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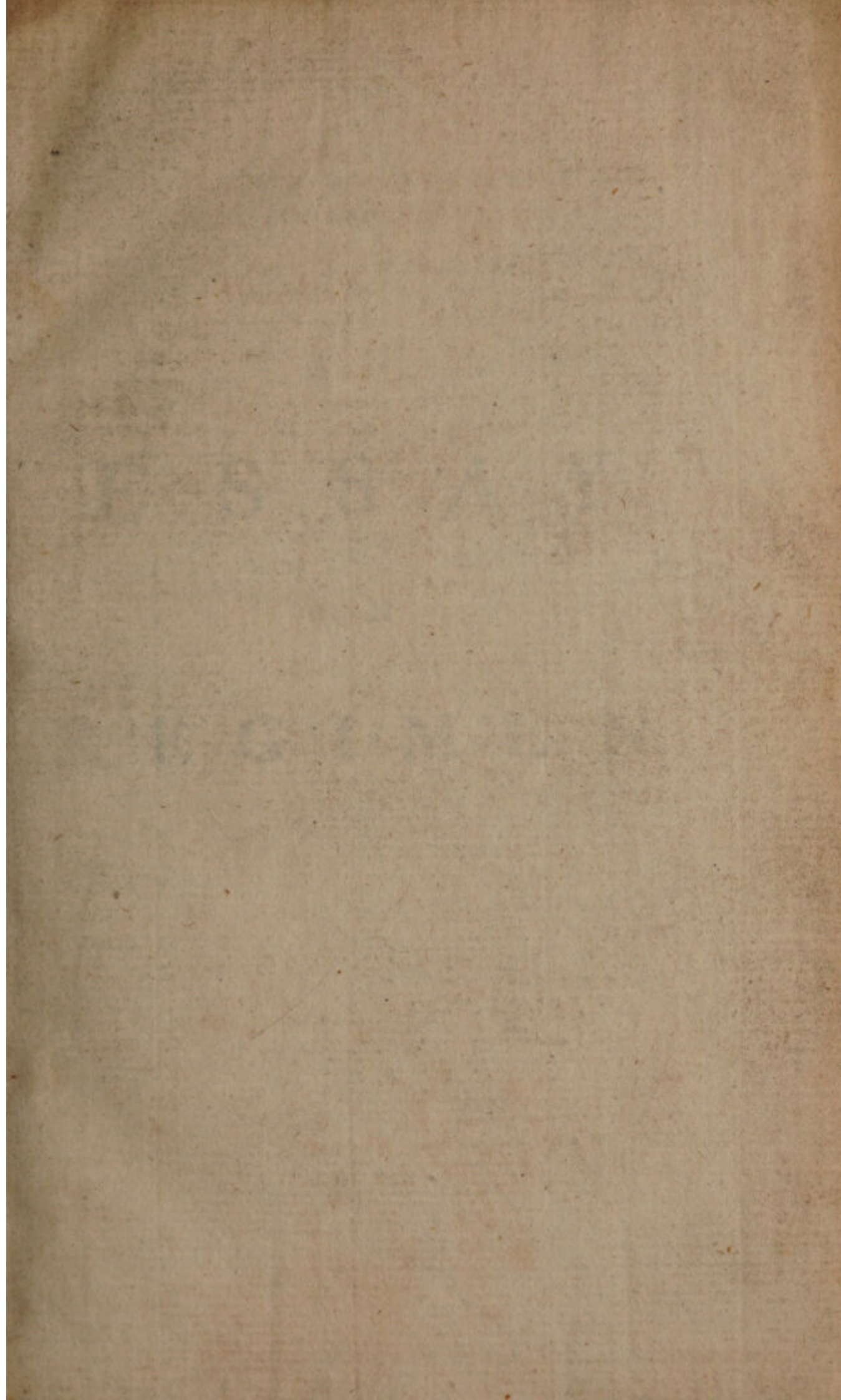
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O N
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O F
PHILOSOPHICAL MEDICINE,
And point out
Some of its MORAL CONSEQUENCES.

By GEORGE CHEYNE, M. D.
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Felix, qui potuit rerum cognoscere causas. VIRG.
Inque domus Superûm scandere cura fuit. OVID.
1 Cor. xiii. 12. Βλέπομεν γὰρ ἅπτι δι' ἐσόπτρου ἐν αἰνίγματι.

The THIRD EDITION.

L O N D O N :

Printed for DAN. BROWNE, without Temple-Bar;
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T H E
P R E F A C E.

I. **T**H E following Essay was written to instruct all sober and serious Persons, how to preserve, or regain their Health; but chiefly to direct and relieve my Fellow-sufferers, the Scorbutic, Gouty, Consumptive, or Nervous *Valetudinarian-low-livers*; to make them pass their Lives the most comfortably, the Degree of their Distempers, the Time of Life, the Nature of Things, and the secret Orders of Providence, will permit. And since they must be deprived, in some Degree, of the grosser sensual Pleasures; since all sentient and intelligent Beings are made for Happiness, will by mere Instinct, seek it some-how, and some-where; since their necessary Low-living will naturally

b

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turally (in time at least) make them high-spirited, and their intellectual Organs more acute, penetrating, and delicate; I have endeavour'd, by the following Discourses, to supply them with some suitable Entertainments and Amusements, such as I have often agreeably diverted my leisure Hours with.

2. True Philosophy is the Science of living the most happily, through the whole Period of our Existence, the Nature of things will permit; Phyfic is but one Branch of this Philosophy, and regards but one part of our Composition, and but for a small Period of our Duration. True Philosophy takes in the whole Extent of our Being, from its most distant Beginning, to its most advanced Stages, possible or conceiveable. True Phyfic is that only which directs how the Body may be preserved the most healthful, the intellectual Organs depending on the Body the most acute, the Senses the most perfect, and the Limbs the most active;

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active; not for a while only, and by Fits and Starts, but uniformly, as long as they were made to last, and as the original Frame and Texture will permit: Any thing less than this, is but as a Part to the Whole; an imperfect and unfinish'd Sketch of such a Philosophy, and such a Physic, their Theory and Principles, was intended by the following Essay and Discourses.

3. *They were composed at different Times, and on different Occasions; but one general Scheme, and one manner of free Philosophizing, and easy Conjecturing, runs through them all; one, to wit, where the fundamental Truth, or Proposition in general, is suppos'd either allow'd, reveal'd, or already demonstrated. But the Why? the final Causes, the moral Consequences, and the particular Detail, is only here conjectured about, from probable or philosophic Principles. This necessarily makes them more loose, unguarded, and immethodical, and the*

b 2

same

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same things to be often repeated. But I had neither Leisure, Relish, nor Strength of Application, to remedy these Faults; it would have cost me more Trouble than the first Composure. All I could obtain of myself, was to make a short, more distinct Abstract of the whole, and join a few Explications, to prevent Cavil, and all Mistakes not wilful and disingenuous, if possible.

4. *I am very sensible, by this Work, I shall make myself obnoxious to two very different kinds of Men, the Stiff, Rigid, and Precise; and the Licentious, Unguarded, Spurious, Free-Thinkers. The first, very probably, will censure my Conjectures and Sentiments, as dangerous and presumptuous, and myself, as being wise above what is written, and arrogantly prying into the Secrets of infinit Wisdom. It is very possible I may have been faulty, in this particular. I am sensible, that some even undoubted Truths, that may hurt the Weak, ought to be concealed,*
or

The P R E F A C E. V

or enjoy'd only in secret; the same Degrees of Light not being equally luminous and perceptive to all Eyes. But since old Men, and Valetudinarians especially, become, as it were, Children a second time, and, in their second Childhood, those must have their Rattles as well as these; I thought it safer, as I am sure it is much more entertaining, to play with Ideas, philosophic Conjectures, and such Amusements, how weakly soever founded, as tend to make Virtue and its Source amiable, justify the Conduct of Providence, and mend and rejoice the Heart without hurting the Head, than to dwell on the dark Side of Things, that lead to Pyrrhonism, Fatalism, Infidelity, and Despair. If I thought I had advanced any thing derogatory from the Amiableness of infinit Perfection, contrary to the Doctrine of the earliest and purest Times of Christianity, contradictory to the Analogy of Faith, and the Form of sound Words, I had committed these Sheets to the Flames, with the Hand of their Author,

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before I had published them. But, on the contrary, I hoped they might agreeably entertain my Valetudinarian, who being placed by his low Health, in the middle State, between both Worlds, the old and the new, must unavoidably, at some times, figure to himself some sort of a Map of the next World. I was therefore willing to try to illuminat it, the best I could, and to trace some of the Out-lines of the Passages from this to that Mansion; by endeavouring to illustrat, from not so common a Set of Principles and Philosophy, some great and fundamental Truths, establish'd on more popular Proofs, viz. that there is no Possibility of Happiness here or hereafter, without Purity of Heart and Life; and that the true Reason of the present Darknes, both in Providence and Revelation, is the Difficulty of recovering this Purity of Heart and Life, to its utmost Perfection, in free lapsed Intelligences, consistent with their Liberty, and the Harmony of the Divine Attributes,
which

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which infinit Power and Wisdom will not, I might say, cannot, counteract.

5. *I apprehend less Quarter from the opposit Set of Men, who may honour me with Enthusiasm, Romanceing, and Castle-building, without any solid Foundation. All I have to say is, that perhaps my Manner of explaining some great and fundamental Truths, and a few of the Consequences I draw by my Method, may be defective: And perhaps, from some of the Links being dropt, and from Faults in the wording, the Chain of the Reasoning may not be always clear and strong; but I am sure the Foundation is solid and just, and allow'd to be such by all true Philosophers; and without it, all general and abstracted Reasoning (on these imperceptible Subjects) must be vain; I mean, without admitting Analogy: For without supposing the Evidence and Probability of it, (it being in Things only, what Proportion is in Numbers, and its Progressions being only*

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like the higher and subsequent Terms of a Series in Algebra, from some of the first and simplest Terms being given) no general Laws, nor universal Propositions, can be found out, in Mathematicks, Philosophy, or Morality. For Induction, either in Experiment, Observation, or Calculation, must be always particular and limited. Perhaps the Method, when managed by a clearer Head, and a more solid Judgment, may become a noble Source of divine Knowledge, and a sublime Philosophy. Mathematicians well know, that there are several different Methods of investigating the same Propositions in Algebra and Geometry; and there is scarce a Geometer, but has his own Method of Investigation. The same Conclusions, drawn from different demonstrated Truths, give a sensible Pleasure, and a stronger Conviction, to an honest Heart, and a Lover of Truth; and I could not but be delighted with the Universality, Simplicity, and Luminousness of the Method of
Analogy,

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Analogy, and the other Principles I have laid down in the following Discourses, not having met with an Objection, Difficulty, or even a Puzzle almost, in Nature, Providence, or Revelation, which had not an easy, consequential or probable Solution from them, which is, at least, a Prejudice in their Favour. I had nothing to do, but to try the Difficulty, in its most simple and obvious Cases, (as I used to do in Algebra, to find out universal Canons) and attentively to observe the Conditions of the Progression, till the higher Terms involved the Complication.

6. *There are some Persons made so by Nature, that they are slow, dark, gloomy, joyless, puzzling, and perplexing, and they pass for the wise, prudent, guarded Men of the World: They may attack Error, but seldom find out Truth by themselves; like the Scuttle-fish, they spout out their own black Liquor on the pellucid Element. If they are honest*
and

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and sincere, they are much to be pitied, and are to be treated with Humanity and Charity, being in the State of those born poor and blind, and so destitute of the Necessaries and Conveniencies of Life. They must do the best they can, and be charitably supplied, and with Docility be willing to be led by others; and thus, tho' their Trial might be hard and severe, yet their Victory would be meritorious and glorious. But, on the contrary, it often happens, that Licentiousness, Self-sufficiency, and a supercilious Contempt of others, are the true Causes of their Darkeness and Indigence, and that they have themselves, by wrong or no Culture, stunted the Organs of their Faculties, and by a perpetual Mal-regimen have distorted them.

7. *I take common Happiness, in our natural State at present, to lie in the Pursuit of the general Measures of Thinking, Acting and Living, follow'd by the greatest part of the middling Rank of*
our

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our Species (as it is in their Order in other Animals) ; and common Sense (as it is distinguished from cultivated and refin'd Sense) to lie in assenting and conforming to the Truths and Manners, agreed upon explicitly or implicitly, in the Community where Providence has placed us, without some irresistible, that is, miraculous Evidence, or a peaceable, silent, and not intermeddling Self-conviction to the contrary. And he who pretends to be happy, as to his outward Circumstances, out of common Life, or wise as to intellectual Endowments, out of common Sense, in Things on a Level with his Occupation and Education ; I take him always to labour under some undiscover'd chronical nervous Distemper, be the other Appearances what they will, and have been seldom mistaken in a particular Case. For tho' a sound Mind be not the only sure Evidence of a sound Body, yet it will always shew, that none of the great Organs of Life is intirely spoilt, or greatly damaged, however tender and delicate

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delicate they may be. It is more difficult, than perhaps most Men are aware of, to determin, with any Degree of Exactness, the Limits that separat Wisdom from Folly, Wrong-headedness from intellectual Sanity; the most perfect Man here has a Mixture of both: Optimus ille, qui minimis urgetur. Certain it is, that true Wisdom, and a sound Mind, consists in first pondering, and then doing, every thing as near as we can, with Order, Number, Weight and Measure: But since Precision is incompatible with Finitude, if we endeavour to be constantly progressive towards Perfection, tho' by gentle Steps, neither stopping nor turning aside, but doing the best we can without Scrupulosity, and generously hoping and believeing, that infinit Wisdom and Goodness has, or will supply the rest, in his own Time and Manner, we cannot fail.

8. *Were I to choose for myself, considering the many certain Miseries and*
Tempta-

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Temptations of this State of Probation, the few uncertain Antidotes, and much fewer sincere, durable, and real Pleasures; I had much rather have the weaker, than the stronger System of Nerves, within the Extremes. I had rather choose to be contented with the slight and slender, than covet the strong and pungent Pleasures. I had rather be happy in a Dream, than miserable awake. In a word, I had rather choose to be an innocent, benevolent, tho' weaker and more credulous Person, than a malicious, critical, spurious Free-thinker, even with regard to this Life only. They most certainly are, comparatively, unhappy and joyless in themselves, and are unharmoniously fram'd, in Body as well as Mind, who can delight, and employ their Talents, on throwing Darkness and Doubts even on the imaginary Happiness (suppose it such) of their Fellow-Creatures: Nothing but Rancour, and acrid Juices, could be pleased with tearing and destroying Childrens Play-

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Play-things ; and the wisest Man here is comparatively but a Child.

9. *As to myself, I can honestly affirm, I have had but one uniform manner of thinking in Philosophy, Physics, and Divinity, in the main, ever since my Thoughts were fix'd, and my Principles establish'd: They may have had Alternatives of greater Light and Darknes, occasionally and transiently, according to the State of my Spirits, Knowledge, and Experience ; but in the Heart of my Soul (so to speak) I have been uniform, and under the same Convictions, as to the Fundamentals of these Sciences ; and always thought spurious Free-Thinkers, active Latitudinarians, and Apostolic Infidels, (it being a Contradiction they can be certain in their Negative Opinions, or by them when propagated, should do any Good to their Fellow-Creatures, but an infinit deal of Hurt) under some obstinat bodily Distemper, and much more proper Subjects for Medicin*

The P R E F A C E. XV

dicin than Argument ; and that a low Diet, long and obstinately persisted in, would at last cure both their Body and their Mind, so far as it depends on the Body, especially where Vice and Infidelity have not become habitual, as they certainly have in old Sinners : As I firmly believe, and am as much convinced as I am of any natural Effect, that Water-drinking only will preserve all the Opulent healthy from every mortal Distemper, bateing Accidents, hereditary and epidemical Diseases ; and that a Diet of Milk and Seeds, with Water-drinking only, duly continued, and prudently managed, with proper Evacuation, Air and Exercise, is the most infallible Antidote for all the obstinat Diseases of the Body, and Distemperature of the Mind, so far as it depends on the Body, the present State of Things will permit ; and that it will cure every Disorder in the Body, cureable, and render the Distemperature of the Mind more tractable ; and that, in all Events, it will make both

more

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more tolerable, than they can possibly be otherwise. This Regimen I have for these twenty Years, first and last, pursued, and shall, with the Divine Aid, persist in it to my last Moments; hitherto, I thank GOD, with as much Vivacity, Health and Activity, as can be expected at my time of Life, under such a gouty, scorbutic and nervous Habit. The State of my Intellectuals will be best known by the following Discourses, which were design'd to illustrate the Principles, Theory, and moral Uses of philosophical Medicin. The practical Inferences, and the Conclusions drawn from them in particular Cases and Diseases, confirm'd by forty Years Experience and Observation, will follow in due Time, in a Treatise intitl'd, The natural Method of Cure in the Diseases of the Body, and Distempers of the Mind thereon depending; if GOD shall see fit, by the Preservation of my Health and Faculties.

THE

THE
General CONTENTS.

*A Philosophical and Practical Essay
on the general Method and Me-
dicins, but particularly on the Re-
gimen and Diet, its Quantity, Qua-
lity, Order and Choice, fittest to pre-
serve Health, prolong Life, and pro-
duce equal good Spirits, in Persons of
all Ages and Constitutions.*

ii General CONTENTS.

DISCOURSE I.

Philosophical Conjectures about the Nature and Qualities of the original animal Body, and of its progressive State, in its several Stages of Existence.

DISCOURSE II.

Philosophical Conjectures about the preference of vegetable to animal Food, and of the End and Design of Providence, in appointing the First, and, on Trial, permitting the Latter.

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DISCOURSE III.

A Philosophical Theory, founded on Experiments, of the Nature and Laws of minute inanimat Bodies, and their Systems in general.

DISCOURSE IV.

Philosophical Conjectures on spiritual Nature, the human Spirit, in particular.

DISCOURSE V.

Philosophical Conjectures on Natural Analogy, its Laws, and some of their Consequences.

An

iv General CONTENTS.

*An Abstract, or a brief, but distinct,
Representation of the Doctrines and
Sentiments contained in the precede-
ing Discourses.*

N. B. *This Abstract is designed as an Index of
the Contents of each particular Paragraph,
with the Page where it is to be readily
found.*

DISCOURSE IV.

DISCOURSE V.

A



A
Philosophical *and* Practical
E S S A Y
ON THE GENERAL

Method *and* Medicins,

But particularly on the

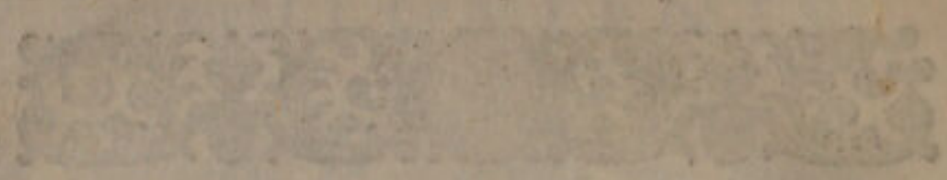
R E G I M E N *of* D I E T,
I T S

Quantity, Quality, Order *and* Choice,
fittest to preserve HEALTH, *prolong*
LIFE, *and produce equal good* SPIRITS,
in Persons of all Ages and Constitu-
tions.

Vivere Naturæ, si convenienter, oportet.

HOR.





PHILOSOPHICAL AND PRACTICAL
ESSAYS

ON THE GENERAL
METHOD AND MEDICINE

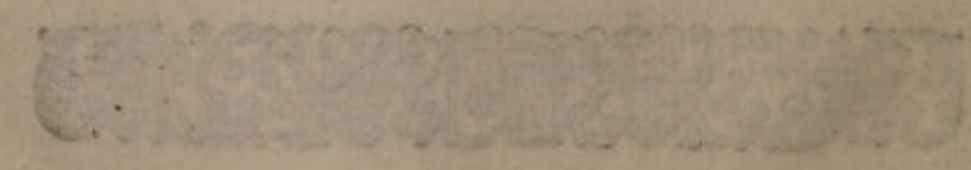
But particularly on the

REGIMEN OF DIET

ITS

Quantity, Quality, Order and Choice
As to preserve Health, prolong
Life, and produce equal good Spirits,
in Persons of all Ages and Con-
stitutions.

By JOHN NICHOLS, A Gentleman, &c.



[i]

A
Philosophical and Practical
E S S A Y
ON THE
General METHOD *and* MEDICINS;

But particularly on

The REGIMEN of DIET, *its* Quantity,
Quality, Order *and* Choice, *fittest to pre-*
serve HEALTH, *prolong* LIFE, *and pro-*
duce equal good SPIRITS, *in Per-*
sons of all Ages and Constitutions.

§. I. **T**HERE is not a more pernicious
Error in *Physic*, or one more
opposit to the Expectation of
Patients, (*viz.* the Preservation or Recovery
of their *Health*) than that very common and
universally received Opinion, That there are
Bodies in Nature, or in the *Materia Medica*,
or such as may be found out by *Art*, by
dividing, compounding, or altering them by
the *Tortures* of the *Fire*, which will sudden-
ly,

ly, or in any great Degree, change or destroy the *Malignity* of the morbid *Humors* of *animal Bodies*; or will intirely alter the Nature, Qualities, Figure, Size and Laws of *Cohesion* of the *Particles* that compose their *Fluids* and *Solids*; from an unsound and unhealthy State, to one of a *kindly* and benign Nature (a wild Notion, at first introduc'd and propagated by *enthusiastical Chymists, Quacks* and *Symptom-Doctors*). An *animal* Body is nothing but a *Compages* or Contexture of Pipes, an *hydraulic Machin*, fill'd with a Liquor of such a Nature as was transfus'd into it by its *Parents*, or is changed into by the *Nature* of the *Food* it is nourish'd with, and is ever afterwards good, bad, or indifferent, as these two Sources have sent it forth. The *Primæ Viæ*, or the *alimentary Tube*, is, as it were, a *Common Sewer*, may be foul'd or clean'd in various Manners, and with great Facility; it is wide, open, and reasonably strong, in most *Animals*: But from the *Intestines* into the *Habit*, (which only ought to be reckon'd the Body, or the *Vehicle* of the *Soul*) and into the *sanguiferous Tubes*, into the *Glands* and *Bowels*, the Passages from thence are so streight and narrow, that they are but *infinitesimal Pores*, rather than *Orifices*, *Strainers* and *Searches*, rather than *Mouths* of *Tubes*, and are scarce ever visible or perceptible in a healthy State; and the Supply and Nutriture of the *Fluids* and *Solids* must pass under the

Form

Form of a *Steam* or *Vapour* through them, and not in the Form of a *Liquor*, either for *Food* or *Physic*, either to increase the Quantity, or alter the Quality of the Blood and Juices; and the *Solids* (which *concentred*, *consolidated* and *condens'd* into their real or first *Formation-Size*, would not equal a *Grain* of *Sand*) are permanent and durable, and continue pretty much in that State of *Elasticity* and Firmness, they were first created with; and they are strong or weak, small or coarse, *firm* or *lax*, loose or *elastic*, blunt or sharp, as they were first made by the *supreme Artificer*, or are alter'd somewhat by the original *Dyscrasy* or Distempers of the Parents, (the *Mother* can only mend or spoil their Juices, which might be easily perfected by long Continuance in a *sweetening Diet*, during their younger Days; which if they survive, they generally grow stronger as they grow older, become the *Genii*, and the Governors of the World, because the *Solids*, thus purified, come from the *Father* alone) and continue much the same all the Time of their Duration on this *Globe*, except so far as the small *temporary* and *fugitive* Alteration that *Diet*, *Exercise*, or *Evacuation*, or mild ponderous Medicines long continued, may make on them; so small a Matter it really is, that *Physic*, or the *Materia Medica*, can perform on the Habit, on the *Solids* at least; and yet it is only in and by them, that *Health*, *long Life* and *Serenity* are to be had: The most that *Physic*

or *Physicians* can do, is in and by the *Primæ Viæ*, or alimentary Tube, through these fine lacteal *Searches* into the *Habit*.

