *Solid Bodies*, supposing God to force and determine the parts of those *Bodies* precisely in the same manner, as the Parts of Water had been determin'd in the first *Hypothesis*, at the first instant of Motion and Fraction ; it is plain, that in case one move, another must instantly take its place, since it is exactly driven and determined, as the parts of Water was that took that place. Therefore Motion must follow in the second *Hypothesis* as in the first.

All the difference lyes in this, that the parts of Water being with the greatest ease imaginably divided, but a very inconsiderable force is required to move them ; and the parts of solid Bodies being more difficult to be divided, a far greater impulse would be required to do it : But *M. Descartes* has liberty, if he pleases, to suppose this Infinite ; and that resistance which God would find, would not be of all the parts in general, against the division of each in Particular ; a resistance we find insurmountable in Plenitude that's fluid : But would only be the resistance of each part against its own Division, which we can most distinctly conceive not to come up to invincible.

In a word, the Motion and Division of solid Bodies is possible *in Pleno*, whilst we conceive the different parts of these same Bodies push'd to-
wards

wards all parts imaginable of the Space, and so determin'd that upon one's Desertion of a place another immediately fills it: For without this Proviso, Motion is impossible even in Fluids, and with it, it is necessary though in solid Bodies.

Although, said I unto them, this Explication seems to me a true Demonstration, yet I pretend not to recommend it unto you as such. I am satisfied if it only staggers your Opinion of the certainty of the contrary Arguments, ordinarily made use of in this matter; and I question not but that after you have considered it with Attention, you will grant me more than at present I demand.

In effect my *Academicks* seem'd well enough satisfy'd with what I said; scarce above one Scruple more stuck by them proceeding from a Supposal of theirs, that in the first Instant of division you gave a *cubical* Figure to all the parts of Matter. A Circumstance that still blunted their Imagination. To this I answer'd, that would they but reflect on what I had been explaining to them, they would clearly perceive that Circumstance made no particular Difficulty; but throughly to dispossess them of all uneasiness, I assur'd them, you never had made that Supposition, as your own Words might easily convince them; that in your *Book of Principles*, you suppose no more than this, That all the parts of Matter were not *Spherical*; and that in your Discourse of *Light*, you give them all imaginable Figures: I farther shew'd them the places, and brought them to confess the little Honesty or Exactness of some Authors, who thus adapted the Exposition of your Doctrin to their Phancy, and the way that lay most advantagious
to

to attack you in. Lastly, in two or three Words I gave them your own Thoughts and Sense thereupon, which I always took to be the same with this, *viz.* That God in the first agitation and division of Matter, reduc'd it into all kind of Figures, which he forc'd and determin'd every way towards all sides of the Space : That he thereby made a liquid Body ; great Portions whereof he after took to move them circularly and make *Vortexes*, wherein the generality of the insensible parts that constitute them, turn'd round about their Centre ; that by this Motion there was made a continual change in the parts of Matter, some losing their Angles, others uniting and linking themselves to one another. That I, after you, believ'd the same thing happen'd every moment among the insensible parts of all liquid Bodies ; and thence it was that you infer'd the Existence and Distinction of your three Elements. I flatter my self *Monsieur*, you will not be much dissatisfy'd at my Answers, and that you will acknowledg that how far soever I am behind-hand with the rest of your *Disciples* in Parts and Penetration, there are but few that exceed me in the Attention you desire your Readers to bring with them in entering on your Books, and Application requisite before they pass their Judgment, and especially before they venture to oppose them or defend them.

But to persue in giving you the Account of my Conferences : This I have been mentioning had two Effects. The first was to break a little our *Peripateticks* of that mischievous Opinion, they had admitted of your Doctrin, which they had till then regarded as full of Contradictions
and

and Absurdities, absolutely incapable of Defence, and as a System that undermin'd it self. The other was, to cause two or three of the most subtil and discerning of them, to apply themselves closely to the reading and examination of your Books; whereby they have found Difficulties in earnest, that seem to me to be truly so, and upon which, as I at first observ'd to you, I was forc'd to make my Appeal to you your self. For I must confess that as Haughty as I was, upon my first Success, I am now reduc'd to such a Maze, as makes your Light and Assistance necessary to extricate me thence.

'Tis now a Fortnight that these Gentlemen have desisted to urge any thing against your Doctrin; and three or four Conferences in the *Interim* have pass'd in the explaining your Sentiments, and resolving some Questions they propos'd to me, upon several particular Passages of your Books, of which they thought, at least pretended that they thought, they did not rightly take the meaning. This was only a Stratagem they made use of to trapan me. I was well aware of that petty Conspiracy, which doubtless would have given me some disturbance, having to deal with Men of admirable Sense, had not the goodness of the Cause I manag'd, bore up my Courage and Resolution. To conclude, two Days since they brav'd it at an high rate; and promising or threatenng in a short time, to confute the greatest part of your *Metaphysicks* and your *Physicks*, they told me they would immediately fall aboard the System of your *Vortexes*: That that was to attack you in the main part; and they question'd not but

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they

they had upon that Article, wherewith to ruin your *Physicks* to all Intents and Purposes.

Notwithstanding, whereas they are as Courteously and Obliging, as Ingenuous and Judicious, and besides were well persuaded of the difficulty of their Arguments, to save me that Perplexity and Confusion, in the trouble they foresaw I should be put to, in giving the Solution, they would not oblige me to answer them on the place : But were content to give them me in Writing, that I might return my Answer at my leisure : They only read them over to me, to see if I comprehended their Sense ; and I protest to you, though I seem'd to Vapour, I was extraordinary pleas'd in my Mind, with those little Differences which they paid me : For they argu'd only from Matter of Fact and Principles drawn Word for Word out of your Books, which they turn'd one against another, and made them destroy themselves in so plausible and probable a manner, as requir'd *M. Descartes* himself, at least one better skill'd than I am, to refute them. I shall transcribe the principal things of their *Memoire*, and in their own Expression. They have given it this Title.

*Objections offered a Cartesian by
some Peripateticks, against the
general System of M. Descartes's
World.*

FIRST, they pretend to prove that the Posture and Array in which *M. Descartes* has marshal'd his Matter, or his three Elements in his *Vortexes*, thwarts and contradicts his general Rules of Motion, which he gives himself, and the Properties he attributes to every of those Elements. And thence they'l draw such Consequences as intirely overthrow his Doctrin touching the *Nature of Light*.

Secondly, they will shew that his manner of explaining *Light* is no ways consistent with (not to repeat his Position of the Elements in the *Vortexes*, but) the very disposition of his *Vortexes* amongst themselves.

Thirdly, they will prove, that by the Principles of *M. Descartes*, the *Earth*, no more than any other Planet, can be priviledg'd with a peculiar *Vortex* in the *Vortex* of the *Sun*. Which being once more Demonstrated, all *M. Descartes's Astronomy* is turn'd topsy-turvy, and the whole *O Economic* of his *World* utterly routed and destroy'd.

The first Argument.

1. We forthwith take for granted, that Master-Principle of *M. Descartes*, That every Body circularly mov'd constantly endeavours to eccentric it self, and escape from the Circle it describes.

2. From that universal Principle immediately follows this particular Consequence, that in a *Vortex*, where the Matter of the first, second and third *Element* are circularly mov'd, all three endeavour to acquire a Motion eccentric to the *Vortex*.