§. 2. WHAT is it then, will it be said, that *Art, Physic* or a *philosophic Physician*, can truly do, to relieve the Miseries, Pains and Diseases of their *Fellow-Creatures*? A great deal, if judiciously and honestly directed, and obstinately and exactly pursued, *viz.* by mending the *Juices* in the Manner Nature, the Distemper, the Age, and the Habitudes of the Patient point out. *These* (the Juices) are the only things in an animal Body, in the Power and under the Dominion of a *Physician*. If the *principal Intentions* of the *Physician* be to mend the Blood and Juices, *they* will in time, and by the wise *Mechanism* of Nature, rectify and confirm the *Solids* into their proper Situation and *Tone*; for it is out of, and by the Juices, that the *Solids* are nourish'd, figur'd and cloath'd. *Air* and *Exercise* will give them the proper Firmness and Degree of *Elasticity*, and then the *animal Functions* will be perform'd with Facility and Pleasure, and thereby the Person will enjoy *Health* and *Serenity*. *Art* can do nothing but remove Impediments, resolve Obstructions, cut off and tear away *Excrescences* and Superfluities, and reduce Nature to its primitive Order; and this only can be done by a proper and specific *Regimen* in Quantity and Quality, by *Air* and *Exercise*, and by well-judg'd and timeous Evacuation, and preparing
the

the morbid Juices for easier Elimination, by Means which, I fear, lie in a narrow Compass, and depend mostly on the mild mineral Medicins (which were never originally design'd by Nature to be introduc'd into an animal Body, and always rend, tear and wear them out faster, like *Spirits* and *chymical* Medicins, but in bad Cases are at first at least necessary) judiciously managed with proper *Dilution*.

§. 3. *PHLEBOTOMY* will directly let out a Part of the bad and vicious *Juices*, to be immediatly supplied with good *ones*, from proper Regimen, by making the Vessels more *roomy*, and thereby enabling the *Circulation* to make her fuller Rounds; for when the Blood-Vessels are *too turgid* and full, or the Juices too thick, gross, and sily, to tumify them, the natural *Secretions* and Discharges will be too small to admit into them new, fresh, sweet *Juices*, from Food or Physic, which well-tim'd, partial and frequent *Phlebotomy*, will much assist. *Vomits* drive forcibly out of the upper Part of the *chyliferous Tube*, not only its noxious Contents, but strongly squeeze all the *Glands* (which are infinit) of the *Abdomen*, dissolve and *fuse* by its *Convulsions*, and internal Compressure, their Contents, (and that of the universal Mass of the Fluids) and promote their *Expulsion*; and, *frequently repeated*, are of more Use and Efficacy than all the other Evacuations join'd together; for they not only truly

reach the Habit, supply the Place of Exercise, cleanse the *internal Viscera* and *Glands*, (which can by no other means be reached) but compress, squeeze and drive out the most distant Obstructions, by setting the whole *System*, and the most remote *Fibre*, in violent Action and Play; and where the Solids and natural Strength will admit, are, I think, the most *universal Remedy* known to *Art*, if obstinately and long persisted in, in *chronical* and *obstinate* Cases especially; for most infallibly they bring out all the latent most remote *Morbofities* in the Habit, dissolve and fuse them, and mix them with the universal Mass of Fluids, in the Trunks of the great Vessels, to be more readily and easily thrown out of the Habit: but *they are a hard Work*, and few can bear them. *Purges* clean and empty the lower Part of the *chyliferous Tubes*, leave the *Glands* situated there, more Freedom to part with their *Obstructions* by subsequent Repetitions: but this *Evacuation*, tho' much easier, yet is a *great way about*, and of slow and small Efficacy in great Diseases, unless the *Malady* be situated in the lowermost Regions of the Body; and even then *Vomits* do it sooner and more effectually: and in weak Habits, and *nervous* Distempers, *Purges* ruffle extremely. *Diaphoretics*, I think, do little in these our *Northern Climats*, unless they be very gentle, and are useful only in *acute Cases*, where Nature tends towards a *Crise*; in *chronical* Cases, they heat and inflame, and only
 spend

spend the thinnest and most *aqueous* Parts of the Fluids, which are generally most innocent. *Diuretics* scour and clean the *urinary* Passages, and carry off *scorbutic* and *nephritic Salts*: but to be innocent or efficacious, they ought to consist of the thinnest, softest and coolest of all Liquors, that is, the purest Water, just soften'd and *acuated* by the Meal or Salt of some proper Vegetable. *Blisters* are mostly *Topical*, they melt, *fuse*, and draw forth the viscid Serum from the *capillary* Vessels, and leave Room for a freer Circulation; and when promoted and effected by *Cantharides*, have a sensible Effect on the most distant Fluids and Solids; and in acute Cases, they are indeed the greatest and most effectual *Remedy*. These are most and chiefest of the Evacuations used in the Practice of *Physic*, and, judiciously and properly pursued, are of the greatest Consequence to lay a solid Foundation for a *Cure*.

§. 4. *MERCURY* and *Antimony* alone, with their milder Preparations, judiciously managed, and united with the specific Juice of *Vegetables* that Experience has determin'd proper for the Distemper, upon all the Reasoning and Experience I have ever had, bids fairest for attenuating the Juices, and opening the Obstructions in the small Vessels and *Glands*, and so fitting the morbid Particles for Elimination; but they are a two-edged Sword, and destroy weak Persons in unskilful Hands; but I have Occasion to speak more explicitly of

their Nature and Effects in another Place. *Nitre* and its Preparations, especially the *animal* Preparation of it, in *Wood-lice*, has been thought by all *Antiquity*, the most innocent and yet most effectual of all the *saline Tribe* of Medicines, to cool, deterge, and open Obstructions; and its sensible Effect in dividing the *Blood-Globules* in the *Lungs*, and giving it thereby its *Scarlet* Colour, and its Efficacy in propagating and quickening *Fire* and *Light*, (in both which Effects it has undoubtedly a great Power, if not the greatest) shew its *Energy*; and in *febrile* Exacerbations, especially of the *Symptomatic* kind from malignant Ulcers, and an *inflammatory* State of the Blood, when plentifully diluted with *pure* Water, and long continued, I think, and have found it the best, if not the only *Remedy*, sufficient to justify the great Encomium on the *Natron* of the Antients. When the Blood is sufficiently *fus'd*, and the *Glands* made sufficiently open and pervious, by *Evacuation* and *Diet*, then *Steel*, *Bark* and *Bitters*, judiciously prepared, and fitted to the original Strength of the *Solids* of the Patients, will be found the most effectual, to wind up the *Springs* of *Life*, and to give a *Tension*, due *Tone*, and proper Degree of *Elasticity* to the *Solids*, the *Fibres* and *Nerves*, but especially the *Membranes*, which, I think, are the true and only *Seats* of *Spring* and *Elasticity*, and the proper immediat Instruments of *Motion* and the *Functions* in an *animal Machin*. Long and great Evacuation, and a thin cool Diet, while they

they are pursued to *fuse*, thin, and attenuat the Juices, must of Necessity *relax* and let down the *Spring* of all the *Solids*; when the Juices are sufficiently thin'd and attenuated, (which *Blood-letting* will always discover) then, to give Strength, Vigour and Activity to the Patient, that all the *Secretions* may be duely made; the sole *Intention* to perfect the Cure, I say, is to wind up the *Solids* again, as far as *Art* can, which, I fear, is not far; at least, I have never found it much, nor very dureable; for all *Astringents* are of the Nature, act by the same Laws, and have the Effect that *Wine* and *spirituous Liquors* have, and are not unlike the buckling upon *Pipes* and boiling soft broken Hair; they will give them a new *Tension* and proper Figure for a short time, but their Efficacy and Relief is only *fugitive* and transient, and never dureable; and they effect at the same time a thickening, increassating and sizeing on the Blood and Juices, while they are winding up, bracing and contracting the *Solids*; for the Effects of the Qualities and Powers of all Bodies, both *Liquids* and *Solids*, of Food and *Physic*, are always in a *duplicat* Proportion of the Distance from the *Centre* of their component *Particles*. There is indeed this Difference between *Bark*, *Bitters* and *Steel*, and that of *strong Liquors*, that the Sides of the Vessels, especially their fine close *membranous* Coats, imbibe, attract and preserve the *astringent* Virtue and Qualities of *Bark*, *Bitters* and *Steel*, and such Astringents and Bracers, longer,
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by reason of their innate *attractive* Virtue on the Particles of such Bodies, their greater *Solidity*, and closer *Texture*, than the *Blood Globules* and the circulating Fluids do, which are in a perpetual *Flux*; and *spirituous* Liquors mixing more immediatly, fully, and by closer and larger *Contacts* with the circulating Juices, spend their Efficacy on them, and thicken them faster. For these Causes and Reasons, I say, *strong* Liquors must have a more immediat and stronger Effect on the Blood and Juices, for condensing and thickening them, than *Steel*, *Bitters* and *Bark*, and such-like Astringents can have; and so spirituous Liquors much indulged, must necessarily have a much quicker, and more *deleterious* Effect on animal Fluids, than *Steel* and *Astringents* can: but still they both act in one *Tenor*, and by one *general Law*; and *Steel*, *Bitters* and Astringents, improperly and intemperatly us'd, and over-dos'd, will have the same kind of bad Effects, and produce the same *Symptoms* and Diseases that Intemperance in strong Liquors will; only they are sooner felt, are less grateful and bewitching, are much less or not at all craved, and consequently are sooner given over.

§. 5. IT is *Diet* alone, proper and specific *Diet*, in *Quantity*, *Quality* and *Order*, continued in till the Juices are sufficiently thinn'd, to make the Functions regular and easy, which is the sole *universal Remedy*, and the only Mean known to Art, or that an animal Machin,

chin, without being otherwise made than it is, can use with certain Benefit and Success, which can give *Health, long Life* and *Serenity*. There is an *innate* Degree of Strength and *Elasticity* in the *Solids*, to circulate the Liquors, and promote the *Secretions*, and carry on the *vital Functions*, with which one comes into the World, which they derive from their *Birth* and *Parents*, which is ever after but little alter'd even either by *Art* or *Diet*: *Growth*, Inlargement of the Body, and crusting over the original Solids, and *Maturation*, only fills the linear and infinitesimal original *Tubes* and Vessels with a proper Liquor, to stretch, extend, and plump them, as a Sack is fill'd with Grain, or a Bladder with Air or Water; from that Liquor, their *Coats*, the fleshy and nervous *Fibres* of the Muscles, *Tendons* and *Membrans*, and other Solids of the Body, is thicken'd, crusted over, and condens'd; the *Spring, Elasticity*, and motive Power, lies solely and intirely in the original, primary, divinely organis'd linear *Fibrils*, and the *Membrans* made of them. The Incrustation and Incrassation from the Fluids, in the *Tubes* superinduced on them, but weakens their original *Spring* and *Elasticity*, both by its Weight and *incommensurat Vibrations*, as we find by the *Elasticity* of Twigs, the *sharp Notes* of fine small Hairs, and the *Agility* of young Animals. The *Elasticity* consists mainly in the original Degree of *Attraction* in the com-
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ponent *elementary* Particles of the *linear Fibrils*, primarily fashion'd by the *Author* of *Nature*; and it is in this *Elasticity* alone, the Force, Power and Pleasure of Life, and of the *animal Functions*, consists. If the *Elasticity* of these Solids be such, as easily, readily and pleasantly to overcome and slide over all the *Rubs*, Impediments and *Letts* in the *Functions*, (whatever State the Fluids be in) then the Animal is healthy, active and gay; otherwise, if they are perform'd with Labour and Struggle, and from too great Efforts of the *self-motive* Principle on the primarily *divinely organis'd Vehicles*, and its Load of Crust which is laid on it, to defend it from the Injuries of this *Element*, and ruinous *Planet* we are now confin'd to: For as a *Surgeon* lays a Plaister on a Sore, to defend it from the *Air*, and the *Touch* of hard rough Bodies; if this *Plaister* itself should be hard, rough, *corrosive*, or stimulating, it would become a Pain and Incommodity, instead of a Pleasure or Defence. It is out of the Juices that circulat in the *Tubes*, that this *plaistering* is made on the *primitive* sensible *elastic Fibrils*; and it is therefore of the last Consequence, and indeed the *One* thing necessary, that these Juices be the sweetest, lightest and most *lenient* possible; and this we can only bring about by Diet, *soft, sweet, cool, mild Diet*.

§. 6. SOME Persons have industriously and designedly spread it about, that I was of Opinion, that a *sole* strict Vegetable, or *Milk* and *Seed Diet*, was the best and fittest for all *Persons*, *Climats*, and Ages, without Exception or Limitation, and the *only one* proper, approv'd by the *Author* of *Nature*, and *specific* to cure all animal Distempers; advised my Patients no other, or pretended to cure them no other way, be their Distemper what it will. My Opinions are of little Consequence to the World, and I hope I have too little Value or Regard for them, as they are *mine*, to be any Degree *sanguin* or concern'd for their Reception. I have, and I hope have always express'd, so great a Regard for the *Wisdom*, *Fitness*, and Propriety of Things, as discover'd by *Revelation*, (from whence the Patent for *animal* Food is deriv'd) not to set up my Opinions or Ideas in Opposition to those of *holy Writ*, and the Divine *Spirit* speaking in it. The Wisdom of *Man*, even that of the highest *Cherubim*, is but *Foolishness*, when compared with the *Omniscience* of *God*, and his wise Providence. He that *made* us and sent us here, knows best what is fittest for us, to answer and bring about his own Designs of *Love* and *Mercy*. But I am thoroughly convinced, from *Reason*, *Experience*, *Philosophy* and *Revelation*, that in our *present State*, in this our *probatory* transitory Situation, on this ruinous *Globe*, (sensibly and
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evidently spoil'd a second time by the *Deluge*) on which we are now situated, that *animal Food*, their Juices, and *integral Particles*, are the fittest and most proper, to produce most quickly and more immediatly, the firmest hardest human Flesh, and warmest strongest Blood. There is a *Similarity* and *Homogeneity* between the *muscular Flesh* of tender sweet *Animals*, and that of the *human Body*; the *integral Particles* of the *Solids* of the *first*, and the component *Globules* of their Juices, are ready *form'd*, *figur'd* and adjusted to build up the *Flesh*, and cloath the *Solids*, and furnish out the Juices of the *latter*: they are at hand, adjusted by *Square* and *Compass*, directly to be laid together, to *rear* the *Solids*; and their Juices are inur'd and familiaris'd to perform the *Meanders* of the Circulation, and with Facility to perform all the *animal Functions*, with the least Labour or Struggle, less than those of *Vegetables* in general; as a *Mason* will sooner and more strongly build the Walls of a House, who has hewn plain *rectangular* Stones at hand, than one who has rough Stones only, Sand and Mortar, all which must be first figur'd or prepar'd for a solid durable *Building*. All this, I think, is true, just and *philosophical*; and while Youth and tolerable Health continues, none ought to *alter* the common temperat Diet of the middling Rank of those among whom he lives, for a particular or *artificial* one, without

a particular *Call*, and the best Advice: Nay, I think such a Change unnatural, out of the Order of *Providence*, and in some Degree *immoral*. When a Person is tolerably well, and not far advanced into Life, to change an *animal* for a *vegetable* Diet, to avoid mere Possibilities and future *Contingencies*, is arrogantly prying into the divine Decrees, and insolently *criticising* the Conduct of his Providence. If God's Design is to purify us by Pains and Penalties here, ours ought not to be only the mere enjoying the *Kingdoms of this World*, and the *Glories* thereof. If his be to shorten the Time of our Sufferings, by rendering them more *intense*; ours ought to be to bear them as long as by his Assistance we possibly can, in the common Course of Nature and Providence; for if we *cowardly* fly from them on one Side, He has Power and Skill enough to double them in another; in this Particular, *whatever is, is best*: But if we should find our Pains and Sufferings so intense, that they are no longer tolerable, but hinder, instead of promoting, what is our *Duty* and *Vocation*, and what we are convinced is best for us, then he has advised us, *when persecuted in one City, to flee to another*: Then, and only then, when *animal Food* will no longer do, we are to try what *Milk* and *Seeds* can do to ease our Pain. It is only the *Cross* of God's *Appointment*, and which he declares his, by natural Causes, and in the Course of his Providence;

unforeseen and *unavoidable*, which we are to *take up daily*, and with all the Joy, Alacrity and Resignation, that the Meaning of a *Cross* can imply, that is, *the best we can*, with the Aid of his *Grace*. And if Suffering, Punishment, Pains and Penalties, and shortening the Duration of our Imprisonment here, be the very best for us in our present Situation and State; and if *animal* Food, and *fermented* Liquors, naturally, necessarily, and *mechanically* produce these Effects more readily than *Vegetables*, Milk and Seed Foods, and aqueous Liquors, then was it with infinit Wisdom, Kindness and Fitness, that the Holy Spirit permitted *animal* Food, and enlarged the *Materials* of our *Aliment*, even tho' his first Intention for Man had been Vegetables only (which could only be in a paradisaical State, or on a better unspoil'd *Planet*). But the real Truth is, *Nature*, our *Globe*, the various unkindly *Climats*, the different Ages, States, Conditions and Circumstances under which Man is at present, render it utterly *impossible* and *impracticable*, that Man should be advis'd, order'd or commanded, by infinit Wisdom, to live only on *Vegetables*. It is not, and it cannot be, by *Bread alone* that Man can live at present; it cannot answer the Ends, Uses and Occasions Men are now necessitated to pursue. Great and sudden Efforts of *Prowess* and Strength cannot be answer'd or executed by *Vegetables* and Water only; they are too thin, weak and poor. *Youth-hood*, Vigour,
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Robustness, and great Action, would be tortur'd, and languish under Bread and Water in ever so great Plenty: *Milk, Fruits, Seeds* and *Vegetables*, in any Perfection, are of much greater Expence and Labour to procure, than that the Poor and Necessitous now can afford them, especially in *Northern Climats*; they have lost their Vigour, Energy and Balsam, since the Deluge. Milk is appropriated for Children, and not grown Men, to answer the Ends of Providence. But to explain my Thoughts on this Matter as a *Physician* only, as clearly and precisely as I can, as they flow from natural Philosophy, the animal Oeconomy, and my own *Experience*, I say, 1. That after a *Fever*, or any *acute* Distemper is over, and had its perfect *Crise*, and the Person is not past the *Meridian* of Life, the Blood and Juices, by the strong and violent Labour of the Solids, being sufficiently *ground, effete* and *languid*, a *Milk, Seed, or vegetable Diet*, is by no means long and obstinately to be continued in; it would continue the Party *too languid*, the *Juices too thin and vapid*, and the *Spirits* too low; and therefore he ought absolutely to be directed to an *animal Diet*, and *temperately* strong Liquors of the lightest, most nourishing and *balsamic* Nature, to be gradually and cautiously enter'd upon; especially as he begins to be capable of *Air* and *Exercise*. 2. If upon taking away a few Ounces of Blood only out of a large *Orifice*, the *Curd* is found too thin, tender, watery, and

too readily *fusible*, or dissolvable in warm Water, and the *Serum* too clear, whiteish, or in too great a Quantity; a *Milk, Seed* and *vegetable Diet*, is by no means to be longer continued in, but is to be altered gradually into light, sweet and young *animal* Food, and temperat fermented Liquors. 3. If after two, three, four or five Years, the Disorders for which a low cool Diet was advis'd and enter'd upon, with sufficient Strictness and Precision, is not cured, or greatly reliev'd, the Party may conclude, that a low cool Diet will not make a perfect Cure, and must with Patience, and a general Regularity, enter on common Life, and not be longer scrupulous, or anxious about *Regimen*, in the Quality, but in the Quantity, and submit to the Order of Providence, and use the Means that Experience or the best Advice suggests to alleviat the *Symptoms*, and do the best he can *taliter qualiter*, if he is under Fifty. 4. To such as have an original hereditary weakly *scorbutical* or *scrophulous* Habit, and are far advanced in Life; who have *mesenteric glandular* Obstructions, with feeble Solids, and little Strength and Vigour, a *Milk, Seed* and *vegetable Diet*, with *aqueous* Liquors, is by no means to be advis'd; for as the Case is absolutely incurable, it were in vain to torment and restrain them, more cruelly than their Distemper itself does; they must not be forbid, but rather indulged the common *Comforts* and *Gratifications* of Life. It is to such that St. *Paul's* Advice to *Timothy*

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is just, as well as kind, *to drink a little Wine for their Stomachs sake, and their often Infirmities*: A general Moderation, and an Observation of the *Juvantia* and *Lædientia*, is only to be advised, and the Use of these Means known to Art, to alleviat *Symptoms*. 5. In all *eruptive* Cases, in all acute and *periodical* cutaneous Cases, in the actual Fits of the *Gout*, in the *second Fever* of the Small-Pox, in *Fevers* verging towards a *Crise*, to drive out from the Centre to the Circumference any changeable Disorder, and universally in all Cases where the *vital Indications* languish and labour, and Nature is in a Struggle to throw outward *Morbosity*; she is most certainly to be assisted by generous *cordial* and warmer Medicins, and higher *Diet*, to further the End Nature points at. These are some of the Cases where too low and cool a *Regimen* is by no means to be advised or pursued. 6. And *lastly*, Whenever the End of a low Diet is obtained, *viz.* the *sweetning* and *thinning* the Juices, and the *Symptoms* are abated or cured, the Diet is to be heighten'd, and gradually and cautiously rais'd, at least if the Party be under Fifty. I will now suggest as plainly, in what Cases I think it is to be advised and tried. As to the Healthy and Well, I have nothing here to say: *Sufficient for the Day is the Evil thereof.*

§. 7. It is only to those whose *Stomach* and Digestion is so weak and relax'd, that they

cannot concoct without extreme Suffering, any such Proportion even of tender *animal* Food and *fermented* Liquors, as may be sufficient to nourish and support them: To *those* whose Blood and Juices are evidently so *thick, gross* and *viscid*, that it fills and obstructs the Vessels so *tumidly*, that they cannot receive a sufficient Quantity of either *Medicin* or *Food*, to cure or preserve them, the Circulation and Perspiration being intirely at a stand: To *those* who are subject to perpetual *Hæmorrhages*, Inflammations, or constant small acute *Fevers*: To *those* who are after the great Meal towards Midnight, *hectical* or *consumptive*: To *those* labouring under a *scorbutico-nervose Atrophy* and wasting: To *those* labouring under hereditary, early, knotted, disabling and painful *Gouts* or *Stone*: To *those* who are highly, hereditarily and early *scrophulous* or *scorbutical*: To *those* who are *leprous* and universally crusted over with *cutaneous Blotches* and *Scabs*: To *those* who are *epileptical* early in Life, with a thin *cacochymic* Habit: To *those* who are constantly *hysterical* or *hypocondriacal*, with frequent *Fits* and *Convulsions*, under a weak thin Habit, which threaten a *Consumption*; for I have always observed these obstinat violent *hysteric* and *hypocondriac* Fits in young slender Persons, to be the first *Stage* of a real *Phthisis Pulmonum*, or at least of a *nervous Atrophy*; and if it was not cured or prevented in this its first Stage,

Stage, by the same Means and Regimen commonly the Refuge of the subsequent Stages, they were not to be ever after remedied, they being sure Prefages of *Tubercles* in the Lungs: To *those* that are plainly *cancerous*; in short, to *those* chiefly who after they have long and strictly follow'd the best Advice, and the most effectual Remedies, still labour under some atrocious, painful and dangerous Distemper; to such, and such only, have I ever advised a total rigid *Milk* and *vegetable Diet*, with *aqueous Liquors*; but no longer to be continued, than till the *Symptoms* were extremely mitigated, or intirely overcome; and then, if it was after the *Meridian* of Life, to be persisted in obstinately; if long before it, to be gradually and cautiously alter'd into common Life with great Temperance; and I know all honest and experienced *Physicians*, *antient* and *modern*, are and must be of the same Mind.

§. 8. THE great and essential Difference between *animal* and *vegetable* Food, is much the same as between *Chemical* and *Galenical* Medicins. *Chemical* Medicins are the suppos'd (at least their most active) Virtues and Qualities of *Plants*, *Metals* and *Minerals*, contracted and concentrated into a small Volume, by the Tortures of the Fire; their useless or destructive Parts separated and thrown away, and their useful and *sanative* Qualities compacted and united into an imme-

diat *Contact* and condensed. They would be of admirable Use and Convenience, if these suppos'd *Facts*, and such mentioned Virtues, were just, solid and true, or if an *animal* Body could bear them without greater or more fatal future Injuries, than their present Benefit (how great soever) or Convenience can compensat. But it is most certain, that such *Medicins*, *Drugs* or Bodies, are the most destructive to animal Bodies, if long and in great Quantities thrown in, that Malice can invent, beyond Gunpowder itself and even spirituous Liquors; for not only Nature has provided none such, but as *Poisons* in venomous Creatures to kill their Enemies, or cook them for their Food: but that the Particles of Fire, the most destructive of any, are so closely impacted and *transubstantiated* in, as never to be afterwards separated from them, and that their component *Particles* are so minutely divided by the *Tortures* of the Fire, as to acquire such a Force of *Attraction* towards the Particles of animal Bodies; such a *Polarity*, (as Dr. Lister observed, in all Calcinations, both of *Vegetables* and *Minerals*, so constantly to answer the *Magnet*) that they become Iron, *Bristles*, Nails and Lancets, darting directly and perpendicularly into the Solids, so as quickly to tear, rend and destroy, or fix them, and so can never be proper for *Food* or *Physic*; whereas *Galenical* Medicins, consisting of the *integral Particles* of *Vegetables*, *Metals* or *Minerals*;

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dissolved only by gentle Heat and Moisture, in a watry *Menstruum*, have none of these *deleterious* Qualities on *animal* Bodies, but become their Food as well as Physic, and naturally take the Places of the morbid Particles of animal Habits, which Time and the natural *Functions mechanically* throw off. Just so *animal* Food, and *fermented* Liquors, are the smallest, most *elementary* and *attractive* Particles, united and concentr'd like the Rays of the Sun in the *Focus* of a Burning-glass. Their delicious Flavour and Savour consists in their greater abundance of *Oil* and *Salts*, which are the most active, and consequently the most destructive to animal Bodies. If they are sufficiently diluted, and their *Volume* and Quantity increas'd, by the more innocent and unactive Particles of fine Earth and Water, they may be safely used, approaching thereby very near to *Vegetables*. Juices and fermented Liquors, much diluted with Water, become the nearest Approximation to *pure Water*, the only *Beverage* designed and fitted by Nature for *long Life, Health* and *Serenity*; and the whole Study of the Patient, and Intention of the *Physician*, ought to be to find out this just *Mediocrity* of *animal* and vegetable Food, when combin'd, for *Aliment*, and of *fermented* and aqueous Liquors mix'd for *Beverage*, which is the most proper for preserving his Health, or curing his Disorders; for there is very little in the *Specification* of the *Diet*, whether it

be all *Vegetable*, or partly *Animal*, partly *Vegetable*, some Vegetables being more *deleterious* to *animal* Constitutions than some *animal* Substances; and there is but a very little Difference between pure *warm* Water, and cold Water *warm'd* with a very little Wine; the just Mixture and *Proportion* suited to the Constitution and Distempers of the Patient, is by far the greatest Affair; tho' in the Distempers by me just now *specified*, that are painful and dangerous, too great Exactness, both in Quantity and Quality, is never to be *slighted*; for in a true *statical* Balance, such as the Constitutions under the mentioned Diseases are, a few Grains or Spoonfuls thrown in, will destroy the *Equilibrium* of Health and Ease.

§. 9. THE Benefits a Person who desires nothing but a *clear Head* and *strong intellectual Faculties*, would reap by religiously drinking nothing but *Water*, (tepid or cold, as the Season is) while he is yet young, and tolerably healthy, well educated, and of a sober honest Disposition, are innumerable: As, 1. That he would live probably till towards an *hundred* Years of Age, that being the Term of Life appointed by the Design of the Creator, even after the *Deluge*, and after that eating of *animal* Food was permitted, before (as it is believ'd) *fermented* Liquors were invented; at least, if we have any regard for *Moses's* History, which yet cannot be denied to be one of

of the juſteſt Accounts of theſe early Times.
2. That he would thereby conſtantly enjoy a *clear Head, calm*, at leaſt *governable Paſſions*, a Facility in *intellectual Applications*, and in the Acquisition of Virtue; and ſo having a longer Duration ſecur'd to him, and all Impediments removed, he might make ſurprizing and wonderful Advances in *both*. 3. He would thereby be ſecur'd againſt all the great *atrocious* and *frightful* Diſtempers, ſuch as *Melancholy, Lowneſs of Spirits, Wrong-headedneſs, Lunacy* and *Madneſs* (the Bane of the fineſt, beſt and moſt penetrating Spirits in *Great Britain*). For I defy any Man to give an Inſtance of any furious *Madneſs*, or great and obſtinat *Lunacy* or *Melancholy*, in any one who ſoon after Twenty, enter'd on Water drinking only, let him eat what he can; for it is *fermented Liquors* only that inflame the *Membrans* and *membranous Tubuli* (the *Nerves*), which are the bodily Organs of *intellectual Operations*. It is the *Fire, Sulphur* and *volatile Tartar* of *fermented Liquors*, that inflame, corrugat and ſtimulat theſe *Membranes*, and their linear Threads, into violent Succuſſions, that break and tear them, which are the immediat Cauſe of theſe frightful and overwhelming Diſtempers, as they are of the painful torturing ones, *Gout, Stone, Cancer* and *Conſumption*: For tho' Gluttony will thicken the *Curd* of the Blood, and thereby cauſe Obſtructions in the *Glands* and *Capillaries*, from whence many
and

and various Distempers may arise, yet will they be of the obtuse, slow, lingering Kind, and in which Nature will always give a timely and early Warning, by *Inappetency, Nausea, Vomiting, Purging, Sweating, Spitting or Rheums*, which will opportunely stop the Progress; and while Water is plentifully then craved and given, it will carry on, distance in the Circulation, and dilute this too viscid *Curd*, to prevent an intire Obstruction of the *animal* Functions, or destroy Life, and hinder the Generation of *Gout, Stone, Cancer and Consumption*, which are solely produc'd by the hard saline Concretions of *fermented* Liquors. But, 4. The most signal Benefit a Man will reap from early Water-drinking solely, while as yet in tolerable Health, is being preserv'd from the *acute, sudden and mortal* Distempers, as *Apoplexies, Suffocations, Fevers* of all kinds, *Pestilences and Pleurisies*. It is to *fermented, strong, or spirituous* Liquors solely, that these quick and destructive Distempers owe their true Cause, which give no Warning, and admit of no Cure: At least, Water-drinking solely, is the only Preservative, I am certain, known or knowable to Art. Accidents, *epidemical* Causes, a constant Neglect, or a total Inability to guard against the Dangers of the other *Non-naturals*, absolutely necessary towards perfect Health and Life, may produce some Degrees of these mention'd grand Distempers; but then, under sole Water-drinking,

drinking, they will neither be so painful nor dangerous: For it is certain, Water-drinking, Dilution, and *thin* Diet, is the only Mean known to Art and Experience, to cure them, when Persons are already seiz'd with these Distempers, join'd with strong and proper Evacu-ations; and whatever will cure, will prevent; as Water pour'd on will extinguish Fire, so it will prevent its being kindled or beginning. If these frightful, painful and mortal Distempers happen sometimes in *Eastern* or *Southern* Climats, where *fermented* Liquors are not much in Use, it is because they wallow and indulge in some things almost equally as pernicious and inflammatory as these *strong* Liquors, as high in *Aromatics*, *eastern Gums* and *Juices*; *Opiats*, the *volatile cepacious Roots*, *Fruits* and *Seeds*, of the *poisonous*, *soporiferous* or *stimulating* kind, with which those Climats abound, which is the sole Cause of all their *inflammatory* Distempers, and unnatural and dissolveing Lust; for these are all but *dry Drams*, of a more dureable and adhesive Nature than some of the *liquid* ones; for Fire is still Fire, whether *Solar* or *Culinary*, *Natural* or *Chemical*; whether it is *transubstantiated* into *liquid* or *solider* Matter; and Water is its only Extinguisher.

§. 10. I HAVE said, that the *Quantity* of *Aliment* (Meats and Drinks) is of much greater Consequence in general, than the *Quality*,

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Quality, for the Preservation of Life, Health and Serenity. If a Man study the *least*, light or heavy will not so much incommode him. The great End and Use of a *low Diet*, or one of *Milk, Seeds and Vegetables*, is to mend the *Juices*, to cool, attenuat and sweeten the circulating *Fluids*; whatever *Diet* does this, must *mechanically* relax, unbend, and let down the *Spring* of the Solids. It is true, the Superiority of the *Force* or *Spring* of the Solids, must be always greater than the *Resistance* of the Fluids; else the Animal could not live at all; that is, the *animal Functions* could not be perform'd; and this *Superiority* must be continued in some Proportion, whatever *Regimen* the Animal uses, so long as it lives. But it is certain, a cool, thin, sweetning Diet, attenuats the *Fluids* in a greater *Proportion* than it relaxes and unbends the *Solids*; because, 1. All the *Secretions* are from the *Fluids*, and not from the *Solids*; and they spending and wasting *faster*, must be sooner supply'd and alter'd by the proper Food. 2. Because the immediat Action of *Food* and *Physic* is upon the *Fluids*, and they absorb and consume most of their Virtue and Efficacy; and the *Solids* are never acted upon by them, till the *Fluids* are fully saturated and *transubstantiated* into their Substance. And, 3. Because all Fluids by their Nature are sooner and more readily acted upon, and alter'd into foreign Qualities, than any Solids possibly can; and
hence

hence it comes to pass, that a Person on the immediat Change, and for some considerable Time after, in passing from a *high* to a *low Diet*, will find his Health wonderfully mended for the better, because the Resistance of the *Fluids* is immediatly lessen'd; which will again, even under the same *Diet* in Quantity and Quality, wonderfully, and, as it were, unaccountably totter, and alter for the worse; which happens on the *Despumation* of the *Glands, Capillaries* and *Solids*, while they are *spewing* out and *disgorgeing* their *morbid* Contents on the *Primæ Viæ*; but which, by proper and *specific* Evacuations, Exercise and *Astringents* afterwards, will generally be set to rights again, if the Person be at a *proper* Time of Life, that is, under Fifty; for after that, there is little Encouragement from any Mean, but gentle *Evacuation*, and a Perseverance in the *regulated Regimen*: Nay, even he must proceed, lessening it in *Quantity* at least, if not in *Quality*, by proper Degrees, and at proper Periods, descending out of *Life*, as one ascends into it, *viz.* by *Milk-Porridge, Water-Gruel, Panada*, and the like. But the great Benefit and Advantage a Man reaps from a *low, cool, thinning, sweetning Regimen*, of Milk, Seeds and Vegetables, above what he can have under any Diet of *animal* Food and *fermented* Liquors, is, that he can keep the *stretched* and extended Bowels, and Blood-Vessels, always fuller and plumper, and in their
natural

natural *Tension* and Situations; and consequently will make the *Secretions* more plentifully, and all the *Functions* will be more natural, and easier, than under a spare, *cautious* and anxiously *guarded* starving *Regimen* of so little *animal* Food as is absolutely necessary; as a weak Person will walk more easily in Stays than loose, some lame Persons in a *Boot* than a Stocking; and a *defensive Plaister* will keep a *Sore* easier, than when it is bare; and Excesses are neither so painful nor dangerous under the *first* as under the *second* *Regimen*; and the same Person may safely venture on at least *four times* as much *Vegetable*, Seed and Milk Food, as he dare of *animal* Food of any kind, at least of *dense*, *hard*, or full-grown *animal* Food.

§. II. I THINK the natural Order and *Progression* in *Regimen*, for those who are ordain'd to, or for those whose *Vocation* and *Occupation* is *sedentary* and *studious*, who by the *Order* of *Providence*, and Situation of Life, have been *signatur'd* to intellectual Professions, and for all those who would cultivate and maintain *clear Heads* and quick *Senses* to the last, is from their Birth till Fifteen, to persevere in a gradually increasing temperate *Diet*, without fermented Liquors; from Fifteen to Fifty, to be only temperate in *animal* Foods and *fermented* Liquors; after Fifty to give up *animal Food Suppers*, and *fermented* Liquors; after Sixty to give up *all animal Food*; and then

then every ten Years after to lessen about a quarter of the Quantity of their *vegetable* Food; and thus gradually descend out of Life as they ascended into it. And that all Persons subject to *inflammatory Distempers, Gouts, Erisipelas's, hot Scurvies, Leprosies, Asthma's, Jaundices, Colicks, nervous Lownesses, violent Head-aches, Hemorrhages and Hemorrhoids, Anasarca's, Ruptures, or white Swellings*, tho' otherwise strong, hearty, hale, and of a seeming sound Constitution, ought to give up Meat Suppers, and all fermented Liquors; and that the Children of all Fathers (for Mothers are not here to be minded) who have died before Thirty-five, of any *natural Distemper* whatever, and all the Children begot of *Fathers* after Sixty, ought to live without *Meat Suppers*, or *fermented* Liquors; and that all Persons whatever, whatever Age they be of, or of whatever Nature their Complaints and Disorder may be, if, upon repeated small *Phlebotomies*, and without transient Accidents, (as *Colds, Damps, Blasts, and Bruises*) they constantly observe their Blood fizy, *viscous* and *glutinous*, ought directly to be put on a low Diet, either of Milk, Seeds and Vegetables only, or at least of one, without Meat Suppers, and fermented Liquors; and this *Regimen*, with proper attenuant, alterative and sweetning Medicines, (which, in the Nature of things, ought to be of the mild *ponderous* and *mineral* Tribe) to be continued
till

till at least this Size and Glew be broken and dissolved; else they can never expect uniform and continued Health; for such a Regimen, and such Medicins, must do this in Time; else nothing in Nature possibly can.

§. 12. *UNPHILOSOPHICAL* and unexperienced Persons, tho' they know and observe the great *critical* Alteration that happens in the *Sex*, in or about Fifty, and that without a special Care, both in the *Regimen*, proper *Evacuation*, and *alterative* Medicins, they are in great Danger, either of their Lives, or of some *chronical* and obstinat Distempers, that make their Lives ever after miserable and uncomfortable, after that Period; yet think this *Misfortune* peculiar to *Females*, and that the *Males* have a Privilege and Security to be luxurious and sensual to the last; which is the *true Reason* why so few die *natural Deaths*, and that most pass as really and truly out of Life, in a violent untimely Manner, as a *Felon*, who suffers under *public Justice*. The *Matter of Fact* and Order of Nature is this: Fifty was design'd as the *Meridian* of Life, in this our *lapsed* State and Duration, on this ruinous *Planet*; from this *solstitial* Point it is a Descent out of Life. From the *Birth* upwards to this Point, the Solids were developing, expanding, crusting over, and hardening to their utmost Extension, Firmness and Density; and thereby their *Elasticity* beginning
then

then at Fifty to weaken and unbend, and they to *ossify*, the *Digestions* become grosser and more imperfect, the *Secretions* lessen; and all the *animal Functions* labour; and then, if due Care is not taken to obviate these Effects, the *chronical* Distempers naturally arising out of these Causes, and that lurked in the *original Constitution*, begin to emerge and sprout out, the *Viscera* to *tumify* and *obstruct*, the *Glands* then swell and press on the circulating Blood-Vessels, the *Capillaries* to coalesce, become full and dense, and the *Nerves* and *Membranes* are interrupted in their *Play* and *Vibrations*, and all the *animal Machin* labours, and the Functions are perform'd heavily, with Pain and Struggle. This is the true Time and *Season* of Life, for Attention, Consideration and Care of a wise Man and a *Philosopher*. The *Hyperbolic Curve* of Life is at the Point of its Return *downwards* again; and if then proper Care be taken, by some few Evacuations, Alteratives, and a Regimen, to put a *Drag* on the Wheels of Life, that they may go down gently, calmly and serenely, these become more useful to themselves and others, than in the first ascending part of Life; and this happens equally to both the *Sexes*: for it is not from this Season being the common *Period* of the *Fertility* of the *Female Sex*, that these Appearances happen; but is a *general Law* of *Nature* to both *Sexes* from the Causes assign'd; for all the Difference of the

Sexes lies in the different *Configuration* of the superinduc'd Crust or Shell laid over the primitive *æthereal* Body, which in both is probably pretty near of the same Figure, Size and Materials, originally.

§. 13. IT is not an unpleasant *Speculation*, to *contemplat* the Order of Nature in its *Progression* towards reducing this our Tabernacle of Clay, into its original Dust, from its Cradle to its Coffin, especially in those who live the whole Duration of the natural Life. The Diseases of *Infancy* are generally *Scabs*, *Blotches* and *Blains* over the Face, Head, Eyes and Ears; sometimes *Fits* and *Convulsions*, and such *Cephalic* and Head Distempers; and these are certainly *constitutional* and *parental* Disorders communicated by the morbid Juices of the *Parents*; the *Colicks*, *Vomitings* and *Diarrhœa's* succeeding, come from the improper Nourishment in *Quantity* or *Quality* of the *Mothers* or *Nurses*; the *Measles* and *Small-pox* are also original and parental Impurities convey'd to the Blood and Juices in the Birth, from too high and too much animal Food, and are most of them the Diseases of the upper Region of the Body. When Nature has struggled by these to purify the Juices by such *Despumations*, then come the Distempers of the *Breast* and *Lungs*, in *Coughs*, *Catarrhs*, *Consumptions*, *Asthma's*, *Pleurisies* or *Peripneumonies*; after these come Pains in the *Stomach*, *Heart-burnings*,

burnings, Colicks, bilious Vomitings, Jaundice and Diarrhœas; then succeed Gouts, Stone and Gravel, Palsies, Rheumatisms and fixing of the Joints; and very often Ruptures, Piles, or Mortifications in the Bowels, Feet, or Toes, the Diseases of the lower Regions. All I would insinuat by this Reflection, is, that Nature seems to aim, and would certainly, if not interrupted by Accidents, obtain and pursue a kind of a regular and uniform Progression, in her Course of dissolving and mouldering into Dust, this Adamical Crust of Clay, by Distempers, topical and local, from the Head, through the Viscera, to the Feet and Joints, till, like a dying Vegetable, she has fix'd it in the Earth, from whence it sprung. This is certainly her general Law, if not interrupted by original, parental Diseases or Accidents hurting some of the Organs before it was born, or by Accidents proper and peculiar to the Party itself; or a general bad Regimen, which may quicken this Progress, or throw it out of its natural Progression on a weaken'd Part, that may discompose the general Law of Nature.

§. 14. FOR Perspicuity and Brevity, I distinguish *four Orders* and Degrees of *Regimen of Diet*, that is, of Meat and Drink; *viz.*
1. The *common Diet* of a reasonable Proportion of *animal Food* and *fermented Liquors*, common to the *middling Rank* of the Healthy,

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Temperat and Sober in every *Climat* or Country. 2. A Diet of plain fresh *animal* Food once a Day, without any *fermented* Liquor, only plain Water, or Toast and tepid Water for Beverage; or one of one Day Meat without *Wine*, and another Day a little *Wine* without *Meat*, which I would call the *trimming Diet*. 3. A Diet without any *animal Food*, but one of *Milk, Seeds, Fruits* and *Vegetables*; any thing where the Life of no Animal is wanted to compose or dress such (as Eggs, Gravey, and the like). 4. A *total strict Milk and Seed Diet* only, without any other Materials. Of these I intend to say something in *general*, and in this Order, both as to their Times and Cookery. But first as to the *Order*; or Time of changing any one of these different kinds of *Regimen* one for another.

§. 15. WHEN a Person is tolerably well, and is subject to no painful or dangerous Distemper, I think it his Duty, and the Order of *God* and *Providence*, to *let Well alone*; and with general Temperance, without Solitude, Anxiety or Scrupulosity, to persevere in the *common Regimen* of the middling healthy temperat Order of Men, in the Country and *Climat* where he was born, or long habituated: To follow St. *Paul's* Advice in another Case, to ask no Questions about what he should *eat* for Health's sake; or rather our *Saviour's* Counsel, not to be *solicitous*, or take *anxious* Care,

the Regimen of DIET, &c. XXXvii

Care, about what he should eat, or what he should drink, or wherewithal he should be cloathed; but without Curiosity or Nicety, take a Share of whatever is presented: For to live at such a Time, and in such a Circumstance, medically, is truly to live miserably, and *propter vitam vivendi perdere causas*. It is enough, for a *wise Man*, and a *Christian Philosopher*, to stop, and attend to *Diet and Regimen*, when, by the *Order of Providence*, his natural and providential Course of common *Regimen* is barr'd up, by some Disorder or Distemper; and then wise Nature will give him timely Warning, by *Inappetency*, a *Nausea*, *Reaching*, *Vomiting*, a *Flatulence*, *Fulneis* or *Pain* in the *Stomach*; for all Distempers begin first at the *Stomach* or *Bowels*, and then ascend to the *Head*, which is the Language of the *God of Nature*, saying to the Person, *Man, take Care*; and then, and only then, ought a *Christian Philosopher* mind his *Regimen*, and by *Evacuation*, moderate *Fasting* or *Exercise*, endeavour to relieve or remove the Grief, or apply to some honest experienced *Physician* for Advice.