3. We infer yet farther, from the same Principle, another Conclusion, That in that general Attempt, made by different Bodies thus agitated and confus'd, to deviate from the Centre of their Motion, those that are most agitated and are most fit for *Motion*, those, I say, must have the advantage and ascendent over the rest, to gain the Circumference of the Circle the *Vortex* describes, and consequently to compel the less agitated, and less fit for Motion towards the Centre of the *Vortex*.

Though this Conclusion should have no visible and necessary Connection with the Principle, as indeed it has: Yet we might warrant our use of it, by producing *M. Descartes* to vouch the same thing, in several places of his Books, and particularly in his *fourth Part* of the *Book of Principles*. Where he gives the reason for the Motion of heavy Bodies towards the

of the Earth, Terrestrial Bodies are below the Air, and the Air below the Celestial Matter.

To these we only add one more that *M. Descartes* frequently repeats, especially in the *third* and *fourth Part* of *Principles*, and in the eighth Chapter of his *Treatise of Light*, viz. That the *first* and *second Element* have much more agitation, and are far more fit for Motion than the *third*, whose parts are ragged and branchy, and of a very irregular Figure.

All this suppos'd, let us agree with *M. Descartes*, that Matter having been created such as he advances, God was able to divide, and actuate it with Motion, and that he effectively has divided it and mov'd it. Let us stop now, and fix our Imagination and our Thoughts upon that great Partition of Matter, or upon that Vortex, that hath the polar Star for its Centre. Let us conceive that portion of Matter, made up of an infinite number of little insensible Parts it self turn'd round, whilst all the little Parts are also turn'd about their proper Centre.

From this Motion must arise the *three Elements*, that is, the most exquisitely subtile *dust* of the *first Element*, the *little Balls* of the *second*, and the *ramous Parts* of the *third*, all which are Parts of the same Matter differing from one another meerly by their Figure and their Bigness.

Whether the *third Element* be cotemporary with the other two, as *M. Descartes* seems in some measure to suppose in his *Treatise of Light*: Or, whether it be form'd by the Conjunction of several Parts of the *first Element* hook'd to one another, as he seems to teach in the *Book of Principles*: That Philosopher pretends, that in that

justling and concussion of Matter, when it hath lasted long enough to break the Angles of most of the agitated Parts, the Matter of the *first Element* must be posted in two principal places. First, in the whole Space of the *Vortex*, where it ought to be dispers'd, to fill exactly all the Intervals found betwixt the Balls of the *second Element*, whereof the whole Substance of the *Vortex* or the Heaven is compos'd; Secondly, at the Centre, whither it must be forc'd by the Balls of the *second Element* to descend, to constitute a Spherical and Fluid Body, which is nothing but the Star it self, that by the circular agitation of its Matter, and the struggle that Matter makes to procure its Inlargement from the Centre of its *Vortex*, thrusts the Globules of the *second Element* that is above it, to all Points imaginable, and communicating by their means that Impression to our Eyes, produces in them the sensation of *Light*.

This is the Sum of all *M. Descartes's* fine Doctrine on this Subject. But we offer to demonstrate to him, by the aforesaid Principles, which are all his own, that it is not the Matter of the *first Element*, but the *third* that ought to constitute the *Centre* of the *Vortex*; and thus the Stars must not be luminous, nor the Sun any more than they, but all must be opaque Bodies, as are the Planets, the Earth, and solid Masses compos'd of the unactive and almost motionless Parts of the third Element, entangled and link'd with one another.

The Demonstration.

When several Bodies or Parts of Matter are circularly mov'd together, those which have the least Agitation, and are least dispos'd for Motion, are the least able to make their escape from the *Centre*. And on the contrary, those that have most agitation, and are best dispos'd for Motion, are most able to make their escape, and compel the other downwards to the *Centre*. This is the third Principle I have suppos'd, after having deduced it from *M. Descartes*.

But the Matter of the *first* and *second* Element have much more agitation, and are exceedingly better dispos'd for Motion than the Matter of the third. This is the fourth Principle which *M. Descartes* constantly supposes.

Therefore the Matter of the *third* Element, not that of the *first*, ought to take up the *Centre* of the *Vortex*. Which is the Proposition to be demonstrated; and is contradictory to that of *M. Descartes*, on which he founds his whole System concerning Light. Therefore the Sun and Stars must be dark, not resplendent Bodies. We charge nothing upon him here, but what is expressly his own; and we demand at the same time by which of his Principles, not knowing what to do with the *Fragments* of the blotches of the Sun, nor what use to put them to at the *Centre*, or near the *Centre* of the *Vortex* where they are gathered and dispersed, he makes them wrest and force themselves in to the midst of the *Circumference*, as branch'd and incapable of

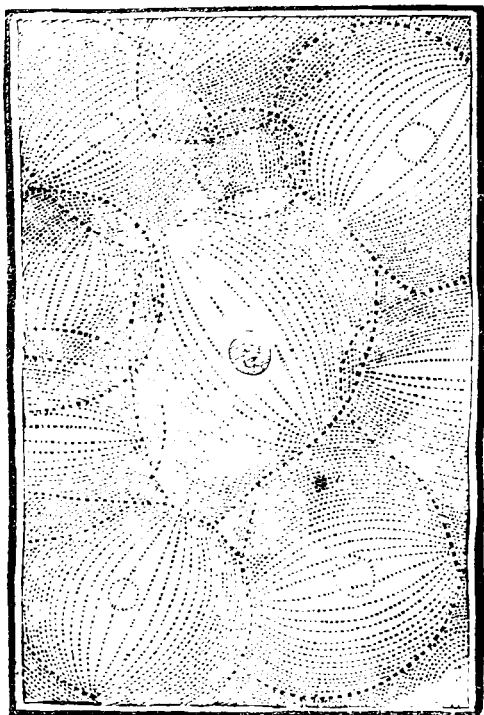
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Motion as they are; and constitute a sort of Air, which, according to him, is extended as far as the Sphere of *Mercury* or farther? How comes it to pass that the *first* or *second* Element, that are either at the Centre or near the Centre, or immediately below these broken parts, resign so patiently the right they have by Vertue of their vehement agitation and proneness unto Motion, to the place the others get possession of towards the Circumference? And if once that irregularity and disorder, so opposite to the Laws *M. Descartes* hath establisht in his World be tolerated towards the Sun; why must a Stone that near our Earth shall be cast into the Air be violently retorted towards the Centre, by the Matter of the second Element below it, under pretence that the Stone hath usurp'd a place unbecom'g its Quality, and only due to the Matter it hath displac'd, on account of its vehement Motion?

And thus it is that *M. Descartes's* Principles agree. Thus he is so very frugal as to make them serve for several purposes, even for contradictory Conclusions, with the assistance of some little Comparisons he can well enough manage, to the blinding those that read his Works but carelessly, and are commonly design'd for nothing but to disguise his *Paralogisms*, and put off his Propositions that Reason cannot justify.

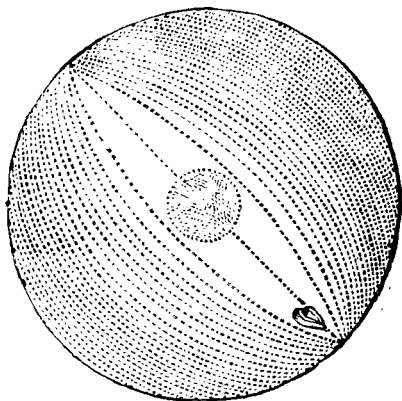
The second Argument.