§. 16. IF the Case is *acute*, the Party is not generally, at least for any Time, in a Condition to observe or direct for himself: But seldom any notable Errors are committed in *Regimen* then; for on the slightest Attempts to any great Excess, either in *Quantity* or

Quality, Nature immediatly *revolts*, and the Party suffers to such an Extremity, by the *Exacerbations* of his *Symptoms*, that any notable Progress in such an unnatural *Regimen* cannot possibly be receiv'd or persisted in; and yet I have seen and felt, by the Indiscretion of *Friends*, or the officious Sedulity of *Nurses*, the poor Patient suffer to mortal *Agonies*, and sometimes to Death, in *acute Cases*, by improper Loads of *high Foods*, or liquid or solid *Drams* and *Cordials*; and many have suffer'd more from high and hot Drugs, than ever they could from the Distemper. In *acute Cases*, seldom any thing that is given either for *Food* or *Physic*, passes the *Primæ Viæ*, unless it be extremely *light* and *liquid*. In such, the wiser *Antients* scarce ever administred (besides proper Evacuation) any thing but tepid *Water*, simple *Oxymel*, or Water soften'd, or sharpened by the *Flour* or Meal of some proper or *specific Vegetable*. Long obstinat Fasting, continued even *ad Deliquium*, with plentiful *Dilution*, and the Evacuation indicated by the Nature of the Distemper, was their most *universal Remedy*. But it is not of Regimen in *acute Cases* that I here intend to speak; my sole Business is with *chronical Cases*.

§. 17. BUT since *chronical Cases* are only *acute Cases* diluted, and drawn out into a longer Time, with weaker *Paroxysms*, and a more protracted *Crise*; since Nature has a
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the Regimen of DIET, &c. XXXIX

general Law and Type, by which she governs and *signatures* such *acute* Distempers, especially in those who follow *her Laws* and Simplicity, and not disturbed by *spurious Art* or Accidents; since *Fasting*, proper *Evacuation*, and *Dilution*, are the great Remedies indicated in *acute* Cases; it is natural and highly probable to suppose, that proper *Evacuation*, Abstinence, and thin cool soft *Regimen* longer persisted in, will be the single Intention pointed out, and the great and *cardinal* Remedies in *chronical* Cases; and therefore, when a Person, under common Life, is seized with a *chronical* Distemper, which by prudent Abstinence, and lessening the Quantity of this *common Diet*, is not remov'd, he ought to apply to the proper *Directors* of Health, and follow their Advice religiously, in the Use of Medicins and *Regimen* they order; and if in *three Months* time, in *chronical* Cases, by rigorously pursuing the order'd Medicins and *Regimen*, their Symptoms are not totally remov'd, or greatly reliev'd and mitigated, he may, I think, fairly conclude the *Regimen* was not low, cool and thin enough, for the End propos'd; and therefore ought to resolve to sink his *Regimen*, both in Quantity and Quality, and enter upon what I call the *trimming Diet*.

§. 18. BUT before any Person resolves to sink or alter his *Regimen* of Diet, or any prudent *Physician* ought to advise such an Altera-

tion, he ought always to premise a gentle partial *Phlebotomy* out at the *largest* Vein, and from the largest Orifice commonly open'd; for a small *Trunk* of a Vein will only send out such Blood as is much different from the *Craze* of the whole Mass; the Circulation being slower in the small *Branches*, the *Viscidities* is generally impacted into the smallest in a greater Proportion, and the *serous* Part by the Slowness is perspired or run off, by the *Lymphatics*, and lateral Branches; and a small *Orifice* either compresses and breaks the Texture of the *Curd* of the Blood, disunites and separates the *Globules*, so that the Observation cannot be fairly or with any Degree of *Accuracy* made; but by comparing the Blood so let out, with other sound healthy Blood, (for Example, that of a healthy Person, or of a Bullock or Sheep) if the Difference in *Taste*, *Colour*, *Cohesion* of the Globules, and *Curd*, and the Proportion thereof to the *Serum*, be in all or most of these Distinctions, greatly different from those of the *sound Blood*, it may fairly be concluded that the *Regimen* of Diet, both in *Quantity* and *Quality*, is to be sunk and lessen'd, and that proper and *specific* alterative Medicins, to thin and sweeten the Blood, are indicated, (especially those of the mild ponderous Nature at first, with the *Galenical* Vegetables, which universal Experience has assign'd as *specific* in a Distemper of such a Denomination) and the Evacuations of the

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Primæ Viæ by gentle *Vomits* and *domestic Cathartics*, as the Symptoms exasperat; for tho' a Person may still suffer, even when the Blood thus let out for Experiment's sake, mostly appears, on such gross Experiments, tolerably good, and not differing greatly from *sound Blood* in the Size, the bad Juices being confin'd to the *Capillaries*, *Glands* and great *Viscera*; yet these will never be open'd and render'd pervious, till the Blood in the great Trunks of the Vessels be first attenuated, *thin'd* and *sweeten'd*: And he will never be long or uniformly well, who has *bad Juices* circulating, in these greater Vessels; it is a certain *Symptom*, that it must be much worse and more *sizy* in the small *lateral Branches*, the *Capillaries*, and the *Glands* of the *Viscera*; and it is *Diet alone*, and it chiefly, join'd with mild ponderous Remedies at first, *Evacuation*, *Air* and *Exercise*, that can at last alter or *antidote* these morbid Symptoms. And if after three Months Use of the Medicines advis'd in *chronical Cases*, by an honest experienced Physician, the Blood on such a Trial continues bad, that is, *sizy*, *liverish*, with either too little *Serum* tho' clear, or too much but *muddy*, then, I think, the *trimming Diet* ought to be tried, *viz.* one of white Meat in a moderat Quantity once a Day, with *Milk*, *Seeds* and *Vegetables*, for the other Meals, and *aqueous Beverage*; or one Day a little plain Meat of any kind once a Day, with

aqueous

aqueous Beverage that Day, and the next Day only *Milk, Seeds* and *Vegetables*, with about a *Gill* of some sound old *Wine*, with or without *Water*; and this *Regimen*, with a due *Care* of the other *Non-naturals*, proper *Evacuation*, and due *Exercise*, I think, ought to be continued for one whole Year or two, in obstinate *hereditary chronical* Cases; for, I think, acquir'd ones will scarce require so long Time, or such Severity of *Regimen*, to be cured, or at least greatly alleviated, unless their Excesses have been violent, or that they are far advanced in Life.

§. 19. B U T since such Cases do daily happen, both in *hereditary* Distempers, and those acquir'd by an obstinate *Mal-regimen* long continued in; that after a full *Twelvemonth* or more of a *trimming* Regimen of Diet, with proper *Evacuation*, and *specific* Alteratives, the Blood, on making the Trial, as above described, continues still *bad* and *sizy*, then, I think, all Medicin (except domestic Evacuations or Alteratives) may be fairly cashier'd and laid aside, as of little or no Use, and the whole Stress and Hope laid on *Diet* and *Regimen* only, by sinking it in Quantity as well as Quality, and confining one's self to *Milk, Seeds, Fruits* and *Vegetables*, well dress'd, or much dissolv'd by *culinary* Fire, to evaporate the Wind; and drinking only *tepid Water*, or some specific mineral Water, as the Case requires, and *Wine* only
as

as other Persons use Spirits, on dangerous Symptoms, as a Cordial, and on Extremities; and this *Method* and *Regimen* ought to be continued for *two Years* more at least. And, I think, in Persons of a tolerable Constitution, and where some of the *great Viscera* are not intirely spoil'd and irremediably consumed, this Method and Diet cannot fail of having salutary Effects of a perfect Cure, or a very considerable Relief; and then if the Party is not past the *Meridian* of Life, the Person may without Fear or Danger, gradually and by slow Degrees, rise again to the *trimming* Diet, and from it return back again by the same Steps he descended into common Life; and only on *Exacerbations*, and stated Seasons, sink into his lower Regimen, for a Preservative.

§. 20. BUT after all this Care and Perseverance in a *milk, seed and vegetable Diet*, with *aqueous Beverage*, if on a Trial after the manner mentioned, the Blood be still fizy, as it often is in bad Constitutions, and obstinat Cases, and the *Symptoms*, still severe and depressing; the only thing remaining for such a Person with any Reason or Expectation of Success of a total Cure, or any notable Alleviation of his *Symptoms*, is, for the Person to enter on a *total rigid strict milk and seed Diet only*, without Butter, Eggs, or any other Vegetables, but Wheat, Barley, Rice, Oats, Sago, and the like seed Meats; and even to make his Milk the
thinnest

thinnest possible, skim'd Milk, sweet Butter-
 milk, sweet Whey; or the Whey made with
 a Mixture of sour Milk, or Orange-Whey, or
 Whey made with the Juice of some specific
 Vegetable, (especially in *scorbutic*, *gouty*, *pul-
 monic* and *icteric* Cases, which is the *Base* of
 most of the *chronical* Distempers in *England*)
 and Bread or Seeds dress'd made with Milk
 only; for Seeds are young Vegetables, and are
 neither so hard of Digestion, so windy, nor
 abound with the *essential* Salts of Plants, Roots
 and Fruits. And even the *Quantity* of the *Regi-
 men* is to be minded; little at a time, but oftener,
 never either to load the Stomach, nor compress
 the *Nerves*, *Membranes* and *Fibres*; Fulness
 and Compression, even by such Foods, like
Stops in *musical Chords*, will interrupt their
 easy, regular and *harmonious* Vibrations and
 Play, and so will sink the Spirits, and make
 the *Functions* labour. This Regimen ought
 at last to be tried, all other Methods not suc-
 ceeding. One would not buy *Gold too dear*;
 but Health and free Spirits are more precious
than Gold, and a wise Man would give up
 every thing else for them. This *Regimen* will
 infallibly have one of these two Effects; it will
 either totally cure him, if the great *Viscera*
 are not quite consumed; or make him *lie
 down* more easily, and will infallibly give him
 longer Time and better Spirits to settle his
temporal Affairs, and give all the Attention to
 his *future State*, the Nature of Things will
 then admit.

§. 21. MOST People that enter on a *low Diet* for Health and Spirits, intirely *counteract* and *defeat* its beneficial Effects. I have known some *Men of Quality*, and *Gentlemen of Fortune*, who have been advis'd a *low Diet*, have their *Vegetables* of the *highest* and *rankest Flavour*, dress'd high with *burnt Butter*, *hot Spices*, *Aromatics*, *Onions*, *Eggs* and *Salt*; so that they were infinitely more deleterious and hurtful, than a moderat Quantity of plain *animal Food* once a Day could possibly be. The *meager* fasting and *Lent Times* among the *Catholicks*, in *French*, *Italian* and *Spanish Cookery*, with their high *Fish Sauces*, will much sooner inflame the Blood, produce *Gout*, *Stone* and *Fevers*, than a *Bit* of *Chicken*, *Veal*, *Lamb*, or any white Meat plainly dress'd possibly can. All the beneficial and salutary Effects of a *low* and *vegetable Diet*, I have ever observ'd, have been owing in atrocious, obstinat and painful Distempers, to *Milk* and *Seeds only*, and even these the *thinnest* and the *least* the Person could be tolerably easy under from the Pain of Hunger: And it is not easily to be credited what wonderful Effects, even in the most desperat and universally *condemn'd to Death* Distempers, I have seen perform'd by such a *Regimen* duly and obstinately persisted in, especially in Persons under Fifty; *Epilepsies* totally cured, *hereditary Gouts* almost eradicated, *universal Lepers* made clean, *Stones*
in

in the *Bladder* and *Kidnies* laid quiet, *Cancers* healed or palliated, ulcerated *Lungs* made found, and *schirrous* Livers made pervious. But all this has been constantly brought about by a total, obstinat and continued milk and seed Diet only ; but in all such *incurable* Cases, the Diet is to be persisted in to the last Day of Life ; for I have always observed, when such return'd to a high or common Diet only, their Distempers always return'd with greater *Violence*, as in Reason and true *Philosophy* must have been expected : For the Solids being brought down and relax'd to a Level and *Equilibrium* with such a Diet, become infinitely sensible, delicat and tender ; and such strong *Aliment* becomes an universal Stop and Obstacle to their Play and Vibrations, (like sticking down a *musical Chord* all along with *Pins*) and interrupts, marrs and confounds the whole *animal Functions* and *Oeconomy*, and brings on all the old Symptoms enraged.

§. 22. It is true, to live thus poorly, *anxiously* and attentively, is a most *miserable* kind of Life, to which the *Brave*, the *Bold*, and the *Unbeliever* will brag he should prefer *Death* itself: But I, who give little Credit to such *Bounces*, know *Self-preservation* to be the great Law in Nature, never met one but the true practical and habitual *Christian* among my many Patients, and even scarce these, who was truly willing and pleas'd to *strip* and lie down ;

down; and only him who was always resign'd to the Order of Providence either in *Life* or *Death*; and even not *Him* at all Times, and in the dark Moments of *Trial*, or any but the extremely miserable in Life. But here the Case is not mere *dying*, but *living a dying Life*, perhaps for many Years: Here it is in two Evils, (*violent Pain*, or extreme Lowness and Languishing, or tolerable good Spirits, and sufferable Pain, at the Tax and Charge of a transient momentary sensual Gratification) choosing the least; on the other side, it is a voluntary and a resolute withdrawing from the Orders and future unknown Designs of *Providence* over us, when a very certain Mean (at least in due Time) of escaping, or at least greatly diminishing these Miseries is offer'd. In short, not to take up with a low Regimen here, is a plain Rebellion against the Orders and Designs of Providence manifested by Nature, the Relations of Things, *Philosophy* and Experience, for the mere Gratification of vitious morbid Appetites: In a word, it is deliberat *Suicide*, the greatest of all Rebellion and Sin.

§. 23. IN *Lowness of Spirits*, want of *natural Rest*, great *Anxiety*, involuntary dark and terrifying *Thoughts*, *Ideas* and Imaginations, there are but these *three* infallible immediat Reliefs or Remedies: 1. A *Vomit*, that can work briskly, quickly and safely, and Experience and Use can only determin what that
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one shall be; for it is not the *Evacuation* or Quantity of the Discharge, that is to be so much minded, as the *internal Action*, the strong *Convulsion*, the internal *Exercise*, and the *cleaning*, squeezeing and compressing the *knotted* and *tumified* Glands of the *Primæ Viæ*, warm Water, *Chamomile*, or *Carduus Tea*; and without drinking any thing, I have often effected a present perfect Relief, by mere urging and tickling the Throat and Glands with the Finger or a Feather, by bringing the Muscles of the *Abdomen* into repeated *Efforts* and *Kecks*; and so have frequently discharged Loads of *Phlegm* and thin *Rheum*, which always greatly reliev'd; and this Method frequently, nay sometimes daily repeated, and with greater Safety and less Trouble pursued, will answer the Ends, in tender and delicat Constitutions, under a Regimen, of formal and artificial Vomits; and I earnestly recommend the Trial and frequent Practice of it, to all tender low-living *Valetudinarians*, as what they will find infinit Benefit from, and much easier and safer than artificial Apothecary Vomits, when they have made the Practice of it easy and familiar: The Strong and *Robust*, whose *Fibres* are firm and *callous*, will require stronger for a present Relief, and they must be repeated whenever the Symptoms exasperat. 2. Great, frequent and continued *Exercise*, especially a *Horseback*, because this Exercise, by the frequent *Succussions*, opens all the *Glands* of the *Abdomen*, of the *Mesentery* and *Liver*,
where

where the Evil generally lies. Walking, because of the universal Action of all the *Solids*, and its forcing the Perspiration, is the best Exercise to *preserve Health* and *good Spirits*; but *Riding* is best to recover them; to this the *Flesh-brush* for half an Hour, Morning and Night, ought to be join'd, to uncork the *Plugs*, and concreted Recrements, that stop the Mouths of the *perspiratory Glands*; and then washing with *tepid Water* in *Winter*, and *cold Water* in *Summer*, the whole Skin, to scour off these *Impurities*; and drying well after: and having always a large broad soft *Girdle* of Leather, quilted with Cotton, to wear about the *Loins*, like a *Stay* or *Swaith*, to keep the *Viscera* in their natural Situations, the *Lacteals* and *Intestines* in their natural *Curvatures*, and the *Bowels* from being too *pendulous*, especially in thin and wasting Persons.

3. Religiously to study and practice the *lightest* and the *least* of Food, they can be tolerably easy under: The least unnecessary Burthen, *compressive* Constriction or Ligature on the tender delicate *Fibres*, *Nerves* or *Membranes*, hinders their easy, pleasant and natural *Play* and *Vibrations*, which is the immediat Cause of *Lowness* and *Anxiety*; it is like *nailing* or sticking down with *Pins* or *Stops*, the *Play* of a *musical Chord*, whence *Discord* must necessarily ensue. In short, to preserve or obtain *good Spirits*, in very low Cases, a Man must be in a con-

stant Course of *Self-denial* as to *Aliment*, and make, as it were, *Hunger* his greatest and only Pain; but nothing but Experience and constant Observation of the *Juvantia* and *Ledentia*, is sufficient to determin, to each Individual respectively, how far this is to be carried. *Prudence* is the first of all Natural as well as *Christian Virtues*; *Gold* may be bought too dear, but *wise Nature* always tells us how far this Method ought to be carried, by the Intenseness of our Cravings, when gone too far; and then a Person under no unnatural or vitious *Passion* or *Lunacy*, will obey her *Calls*, by giving her what she *craves*, so as to make her tolerably easy. But these are the most general certain *Antidotes* against extreme Lowness and Anxiety known to me; the Reliefs of *Art* and *Medicin* are not my Design at present here.

§. 24. SOME Persons have found great Relief on Lowness, a bad *Constitution*, and *nervous* Distempers, on Change to a *Southern* and warmer Climat, from a *Northern* and colder. But I never observ'd that Benefit durable, or in any Degree perfect, unless the Party continued all the rest of his Days in that *Climat* and *Country*; and tho' proper Air and Warmth be a most *comfortable* and *cherishing* thing to *animal* Bodies, yet it is observing the Diet, liveing in the manner of the Country, that
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contributes most to the Cure or Relief; for it is well known, that in warm Countries, and *southern Climats*, the Diet there is not only exceeding spare and *light*, but almost altogether *Vegetables*: The Heat and Rarefaction of the Air, and constant Perspiration, make a full high *rank* Diet certain Pain or Death: And even the Materials of their Food there, the *Animals* and *Vegetables*, are lighter and less *rank* and destructive in their Nature, and more stimulating; the Natives scarce ever taste fermented or strong Liquors, and indulging in them is the sole notorious Cause of the *sudden Deaths* of all our *Soldiers*, *Seamen* and *Traders*. It is true, *eastern* and *southern* Nations use many and the highest *Aromatics*, with their *Vegetables*, and they are but *dry Drams* of as pernicious a Nature almost as our liquid ones; and this is the sole Cause of their *unnatural Lust* and *Leachery*, of their *acute Distempers*, and *short Lives*. But when a *valetudinary* Person goes to a *southern* Country for his Health, and lives as he used in his *northern* Country, he rather grows worse for the *Climat*; and if recover'd by the Air and Traveling, and observing the *Regimen* peculiar to the Healthy in that *Climat*, if he returns, and does not continue the Regimen of Diet by which he was recover'd, he falls back again, and the *second* Error is worse than the *first*; and, in Truth, to travel through, or live even

a few Months or Years in, a *southern* Climat, and afterwards be obliged to pass his Life at Home in a *northern* Climat, is but only roasting at the Fire, or going strait out of a very hot Room into the cold Air, to freeze and chill the faster, and more intensely; for *Reaction* is always equal to *Action*.

§. 25. As to the *Quantity* of Foods of any kind, *strong, middling* or *weak*, fittest to prolong Life, and prevent or cure Diseases, the most proper for each Individual, there is no possible way to determin it to any Precision; it must be different, according to the *Size, Strength, Age, Constitution, Habitude, acquir'd* or *hereditary* Distempers of each Particular, which are as various as their Faces. *Wise Nature* had so contriv'd us, had we follow'd her Simplicity and Order in our Diet, that our *Appetites* and *Craveings* should be a sufficient *Rule*; but having by long *Habitudes* and *Example*, spoil'd, corrupted and disorder'd her *Laws, Sensations* and *Order*, she is not *now*, in all Cases, sufficient to determin this Affair. The best *Rules*, I think, a wise Man can follow, are, 1. To use the plainest, most tender, least *poignant* and savoury Meats, fully dress'd, he can find, and to abate in *Quantity* what he is forced to increase in the *Quality* of his Food. 2. To take the *least* possible he can be tolerably easy under from the Pain of *Hunger*.

ger. 3. To observe for some Time, and with some Care, what *Foods*, in Quantity and Quality, he is easiest under, and the natural *Rest*, the natural *Secretions*, and the animal Functions labour *least*, and are most pleasantly perform'd under. 4. To observe the *Quantity* after the great Meal, he can apply his *Head*, his *Attention*, and his *Body*, to their proper Offices, with the greatest Facility and Pleasure under. 5. To follow the Quantity and Quality of those Foods that give him regularly one figur'd *Stool* a Day only. 6. For *one Month* to try double the Quantity, or at least one *third*, or less, more than he us'd of the same kinds of Food, and observe what Difference this makes in his *Functions*, *Intellectual* or *Animal*; and by some repeated Trials of this kind, summing up the whole, and takeing the *half* of this Quantity, divided by the Number of Days, as the *Medium* between the least or greatest Quantity. 7. To try, by a *Sanctorian* Chair, the Quantity and Quality of those Foods that perspire the *most* and *soonest*, and reduce the Body to pretty near always the same Weight: Or, 8. Lastly, Without Care, Anxiety or Perplexity, to study and pursue the *lightest* and *least* of Food he can possibly be easy under; for, without all doubt, Nature will (to a Man of a sober Mind, and in his right Senses) by acute and intolerable Pains from *Hunger*, apprize him at least in some time, if he has under-

pos'd her. So far may suffice to an honest prudent Person, as to the Quantity of Food, or the Materials of the *Curd* of the Blood; As to the *Liquids*, or the Materials of the *Serum*, I am perfectly convinced, Nature never intended any thing but *pure Water*; *Water* being *signatur'd*, by its greatest *Fluidity* and *Inspidity*, for carrying *alimentary* Particles readily and pleasantly through all the strait *Meanders* of *animal* Life; and having design'd fermented Liquors, and the Juices of *Fruits* and *Vegetables*, for *Physic* only, and they are, when us'd with Intemperance, or as common Beverage, the sole universal and adequate *natural Cause* of most acquir'd Distempers; and Water-drinking only, the proper and adequate *Antidote* for such. But if a Man will drink vinous and fermented Liquors, then the best are those that are of a middling Strength, the *lightest*, *oldest* and *ripest*, which have spent or drop'd their *saline*, *tartarous* and grossest Particles by Age and Maturity; on which Account the old *Rhenish* or *Hock*, ripe *Claret* or *Burgundy*, neat old *Port* and *Madera*, will be preferable; and the rich, fat, fiery, oily and gross Wines are only to be us'd as *Cordials* and *Drams*, on Necessity and Extremity. But always the least is the very best of all fermented Liquors whatsoever.