In order to comprehend this Difficulty, we must suppose with *M. Descartes*, that all the fix'd Stars are not contain'd in the Circumference of the same Sphere, nor equally distant from the Centre of the visible World. That some are sunk deeper in the vast Spaces of the Firmament, others dive nearer to the Centre of the World. We must also remember that each of them have their proper *Vortex*, of which they are themselves the Centre, and that those *Vortexes* are so many different Spheres rang'd above, below, and on the sides of one another. As for Instance, we must conceive the Vortex of the Sun, in which floats our Earth, with the other Planets, as a fluid Sphere, surrounded with many others like it, which it touches in several points of its external Superficies, just as a Bowl incompass'd on every side with other Bowls touches them all in different parts of its Circumference.

S *The Vortex of the Sun.*

In the third place we must recollect *M. Descartes's* manner of explaining *Light*, which consists in that endeavour the Matter of the *first Element* makes at the Centre of the *Vortex*, to get farther from the Centre, whence, pressing on the Celestial Matter, or the second Element in all imaginable Points, that impulse and that pressure

pressure light on all the Lines that reach to the Circumference of the *Vortex*; some of which necessarily falling on our Eye, when directed towards the Star or Sun, make such a Pressure and Vibration there, as determine our Soul to that Perception which goes by the Name of *Vision*.

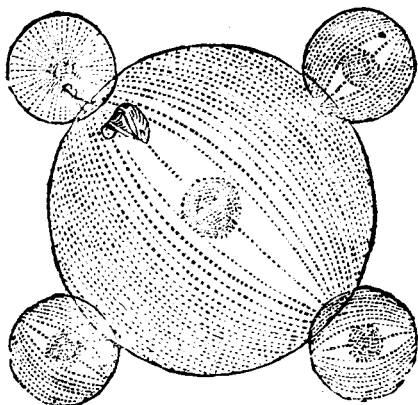


This Figure will easily explain it, where the little Points at the Centre of the Circle represent the Matter of the *first Element*, or the Body of the Star. The Lines drawn out to the Circumference, represent the Celestial Matter, whose Rays concenter in the Eye plac'd at the Circumference of the *Vortex*.

We presume to affirm, That in this Situation of the Vortexes, we who are in *that* of the *Sun* should not be able to see the *Stars*, *Monsieur Descartes's* Principles supposed.

A Voyage to the

Let us add to the preceding Figure, four other *Vortexes*, supposing them the *Vortexes* of four Stars that are nearest to that of the Sun.



Let the Eye, plac'd in the other Figure to behold the Sun, be turn'd towards one of these *Vortexes*, to behold, for Instance, the Star B. wee'l demonstrate by *M. Descartes's* Principles, that it is not possible to be seen.

The Demonstration.

The Eye can no ways obtain the sight of the *Star B*, but by means of the Rays or Lines of the Celestial Matter, push'd by that Impulse the *Star B*. causes in struggling to get from the Centre of its *Vortex*, which Impulse is communicated to the Eye, by its pressure and concussion of the
Strings

Strings of the Optick Nerve. But this is impossible, supposing the Eye placed in the *Vortex* of the *Sun*. And thus we prove it.

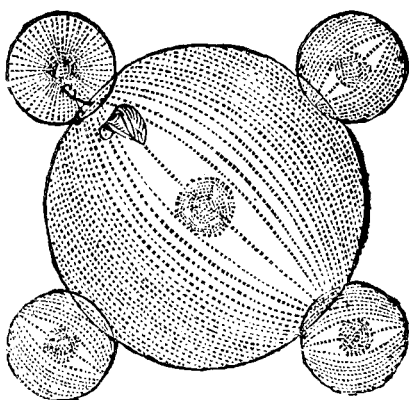
That Impulse must be communicated to the Eye by one of these two ways; either immediately by a Ray, or Line of Matter drawn from the *Vortex* of the *Star* and Terminating in the Eye; or mediately by a Line of the *Solary Vortex*, in which the Eye is plac'd, retorted on the Eye by the *Vortex* of the *Star*. As if the Line B, A. of the *Stellary Vortex*, should retort upon the Eye the Line A. C. of the *Solary Vortex*. For it is impossible to conceive the *Star* should cause any Impression on the Eye but by one of these two ways: But neither the one nor the other will serve our turn.

Not the first, because the *Vortexes*, according to *M. Descartes*, have each their circumscrib'd and separate Sphere of activity, and a Motion altogether different. Insomuch that the Lines of the one are never blended with the Lines of the other: But end severally at the Circumference of their own *Vortex*; and if once that Communication or rather Confusion should be admitted, all would speedily return, into that confus'd and disorderly Chaos, from which *M. Descartes* will have his World extracted, by the only Laws of Motion; and farther, since there is no point in the *Vortex* of the *Sun*, wherein we cannot see the *Star*, the Matter of the *Stars Vortex* must necessarily possess all the Space of the *Vortex of the Sun*; than which nothing can be more absurd.

There remains the second way, which will prove as useless as the former to *M. Descartes*, proceeding on his Principles; forasmuch as with
him

him the *Vortexes*, though unequal perhaps in Bigness, must be ever equally matcht in Power and Efficacy. For, says he, unless there was that equality betwixt them, they would infallibly destroy each other. Now that equality proceeds from this, that the *Star* of a *Vortex* moving still uniformly round, presses the Matter of its Sphere towards the Circumference, and against the neighbouring *Vortexes* precisely with so much force as the *Stars* of the other *Vortexes* press the Matter of their Sphere in opposition to it. Which is the reason, according to him, that they always maintain their Ground against each other: But from hence also we manifestly conclude, That the Matter of one *Vortex* is incapable of repelling that of another, or causing it to recoil towards the Centre, from whence it struggles and contends to move with all its force, reliev'd also with the whole *Posse* of the *Star* that pushes it. Therefore that Effort, the Matter of a *Star* makes to get farther off the Centre, can make no Impression on our Eye, so long as it is in the *Solary Vortex*; since the communication of that Impression is utterly prevented by the Matter of the *Solary Vortex*, that with all its might and main resists it, and consequently hinders that pressure on the Organ, which is the only cause of Sight. To explain our selves by a comparison much like that so often made use of by *M. Descartes*. Let us suppose a blind Man, whose Hand stirring neither one way nor other, touches the end of a Staff. Let us again suppose his Hand so capacitated and dispos'd, that for the Perception of the Staff it is not sufficient that it be immediately contiguous to it, but that there be besides that Contact,

tact, some pressure of the Staff against the Hand. Let us in the third place suppose another Hand, pushing it strongly against that of the blind Man. Lastly, let us suppose that a third Person, holding the Staff in the middle, endeavours to withhold it from the Hand of the blind Man, and that this endeavour be exactly equal to that the second Hand makes the contrary way. In this case the Staff will advance neither one way nor other, it will make no pressure on the Hand of the blind Man, and consequently, according to the first part of the Supposition, he will not be sensible of it.



Let us apply this to the Case in Dispute: We will imagine a Line of Celestial Matter reaching from the Eye to the Circumference of the *Solary Vortex*. The immediate Conjunction of that Line with the Eye is insufficient to produce
the

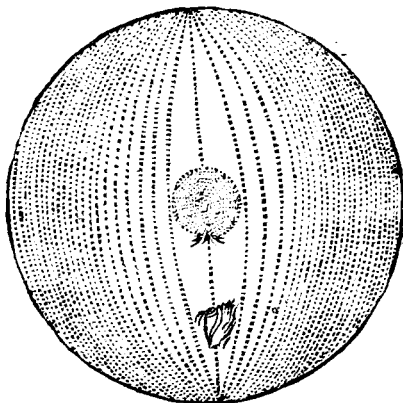
the sensation of Light, unless something more be added. That then which must be added, is an impulse and pressure of that Line against the Eye, which will determine it to see; and this is the Doctrin of *M. Descartes*. But now whence comes that pressure in the *Hypothesis* before us? It cannot proceed precisely from that Line of Celestial Matter, seeing it makes a directly contrary Attempt, to withdraw it self from the Eye towards the Circumference of the *Solar* Vortex. It must then, if at all, proceed from the Line of the neighbouring Star's Vortex, that reflects the aforesaid Line against the Eye. But this making as forcible an Attempt to get from, as that to press it on the Eye; it is plain, that Effort and Impulse can no more reach the Eye, than can the Effort of the Hand that pushes the Staff, arrive to the Hand of the blind Man; and that the Eye admits no pression from the Celestial Matter requisite to cause the Perception of Sight: Like as the blind Man's Hand receives no Impression of the Staff, requisite to excite the Sense of Feeling, or to cause the Perception of the Staff; and consequently the Eye, plac'd in the Vortex of the Sun, will be as far from seeing the Star, as the blind Man from feeling the Staff.

But for a Confirmation of all this, we must remember, that in the Principles of *Descartes*, not only what interrupts that Effort and that Pressure, but also what ever weakens or curtails one or the other, consequently frustrates the effect of the luminous Object on the Eye; and thus it is that Philosopher explains the spots of the Sun, or those defailures of Light, that appear in several parts of the Convex of that

Luminary. For, according to him, the parts of the *third* Element, hookt and ingendred with each other on the Surface of the Sun, keep the Matter of the *first* Element, of which the Sun is made, from pushing the Celestial Matter towards my Eye, with so much force as formerly: Which is the reason that the Lines of the Celestial Matter, which touch my Eye, and which we suppose extended to that Matter of the *third* Element flak'd upon the Body of the Sun, are no longer Rays of Light, that should represent to me that part of the Sun as bright as all the rest. So that the Light, which I perceive in all the Sun besides, causes me to perceive in that part of the Sun a defect of Light, which we call a Spot or Stain. Now it is evident that this Portion of Matter of the *third Element*, that only floats upon the Surface of the Sun, breaks the force, wherewith the Matter of the Sun pushes the Celestial Matter against my Eye, much less, than if a force equal to that of the Matter of the Sun stood determin'd, and fully bent against it, as it happens in this Case, where the Matter of the *Solary Vortex* withstands the Effort of the *Star*, and consequently hinders it from making any Impression on my Eye. And here let *M. Descartes* shuffle and cut, and make what stir he pleases to recover his Reader, by an Explication of *Refractions* made in the Rays of the *Star*, upon their passage through the *Vortex* of the Sun; his only Design is to lurk and secure himself in that Darkness and Obscurity with which he purposely benights the Question. Let him only tell us what he means by those Rays of the *Star* that arrive to the Earth athwart the *Solary Vortex*. But what

A Voyage to the

we have said will sufficiently evidence, how groundless and trifling will appear whatever shall be urg'd thereupon.



But if it be impossible to conceive the communication of the Effort and Impulsion of a Star, whose Vortex immediately borders on the Sun, what will become of the other Stars, whose *Vortexes* are infinitely distant from that of the Sun, and which must make a sensible impression on our Eye across a great many *Vortexes*, whose Matter is differently mov'd, and are all so many Obstacles to that Communication? Doubtless, though all we have been urging amounted not to a *Demonstration*, in respect of the Stars situate near the Sun, it would infallibly, in respect of all the other. So that instead of those infinite Stars, we see sparkling in the Firmament by night, we should not discover an hundred with the best Perspectives.

What

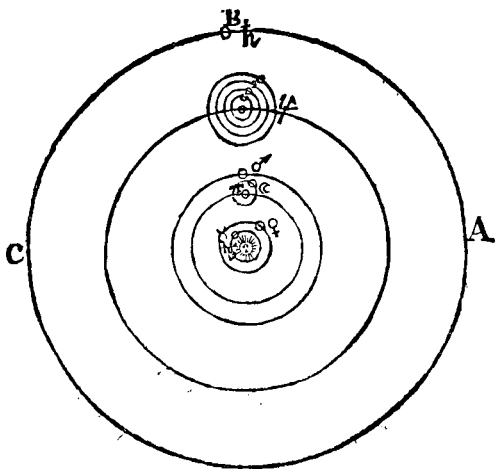
What now if we should add it were impossible to see the Sun it self? Yet this may be prov'd by the same Principles; for no more is requisite for this, than that the *Earth* should have a particular *Vortex*, whose Motion should equalize and resist that of the Celestial Matter which the *Sun* pushes towards our Eyes. But so much is true, according to *Descartes* himself; for he expressly teaches, That the *Earth* hath a particular *Vortex*, whose Matter struggles as much as possible from the Centre. That effort is contrary to the effort of the Matter of the *Solar* *Vortex* on that side which is inlightned by the *Sun*. That effort is equal to that of the Matter of the Sun: Otherwise the *Vortex* of the *Earth* would run to ruin. Therefore the *Impression* of the *Sun* cannot be communicated to our *Eye*.

What shall we say of the *Planets* and *Comets*, which are seen by the help only of the reflected Rays of the Sun, and that consequently are not so strong as if they were direct? If the *Earth's* *Vortex*, arguing on *Descartes's* Principles, is able to obstruct the latter, how much easier is it to obstruct the former, and hinders us from seeing all those Stars?

All this seem'd very difficult; and before we turn'd *Cartesians*, we had a mind to be satisfy'd thereupon. But one thing yet remains, and perhaps something better than ordinary, upon the particular *Vortex* of the *Earth*, which is Matter of a third Difficulty in us.

The third Argument.

This third Difficulty is well grounded on *M. Descartes's* Principles, and brings such weighty Consequences against the System of his *World*, as though all the rest were insignificant, would alone unravel the finest Contexture in it. He supposes the *Earth* to have a *Vortex* particular to it self in the great *Vortex* of the *Sun*. A Priviledge also he confers on *Jupiter*, but denies the *Moon*. He explains this Supposition in a plain and very familiar way, exemplifying it by those great *Whirl-pools* we sometimes see in Rivers. In the midst of these great *Whirl-pools* there are several little ones, that attend the Motion of the bigger, and are carried round their Centre, and at once whirl Chips and Straws about their own. Nothing could be better thought on for the making us understand how the *Earth* and *Jupiter*, when carried about the *Sun* by the Matter of the *Grand Solary Vortex*, at the same time cause the other *Planets* to circuit about themselves; how the *Moon* is forc'd about the *Earth*, and four little *Planets* about *Jupiter*. But as Ill-luck would have it, examining that *Hypothesis* by the *Principles* of our *Philosopher*, we found it absolutely impossible.

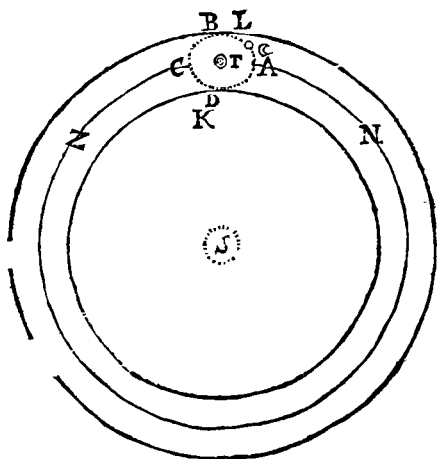


The Demonstration.