§. 26. WHOEVER can resolve in *bad Spirits*, a bad Constitution, and in advanced Life,
to

to go into a Regimen, may, I think, fairly be manumitted from *Drugs*, that is, from any kind of Alteratives, even the Preparations of *Mercury, Steel, Antimony, Sulphur*, and all those of the ponderous and mineral Kind; they will only tear and rend his tender Bowels and Vessels; and even from every sort of the *violent* and *active* kind; and trust simply to Nature and domestic *Evacuation*, as the *Symptoms* exasperat, viz. little *Bleedings*, gentle and weak *Emetics*, Stomach *Purges*, *mineral Waters* of a proper kind, gentle Air and Exercise, and a *Regimen* of the *lightest* and *least*, no regular Meals, but a little at a time and oftner; for as Nature will not, now on its *Decline*, bear the violent and *active* Remedies, without being torn to pieces, so there is not sufficient Time in Life remaining for strong Health; and they must consider what Nature can *bear* and *do*, and follow her by their *Feelings* rigidly, and treat themselves as *Children* the *second* time, by giving her barely the *lightest* and the *least* she can be tolerably easy under, and always endeavouring to lessen the Quantity and Quality of the Diet, as her *active* and *digestive* Powers weaken and decrease; for one Day tolerably easy by the Strength of *Nature* only, will be better than two such by the Help of Art, for her *Recovery*, and prolonging her Life.

§. 27. IN a *low Regimen*, even when upon Necessity, and under prudent *Counsel* and Advice, when a Person has enter'd upon it, and has continued in it for a long time, they may have many *Plunges*, *Discouragements* and *Exacerbations*; especially as the peccant Matter becomes collected from the Mass of Blood by the greater *Glands*, and is now soliciting to be *pumped* off, or driven out by the *Common-sewer*; besides Accidents, the *Inclemency* and Alterations of the *Seasons*, especially *Spring* and *Autumn*, when *animal* as well as *vegetable* Nature undergoes some notable Alterations; none ought to be so scrupulously nice, as not, at such a Time, to lay aside their *low* Milk and *Seed* or *vegetable* Diet, and take to a little *white* Meat, and fermented Liquors, upon *Nausea*, *Inappetency*, and transiently to *brace* the Solids, to get Strength to throw off the still remaining Load of *Morbosity* and *Viscosity*; this is but like standing to take a little Breath in ascending a *steep* Mountain: But then they ought, as soon as this periodical *Paroxysm* is remov'd, by proper Evacuation, and this temporary *braceing Regimen*, to return to their *cooling*, *soft*, *sweetening* and *thinning* Diet, in order to purify the Juices totally. This *Interruption* will only retard the *Cure* a short time, and will give Strength to perfect it at last, as far as the *Nature* of Things will permit: For it is to be believ'd

liev'd as a *certain Truth*, without which no Patient will be encouraged to proceed, that it is to a low, cool, thin *Diet* alone, with proper and indicated Evacuation, that the Blood is to be at last mended, and the highest Health the Constitution will permit is to be obtain'd.

§. 28. To *conclude* this tedious Detail, of the two, *animal Food* or *fermented Liquors*, either of any kind, that is in Use, if my Opinion were to be *ask'd*, Which of the *two* is most pernicious to *animal Bodies*, or, in which of the *two*, Mistakes or *Excesses* are most pernicious, fatal, and most productive of the *severe* Distempers? I would not hesitate a Moment, to ascribe to *fermented* or *distill'd* Liquors of any kind, the whole Blame of all or most of the painful and *excruciating* Distempers that afflict Mankind: It is to it alone all our *Gouts, Stones, Cancers, Fevers, high Hysterics, Lunacy* and *Madness*, are principally owing: It is the true *Pandora's Box*. And he who would timeously give up, while he is tolerably well, *fermented* Liquors, and drink nothing but *pure tepid Water*, need never seek nor want any other *Cure* or *Medicin*, but gentle and proper *Evacuation* occasionally, be his Distemper what it will: He may then freely give up any Concern about what he should *eat*; let him, without Fear, follow Nature and his Appetite, in whatever plain Meat is presented,

sented, he can be in no Danger from any *fatal* or dangerous Distemper. Water-drinking to those that are already tolerably well, begun early, at least under Thirty-five, or after, when no *chronical, hereditary, mortal* Distemper is rooted, is the true and universal *Panacea*, and the *Philosopher's Stone*. God has not only *permitted*, but by a wise Appointment of his Providence, has, in many Cases, made *animal* Food absolutely necessary and indispensable; and for great *high Health* and *Spirits*, *warm* and strong Blood, bodily *Prowess* and great *Labour*, it is the only proper Food; but for *fermented* Liquors, I know no Command, Council, or Example. Certainly *wise Nature*, who has provided liberally Supplies for all our Wants, has furnish'd us none of it; it is the Invention of spurious and luxurious Art, and it is present Death to *many*, and the natural *Aversion* of all Animals who follow pure Nature: It certainly shortens the Duration of *Life* to all that use it even with *Moderation*, and is the alone *adequat* Cause of all the *mortal*, painful and atrocious Distempers. As a Medicin, present Relief, and as a *bitter Chalybeat Potion*, on Occasions and Extremities, it might be a tolerable *Medicin*; but as common Beverage, it is a slow but certain Poison.

FOR a *Conclusion*, I will, from the whole, set down a few *Aphorisms*, that may perhaps instruct

instruct and ease the Memory of the *Valetudinarian*.

Aphorism 1. A CONSTANT Endeavour after the *lightest* and the *least* of Meat and Drink a Man can be tolerably easy under, is the *shortest* and most infallible *Mean* to preserve *Life, Health* and *Serenity*.

Aph. 2. HE that would preserve a *clear Head*, and equal Spirits, must keep his *Stomach* clean, his *Bowels* moderatly empty and uncompress'd.

Aph. 3. ON *bad Nights, Lowness, Flatulence* and Oppression of *Spirits*, of any Continuance, the only certain *Reliefs* are, a small *Phlebotomy*, a gentle *Vomit*, a *domestic Purge*, *rideing* a Horse-back, and a *Regimen* of the *lightest* and the *least* persisted in.

Aph. 4. SMALL frequent *Phlebotomies* are the quickest and most effectual *Mean* to mend the *Blood*, and to cure *Cacochymy*, if a *Regimen* of the *lightest* and *least* be joined,

Aph. 5. GENTLE and repeated Evacuation upwards and downwards, (especially, and perhaps only, *Vomits*) by the Medicins most familiar and experienced, (the *Action* and Exercise of Vomiting is its chief Use) are the
surest,

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surest, quickest, and most effectual Mean to prevent or remedy the ill Effects of Gluttony, Over-loading and Repletion, (that is, almost all chronical Distempers) provided the *lightest* and the *least* be join'd afterwards.

Aph. 6. DISEASES are always to be cured by their *Contraries*, the *high Diet* by the *low*, the *hot* by the *cool*, the *sapid* by the *insipid*, the *thick* and gross by the *thin* and poor, *Repletion* by *Fasting*, *Inactivity* by *Exercise*. Health acquir'd and possessed lies in the middle Regimen, between these two *Extremes*.

Aph. 7. PERFECT Health and good *Spirits* depend chiefly, if not only, on the easy and pleasant Play or Performance of the *Animal Functions*, viz. the *Digestion*, *Circulation*, *Respiration*, *Perspiration*, *muscular Motion*, and the *Secretions*.

Aph. 8. HE that would be soon well, must be long *sick*, that is, treat himself as a *Valetudinarian* in most things.

Aph. 9. EXERCISE and gentle *Evacuation* will supply the Place of *Abstinence*, and *Abstinence* will supply the Place of *Evacuation*; but the first two are still preferable, because they damage the *Solids* least.

Aph.

Aph. 10. QUANTITY in Food will supply *Quality*, and *Quality* will supply the Place of *Quantity*; but in very bad Cases it is most secure to join *both*.

Aph. 11. THERE is but little in a *specific Regimen* of *Diet* to remedy or antidote a *specific Distemper*; *Abstinence* in general, or a constant Endeavour after the *lightest* and the *least*, will constantly supply the Place of any *specific* particular *Regimen* of *Diet*: But in very bad Cases, a particular *Choice* of the most *specific Regimen* that *Art, Experience* and *Philosophy* shew to be most proper, is not to be neglected.

Aph. 12. THE *Regimen of Diet* by which one is cured of a particular *Distemper*, ought to be continued, at least in some Degree, especially if the Person is not much under *Fifty*, else the *Distemper* will return with more severe and worse *Symptoms* than at first, as *Experience* has constantly shew'd.

Aph. 13. Every *wise Man*, after *Fifty*, ought to begin to lessen at least the *Quantity* of his *Aliment*; and if he would continue free of great and dangerous *Distempers*, and preserve his *Senses* and *Faculties* clear to the *last*, he ought every seven Years go on, abateing gradually

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gradually and sensibly, and at last *descend* out of Life as he *ascended* into it, even into the Child's Diet.

Aph. 14. He that is *old* when he is young, that is, treats himself as a wise *old Man* does, or ought to do, by great *Temperance*, *Air* and *Exercise*, if he lives past Thirty-five, will be young when he grows old in Years.

Aph. 15. No Person of any Fortune ever died; or suffer'd *acute* Pains, or mortal Distempers, by the *too cool*, *too little*, or too *insipid* in Diet; all by the *too hot*, *high* and *savoury*: But Virtue and Health lie in the *golden Mean*, so difficult to be found, and only to be secur'd by the *lightest* and the *least* a Man can be tolerably easy under.

Aph. 16. THE eternal *Law* of Nature, by intense Pain in *Craveing* and *Hunger*, will never suffer a Person in his right Senses to go on long obstinately, and to his Hurt, in the *too little*.

Aph. 17. *WATER* pure, clear and *insipid*, is the sole *Beverage* that can procure or continue *Health*, and a *clear Head*, being the sole Fluid that will pass through the smallest animal *Tubes* without Resistance; next to it are *aqueous*, or weak fermented Liquors.

Aph.

Aph. 18. WATER tepid or cold, or impregnated with the specific Vegetables, or Minerals, that Experience has found proper to antidote a given Distemper, is the true Panacea in both acute and chronical Distempers: Nature has prepared no other Medicin for us, but Water impregnated with Vegetables in their Juices, or natural Mineral Waters on the Surface of the Earth.

Aph. 19. MILK is the only Food prepared by Nature for young, that is, weak and tender animal Bodies; and there is no real Difference between a young, tender, animal Body, and a diseased grown Animal, but that, of the two, the last is the worst; but it will cost Labour and Patience to make Milk agree in bilious Cases.

Aph. 20. MILK and sweet sound Blood differ in nothing but in Colour: Milk is Blood, which almost directly comes from the Chyle into the Teats of the Animal; and Blood is Milk which has gone many Rounds in the Circulation, and is ground a little in the Lungs, where being mixt with the Nitre of the Air, it receives its Scarlet Colour; it is a Medium between animal and vegetable Food.

Aph. 21. WHEY sweet, or medicated with the Juice of any specific Plant, Sage, Balm, or Orange,

Orange, or antiscorbutic, vulnerary, or pulmonic Plants, will supply the Place, and are preferable to most Decoctions, of Plants, Infusions, *Apozems* and *Diet-Drinks* whatsoever, except those of the strong Detergents, as *Horse-Radish*, *Mustard-Seed*, and the like, where necessary.

Aph. 22. GOATS Whey being a natural Infusion from gentle Heat, and gentle *Triture*; of the fine *aromatic* and *nitrous* Vegetables on which *Goats* feed only, is one of the very best Diluents, Detergents, Cleansers and Sweeteners of *scorbutic* and *salin Cacoehymies*.

Aph. 23. FRICTION Morning and Night, and in Winter Washing with warm, and Drying before a Fire, and in Summer with cold Water, is an excellent *Mean* to facilitate and promote the Perspiration; to clean the *Cuticle*, and cure *cutaneous* Uncleannefs and *Defedations*, *cold Batheing* is excellent, and preferable to every Washing in Cases where the Blood is sweet and thin, the Solids too lax only.

Aph. 24. CINCTURE with a broad quilted Belt about the Loins, to keep the *Bowels* in their natural Situations, and the *chylous Vessels* in their best *Locality*, and in flabby Constitutions, weak *Bowels* and *Atrophies*, is of great Benefit.

Aph.

Aph. 25. *RIDEING* is the best of all Exercises to get Health, and to promote the *Digestions*, especially in *nervous Distempers*, where the *Abdomen* and the *Meseraic Glands* are principally affected: But *Walking* is best to preserve Health already got, because it is the most natural and the most universal Promoter of all the Excretions.

Aph. 26. IN *Nature* or *Art* there is no such immediat Cure for low Spirits, Anxiety, and Want of Sleep, as rideing a Horse-back, long Journies with Fasting, or rather a very soft light Feeding with warm thin Liquors at Resting-Places, but that the least possible that actual *Fainting* will permit.

Aph. 27. NEXT to *Rideing*, is either a *Vomit*, or Fasting almost to Faintness, and then only a little spiced Wine and Water warm, and a Mouthful or two of *dry Bisket* every 5th or 6th Hour, with continued *Friction*, with a coarse Cloth, warm Flannel, or a Flesh-Brush, especially on the *Spine*, in *Faintings* and extreme *Lowness*.

Aph. 28. To procure *natural Rest*, nothing is like four or five middling Pills of true *Assafætida*, with four or five Grains of pure succatrine Aloe, taken going to Bed.

Aph. 29. THE only Way to secure tolerable *Spirits* in very low Cases, is a constant Endeavour to make Hunger the greatest Pain, and to cheat the *Appetite* and Craveing with little, warm, light Liquors at large Intervals.

Aph. 30. GOOD Hours will be always a most beneficial Mean to preserve Health and Spirits, to go to Bed by Ten, and rise by Six.

Aph. 31. WHOSOEVER would preserve his Health and Spirits to the last, even when he is in Possession of it, ought to pass through the great Operations of *Physick* in the Spring, viz. To bleed, vomit and purge, whether he have apparent Necessity or not; for *Scurvy*, or *scorbutick Juices*, is the great chronical and fundamental Distemper of *Britain*; all the rest are but Sprouts and Branches of it. And therefore,

Aph. 32. VOMITS often repeated, at least as often as the Symptom of any Ail aggravats, increases or exasperats, are the sole *universal Antidot* and *Panacea* of *Britain*; an ailing Person cannot repeat *them* too often, they will always prove beneficial and *salutary*.

Aph. 33. IN cold Feet nothing like bathing them in tepid Water a little before going to Bed.

Aph.

Aph. 34. A *low Diet* seldom extirpats, or totally eradicats, any *hereditary chronical* Distemper, unless it be in the young, the middling-aged, or the strong and healthy, who have otherwise tolerable *Stamina*; in the very *puny*, delicat and *slender*, in the *old*, and far advanced in Life, even after Fifty, in the strongest, it only abates the Violence of their *Symptoms*, makes them less severe, and the Returns seldomer, and only prolongs the Duration of their Lives.

Aph. 35. THE natural Diseases of the *Poor* and *Necessitous* are generally owing to a *bad*, unwholesome, unsound Diet, and the Want of due Care of the other *Non-naturals*, Cleanness and Shelter; and are generally cured by their *Contraries*, viz. a good, *wholesome*, plain Diet, and a due Cleanness, Shelter from the Inclemency of Seasons, and an easy Mind.

Aph. 36. IF it happen that the *Poor*, and those having no Property of their *own*, by *Stealth*, *Robbery*, or *unlawful* Means, enter on and pursue the *Luxury* of the *Rich* and Opulent, not having the other Necessaries and Conveniencies of Life, neglecting, or not being able to afford, or being inured to want the necessary Care of the other *Non-naturals*, their Diseases are then the most *atrocious*,
painful

lxviii *A Practical* ESSAY, &c.

painful and miserable of any; which is the Reason that the *acute* and *contagious* Distempers begin first, spread faster, and are more *mortal* among *them*, than those of the better Sort.

Aph. 37. DIET; a proper well regulated and parsimonious, cool Diet, is the far greatest *Article* of long Life and Health; but the other *Non-naturals* are to be carefully attended to, and guarded against, else it will not avail alone, which is the Case in *Monasteries*, *Desarts*, and long *Sea Voyages*.

DIS

TO THE
Right HONOURABLE
THE
Earl of HUNTINGDON, &c.

My LORD,

HAD I the *Honour* to be known to a *Person* of more Probity, Steadiness, Love to his Country, and Benevolence to the whole Race of Mankind : Had I known a truer Friend to *Christianity* in General, or to the *Church* in Particular ; your *Lordship* had not been troubled with this *Address*, nor with the Protection of this Work ; which is design'd for the *Cure, Relief, or Entertainment*, of the Valetudinary, Weak and Diseas'd in *Body* or *Mind*. Your *Lordship's* natural and acquir'd *Endowments* en-

DEDICATION.

able You to judge *solidly*, how well it may be fitted for that *End*. *Good Lady* HUNTINGDON, I believe, has benefited by some of the Rules for Health laid down in this Treatise; as have some others of the Branches of your *Noble Family*. *Lady Betty's* eminent *Christian* Virtues are not only universally admir'd, but *felt*. These Considerations make this Work your *Lordship's* peculiar *Property*; and I am greatly pleased with an Opportunity, publickly to declare the *Honour* and *Esteem* I have for the Family of the HASTEINGS, and, in particular, how deeply I am,

My LORD,

Your Lordship's most faithful

Bath, Aug.

15. 1739.

humble Servant,

GEO. CHEYNE.



DISCOURSE I,
Philosophical CONJECTURES
ABOUT THE
NATURE and QUALITIES
OF THE
Original Animal Body,
AND OF ITS
PROGRESSIVE STATE
IN ITS
Several Stages of EXISTENCE.

I Cor. xv. 44. *There is a natural Body, and
there is a spiritual Body.*



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DISCOURSE I.

Philosophical CONJECTURES

ABOUT THE
NATURE and QUALITIES
OF THE

Original Animal Body,

AND OF ITS
PROGRESSIVE STATE
IN ITS

Several Stages of EXISTENCE.

§. 1. **T**HERE are *Animalcules*, which being endued with Life and Motion, must consequently perform *Animal Functions*, that are less than any Object perceptible by our Senses.

THIS is beyond all Doubt from *Microscopical Discoveries* in *Pepper Water*, *Spring Water*, *Vinegar*, *Sperm*, the *Urine* and fluid Juices of almost all morbid Animals; and

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Mr.

2 Philosophical Conjectures on

Mr. *Leeuwenhoeck* has shewn, that there are Animals, many Thousands of which would not equal a visible Grain of Sand; and that there are *Tubes* in Animals, of which several Hundreds would not equal a common Hair; and the smallest *Animals*, to carry on Life, must necessarily have all the chief *Organical* Parts of the greatest Animals, at least *analogically*.

§. 2. An *organized* Animal Body could not possibly at first have been formed, nor can its *Functions* be now accounted for, or explained, by mere *Mechanism*, or the Laws of Motion which now obtain, without the Sagacity and Agency of a *primary self-existent* Cause; nor can the *Functions* be continued without the Superintendence and Influence of a *self-moving, self-acting secondary Agent*, informing and acting on it continually.

THIS is not only demonstrable from the *Inertia* and Passivity of Matter, from the obvious Contradiction of a *perpetual circular* Motion, which is the Case of all Animals (the Motion of the *Heart*, and the *Muscular* Force of the Blood-Vessels, being the Cause of the *Circulation*, and the *Circulation* being the Cause (efficient or occasional) of the Motion of the *Heart*, and of the *Muscular* Fibres;) But that mere *Mechanism* acts only according to the *Surfaces* of Bodies; and yet it is probable, that

that animated Bodies act according to their *Solidities*, and that every *Atom* of an animated Body is constantly in Action, for the Preservation and Well-being of the whole *Machin*, and also for exerting that particular *Animal Function*, which its Figure, Situation and Use in the Animal requires. Besides, natural and simple *Mechanism* can act only from One *Centre* of Motion or Impulse, in One single *Direction* only; whereas *Curvature* requires different Direction every Moment, and consequently various *Centres* of Motion or Impulse. Now, if we consider the Varieties of Motions and Directions in the Joints and Muscles of Animals, but especially the *infinite* Variety of *Curvatures* in the *Arteries*, *Veins*, and *Nerves*, and particularly in the *Glands*, we will readily perceive it to be utterly impossible, and a Contradiction, that an Animal Body could have been at first *formed* without a *Supra-mechanical Organisation*; or that it should continue to *live*, and perform *Animal Functions*, without the continual Agency and Superintendence of a *secondary* self-active, and self-motive Principle.

§. 3. It is highly probable, that the first *Elements* of Bodies, or the *least* and *last* Particles of Matter, are *solid*, *hard*, and *indivisible*, by any *finite* Power, or Force whatever; because by *Friction*, *Collision*, and *Use*,
B 2 they

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they are not worn out, and lose not their *Original* Figure and Size; since they are still fit for the Ends and Purposes of their first Institution.

§. 4. GOD and *Nature* do nothing in vain; and since *Body* must necessarily be always endued with some Figure, being neither infinitely small, nor infinitely great (where Figure may possibly be thought to vanish) the three most simple Figures of all solid Bodies, *viz. Spheres, Cubes, and equilateral triangular Prisms,* might possibly at first have made all the Diversities of the primitive original Particles of *specific* Bodies. These Figures, with the particular Laws of *Attraction* and *Union* thence arising, together with different *Diameters,* and various *Combinations,* may have made all the Differences of Bodies.

§. 5. THE several *Elements,* or the several *Aggregats* or Masses of the different original Particles, now commonly called *Elements,* as *Water, Air, Light, Salt, and Earth,* have each some specifick Qualities, which distinguish them from each other, and which they never entirely lose in any State whatsoever; but which may be swallowed up, and rendered unactive, when blended and combined with other Particles, as they are in the *integral* Particles of natural Bodies, as these are constituted in this our *System.*

WATER

WATER has its Incompressibility, the Roundity, or at least the *Spheroidity* of its constituent Particles; its Transparency, or refractive Power, its Admission of *Salts* into its Substance without greatly increasing its Dimensions, at least in a certain Quantity and Proportion, nay sometimes lessening them.

AIR has its Elasticity, its *repulsive* Force, its *acid* and *nitrous* Spirit, and its *vivifying* Quality to Fire, and Animal Life.

LIGHT has its Activity, Velocity, Tenuity of its Particles, and its Fitts of easy *Transmission* and *Reflection*, and probably a greater Gravity or *Byas*, on one Side, than the other of its Particles.

SALT has its Solubility in Water only, its penetrating Virtue on Bodies, and its stimulating Quality on *animal Fibres*; A greater Degree, and particular Law of the *attractive* Force of its Particles on one another, whereby its *Clusters* are generally of regular, and nearly similar Figures terminated by plain Surfaces.

EARTH has its greater Gravity, loose Connexion, and less Attraction of its Particles; its Friability, and irregular Figure, being probably the *Ramenta* or *Abrasions* of the other *Elements*.

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PERHAPS the *primitive Animal Body* might consist of the *First* pure specific and sublimed *Elements*, harmoniously combined, and elegantly ranged in their Original Natures, of which our present patch'd gross Bodies, are only the confused dense Kind; as our present Globe of *Earth*, its *Water*, *Salt*, *Air*, *Light*, and *Earth*, are but probably the *putrified* Carcase of the primitive *Planet*; but both may continue to have some remote *Analogy* to one another, as a Carcase hath to a living Beauty, or an *Egyptian Mummy* to a living *Cleopatra*.