Either the particular *Vortex* attributed to the *Earth* is the same with what it had, whilst yet it was a *Star*; or else it is a new one, made since the Destruction of the other. We maintain that neither the one nor the other can be said. Therefore it can have none at all.

It cannot be that it formerly had. For 'tis *M. Descartes's* Position that a *Star* degenerates into a *Planet* or a *Comet*, by the loss only of its *Vortex*. According to him, a *Vortex* is preserv'd meerly by its Matter, having as much Motion and Resistance as the Matter of those about it; and its Matter loses that equality of Motion and Resistance, when the *Star* at the Centre can no longer communicate so much by

reason of the Scum that covers it. Now the *Earth* is a *Star* not only covered with a Scum or Dross, but with several thick Crusts of an unaccountable Depth. So that it was incapable of preserving its *Vortex*, which must have been quite and clean destroy'd, and swallow'd up (as *M. Descartes's* Latin Word expresses it) by that of the Sun. Let us see then if the *Earth* was able to procure a new one since its removal near the Sun.



S the Sun. **T** the Earth. **A B C D** the little *Vortex* of the Earth. **N A C Z** the great Orb wherein the Earth is carried round the Sun.

M. Descartes takes this same course to communicate his Thoughts: He makes this Figure which represents the *Vortex* of the Sun, in which the Centre **S** is the Sun it self. The little Circle or *Ellipsis* design'd with **C. D. B. A.** represents the
lit-

little oval Vortex of the Earth which carries the Moon about the Earth T. The Circle N. A. C. Z. is that which the Earth describes in a twelve Months time about the Sun. The Circle B. and the Circle D. bound and terminate the least Diameter of the *oval Circle* of the *Earth*. Moreover he supposes that though the *Planets* and *Earth* are carried about the *Sun* by the Celestial Matter, yet that Matter moves swifter than the *Planets*, as the Water of a River runs swifter than the Boats that glide along its Current.

From this Supposition he concludes, That the Celestial Matter ought not only to give the *Planets* a turn about the *Sun*, but also about their several Centres, and ought to form it self into little *Heavens* round about them, that shall exactly mimick the motions of the greater.

He makes this second Conclusion, That if *two Planets* chance to meet in the same Circle, *one* of which is little and consequently fleetier than the other, the least upon its Approach ought to fall in with the petty Heaven of the bigger and dance along with it an eternal round. And this (*says he*) is the fortune of the *Moon* in reference to the *Earth*.

Whereas now almost all the *Physicks* of *M. Descartes* rowl upon this particular *Vortex* of the *Earth*, and since this is, as a Man may say, the principal *Wheel* in his whole *Machine*, he had need so to strengthen and establish it, as to render it uncontroverted, and to suppose not the least thing there in danger to be call'd in Question, and that cannot be made good by most solid Reason and Argument: Let us see then how it answers expectation.

He explains his first Supposition, which is the main Support of all the rest, *viz.* That the Cele-

stial Matter which carries the *Planet* round the *Sun* moves far swifter than the *Planet*. He explains, *I say*, this Supposition by the *Simily* of a Boat falling down a River, which goes on much slower than the Water that flows under it: A plausible comparifon at first fight, but that has nothing folid in it: Since the reason of the Boats tardy Motion in refpect of the Water that forces it along, is wanting in the Planet, steer'd in the midft of the Celestial Matter. The reason is this, that part of the Boat, which ftands above the Water, meets with the oppofition of the Air, which bends its courfe differently from the Water, and confequently refifts the Motion wherewith the Water influences the Boat. And the greater that refiftance is, as in a contrary Wind, the slower is the Motion of the Boat, in comparifon with that of the Water. And the lefs the refiftance is, as when the Wind ftands fair, the fwifter is the motion of the Boat: But this is not to be found in the Planet, plung'd in the midft of the Celestial Matter: It preferves intirely all that Motion the Celestial Matter can imprefs upon it, free from all external Oppofition. Befides, being of it felf indifferent to Motion, or to reft, to fuch or fuch a degree of Motion, to this or that Determination, it offers no refiftance, as *M. Descartes* himfelf fpeaks to the Matter of the *Heaven*.

He gives next the reason of that inequality of Motion of the Celestial Matter, and of the *Planet* carried by it; which is (*fays he*) that though fuch little Bodies, as are the infenfible parts of the Celestial Matter, confpiring all together to act confederately againft a great one, may be as prevalent as *that*; notwithstanding they can never

ver move it in all respects so swift, as they are mov'd themselves; 'cause though they are united in some of their Motions which they communicate unto it, they infallibly disagree in others which they cannot communicate. Either we are mistaken, or this is a meer *Gipsy-talk*, at least in relation to the Business we are upon; and one of these Slights of Hand, we have observ'd *M. Descartes* from time to time to make use of, designedly to blind his Reader, and to conceal from him the Lameness and Imperfection of a Conclusion necessary to his System; which he is well aware of, but is unwilling any one else should see. 'Tis but bringing some pretty sort of Comparison that may prepare the Mind, and sooth and tame (if we may so speak) the Imagination of his Reader, though commonly it never comes up to the stress of the Difficulty; and then clapping on it for a Confirmation some abstracted Reason, that few either can or will take pains to understand, and the Business is done; fore-seeing that being half-gain'd already by the Comparison, they will easily surrender themselves to the least appearance of Truth, which he shall give them a glimpse of in his reason, that often is a meer fallacy at bottom. And as for this before us: What matters it, though the little Bodies, that drive on a great one, should have several Motions? What tho' they do not communicate all these several Motions, provided they have still Strength enough to force it on, that the Body makes no resistance, that they all combine, as we suppose, with *M. Descartes*, to communicate the Motion requisite, and that we conceive them all pressing on its Surface, so as to push it towards the place where
they

they are push'd themselves? For certainly in all these Circumstances, we must conceive it going at as great a rate as they.

And yet from a Principle so weakly establish'd as this, he concludes, That the Celestial Matter ought to move the Planet round its own Centre, and constitute a little Heaven about it, to turn at the same time as the great one. But not now to controvert that Supposition, as poorly prov'd as it is, let us pursue him in his reasoning; and to see if it be good, let us imagine the Earth T. as it were suspended in a Void, and let us fancy a Circle of Celestial Matter as thick as the Diameter of the Earth, that violently rushing like a Torrent, carries it suddenly away: But as we suppose this Torrent to be swifter than the Earth, methinks without having puzzled our Heads much with the Rules of the Determinations of Motion, we might readily conceive it, upon its violent dashing against the Earth, to be immediately divided in two Parts or Arms, whereof one should run above, the other below it; and whether we conceive this Stream of an equal, or a greater depth, than the Diameter of the Earth, it would diffuse it self round its Surface, above, below, and on every side. Whence it follows, that it would impress no Motion on it about its own Centre, but would moreover deprive it of that Motion if it had one; all the Lines of the Torrent counterpoizing one another, and resisting the Determinations they should meet with in the Earth contrary to their own.

Here ought to be the foregoing Figure, p. 278.

Now methinks in explaining these things thus, it is not a bare *Similitude* that we offer, but a
 per-

perfect Idea of that which ought to happen in the Motion of the Celestial Matter, wherein the *Earth* is carried round the *Sun*,

Wherefore then will *Descartes* have the Celestial Matter that carries the *Earth*, and insists against its Superficies towards A, making greater haste than the *Earth*, bend its whole Current from A to B, not suffering half of it to run from A to D? For 'tis impossible for things to be, or to be conceiv'd otherwise. But if it ought to fall out thus, as questionless it ought, the *Earth* no longer has a *Vortex*; since the Matter flowing from A to D, prevents that which flows from A to B from returning by C. D. Nothing can be more plain and evident than this Demonstration.

But let us suppose *per impossibile*, that the Matter when arriv'd at A, should entirely make a double, to run towards B. Would it make a *Vortex*? No by no means. For advancing from B. to C. and arriving at C. it ought to deviate from the Centre of its Motion, and continue its Progress towards Z. The Reason given for it in the Principles of *Descartes*, is, That this is the very place in all the little Circle it had begun to describe, where it finds least resistance. First, because the Matter it meets in that same Point is already on its Motion towards Z. and freely resigns its place. Secondly, because that which is below it, that is to say betwixt D. and C. resists it, and hinders its Descent, being more weighty, according to *M. Descartes*. And thirdly, because the Circle C Z. is its natural place, according to the same *Philosopher*. It will flow therefore more towards Z. than D. and consequently make no *Vortex*.

But let us farther suppose a *Vortex* made, and the Matter continuing its round, from A. to B.
from

from B. to C. and from C. to A. would this *Vortex* last? Not at all. For we must suppose one of these three things: Either that it is stronger than the *Vortex* of the *Sun*, that is, its Matter has a stronger bent and tendency from its Centre, than the Matter of the *Sun's Vortex* has from his, or that it is weaker; or that they both are equal. If it is weaker it must be destroy'd by the *Vortex* of the *Sun*. If stronger it must ruin his. It remains then that its Strength be equal with the *Suns*: And *M. Descartes* must unavoidably suppose it: But how will he prove it to us, I say not by a Demonstration (we will not put him on so hard a Task) but how will he bring the least Conjecture to give this Supposition a pretence to probability? Cannot we on the other side produce several Reasons to destroy this Supposition? Cannot we shew, in case the *Vortex* of the *Earth* was as strong as that of the *Sun*, and the little *Globules* wrested themselves as forcibly from the Centre of their *Vortex*, that the *Earth* it self would appear a *Sun*, and so would *Jupiter* to boot? Since that which makes the Centre of a *Vortex* to us seem luminous, is only the vehement Motion of its Matter? Though *Descartes* says the Centre would be drain'd of all its Matter, might not we however, imitating the Stile of that *Philosopher*, compare the *Vortex* of the *Sun* quite from S. to D. to a vast *Ocean*, whose boystrous Tide swelling against the Stream of a little *River*, by which we illustrate the *Vortex* of the *Earth*, obliges it to fall back again, and adds a Determination to its Waters quite contrary to its former? But with *Descartes* for a *Vortex* to be destroy'd, and for the Matter of the *Vortex* to take the Motion and Determination of another, is one and the

the same thing. Let *M. Descartes* but prove his *Vortex* of the *Earth* with the least part of the reason we have brought against it, or by as natural a Comparison as we have us'd to demonstrate it a meer *Chimera*, and he need not fear to stand the Test, Sallies and Assaults, of the best of his Adversaries.

What now if we should fall to examining the Difficulties that may be gather'd from the little *Planet* in particular, I mean the *Moon* consider'd in the petty *Vortex* of the *Earth*? Should we probably find less Matter of Objection?

Here ought to be the foregoing Figure, p. 278.

We advance no more than this, that supposing the *Moon* when arriv'd at A. was carried on towards B. she ought to deviate from her *Vortex* in C. For first, That's the external Superficies of the little *Vortex*, as *M. Descartes* will not deny. Secondly, She Attempts to leave her *Vortex*, by his grand Principle of circular Motion. He pretends she cannot make her escape towards B. because the Matter of the *Solary Vortex* in that place is more light and active, and repels her towards the Centre. Nor can she, according to him, make downwards towards K. for that, says he, the Celestial Matter on that side is heavier than the *Moon*, and equally opposes her Descent: But we say she will get out of her Circle at C. and continue her Progress toward Z. For being in C. she finds no resistance, since the Matter of C. Z. is that of her own Circle, which is already on its March, and willing to give up its place. Besides, being in that place, she actually makes an Attempt to get rid of the Centre
of

of her Motion, that is to say, of T. she therefore will accomplish her escape, since there is no Obstacle in that as is found in the other Points; and being cast out of her Circle, she will be oblig'd to continue her Journey towards Z. by the Matter plac'd above, and below her in the Circle, for the self-same Reasons as are given by *M. Descartes*.

Yet in spite of all this, it cannot be deny'd, but that *M. Descartes* had good reason to order his Suppositions of these things as he did. His System was too far advanc'd to think of stopping at so small an Obstacle as a *Moon*. All the *Grandee-Planets* were plac'd severally, according to the Quality and Preeminence their Solidity had given them. *Madam Luna* too was seated in the Circle of the *Earth*. There was only one little Inconvenience in the case, which was, that she must necessarily take a turn about the *Earth*, and consequently must be sometimes in the *Earth*'s own Circle, and sometimes out of it. She must therefore have a little *Vortex* of her own. And this is the best, as also only reason that can be given for his making one on purpose: And setting this aside, the Laws of *Statics* alone could never have prevail'd with his Frugality, to put it self to that extraordinary Expense.

We had not insisted so long upon this Article, had not we consider'd it as the capital Point in the *Cartesian System*; and as the Foundation of that prodigious Edifice, which has been taken in our days by so many, for the compleatest Mastery of a Human Mind. Let us see the Importance of our *Demonstration* by the *Corollaries* drawn from it.

Consequences of the preceding Demonstration.

The first Consequence belongs to *Astronomy* and the *Phenomena* of the *Planets*. For first of all, there being no such thing as a *Vortex*, the Moon turns no longer round the Earth, since, according to *M. Descartes*, the only reason of her circuiting is the *Vortex* that carries her aloft. Secondly the four *Satellites* of *Jupiter*, must be cashier'd of their Dignity and Employment, which they only enjoy on account of the continual *Centry* they keep about him, and that by means of a particular *Vortex* attributed to that Planet, as well as to the *Earth*, in the grand *Vortex* of the *Sun*. For all that we have said of the *Vortex* of the *Earth* and of the *Moon*, ought to be apply'd to *Jupiter* and his *garde du Corps*.

These two Particulars in *Astronomy* are considerable enough to assure us that the *World* of *M. Descartes* is not that of Gods own making, which we live in, but of a very different Architecture and Contrivance.

The second Consequence respects almost all the principal *Phenomena's* of the lower World in general, whereof wee'l only concern our selves with the most considerable and easiest to be understood. 'Tis by the means only of the *Vortex* of the *Earth*, that the *Cartesians*, following their *Master*, explain the *gravity* of Bodies, and account for the Motion which they have towards the *Centre* of the *Earth*. For to instance, say they, when you cast a Stone up in the Air, it forces below it a Mass of the *second Element*, and Air equal to its bulk: But that same Mass has a far
greater

greater agitation, and is better dispos'd for Motion, and consequently has more power to spring fromward the Centre of its *Vortex* than the Stone that scarce contains any thing but the Matter of the *third Element*; and therefore must be compell'd by the Matter of the *second*, to descend towards the Centre of the *Vortex*, which is to say, the Centre of the *Earth*. We may truly say then, that without a *Vortex* heavy Bodies would not fall downwards, on the contrary they would naturally fly upwards, and thus we should see Miracles and Wonders.