ACCORDING to this *Analogy* then, may not the Matter and Substance of the original first-created *Vehicle* or Animal Body, be of such Elements of the original Kind? of a *celestial* and *spiritual* Nature (so to speak) infinitely more subtile and refined than the Matter of *Light*, more elastick than the finest *Æther*; and whose Particles might have had, as it were, an infinite Power of *Attraction* even at finite Distances, and consequently might pervade all gross Bodies of our *System* without Resistance or Pain.

§. 6. On such an *analogous* Supposition or Conjecture, the Fineness, Elasticity and Law of *Attraction* in the Particles of such a *spiritual Animal* Matter, might admit of Degrees

grees (as all Finites must necessarily do) and the Degree might be in Proportion to the natural and moral Powers of the Spirit conjunctly.

It seems highly probable, that all finite created *Spirits* have, and must have material *Vehicles*, of Purity and Fineness in Proportion to their natural and moral Powers conjunctly, not only to limit and direct their *Energy* and Efficiency, but to *commerate* with other Animals, and inanimat created Natures; none but the Supreme Spirit, *the Father of Spirits*, being absolutely and entirely an infinitely pure *immaterial Spirit*, acting by his Power and Energy with equal Facility at all possible Distances. And the *Vehicles*, or original Bodies of all created Spirits might possibly be of some such Nature, as this described Matter, which may be called *spiritual Matter*, or *Element*.

§. 7. This *spiritual animal Body*, at first divinely organized, may be rolled up, folded together and contracted in this present State of its Duration, into an infinitely small *Punctum Salient*, into a *Miniature* of a *Miniature in infinitum*, lodg'd in the Loins of the Male of all Animals, (for it is highly probable the Female was but a *secondary* Intention, or a *Buttress* to a falling Edifice) and proceeding in a *diverging Series*, and progressive Gradation, that in due Time it may be fit to be nourished,

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and increased by the Juices of the proper Female, and thereby enabled to bear the Coarseness and Injuries of this *ruinous Globe*, and gross Element, to which it is to be condemned for a certain Period.

§. 8. IT would seem that this *spiritual Body*, of this refin'd subtile Matter divinely organized, by an infinite Degree of *Attraction* to its particular informing *Spirit*, and by an individual *Fitness* and *Congruity* to the specific immaterial Inhabitant, is so intimately united with it in its original *Creation*, that they are *never* after to be separated, whatever future State they may go into, by any finite Power whatsoever; no more than the Firmness and Solidity of the primitive original *Atoms* of Matter can be broken or divided by any natural Power. So that in whatever After-states it may exist, or whatever *Plaister* or Vehicle of a denser and coarser Element may be superinduced, the *spiritual* Inhabitant and the *primitive* Creation-Body go inseparably together. And as this refined spiritual Body might have been the *Creation* primitive Body, so it may, purified, develop'd and mundify'd, become the last *Resurrection* and *glorify'd* Body.

§. 9. It seems highly probable, *analogous* to the other Appearances of Nature, and congruous to rational Agency (if we suppose the first Being *rational, intelligent* and *wise*, acting

ing with Designs and Purposes) that the confining of *intelligent* or *sentient* Beings, for so long a Time, to so dark and strait a Prison, in the Origin, Seeds and Eggs of Animals, on this *ruinous Globe*, must have been for some wise and good End and Purpose, in God's *moral* Government of his intelligent and sentient Creatures; perhaps for *Punishment*, Correction, progressive Purification, and painful Sensation (*A Body hast thou given me*, was said of our *Saviour*, to make him passive); *Feeling and Experience* being the most effectual Mean to admonish and teach finite, wandering and heedless Beings; at least this seems one Part of the Design.

§. 10. THAT in our present Scene of Existence, our *natural Powers* are tied down, sopited, and fettered by the Manner of our *Origination*, and coming into rational Life, is self-evident: The wisest and best Man on the Earth, as to rational and intelligent Living, was first like a mere *Vegetable* or *Plant*, afterward a mere *Animal* or *Brute*, and but at last, very late, and only for a short Time, the rational and *complete Man*; and this Truth might be further illustrated, and even demonstrated, from the Qualities of *Matter*, which are contrary to and destructive of the Qualities of *Spirit*. Now this Progression must have some End and Purpose in the Intention of a wise and good Cause; and may suppose, that by the Abuse of Liberty, and ido-

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idolatrifying the Creatures, the *moral Powers* (*Justice, Goodness, and Truth*) being erased and cancell'd in the *Spirit*, the most effectual Mean and Expedient to restore them, was to tye down, contract and sopite the *natural Powers* of the Soul (*Living, Perceiving, and Willing*) to a *Level* and Equality with these defaced *moral Powers*, that by the Use of the proper Means, they might (without Letts or Obstacles from these *natural Powers*) gradually improve and grow up together, in the same Degree and Order; at least this may be One not improbable End and Design of Providence, in this *progressive* Growth of the natural Powers of the human Spirit; since it is evident in Fact, that where the *natural and moral Powers* of the Soul rise to any Degree, this Progression is observed.

§. 11. The *Works* of God are without Repentance, the true unbodied Spiritual Substance in intelligent and sentient Natures, being an *Emanation, Efflux, Ray, or Spark*, or (if I durst use such figurative Language) an *infinitesimal Miniature* of his *Substance*, (and of his *living, perceiving and willing*, or whole Nature) who is *Self-existent*; After flowing from him, can no more *perish*, or cease to *live, perceive and will*, than necessary Self-existence can cease to be; so that *Living, Perceiving and Willing*, (i. e. *Cogitation*) can never be totally extinct in any intelligent and sentient Being: Never in the *Root, Faculty or Power*,
tho'

tho' they may be, and often are, in the *Acts*; like Fire in Ashes. *Annihilation* is contradictory to, and destructive of infinite Wisdom and Power, and unworthy of infinite Perfection, requiring the same *Omnipotence* that *Creation* does; *Reaction* being always equal to Action. And *Self-activity* being an *infinitesimal Miniature* of necessary Existence and Omnipotence. The *first Being* might as justly be supposed capable of destroying Himself, as his *Miniature* Images: Besides, it were neither wise nor good even in a *Man*, to suffer the *Heir Apparent* of a great Kingdom to destroy or annihilate himself, if it were possible by Correction, Restraints, Time, and due Culture, to fit him for the Possession; and sure every Thing that is wise and good is possible to the *best* of Beings. These *Natural Powers* may be sopited, contracted and hindred from issuing into Action, (as we see they are in sound Sleep, in some Diseases, *Syncope's*, and many other Cases) by Obstacles of, and Resistances from gross Matter, by Bonds, Fetters and Chains made of these our *Elements*; and the coarser and straiter these Fetters and Chains are, the straiter and closer the Prison may be, and the weaker and fewer may be the Acts of the natural Powers, till this Prison become almost dead Matter, and a *Dungeon*, or a mere Point. Now infinite Wisdom and Power, being, as it were, necessitated by the infinite *Benevolence* of his Nature, to lay out all the
Energy

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Energy of his Omnipotence and Omniscience, to recover and restore his Miniature Images, consistent with the *Harmony* of his own Attributes, and with the Usage of their natural Powers, (neither of which he could force, or offer Violence to,) seems to have contrived this wonderful Expedient, *viz.* to tye down, sopite and restrain the Acts and Exertion of the natural Powers, of laps'd, *sensient* and *intelligent* Beings, for a determin'd Space of Time, by Chains and Fetters made of the *Elements* of this ruinous *Globe*, in order to punish and purify them, and so to vindicate his *Sovereignty*, to repair the Indignity done to his *Purity*, to warn and deter the other Orders of his standing *Hierarchies*, and at the same Time, by lessening the Strength and Activity of the natural Powers in their full Vigour, to allow Freedom and Uninterruption from them, for the Restoration and Advancement of the moral Powers.

§. 12. WERE the *natural Powers* of a free, laps'd and intelligent Being, greatly and eminently higher than the *moral Powers* in the present State, they must necessarily clash with, interrupt and greatly hinder the Acquisition of the moral Powers. For *Example*, unerring Evidence, irrefragable Demonstration, absolute Certainty, must necessarily interfere with *Humility*, *Dependence*, *Resignation*, *Faith* and *Trust*, and consequently with all Merit, Gratitude,

itude, and Love. What Faith? What Resignation? What Merit is there in believing the Propositions of *Euclid*? In this we are as much passive in our immaterial Principle, as in our Material. We trust our Lives and Fortunes to a Seaman, or Coachman, not on Demonstration and absolute Certainty, but because we believe them to be *honest* able Persons in their several Vocations. Faith and Hope must eternally exclude *Mathematical* Certainty. Perfect Demonstration and absolute Certainty, would exclude Choice, Election and Preference, in finite dependent Creatures. It is *Probability* alone, *Verisimilitude*, *Analogy*, and *final Causes*, or *Revelation*, that can be the proper Evidence to produce *Faith*, and to give Merit, Choice, Election and Preference to the Actions of finite, laps'd and dependent Creatures; and this whole present Scene of Providence, and the Darkness, Obscurity and seeming Deformity on the Face of Nature, and the Works of an All-wise, All-good Being, seem only contrived and calculated, to preserve the natural Powers of lapsed finite Intelligences *in-violate*, and at the same Time to *harmonise* with the Divine Attributes. For had the *natural* Powers continued in their Perfection and full Extent, while the *moral* Powers were cancell'd and extinguish'd, they could never have been restored consistent with the Harmony of the Divine Attributes, and the natural,

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tural, unperishable and inviolable Powers of free Intelligences. Liberty to do Good or Evil, *Pre-Existence* abus'd, universal *Restoration*, and final *Confirmation*, consistent with the Harmony of the *Divine Attributes*, and the *natural Powers* of lapsed Intelligences, well explain'd, will remove all the possible Difficulties and Obscurity, in Nature, Providence, and Revelation.

§. 13. To comprehend, ascertain and determin with *Precision*, and *Mathematical* or *Metaphysical* Certainty, the real Nature, or Substance of any thing, small or great, is incompatible with *Finitude*, and the sole incommunicable Attribute of the *Deity*; and if lapsed finite Creatures, such as we of the human Race are supposed to be, could attain to it, it would destroy our Liberty to act, (whose very *Essence* consists in doing any thing or its contrary) and determin us infallibly to one *Tenour* of Action, as certainly as one Impulse, or one *Centre* of *Motion* in a Body, would determine it to one *Direction*, or in a Right Line, and consequently would counteract our *Recovery* and *Restoration*, and render it impossible. And the most perfect *Cherubim* in Heaven, to perpetuate and *eternise* its Happiness, must necessarily have made a surrender and sacrifice of its *Will* to infinite Goodness, and its *Understanding* to infinite Wisdom; and tho' all that are admitted to the

Beatific

Beatific Vision, see God Face to Face, or see as they are seen, yet it can be only pro Modulo suo; and tho' the Faith and Trust necessary to us here in our uncertain lapsed probatory State, when we come to Glory shall be done away, yet naked Faith, or a Faith founded solely on the Ipse Dixit of infinite Perfection, as well as pure Love, or love of Infinite Perfection for itself, or for its own Amiability, is indispensibly necessary even in Heaven, to perpetuate and eternise the Felicity of the most perfect Seraphim. As our bodily Eyes are utterly incapable of perceiving the real and positive Magnitude, Dimensions and Distance of material Objects, nothing but their relative ones; so is the most sublime and perfect created Understanding for ever incapable to discover, and comprehend the precise Nature, Essence or Qualities of the First Being, or of any of his lowest Works. Objects are perceiv'd or comprehended not according to their own absolute precise and positive Nature, by created Understandings of any Order and Degree, but respectively and relatively, according to the Degree and Extent of their Faculties; and yet a Miniature may be truly a Picture, and as just an one in small, as one at length, and between the First Being, and the absolute Nature of his Works, as conceiv'd and comprehended by creaturely Faculties, there will be allways the Proportion of Infinite to Finite. And when Jesus Christ
said

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said he was the *Truth*, the *absolute Truth*, he as really affirm'd his *Divinity*, as when he said *he that hath seen me, hath seen the Father, or I and the Father are one*; for the absolute *precise Metaphysical Truth* of real positive Things is inseparable from the *Divine Nature*; and he could not be honest and sincere even as a *Creature*, if in such a *momentuous* and fundamental *Point*, he could lead Creatures into a Mistake; an honest Person would have trembled to come so near plain *Blasphemy*, and yet he says his Words are *Spirit and Truth*. But I beg Pardon for this Digression out of the Sphere of Philosophy.

§. 14. THE subjecting *material* Bodies, the outward Creation, and, perhaps, spiritual Natures, to *general* and invariable Laws, (the continuing these under the *Lapse*, which were and must have been establish'd in the State of Innocence, I say, the Continuance of these) seems to be another Expedient of infinite Wisdom to preserve Liberty in the Recovery of the moral Powers of lapsed Intelligences, and to conciliate the *Harmony* of the Divine Attributes. Without these general Laws, (discoverable only to any Degree, by just *Observation, calm Attention, accurate Experiment, extensive Induction* and *Calculation*) there could be no Room for Correction, Amending, for *Choice* and *Election*, or for moral *Good* and *Evil*; but Things would happen in the intel-

intellectual and *moral System*, as they are supposed to happen in the *natural System* on the *Epicurean Scheme*, by *Chance*, *Casualty*, *Fits* and *Starts*, or fatal *Necessity*; which is absolutely to deny the *first Being* to be a rational, intelligent and free *Agent*; for infinite *Wisdom* can do nothing, but for *wise Ends* and *Purposes*; and must contrive *Means*, which have a natural and necessary *Tendency* and *Fitness* for these *Ends*. If these *Means* be not seen by us, or being in some measure seen, may seem not to attain their *Ends*, it is because, being finite *lapsed Creatures*, our narrow *Capacities* cannot reach them, or because all the *Conditions* requisite to make them effectual, were not present in a particular *Case*; for infinite *Wisdom* must act uniformly, with *Order*, *Number*, *Weight* and *Measure*; all which, nothing but general *Laws* and *Canons* can effect, as is well known to *Geometers*, and plainly exemplified in the universal *Canons* of *Algebra*. If these general *Laws* be duly investigated, cautiously guarded, and all the necessary *Conditions* be taken in, they can never fail of obtaining their *End* and *Effect*; unless infinite *Wisdom* and *Power* suspend them for a limited *Time*, to manifest his *Power*, or for moral *Ends* and *Purposes*; or unless they are kept from attaining their natural *Ends* directly, by the voluntary and free *Agency* of imperfect human *Intelligences*.

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§. 14. THE only Thing worthy of a true *Philosopher* is, with Attention, to draw up and collect as many as he possibly can, of these *general Laws* of the Divine Agency in the natural, moral, and intellectual World, for his own Use, or that of his Fellow-Intelligences. For without all Doubt they must be some few of the most obvious of the Laws of infinite Wisdom, laid down as the *Plan*, by which all his *Works of Wonder* were at first form'd, and are still govern'd: And tho' in Him all this great Affair was but one single *Act* of Wisdom and Power, yet in regard to us his *infinitesimal Miniatures*, now in a lapsed State, they must be consider'd by Parts, in different Acts, and divided *Sections*, and view'd separately, in Proportion to our weak and limited Faculties: For certainly *general Laws*, and universal Rules, are the *Method* of Divine Agency, and of his wise Providence.

§. 15. THE general Laws of *Motion*, the Laws of simple *Mechanism*, the Laws of *Refraction* and *Reflection*, and many more such general Laws, both in natural *Philosophy*, civil Society, and human Policy, are pretty well known and adjusted, in all the polish'd Nations of the World; and it is not improbable such general Laws may obtain in other *Systems*, at least *analogically*: and they actually do so, as far as our Observation reaches. And it is very probable that similar and *analogous* general

general Laws, have place in the *moral, spiritual* and *intellectual* World. For God is the same *Yesterday, To-day, and for Ever*; his Nature, Attributes, and Agency, uniform: And since he acts by *general Laws* in material Agency, it is highly probable, and conformable to his infinite Wisdom, to act in the same uniform Manner in all his Operations, *ad extra*; and, as far as just Observations have been made, and well-grounded Conclusions drawn by *Analogy*, we shall find it so in all the *Systems, Moral, Spiritual or Divine*; tho' these last have been but little studied, and timorously applied to, by Persons of a proper Spirit and Genius, out of Dread of the odious Designation of *Enthusiasm* or Superstition: but future Ages may perhaps get over this *Terror*; for the Method has a solid Foundation in the Nature of Things.

§. 16. THESE *general* Laws of the Divine *Oeconomy* in Creation and Providence, or the Rules of consummate Wisdom and Fitness, which the *Supreme Being* has chalk'd out and laid down, are, without all Doubt, inexhaustible and incomprehensible to such an Order of Beings as we are in our present State, and undiscoverable to any Degree of Perfection; *for who can search out the Almighty to Perfection?* Perhaps the Discovery of them may be a Part of the Happiness and Perfection of another State of Existence, and some small Portion of the

Employment of happy *contemplative* Spirits in other Regions; and there, *The Works of the Lord will appear wonderful to them that delight therein.* For if the First Being be rational, intelligent, wise and good, as doubtless he is infinitely so, there must of Necessity be in all his Works, Conduct and Actions *ad extra*, one perpetual *Analogy*, and one continued *Harmony* through the Whole, and in every single Part; each individual *Organ* and *Law* must be fitted to this great End, *viz.* the Perfection of the Whole, and of each Part; and he who considers the *Oeconomy* of Nature, *Providence*, and *Restoration*, with greatest Attention and Humility, will most clearly discern this Wisdom, Fitness, and Divine Order in them.

§. 17. SUPPOSE an infinitely wise, powerful and good Being, did intend to produce something new, that he had no Pattern or Model of before Him, (as the first intelligent Cause could not possibly have in *Creation*) as an Artificer; for Example, (to descend the lowest in a Similitude) he could only express, in sensible Images, the *Genius*, *Nature*, and *Ideas* of his own Mind, and fit the Parts and Organs of such a *Machine* to the End and Use for which it was designed, with *Number*, *Weight* and *Measure*; and so (to compare great Things with small) *Supreme Wisdom*, having nothing but Himself, his own beneficent Nature and Attributes
before

before Creation, to copy forth and represent, could, in all his Works of Wonder, delineate nothing but his own Substance, Nature, Wisdom, Goodness, Justice and Truth. So that all Nature, all Creation, all the Worlds, the *Material, Moral* and *Spiritual*, can possibly be nothing else, but the supreme, immense and infinitely perfect Being, *display'd, pourtray'd*, and made *sensible* and perceptible. *Mundus universus nihil aliud est, quam Deus explicitus*, said a learned Man. To think otherwise, is a sort of *Blasphemy*, and degrading of infinite Wisdom and Perfection below finite lapsed human Intelligences. For there is no possible Work of any Man, but which in some Degree is a Picture of himself, of his own Idea, or of the Constitution and Complexion of his Mind at that Time.

§. 18. IF then there be a perpetual *Analogy* running through all the Works of God, *Natural, Moral* and *Spiritual*; if all his Workings *ad Extra*, be Representations, Pictures and *Hieroglyphicks*, stronger or weaker, more general or more particular, of his own Nature, Complexion and Attributes; if the *material inanimated System* of outward Things, being contrived with infinite Fitness, Justness, Propriety and Delicacy, do represent his infinite Wisdom and Power, in a more sensible, yet in a darker and weaker Manner: and if the *Oeconomy* of his universal

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and particular Providence, and the amazing *Oeconomy* of the *Restoration* of every individual lapsed Being, be stronger and more irresistible Evidences and Representations of his infinite *Penetration*, (so to speak) *Benevolence* and *Power*; then it must be acknowledged, that, through all his Works, there runs one perpetual *Progression*, one continual *Analogy*, and uninterrupted *Harmony*, of his own Nature, Wisdom and Power; and that as *Proportion* is the *Medium*, and true Logic of material Natures and Beings, so *Analogy* is the true *Key* and *Analysis* of *spiritual* Natures and Qualities; and as the *Data* of the *first* is in Sensation, or the Notices from our Senses, or accurate Experiment: so the *Data* of the *last* is in Attention and Reflexion upon our own spiritual Natures, and their Operations, and Experience of the Qualities, Sentiments and Passions of our own Hearts and Souls; and carrying these to as great a Height as possible. For I can conceive no clearer or more distinct Manner to give a Child or an ignorant Person an *Idea* (tho' low and imperfect) of the *first Being*, than to tell him He is like the *Soul* or *living Nature*, of the best and most amiable Person he ever knew, infinitely exalted, without his Imperfections; but who has *Life* and *Being* from Himself only: whereas all his Creatures are *Emanations* from Him, and the Works of his Power: And what is this, but a true *Analogy*? Just such a one, as
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when we give an Infant or ignorant Person an Idea of the *Sea*, by shewing him the nearest great *Lake*, and telling him that the *Sea* is of the same Nature, but vastly bigger.

§. 19. IT is plain from the natural, civil, and sacred History of the whole human Race, from the visible and perceptible State of our *Globe*, its surrounding *Atmosphere*, kindred *Planets*, and their Influences upon ours; that *Pain*, *Suffering* and *Misery*, is as natural and necessary to us here in this present State, as *Existence* is. It is utterly unavoidable but in *Degree*; none ever lived, but felt it in some Kind or Degree or other. The Extreme Tenderness and Delicacy of our *lumbaginous* and *spermatic* State, subject us to the Distempers and Sufferings arising from the Indiscretions and bodily Diseases of our Parents: The Weakness and Helplessness of *Childhood* and Infancy, expose us to innumerable Accidents and Distempers. The imprudent and improper Nourishment in Quantity or Quality, given us by our *Mothers* or *Nurses*, bring naturally on us Suffering and Misery: The Grossness, Coarseness, and Inclemency of the *Element* we live and breathe in, *mechanically* infects us with its noxious and deleterious Qualities: Ignorance, bad Example, contagious Custom, and popular Errors and Prejudices continue the Hazards and Dangers of *Childhood*. Strong Passions and Appetites, a wrong

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Turn of *Head* or *Heart*, a corrupt and degenerate Age, strengthen and confirm our Miseries and Misfortunes in *Youthhood*: Disappointments, Misfortunes, Cares, Want of, or the bad Usage of the Necessaries and Conveniencies of Life, Luxury or Intemperance, Famine or Scarcity, *Epidemical* Diseases, or unforeseen Accidents, one or other, or perhaps all together, make the Complexion of *Manhood*: And *old Age* (the *Cardinal* Disease of human Life) finishes the dark Scene of human Misery with perpetual Aches, Sores and Infirmities of Body and Mind; a more sensible Dotage and Childhood, a *Tædium Vitæ*, with a Desire of Dissolution, which is yet accompanied with a terrible Dread of it; all these conclude this *Climax* and Progression of Misery; through which the very best and wisest, that lasts out the natural Duration of Life, must pass, for his *Punishment*, *Expiation*, and *Purification*; not to mention the Remorse and internal Crucifixion of those who feel a *Law in their Members warring against the Law of their Minds* in a perpetual Strife and Conflict. It is only in and through the *Oeconomy* of the Restoration, by the Knowledge of the *Gospel*, that these natural, necessary and unavoidable Pains, Punishments and Miseries, can be turned, may be reckoned, and are really *Mercies*, *Blessings*, *fatherly Corrections*, lose their Stings, and become *Righteousness*, and *Peace*, and *Joy in the Holy Ghost*.