According to the new *System*, the *Sun* as far out of Gun-shot of the *Earth* as he is, could not warrant his own Security, in case there should be a People that inrag'd at the heat and scorching of his Rays, should sometime joyn to give him an innumerable flight of Arrows. For these Arrows shot from the *Earth*, against the *Sun*, would fall in the circumference of his *Vortex*, and in the midst of the Matter of the *second Element*, which struggling all it can to get farther from the Centre of its Motion, would constrain the Bodies less capable of Motion than it self, to descend towards the Centre, that is to say, the *Sun*. Now these Arrows would be Bodies far less capable of Motion than the Matter of the second Element, therefore it would constrain them to fall towards the *Sun*: Undoubtedly a very surprizing thing. And now we may easily give a reason for the Experiment that *Father Mersennus* formerly assur'd *M. Descartes* he had made; that in discharging a Musquet perpendicularly towards the *Zenith*, the Bullet never came down again; for it must have infallibly been carried to the *Sun*.

According to this System, when we have a mind to make a *Voyage*, I do not say to the *Globe* of the *Moon* as did *Cyrano de Bergerac*, but to the *Sun* it self, it will be the easiest thing to be accomplish'd of a thousand. We need but turn our Head perpendicularly towards the *Sun*, then give a little Spring to put our selves in Motion, and to make room for the Matter of the *Solary Vortex*, that would come bounce against the *Earth*, to give our Heels a hoise, and this is all ; For, according to the Principles of *Descartes*, it would give us such a flirt, as in a trice would dart us to that *Luminary*. In short, *heavy Bodies* would no longer make towards the *Earth*, but all would be upon the gallop to the *Sun*.

What shall we say of the *Flux* and *Reflux* of the *Sea* ; which is one of the choisest places in all *M. Descartes* Philosophy, and on which account there's no one but ought to lament the Misfortune of the *Vortex*? For by the assistance of that *Vortex*, *M. Descartes* and *M. Robault* speak Marvels upon that insearchable *Phenomenon* of Nature. Which not only depends upon the *Vortex* it self, but upon the very *Figure* of it, which was made *oval* on purpose, and singularly for it, though probably it was not at first in the intention of the *Philosopher*. For never did *Tragick Poet* better and more artificially prepare the *Incidents* of his Piece, than *M. Descartes* has contriv'd his *Conclusions*. It would surprize one to see, in his deducing them, that one word, which he let fall careles by the way, and one would think without Design, should have been big with such an Infinity of Delicate Consequences. A Man wonders in the third part of his Principles, to see the figure of that *Vortex*,
 U which

which is no better grounded than the Vortex is it self: But when in the fourth he sees the necessity *M. Descartes* had of it, to explain the *Flux* and *Reflux* of the Sea, he cannot choose but commend his Foresight and Precaution. Not but that, for all these pretty and specious Explanations of the Phenomena of the Flux and Reflux of the Sea, the *Cartesian System* may be demonstrated false in that very Particular. We are convinc'd of this by those Reflections and Observations we have drawn from the best *Mathematicians* since *M. Descartes's* time. They demonstrate by the Observations of the Distances of the *Moon*, determin'd by her apparent Diameters, that that *Planet* is as remote in many of her *Conjunctions* and *Oppositions*, as in some of her *Quadratures*, and as near in some of her *Quadratures*, as in several *Conjunctions* and *Oppositions*. Hence it is false that the *Apogy* of the *Moon* is always in her *Quadratures*, and the *Perigy* in her *Conjunctions* and *Oppositions*. Wherefore it cannot be suppos'd that the *Moon* being in *Conjunction* and *Opposition*, is always in the little Diameter of the *Elliptick Vortex*, and in her *Quadratures* always in the great one.

And yet it is upon this only Supposition that *M. Descartes* explains, and can explain, the inequality of the Tides in the *Conjunctions* and *Oppositions*, and in the *Quadratures*, as also of those we see in the *Equinoxes* and *Solstices*.

Again, if when the *Moon* pass'd our *Meridian*, the pressure of the Air was remarkably so much stronger, than in an other Hour of the Day, it would be perceivable by the ordinary Experiments of *Torricellus* his Tube. Yet this difference has never been observ'd, though it must be
very

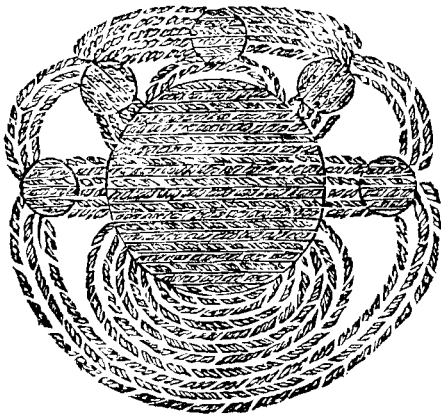
very great: We could still give many other weighty Reasons against this System: But let it be how it will, take away its *Vortex*, and the *Flux* and *Reflux* must needs follow it.

Lastly, according to *M. Descartes* it is the Celestial Matter of this *Vortex*, that having more Motion than is necessary to turn in twenty four Hours time about the *Earth*, employs the remainder to diffuse it self all manner of ways, and together with the Matter of the *third* and *first* Element causes that great variety of Effects and Bodies which we so much wonder at. So the *Vortex* being ruin'd, all goes to Wreck and Confusion, and returns to its Native *Chaos*. Wherefore it makes not only for the glory of *M. Descartes*, but for the Interest of all Mankind to save this *Vortex*. For what remains, we protest we should be wonderful glad to see the Solution of the Difficulties we have propos'd against this and the other Points, upon which we shall resign our selves intire and sincere *Profelytes* to *Cartesianism*

But in answering us let no one think to put upon us, nor quote a place in *M. Descartes*, to convince us he has not contradicted it in another; when 'tis a plain and notorious Case. That Wheedle might take with those that have but perfunctorily read his Works, but must shew them the Contradiction in a clearer Light, that shall take pains to compare the opposite places. We farther desire succinct and neater Answers, than the generality of those himself hath formerly given to those many Objections, propos'd against his *Metaphysics*. Those very Answers raise in our Minds more Scruples than they cure: And yet because they have been

Printed, set off and tinsell'd with High-strain'd Praises of the Author, because he gives them a Magisterial and usually a disdainful Air, and we never see any Replies affix'd to them, many are habituated to reverence them as *second* Oracles, wherewith he hath confirm'd and explain'd those *former* of his own pronouncing. We shall not be such tame Asses, as to be impos'd on by *M. Descartes's* Reputation and Authority, no more than we would be Vassals to the esteem we have for some of his *Disciples*. We praise and highly approve the Advice he gives those who are on the Inquest after Truth, to beware of Prejudices, and shall put in Practice. These, *Monsieur*, are the chiefest of the things contain'd in my *Peripatetick Memoir*. They added some few others by word of Mouth, as for Instance; That you would have been most horribly pester'd if any one would have track'd you step by step, in the *fourth Part of your Book of Principles*, especially from *Number 32. to 45.* where you are so particular, in posturing and disposing those parts of the *third Element*, of which you form your *Earth*: That there were many things there unsatisfactory to the Mind, and that there was not a Page wherein it might not be reasonably again and again demanded, why such a thing ought to be rather so than otherwise, without your being able to give a tolerable Reason for it: That they believ'd that piece of your *Physicks* was one of those that had most contributed to make your Philosophy pass with many for a perfect Fable, ill-digested and not well hung together: And that your Adversaries, without troubling themselves to refute the Propositions that you make there, the Discussion where-

whereof must needs be very tedious, had no more to do, than to refer your Readers to the place, to make them as ill-satisfied with you as can be wish'd.