§. 20. PAIN, *Punishment*, and *Suffering* then would seem to be a natural, necessary and (as it were) a *mechanical* Mean of Expiation, Purification and Perfection, to all sentient and intelligent Beings, in this present State of Existence: which Virtue, Attention and Care can only lessen, but which none can totally, but only in a small Degree, avoid, if not by and through the Means just now mentioned. As rubbing hard Bodies against one another, is the only Method to *polish* and *finish* them; and the harder and longer the *Friction*, the finer the Polish, and the more perfect the Figure; so Pain, in sentient and intelligent Beings, arises from *Resistance to Action*, or from *Re-action*, which in spiritual as well as material Agency, is always equal and contrary to *Action*. Sentient Beings naturally, necessarily, and, as it were, *mechanically*, recede from, and exert a Principle of *Resistance* and *Re-action* to the Cause of Pain; intelligent Beings, *cæteris paribus*, necessarily fly from it with greater Velocity, from the united Force of *Sensation* and *Reflection*. Sensation and Perception begin the Aversion and Reluctance to the Cause or Occasion of Pain, and Reflection turns it into an Abhorrence and Detestation.

§. 21. CONSCIOUSNESS of the Reasons and Effects, seems in no wise absolutely necessary towards *Purification* in general, at least towards

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wards the first Degrees of it, as we see in *Brutes, Children and Ideots*. Pain and Punishment in such a Degree, and often repeated, will naturally bring them to abstain from that, for which they suffer. *Consciousness* of the End and Design of it seems only necessary to accelerate, perfect and turn into a *Habit*, the Aversion and Abhorrence of what has caused Pain, and to strengthen that Habit into a second Nature; as Wood is made streight, first by softening it by Fire, and then keeping it by Cords and Weights in a Situation contrary to its *Curvature*. Pain and Punishment soften and melt down the Subject, *Consciousness* fixes and hardens it, and gives it an habitual contrary Nature. *Consciousness* attends single *Acts* only, and not *Habits*; when the Habit is perfected, *Consciousness* vanishes and dies away (as a perfect Musician, while playing on an Instrument, reflects not on single Strokes distinctly) so that *Consciousness* seems necessary as a *Check* or *Bar*, to prevent Relapses; and seldom takes place till the End and Design of Punishment is in some Degree obtained.

§. 22. FROM what has been said, it is evident that this our *Planet* and its Appendages, is really and literally a Prison or Gaol, a Place of Banishment, of Pains and Punishment for a certain Period of Time, to lapsed sentient and intelligent Beings: like *Siberia* among the *Russians*, the *Bastille* or the *Pierre incise*

cise with the *French*, or the *Plantations* or *Newgate* among us. And the Inhabitants of both Kinds, sentient and intelligent, are, without a *Figure*: Prisoners, Slaves, and Felons, under a State of Expiation and Purification. Our whole *Creation*, our entire *System*, in regard to our defaced and spoilt *Planet*, labours like Slaves at the Oar, is in *Travail*, in a perpetual *Fermentation* and *Effervescence*, as in a malignant Fever, working for a *Crise* and Delivery. Some Individuals may be delivered sooner, some later, according as their Expiation and Purification is perfected; and at last the whole *System*, and all its Inhabitants, must naturally and necessarily, but *harmoniously* or *analogically*, and according to general Laws, undergo some great and violent *Crise*, and an universal *Gaol-Delivery* will be brought about; but when and how this will be accomplished, is beyond Conjecture; *a Thousand Years are but as a Day here*, and the Ways of the *Almighty* are past finding out. It would seem as if the only *Problem*, or Difficulty, (to speak so in regard to Omnipotence, where no real Difficulty can happen) worthy of infinite Wisdom to *solve*, were to recover, perfect and establish in perpetual and unrelapsing *Order* and *Purity*, free and lapsed intelligent Beings, consistent with the *Harmony* of his own Attributes, and the *natural Powers* with which he has endued them. How infinite Wisdom and Power will bring

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bring this about, we can only conjecture in a few general *Hints*, from such of his *general Laws* as are obvious, from *final Causes*, which are plain, and must include some Part of the Ends in rational Agency; and from dark Sketches of the *Analogy* of Things: not impossibly thus.

§. 23. AN infinitely wise, good and powerful Being having created this *System*, we cannot suppose, but it must have been as perfect and blissful, as its Nature could admit, and his sentient, intelligent Creatures as happy, as their Natures and Order could allow; and that he must have furnished them with Means and Power to perpetuate, if not increase, this Perfection and Happiness. But from the very Nature and Essence of *Liberty*; whoever has a Power to continue or increase in a State, must also have a Power to fall back or decrease; whatever is *finite*, must necessarily be *fallible*. Now suppose such finite fallible Beings actually lapsed: the same wise and good Being must have ordered Things so, not only that they should recover and rise again, but that their Fall and *Lapse* should at last be a Mean, not only to strengthen, confirm and fix them in Happiness ever after, (and this seems the only Mean, by which fallible free lapsed Creatures, once actually fallen, could be brought to an illapsing State of Stability) but even to increase the Degree of their Happiness and Perfection; and this, I think, would not only be the full and plenary

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Solution of this infinitely difficult *Problem*, but one worthy of its all-wise and all-powerful Author only; and this he has effected, I think, by these three Expedients or Means. 1. By continuing *general Laws* of Agency in material, moral and spiritual Actions, plainly intimating, that the Concurrence of the same Causes and Conditions will always produce the same Effects; and so leaving Room for Consideration, Amendment, Improvement, Choice, and the Discernment of moral Good and Evil, and thus securing *Liberty* and the other natural Powers of lapsed Intelligences. 2. By tying down, sopiting and suspending the *natural Powers* of the Soul for so long a Time, as is its Duration from the first original *Male*, till the Bonds and Chains, by which their Exertion is restrained, be broken and untied by Death. *a* That during this Time, the Benefit acquired by the progressive Parentage (if *they* happen to return to Order and Habits of Virtue, or have their moral Powers recovered) may operate on these *infinitesimal Miniatures*; by mending their Natures, that they themselves may have time given to recover into Order; and that the Interruption from the *natural Powers* arrived at their Perfection, might not prevent the Acquisition and Recovery of the *Moral Powers*. And, 3. By the *Oeconomy of Redemption* by a *Saviour*, which doubtless was projected before the Creation of the World, or this System, and when the pro-
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per Disposition to receive it, and to reap the Benefit of it, is acquired; and which may in some Time or Place, *explicitly* or *implicitly*, be revealed, to finish the Work of Restoration. But that not being my Province in a *Philosophical Disquisition*, I proceed.

§. 24. It is the grossest Absurdity and Contradiction to suppose, that an infinitely wise and beneficent Being would make either *sentient* or *intelligent* Beings suffer, merely for Suffering's Sake. He must have had just, good and kind Reasons for this his *strange Work*. And since it is certain, that both *sentient* and *intelligent* Beings do and must unavoidably *suffer*, and are in a State of Punishment, Misery and Banishment here; it necessarily follows, that they are in a State of Expiation, Purification and progressive Perfection, in their respective Orders; and will at last be set free, made happy, and perfected, and confirmed in that State for ever. *Omnipotence* surely can, and *infinite Goodness*, I hope, will do all this.

§. 25. IF all is not Deceit and Illusion, it must be evident to a *Demonstration*, that nothing imperfect or unhappy in its Order can come out of the Hands of infinite Perfection; and yet it is *Fact*, that all *sentient* and *intelligent* Beings here, are universally more or less, miserable and imperfect; and that there never
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was any human Creature, in his right Senses, which in a whole Duration of human Life, felt not, and thought not himself unhappy, miserable and imperfect, at least, for some time, if not for the most of his rational Life: and wish'd not himself earnestly, better, wiser, more perfect, and happy. It is impossible, that infinite Wisdom and Goodness, can punish *sentient* and *intelligent* Creatures, or make them miserable, but for some wise and beneficent End and Purpose; from whence it will be evident to a rational Person, that of necessity there must have been a *State of Existence prior* to this present: wherein all those *sentient* and *intelligent* Beings, while in a *collective Mass*, which have been, or shall be on this *Globe*, had misbehaved, rebell'd, and run into Disorder, probably, by *idolatrising* Creatures and *Self*, and preferring them to the *Creator*. And the Account of this Rebellion and Lapse in *Revelation*, may refer only to the last *Scene* or Act in the Tragedy, or the new modelling this *secondary State* or partially *lapsed System*, when the slightest Trial of Faith and Obedience was made; for certainly *Nemo repente fit turpissimus*; finite Creatures can naturally acquire Habits of Virtue and Vice, or indeed of any kind, only by *Degrees*, or single Acts repeated. Certain *Consciousness*, or clear distinct Knowledge of this *pre-existent State*, would only feed idle Curiosity; and might hinder and counter-act that implicit Trust,

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Trust, Dependence and absolute Resignation in every Thing, so absolutely necessary to relative Perfection and Happiness. For the Point in View of infinite Perfection, is to bring all the finite sentient and intelligent Creatures to an absolute *voluntary Surrendry*, and *Trust* of themselves, and every Thing relating to them in Time and Eternity, to his Will and Pleasure *implicitly*; nothing less being sufficient to establish and perpetuate the Divine Sovereignty, *harmonise* his Attributes, and *eternise* the Peace, Happiness and relative Perfection of universal Nature; which different *Willing* would eternally confound and perplex anew, and bring on a *second*, or perpetuate the present *Lapse*.

§. 26. IT is not impossible, that there are other *States*, *Mansions*, and *probatory Celestial Regions*, proper and peculiar to the several imperfect Degrees of the moral Faculties of spiritual Intelligences, with their *Creation-Bodies* or Vehicles, according to the several remaining *Degrees* of Imperfection, even almost *in infinitum*, in an ascending or descending *Progression*. Infinite Wisdom and Goodness may have appointed, in general, a certain limited Period, beyond which the Incrustation of their *Creation-Bodies* cannot last, things being in such a State: But the actual Approach may be quicker or slower, according to certain Terms and Conditions: which we know to be the Case of our present *mortal Tabernacles*; and

and according to the bad or good Usage of our Liberties in the Use of the Means afforded us for acquiring the *moral Virtues*, and affixing the *moral Powers* in confirm'd Habits; we may ascend into more pure, more happy, and more perfect *Regions*, or descend into more gross, miserable and dark *Dungeons*, almost *in infinitum*. But it would also seem, that *sentient* and *intelligent* Creatures could suffer Pain and Misery only to a certain finite and limited Degree, (tho' the Time may be eternal, all Spirits being immortal by Nature) all the *Activities* and *Passivities* of such Beings being necessarily *finite* and limited; and when they come to that *Point*, they must necessarily return, wish for Deliverance, cry for Mercy, Pity and Freedom, and endeavour it with the whole natural Powers of their Spirits; and to this *Point* only, it would seem, an infinitely *wise*, *beneficent* and *powerful* Being can intend to bring his lapsed, wandering *miniature* Creatures now under the *Gospel*; and that he should be ready to receive them into Mercy, and allow them the Means for restoring and recovering their lapsed *moral Powers*. But how long Time it may require to bring them to this absolutely necessary Point, no Reason or *Philosophy* (whether an *Indefinite*, that is, a *creaturely* or *relatively infinite* Time) can determine; and *Revelation* has not made it plain and explicit, but on the contrary has left it not only dubious, but seems to point otherwise; to be sure not before all are brought

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to this indispensable Point of *Returning*. The *Oeconomy*, *Satisfaction* and *Sufferings* of the *God-Man Jesus Christ*, could be only sufficient to render that Expiation, and Restoration of the moral Power in a finite Time, which, in its own Nature, and the Nature of *God* and of his Purity, must have been Infinite and Eternal. The repairing the *Indignity* and *Affront* done to his Sovereignty and Purity, and the deterring his other standing Creatures from *Lapse* and *Rebellion*, is not perhaps left in their Power to prevent; that may be done by the necessary and unavoidable Pains and Sufferings they must undergo, from the painful and leprous *Incrustation* of the several *Elements* they must pass through; their *returning* into Order, their Acquisition of the *moral Powers* of the Soul, and fixing them in these, and consequently in permanent Happiness, intirely depends on themselves, and the Use of the Means afforded.

§. 27. It is no easy Matter to form any precise limited Idea or Notion of *Substance* either *Material* or *Spiritual*; all we certainly know of either, is, that they *exist*, are Realities, and are the *Base* or Subject of real Qualities. But we can no more penetrat into the *Substratum* or Support of these Qualities, by the natural Activity of our Spirits, than our Eyes can see Objects at a certain Distance; such is the Nature, Frame and Limitation of our Order and Rank of *natural Powers*.

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We certainly know that *material Substance* is the *Substratum* of *Extension*, *Impenetrability*, *Passivity* and *Figure*; and spiritual Substance, of *living*, *perceiving* and *willing*, that is, of *Cogitation* or *Thinking*, and also of *beginning* Motion in Bodies, and giving them a particular *Direction*. The Aggregate, or Sum of all these respective Qualities (most of which are contrary to the others) may be bound together or united by some *Bond of Union*, which we shall never have any direct or immediate Conception of, till we throw off this material *Incrustation*, that intangles and fetters the full Exercise and Penetration of our natural Powers. And therefore, if we dropt both Substances, as *unknown* and *unknowable* Things at present, or rather, if we suppos'd both only mere *Capacities*, *Recipients*, *Canals* or passive Subjects of contrary Qualities, as they flow, or are deriv'd from the primary Source and self-existent Cause of all *Activity*, *Qualities* and *Realities*, whose whole End and Use (of these *Capacities*) was to receive and contain these Qualities, limiting, contrary, and destructive of each other respectively; or, lastly, if, as *Geometers* use the Method, we make the one *Positive*, the other *Negative*; this way of considering this dark Subject might, perhaps, throw some Light on it: And then imagin'd that *Matter* or *Body* was *analogous* to (but yet no-wise the same with, but quite contrary, tho' not contradictory) to *Spirit* infinitely con-

dens'd, concentred or increas'd: And that *spiritual* Substance was *analogous* to *Matter* infinitely rarefied, refin'd or *sublim'd*: Then, in the *Geometrical* Manner of considering such respective Qualities and their Subject, *Body* infinitely rarefied, refin'd and sublim'd, would at last terminat in limited *Space* or *Expansion*; and limited *Space* or *Expansion* infinitely condens'd, contracted and inspissated, would end in solid indivisible Points or *Monads*, the common Idea of the component Particles of Body. And yet that Body should be rarefied into *Space*, or *Space* condens'd into Body, is an absolute Contradiction and Impossibility; only this Manner in which Geometers consider infinitely *little*, or infinitely *great* Quantities, is here suggested, as an Illustration of material and spiritual Substance, so difficult to be explain'd. But we not being able to conceive or comprehend *Infinitude*, or infinite Agency, its Effects and Consequences, it may, perhaps, be said, that this is only explaining one *Obscurity* by a *greater*. It may be so: All then we are absolutely certain of is, that these essential Qualities of *Matter* and *Spirit* respectively, *viz.* in *Matter*, *Extension*, *Impenetrability*, *Divisibility*, *Mobility*, *Passivity* and *Figure*; and in *Spirit*, *Living*, *Perceiving*, *Willing*, *Self-activity*, *Self-mobility*, and the Power of *beginning* Motion, and giving *Direction* to Bodies; must necessarily be uniform, and always the same in Degree,

gree, whatever State or Circumstances they may be in. These respective Substances are always in their own Nature and Essence so *contrary* and destructive of one another in their Qualities, that they become a perpetual Bar, Obstruction and Obstacle to the Exertion of these their essential Qualities. They are not indeed *contradictory* or destructive of one another's Qualities in every Degree; they are not *incompatible* and *unallyable* (as we know by Fact); but they are *contrary*; and one Degree of the Qualities of the one, destroys a relative, equal or proportional Degree of the Qualities of the other; and the *Sum total* of these Qualities in the one, destroys the *Sum total* of the Qualities of the other, equally or proportionally, like *Light* and *Darkness*; and an infinite Degree of the one may sopite or totally obstruct the *sensible Actions* of the other, tho' not annihilat or absolutely destroy the other in its Root or Nature. But *Infinity* being above our Capacities, we can only speak of the Effects of their Contrariety and Opposition in their finite Degrees, and pronounce nothing of the Effects of *infinite* Operations; only we are certain, that no less than an infinite Power and Operation in the one, can totally extinguish and annihilat the Nature and Operations of the other; *Reaction* being always contrary and equal to *Action*. We may have a fine *Illustration* and *analogous* Resemblance of this infinite contrary Action, from the Na-

ture of an infinite *converging Series*; in which from the next immediate Step in the Progression, by passing through *infinitely little* of that Order, the Terms from *positive* become *negative*; and likewise, from some *Particles* of Matter, which after having got without their *Sphere*, from *attractive* become *repulsive*, in respect to a particular *Centre*; these Hints are far from an affirming, or any Endeavour to prove, that *Matter* is only infinitely *condens'd Spirit*, and *Spirit* only infinitely *refin'd Matter*, as to their several Substances: For the *Fact* I think false, impossible and contradictory; for *Matter*, however refin'd and sublim'd, is still *Matter*, and has the opposite Qualities to *Spirit*, and have their essential Qualities in direct Contrariety; and were it otherwise, in this Manner of illustrating the Subject, the Proof were absolutely impossible; because the Effects of *infinite Power* and *Agency* are known and knowable by Him only, whose Attributes are infinite Power and Might. If the *Proposition* and Effect was true and real, no *finite Agency* could effect it, nor *finite Understanding* evince it: But these Instances are adduc'd only as an *Illustration*, to remove the seeming *shocking* Absurdity and Terror, in most good Persons Minds, from affirming any Resemblance or *Analogy* between *material* and *spiritual* Substances; for these evidently shew, that *similar* and *analogous* Effects are Realities in the Nature of Things,
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tho' their Manner and Proceſs be inconceivable to us finite Beings; and alſo, as much as in me lies, to take off any Miſtakes and Miſapprehenſion, as if I advanc'd any thing in the *Philophic* Explication of theſe *Mysteries* of Nature, inconfiſtent with *Revelation* or *Religion*, as the Reverend Dr. *Brown* Biſhop of *Cork* has done in his *Divine Analogy*; not fully having underſtood my Manner of explaining the Subject, or perhaps I had not made my Meaning ſufficiently clear and plain; as the Subject is in itſelf almoſt inexplicable, and ought to be guarded with all poſſible Pre-
ciſion, if at all handled.

§. 28. IN my poor Way of conceiving and conjecturing, from the obvious *Appearances* in Nature ſubjected to Senſe; from the *final Causes* the Supreme Rational Being may poſſibly have in ſuch *external Operations*; from the *Analogy* carried from the Things that are ſeen, to thoſe that are inviſible, and only intelligible; the moſt probable and ſatisfactory Account that can be found of the *Oeconomy* and Plan of the Reſtoration of finite laſed Intelligences, ſeems to be this, at leaſt theſe may poſſibly be ſome of the *prominent Lines* of this *Plan*: Some finite free Intelligences of the ſeveral *Orders* in the living *Hierarchies* having by the Abufe of their *Liberty*, and committing *Idolatry*, by too inordinate Commerce with the Creatures, and habitually turning

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away from their Source the *Creator*, destroyed and cancell'd the *moral Powers* of their *spiritual* Natures: *Infinite Wisdom* and *Power*, by the Necessity of his *beneficent* Nature, employing the whole Force of his *Omnipotence* and *Omniscience*, to restore and recover them, without committing *Violence* on their *natural Powers*, or on the *Harmony* of his own *Attributes*; first ties down and contracts their *natural Powers* with Chains of gross Matter, from a (purposely, or mechanically) ruin'd and defac'd *Elementary Globe*, such as our present Habitation is; Chains, which the *natural Powers* of the *Spirit* are necessarily obliged to endeavour to be unloosing all the Time, from the *original Creation* of this gross Body; during which Time, Means, Opportunity and Leisure is allow'd, for the *Acquisition* and *Restoration* of the *moral Powers*: As Felons and Robbers are tam'd and mended by working in the Mines, and tugging at the Oar. By the Toil, Labour and Suffering, from this working off, and melting down the gross and leprous *Plaster*, superinduc'd on the primitive *Creation-Body*, by filing, purifying and breaking these Chains which fetter the Activity and free Agency of the *natural Powers* of the Soul, on this *Creation-Body*. *First*, Reparation, and an *Amende honorable* is made to infinite Purity and Sovereignty; and the bad Example to other *Intelligences*, remov'd: And in the mean time, outward and inward Means

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may be offer'd and bestow'd, by external Providences, *suprahumane* and *imperceptible* Aid and *Grace*, and the Light and internal Operation of the *Divine Word* and *Reason*. the *Messiah*, for recovering the defac'd *moral Powers* of the Soul. Some are under this Operation a shorter, some a longer Time, according to the Wisdom and Designs of the Sovereign *Reason*, and the Mansion they are to fill in the new *Jerusalem*, even till the last *Scene*, which in the Nature of gross corruptible Matter can last but a *finite Time*, either in the Nature of the *Elementary Planet* itself, with its *Appendages*, or in the Incrustation on the primitive *Creation-Bodies* made of this elementary Matter; which must crumble and dissolve into Dust within certain Limits of Time, by the establish'd Law of Nature; the *first*, possibly, from the Expence and Fixation of *Water*, as Sir *Isaac Newton* insinuates, and the *other* necessary Fluids; the *others* for want of *Nutrition* and *Chylification*, and both by Natural and general Laws, but still within certain Limits less than real *infinite*. But both must at last be perfectly purified; the *Earth* and its *Appendages*, possibly, by an universal *Conflagration*; the particular gross Plaistering, by being dissolv'd into its *original Dust*, that the primitive *Creation* Body may be disincumber'd, and made supple and pliable to obey the Dictates of the informing immaterial *Spirit*; and the *Spirit*, by the Acquisition and habitual fixing of the *Moral Powers*. For there cannot be a more
certain

certain and indubitable Truth, than that nothing *imperfect* in its Order could come out of the Hands of infinite Perfection; and that nothing *impure* or imperfect in its Order, can return to live and commerciate with, or be united to God perfectly, finally and immutably.

§. 29. This *Infinitesimal* Particle of Celestial Matter, this *Miniature* of a *Miniature in infinitum*, decreasing in a continued *analogical* Progress, and stor'd up in the Seeds of all Animals and Vegetables, from the first to the last Animal and Vegetable; this divinely organis'd Vehicle or *Corpuscle*, in which the immaterial Principle was inspir'd in its Creation, and to which it is so intimately united by a particular Law of Union, and an individual *Fitness* and *Congruity*, is inseparable from it in all its future States and Circumstances of Duration, at least by any Degree of *Force* less than *infinite*. The *immaterial Spirit*, the Spiritual Inhabitant of this *Celestial Vehicle*, is in its own Nature immortal and imperishable, being an *infinitesimal Miniature* of the Divine Nature and Substance, which is *Self-existent*. I say then, the *Spirit*, the immaterial Substance, that informs this *æthereal Creation* Body, is of its own Nature *immortal* and *imperishable*; but the *material Vehicle*, tho' of a refin'd and *æthereal* Substance, is only eternal by the Divine Order and Appointment, and *comparatively* in respect of other grosser and more dense Compounds, of which Time and Use may alter the Form, tho' not destroy

destroy the Substance; and perhaps their Perpetuity may be continued by a divine primary, or secondary spiritual Influence, from both these immortal Principles. I am sensible, these strong Figures may be expos'd to *Ridicule*, and interpreted *profanely*, by light Persons; but when they understand, and can explain with *Precision*, what the Force of *Infinitude* (small or great) is, their Raillery and Levity may be tolerable; such, of Necessity, must be the Language, when we attempt to express perceptible only, and *spiritual* Things. I hope I have a due Sense of the Purity and Perfection of the Divine Nature and Spiritual Things, not to expose them maliciously and designedly to Contempt and Ridicule. My whole Design is to help honest and sincere Persons to some *Ideal* Knowledge, (which at best is but a poor Affair) that may possibly comfort and mend the *Heart*, without hurting the *Head*.