They proceeded farther to say, you us'd to attribute *Properties* to your Elements, which you was sure to take away again when they were not for your purpose. They gave me an Instance in the Matter of the *first Element* : You attribute as a Property to that Matter a great facility of division and readinesſ to change its Figure, ſo as eaſily to inſinuate its ſelf in every place, and fill all ſort of Space whatever. But when 'tis brought for the Explication of the Nature of the Loadſtone, that Propriety growing diſadvantagious, *Deſcartes* thinks fit to change it for a contrary. There is occaſion for a *little Fortes* of chamfer'd Matter round the *Earth*, and about each particular Loadſtone, to give a Reason for

Part 3.
princip.

the Qualities of that miraculous Stone. These *chamfer'd* parts belong to the *first Element*. It formerly was nothing to them to accommodate themselves with the Figure of a *Skrew*, to pass and repass betwixt the Globules of the second Element. And now in issuing from the *Earth*, or from a *Loadstone*, the parts of Air are able to detain them. Instead of breaking and proportioning themselves to the Figure of the Parts of Air, and second Element mingled with it, they flock and settle in heaps about the *Earth* and about the *Loadstone*, where they constitute a *Vortex*. Those that enter by the Southern Pole are incapable of passing by the Northern, since their Figure can no longer be adapted to that Passage; and they farther demanded, upon that occasion, how it was possible those Snail-work'd Parts, confin'd and stopt thus in a definite Space, having an intricate and confus'd Motion, one amongst another, approaching the *Pole* of the *Earth*, or *Magnet* that was proportion'd to them, could so conveniently turn themselves an end, and present so cleverly their Point against the Pores, in order to their entrance in those Bodies. They pretended the contrary was more likely, and that generally the parts would present themselves across, and thereby make a Confusion capable of stopping all the rest, and damming up the Pores of the *Earth* and *Magnet*, so as to frustrate all those admirable Effects we see there. They advanc'd one *Paradox* more, which was a good Humour enough. Hitherto, said they, the most rational Philosophers have acknowledg'd, that no Physical Argument could be brought against *Copernicus*, to prove the *Earth* was not turn'd about its Centre. *Par M. Descartes*

cartes who sides with that *Astronomer* in his *Hypothesis*, has furnish'd us with a very conclusive one against that Motion: His topping Principle is, That every Body circularly mov'd, attempts to wheel off the Centre of its Motion: This Principle is true: He thence concludes, that the *Earth* turning on its *Axle*, would fly in Pieces, unless the Bodies, of which it is compos'd, were closely press'd, and squeez'd against one another by the Matter of the *second Element*. This Consequence is moreover evident in his System: But now let us see if that pressure of the Matter of the second Element is strong enough to overpower the Effort which the Parts of the Earth make to disengage themselves and get further from their Centre. This difficulty, said they, falls only on *M. Descartes*: For the School-Opinion is so far from owning such a Propensity in the parts of the Earth, to deviate from the Centre, as to suppose a quality and inclination that naturally buckles them unto it. Now upon comparing the pressure of Terrestrial Bodies one against another, by the Matter of the second Element, with the Effort Terrestrial Bodies make to get far off the Centre, the Effort must surmount the pressure: For the Effort is as great as the Motion that causes it, and the Motion is very great indeed, that can carry the Earth several Leagues each Minute; and on the contrary, Experience shews there needs but a very little Effort for the conquering the pressure, since no greater is requisite, than that a Child of four years old imploy in Walking, to lift his Foot and separate it from the Ground, whereto the pressure of the second Element did fasten it. Wherefore it seems to be reasonably concluded,

That the Earth turns not on its Axis, since if it did, we should all be hurl'd in the Air, pursuant to *M. Descartes's* Principle, which yet at bottom is true in sound Philosophy. Thus *this* System affords an excellent Argument against *that* of *Copernicus*.

They yet farther observ'd to me some peculiar Places and Points of your System, of the greatest Importance, which you advance, as they pretend, not only stript and naked of all Proof, but against all Reason in the World; they particularly intreated me to read considerately and without prepossession, the *second Number* of the *fourth Part* of your *Book of Principles*, where having explain'd how the *Vortex* of the *Earth* was destroy'd, and how there grew round that cak'd and crufted *Star*, a spacious *Fleece* of Air, you not only plunge it a great depth in the *Solar* *Vortex*, but also make that Sphere of Air keep pace, and wait upon it thither, and ever incompass it as it still descends. They pretend that Supposition which you throw in *Gratts*, and without all Confirmation, is inconceivable; and yet if it be false, it were impossible at present to have Air about our Earth: It is inconceivable, say they: For, according to *M. Descartes*, the Air is nothing but an heap of the Parts of the *third Element*, exceeding small, and very loose and disunited from each other, and extraordinary obsequious to the Motions impress'd on them by the Globules of the second Element, in which they swim. But this being so, how comes it to pass the *Earth*, traversing those immense Spaces quite from its setting out, at the brink of the *Solar* *Vortex*, to the place in which it is, should still so preserve all the *Air* about it?

How

How by the *Principles* of that *Philosopher* could that Mass of Air, being far less solid than the Mass of *Earth*, have the same Motion, the same Determination, and same Swiftneſs as the *Earth*? How chance thoſe little Parts ſo looſe and independent of each other, and ſo obedient to the Motions of the Celeſtial Matter, have not been diſpers'd by the rapidneſs of that Matter, which they ſtemm'd, as the Duſt is ſcatter'd by the Wind? But added they, how is this Maſs of Air at preſent driven along with the Earth by the Celeſtial Matter? How has it all the ſame Motions? Is it againſt the Body of the Earth, or againſt the Globe of Air the Celeſtial Matter preſſes, to give both one and the other a Diurnal and an Annual Motion? Would not a *Copernical Carteſian* be hard put to't to unperplex himſelf of this Affair?

I omit, *Monſieur*, many other Difficulties whoſe Solution probably I may find in the Answers your Goodneſs will, I hope, vouchſafe the others I have already noted in this Letter. But for what remains, I deſire you to take the earneſtneſs wherewith I write to you, as an effect of that paſſionate Love you have inſpir'd me with, of Truth, and eſpecially to put a favourable Conſtruction on my meaning. I have only tranſcrib'd your *Adverſaries Memoire* in their own proper Terms and Language, and I preſum'd the reſpect I ow'd you, could not warrant my concealing or diſſembling their inſulting way of arguing. Which will ſerve to let you know how much it is for my Intereſt, and the Honour of our Sect, not to ſuffer them to triumph long.

The great and important Business, the *production* of a *new World* at present finds you, joyn'd to the indifference you have always had, and still have more than ever, for the Opinions and Thoughts of Men, might reasonably make you neglect and despise these mean and trifling Things. But those extraordinary Instances you have given me of your Favour, encourage me to hope you will have some Consideration of my Honour, and will not deny me your Hand to raise me from the Ground, where I must own my self a little foil'd and disheartned. I desir'd the *Reverend Father Mersennus* to imploy his Credit with you, to obtain this Favour, and at once to assure you, as I here do, with all the Submission and respect I am capable of, that I am with all my Heart and Soul,

MONSIEUR,

Your most humble, and most
obedient Servant, and most
zealous Disciple.

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