§. 30. IF there is any *Verisimilitude* or Consistency in this *Sketch*, it will follow from it, that the lighter and thinner (while sweet and healthy) the *Crust* and *Plaister* from this *elementary System*, that is laid over this *Creation* Body, the more the natural Powers of the Spirit will be at Liberty to exert their Functions, and acquire the moral ones; the Sufferings and Miseries of the present State of our Existence will be fewer and less intense, and
the

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the total Disengagement of the *Spiritual* Inhabitant from its Prison and Load, will be more easy and perfect; and we shall shake off our *Chains* and Fetters, as we do our Cloaths to go to Bed. The universal Law of Nature, for every *sentient* and *intelligent* Being, that is brought on this *elementary Planet*, is, *first*, to have its spiritual and its celestial Body tied down, and concentrated by Chains and Fetters of this Element, into a *Miniature* of a *Miniature*, then into a *Punctum Saliens*, and at last into a sensible elementary Body: During all this Time, the spiritual Nature is working, like a Slave in the Mines, or at the Oar, to extend this celestial Body to its original *analogous* Figure and Dimensions, by breaking all its elementary Fetters; while yet at the same time it is crusting over more densely the primitive *celestial* Body by Nutrition, and the animal Functions with a gross *leprous* Plaister; when the Creation Body is intirely develop'd, by giving a Facility to its Organs of all kinds, by *Culture* and *Use* in their several Ways, its intellectual Faculties get Power and Liberty to exert themselves; during which Time the Acquisition of the moral Powers may and ought to take Place, and by Degrees, and in a nearly determinable Period, this Plaister dries, hardens, and at last crumbles into Dust; and then the Spirit with the celestial Body, if but partially purified, passes into other *States*, *Elements*, and *Mansions*, as its Degree of moral
Virtue,

Virtue, or Acquisition of moral Powers require.

§. 31. FROM this Representation of the State and Progress of *sentient* and *intelligent* Beings in Spirit and Body, during their Banishment to this *ruinous Planet*; it follows, that the *Root, Faculty* and *Capacity* of the Spirit, or its natural Powers, continue *potentially* and *radically* the same; or that *living, perceiving, and willing*, as to their Essence, Power and Capacity, are in all States radically and invariably the same; tho' their Exercise, Acts and Exertion be restrain'd and sopited by gross Matter. Whoever considers the invariable Nature of Spirit, must be convinc'd, that its giving Motions, with their several Modifications, must always radically and potentially be the same, and uniform, however their Acts may be suspended, sopited, or destroyed by gross Matter, and the Im-mechanism of Bodies; and that all the *Functions* of the Body, all its voluntary and *involuntary* Motions, all its *living* and *vital* Actions, all its internal and external Operations, all its *Sensations, Passions* and *Willings*, that depend on the Body, are all but *Cogitation*, or *Thinking*, in some Degree or other, and its several *Modifications*, as really, as *intense*, full-grown Thinking, with Reflexion, or Meditation, is; in a Word, that the *Soul, Spirit*, or living Principle, is really the true and only intelligent Being, and the Body only is its Organ, Instrument

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ment or Tool, and but a passive Adjunct of the living Intelligence; and consequently, that, 1. our acquir'd *Knowledge* is but *Remembrance*; 2. that a *moral Sense* and *Faculty*; 3. that *innate Ideas* of *God* and *Virtue*, of *moral Good* and *Evil*; That, 4. *spiritual Sensation* and *spiritual Senses*; and that, 5. the *Soul* uses material Organs (tho' not of gross Matter only) in all its Operations, all these are as much *Philosophical Realities* (however ridiculed and exposed by ignorant Persons) as the same Things are, when sensibly and outwardly transacted on our finish'd and perfect external Senses; and that, 6. All our *Culture*, *Study* and *Labour*, to acquire Sciences and Knowledge, or to perfect our natural Powers, terminat only in *filing* off, *melting* away, and *scraping* down, those Chains, and Crust superinduced upon them; and are only removing *Superfluities*, reducing *Excrescences*, and rendering the gross *Patchwork* superinduced on our spiritual Body, pliant, supple and correspondent, with the least Resistance to it; that the *Creation* Body may be at Liberty to extend and disincumber itself: And, *Lastly*, That the shortest and readiest Way to true and solid *Knowledge*, is to endeavour with the utmost Vigour, and strongest Effects of our *spiritual* Nature, to recover and acquire the moral Powers of the Soul defac'd and cancelled by the *Lapse*, viz. *Justice*, *Goodness* and *Truth*; or, in the *Revelation* Language, *Faith*, *Hope*,
and

and *Charity*; to which these will be found, when justly explained, intirely *analogous* and consonant; for it could only be to allow Time and Uninterruption from the *natural Powers*, had they been always in their full Extent and Force, that they have been thus ty'd down, and sopited; so that now they can only rise and extend in Proportion, as the *moral Powers* are acquired.

§. 32. THE *Activity, Sensibility* and *Penetration*, the voluntary and involuntary *Motions* of this our Elementary Body, the animal *Functions*, the more material Acts of *Thinking* and *Cogitation*, such as *Sensation, Memory, Imagination, Attention*, &c. are all radically and primarily perform'd, by the *Self-action* and *Self-motion* of the immaterial *Spirit*, on this *Creation-ethereal Body* principally; as *Sulphureous Inflammations* raise Mountains, and as *Springs*, and *Weights* move *Clock-works*; with this notable Difference, that the first has an internal, immortal Spring of *Self-action*, the other only a temporary and transitory one. Perhaps, for *Example*, towards *voluntary* and *involuntary Motion*, or towards the Exertion of the *animal Functions*; I say, perhaps, there may not be wanted any *foreign, independent* and *perplex'd subtle Fluid*, of whatever Nature; if the animal Appearances and Functions can be more simply, as clearly and fully explained, by the Action of a *self-active* and *self-motive* spiri-
tual

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tual Substance, informing and influencing a fitly and *divinely organized æthereal Body*, and thereby immediately impressing its Action and Energy on the gross earthly Plaister laid over it. A true *spiritual Substance*, of the very lowest Order, must necessarily have in itself a *Spring* of Self-action, a *Principle* and Faculty of Self-motion, from its own *internal* Nature and Essence. I can have no Notion of a *spiritual* Substance, that has not a Power of beginning and impressing Motion on Matter or Body fitly disposed; there seems no Distinction so essential between *Spirit* and *Body*, as *Activity* and *Passivity*; 'tis true this Activity in created spiritual Substances is finite and limited, and may be further restrained by *gross Matter* to any Degree; but it will be always sufficient to begin and impress Motion on Body, so long as the *Inertia* of Body is not greater, than the *Self-activity* of such an Order of spiritual Substances, else it could not in any Sense be called *self-active*. And to produce *muscular Motion*, and the *animal Functions* and Appearances, there may be nothing more necessary, than *Self-activity*, and *Self-mobility*, in a greater or lesser Degree; and divine Organization, Fitness, and not insuperable Resistance, or rather a ready *Facility*, in the primitive *æthereal* Vehicle, which may overcome the Load of Plaister and Rust laid over it: I say, perhaps, this may be sufficient to account fully for all the animal Appearances; a foreign *subtile*

tile Fluid may be necessary to explain the Appearances of *inanimated* Matter; but seems here *superfluous*, and looks perplex'd and ope-rose, and unlike the Operations of the *God of Nature*, which are always from easy and simple *Causes*, and by one such Cause produce various and beautiful Effects. And I think there is scarce accounting for the infinitely different Degrees of Sensibility, the Degrees of Stature and Growth, and the Degrees of Penetration, and of quick and slow Thinking, Memory and Solidity, both in sentient and intelligent Animals, without allowing the Plaistering and Soder, on the *Creation* æthereal Body to fit lighter, thinner and less incumbring on some than on others, and the æthereal Organs to be more at Liberty in the vastly sensible and quick Thinkers and Feelers, than in the slow,

§. 33. It would seem in this progressive State of Purification of lapsed *sentient* and *intelligent* Beings, that when one *Crust* or *Plaister* from the Element to which they are confined, is worn off, another may grow on, of the Nature of the *Celestial* or *Terrestrial Mansion*, which they inhabit, fitted to the Degree of the acquired *moral Powers*; and this in a continual *Ascent* or *Descent*, till the moral Powers are perfected and confirmed into *Habits*, and the æthereal or spiritual Body is purified and refined from all the *Dross* and *Rust* it had contracted; and then will be

accomplished their last permanent and eternal State, suited to their *Order*.

§. 34. THE specific Law of *Attraction*, *Fitness* and Similarity of the *Element* or *Planet*, to the Degree of the moral Purity or Impurity in *sentient* and *intelligent* Beings, may as naturally and necessarily determin and *attract* them to this their specific *Region* or *Mansion*, as the Eggs of Insects, and Seeds of Plants scattered and blown by the Wind, are directed, drawn and adhere, by *Electricity*, to the Leaves of those *Plants* and *Trees* only, which are fittest and have the most proper Juices for their *Adhesion*, *Incubation* and *Vivification*, and for crusting them over, to defend their Delicacy and Sensibility while young and tender, from such Injuries as would put an End to Life. For a Law of *Attraction*, *Fitness* and *Similarity* will be found to hold good, either simply or in some kind of Proportion, or *analogically*, through all Creation, as well in *Spirits*, as in *Bodies*, in the *natural*, *moral* and *celestial* Worlds, till the first and supreme Being become locally and finally *All in all*, and that All be in him with Perfection and *analogous* Similarity in their several Natures, as the *Fish*, or *Rivers* are in the Sea, and that he acts and influences, and gives Perfection and Happiness to all Things He has made.

C O N.

CONCLUSION.

THIS *rude* and unfinished *Sketch* may possibly be thought by some, an *imaginary* and *enthusiastical Romance*, and so perhaps it may be. It is innocent, if a *Fable*; and if thought otherwise, by proper and competent Judges, I should renounce and disclaim it. But on the most intense, anxious and mature *Observations* and *Reflexions* on universal Nature, on allowing the Supreme Being to be a *wise, good, powerful* and *rational* Agent, admitting *final Causes* when they are obvious, and *Analogy* when plain and simple; the *Outlines*, and *Ground-work* of this System may be just and solid, however faulty the *Detail* and *Execution* may be. I can be answerable for nothing, but the *Honesty* of my *Intention* in it.

END of the FIRST DISCOURSE.

CONJECTURE

It is conjectured that the number of prime numbers less than x is asymptotically equal to $\frac{x}{\ln x}$. This is known as the Prime Number Theorem. The proof of this theorem was given by Jacques Hadamard and Charles de la Vallée Poussin in 1896. The theorem states that the number of prime numbers less than x is approximately $\frac{x}{\ln x}$ as x approaches infinity. This is a fundamental result in number theory.

The Prime Number Theorem is a special case of the more general Prime Number Theorem for arithmetic progressions. This theorem states that the number of prime numbers less than x in an arithmetic progression is asymptotically equal to $\frac{x}{\ln x}$ as x approaches infinity. The proof of this theorem was given by Dirichlet in 1837.



DISCOURSE II.

Philisophical CONJECTURES

ABOUT THE

Preference of V E G E T A B L E

T O

A N I M A L F O O D :

A N D O F T H E

End and Design of P R O V I D E N C E ,

I N

Appointing the F I R S T ,

A N D , O N T R I A L ,

Permitting the L A T T E R .

Gen. i. 29. *And God said, Behold, I have given you every Herb bearing Seed, which is upon the Face of all the Earth, and every Tree, in which is the Fruit of the Tree yielding Seed, to you it shall be given for Meat.*

Gen. ix. 3. *Every living thing that moveth, shall be Meat for you; even as the green Herb have I given you all things.*

Ver. 4. *But Flesh with the Life thereof, which is the Blood thereof, you shall not eat.*



DISCOURSE II.

Philosophical CONJECTURES

ABOUT THE

Preference of VEGETABLE

TO

ANIMAL FOOD:

AND OF THE

End and Design of PROVIDENCE,
in Appointing the *First*, and, on
Trial, Permitting the *Latter*.

§. I. **I**T is certain that by our Make, by the Frame of our *Organs*, we are now fitted as for Vegetable, so for Animal Food. The Form of *some* of our Teeth, the *Liver*, the *Pancreas*, and many other of our internal Bowels and *conglomerate Glands*, seem primarily and chiefly designed and fitted to *antidote* the Mischiefs arising from *animal Food*, and *fermented Liquors*, at least for some Time, and in the Days of our Youth,

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and Vigour: For certainly, a Part of the *Designs* of any intelligent Agent may be known by *Analogy* justly drawn, and by *final Causes*, and is the best Evidence finite and lapsed Creatures seem capable of receiving, in the Designs and Contrivances of the *Creator*, till they come to converse with him *Face to Face*. They may be mistaken in them, as well as in every other kind of *Evidence*, being finite, lapsed, and consequently *fallible* Creatures: But this seems to be the only *Evidence* they are capable of at present in such Matters; and may shew evidently the Design of the *Author of Nature*, as a *convex Screw* of any Number of Spires, shews, that it was design'd to fit some concave one of the same Number of *Spires* and *Diameter*. *Chance* is only a *technical* Word, to denote our Ignorance of the true and *physical* Cause of Order and Design; and yet admitting the Existence of *Chance*, that through the whole human Race there should have been, in the infinite Number of their Organs, a perfect Similarity by *Chance* only, and not Design, may, by a fair *Calculation*, be shewn to be as *infinite to finite*, that is mathematically impossible. But the *Question* I design to treat of here, is, Whether *Animal* or *Vegetable* Food was, in the original Design of the *Creator*, intended for the Food of Animals, and particularly of the *human Race*? And I am almost convinced it
never

never was *intended*, but only *permitted*, as a *Curse* or Punishment, and a *Cure* for a *Malady*, or (as the *French* term it) a *pis-alle*, and because infinite Wisdom and Power could make no more of his corrupted rebellious free Creatures in their present State; and for this infinitely wise and paternal End, He seems to have permitted it; 1. To let them *feel* and experience the natural and necessary Effects of their own Lusts and Concupiscence, by painful and cruel Distempers: *Feeling* and Experience being the surest Means by which a finite lapsed Creature can know and learn. 2. To shorten the Duration of their natural Lives, that *Sin*, *Misery*, and *Rebellion*, might not increase infinitely. 3. To produce naturally, and in a Manner consistent with *Liberty*, and the other natural Powers of the Soul, (which being deriv'd from Him, and being his *Miniature* Images, He neither could nor would force or destroy) those Sufferings and Miseries, and Dislike of *inordinate Lusts* and Enjoyments, that might make them think, ponder, and return to *Order*, *Love of Virtue*, and its *Source* and *Original*. And, 4. To sink and contract the *natural Powers* of the Soul, (*viz.* *Living*, *Understanding*, and *Will*), by means of such frail Bodies, into a *Level* with the decayed and lapsed *moral Ones*, (*viz.* *Justice*, *Goodness*, and *Truth*) which by this Rebellion were greatly corrupted and de-

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graded. The Reasons that incline me to think in this Manner, are these following :

§. 2. 1. WHATEVER be the true, *primogenial*, and last Principle of Bodies, beyond which it is impossible to *analyse* or divide them, these are incontestably found in all *animal* and *vegetable* Bodies, as has been before observ'd: 1. *Sulphur*, Oil or material Heat, from whence Spirit and Activity. 2. *Salt*, or hard angular Particles highly attractive, and dissolvable in Water. 3. *Air*, or small elastic Particles. 4. *Water* or *Phlegm*, from whence alone Fluidity: And, lastly, *Earth*, the Base and *Substratum* of these others. In the due and proportional Union of these, do the Variety and Difference of animal Substances consist. Now it is past all Doubt in Philosophy, and in philosophical *Chemy*, that *animal Substances* of most kinds, possess in a much greater Proportion the *two first* of these Principles, *viz.* *Salts* and *Oils*, than *Vegetables*, which partake more of the last, *viz.* *Air*, *Water*, and *Earth*. But from many undeniable Experiments, the two first Principles are known to be the most active, *energetic*, and *deleterious*, and tend more, by their Activity, to the Division, Dissolution and Destruction of the Subject, than those others, when they enter in any great Proportion. 2. The *Jelly*, the Juice or Chyle of *animal* Substances, is
infi-

infinitely more tenacious and glewy *, and its last Particles more closely united, and separated with greater Difficulty, than those of *vegetable* Substances. This is evident from the Experiments made with them in joining of Wood, and is known to all *Artificers*, and may be made manifest to the Senses in the Difference between the Tenacity of *Camp-jelly*, or *Fish-glew*, and that of Paste made of Flower or Barley; or from the Strength of *Ropes* or *Cords* made of *Cat-gut* or *Leather*, and those made of *Tow* or *Hemp*, of the same *Diameter*: And therefore *animal Food* must much sooner, more strongly, and irremediably make Viscidities in *animal* Fluids, and more *schirrously* obstruct the *Capillaries* and *Glands*, than vegetable Substances. 3. But the far more pernicious and destructive Part, is the *Salts*, and *Oil*, abounding more in most *animal* than in *vegetable* Substances; of which there are so many and convincing Demonstrations, that none can have any Doubt of it, that has the least Acquaintance with natural *Philosophy*: For our Blood and Juices being nourish'd and supply'd by such *Substances*, as abound most with these active *elementary* Principles, must necessarily be stored and saturated with *Salts* and *Sulphurs*; and these, being always in a

* *Vide* Memoirs of the Academy Royal for 1729 and 1730.

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State of *Action*, are the true, original, and the most adequate Causes of the most excruciating Distempers. 4. When to these, *strong, fermented* and *spirituous* Liquors are added as a Vehicle, or diluting Mixture, and join to the *Salts* and *Sulphurs* of animal Substances, not only their *inflammable* Spirits and *tartarous* Salts, but their condensing and hardening Quality on the Food in the Stomach, the Digestion is by that means hindered and stopped, and the Food not being sufficiently divided and comminuted, but broken only into gross Particles, does more quickly and obstinately thicken the Juices, and obstruct the *Glands* and *Capillaries*, than *vegetable* Substances. 5. Animal Juices and Substances, before they were turned into Flesh, must have been strain'd through infinitely smaller and more numerous *Tubes*, such as the last and extreme *Capillaries* are (some of which are not bigger than the *six hundredth part* of an Hair); by which Means their Particles must be render'd extremely smaller and finer, and consequently have a much greater Degree of *Attraction*, than those of Vegetables, which pass through fewer *Strainers*, and have no other motive Powers but the *Heat* of the *Sun*; whereas those of animal Substances have, besides the *Sun*, the Force of *muscular* Digestion, and of the Motion of the Heart; the Flesh of Animals, I say, must, upon this Account, necessarily consist of smaller
 Par-

Particles, and so be united with a greater Force, and endow'd with a greater Degree of *Attraction*, and consequently must, with far greater Difficulty, be digested and separated, than *vegetable* Substances possibly can. And hence it is that *carnivorous* Animals are much more *deleterious* Food, being endow'd with much finer and more pungent *Salts* and *Sulphurs*, than those Animals that live on *Vegetables* only, as both the higher *Savour* and deleterious Effects of the first abundantly shew. From all which it is plain to a Demonstration, that animal Substances must naturally and necessarily *incrassate* the Juices, and produce *Obstructions* in the *Glands* and *Capillaries*, and consequently create Pains and Diseases, much more readily than vegetable Substances.

6. It is plain by Weight, that the Substance of most animal Food is specifically heavier than that of most *Vegetables* commonly used for Food, sometimes in the Proportion of three to two. The *Fibres* and Juices of animal Bodies are not only more compact and closely united, and have fewer *Vacuities* than those of Vegetables, whereby the digestive Powers have less Difficulty in concocting and grinding equal Quantities of *Vegetable* than *animal Food*; but by the less *Flavour* and *Savour* of vegetable than animal Food, the Appetite is sooner satisfied, and is under less Temptation to Excess in the first than in the latter; and it

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is consequently better and sooner digested, circulated and secreted, especially by tender and delicate digestive Powers, and so cannot so readily cause *Viscidities* and *Obstructions*. *Lastly*, Infinite *Experiment*, and the best *natural Philosophy*, confirm to a Demonstration, that those Substances, which have least of *Salt* and *Sulphur*, of *Spirit*, *Oil*, and hard pungent Particles, and most of soft Earth, Water and Air, are the fittest to circulate, and be secreted through animal Tubes, create least Resistance to the motive Powers, tear, rend, and wear out the *Tubes* themselves least, and form less obstinate and powerful Obstructions, in the smaller Vessels; and consequently, that *vegetable* Substances, which consist of a less Proportion of *Salts* and *Sulphurs*, *i. e.* of pungent and fiery Particles, and of a greater Proportion of Earth, Water and Air, *i. e.* of less active and cooler Particles, will be less ready to create Diseases, and shorten Life, than an equal Quantity of animal Substances, which have all these in an *inverted* Proportion. In a Word, vegetable Substances are more *rare*, less *compact*, less *coherent*, more easily dissolvable and digestible, turn into a lighter *Chyle*, have less *Salt*, *Oil*, and *Spirit*, and consequently are less heating and inflaming, than animal Substances, and so obstruct and tear animal Tubes less.

§. 3. IF this Account be just and *philosophical*, and if it be lawful at all to enquire into final Causes, (which, if the first Being be *rational* and *intelligent*, and acts with Design, and for some End, is not only lawful, but laudable, when done with Modesty and Humility) then certainly *one* Part of his Design in permitting *animal* Food, must of Necessity have been to shorten the *Duration* of human Life, to *create*, or at least to *permit* us by it, to multiply and enrage Diseases, Misery and Sufferings; since it is evident to a Demonstration, that it must always produce this Effect, and will always have it preferable to *vegetable* Food; and whatever *is*, naturally and necessarily *is*, and is permitted by the *first Being*, we may with the utmost Certainty conclude, was at least *one* Part of his Design; and if Suffering, Pain and Misery here be necessary for our *Purification* and *Recovery* out of this degenerate State, then very probably that might be his Design in this Permission. *This Phenomenon* in Providence, (the Permission and Use of *animal* Food) and *Fact* in *Revelation*, is not accountable any otherwise, than that Pain, Suffering and Diseases, being a natural and necessary Mean of *Expiation* and *Purification*, in the Oeconomy of Restoration, *Infinite Wisdom* permitted it, tho' unwillingly, as his *strange Work*, against the Grain, as it were, for that End solely; as a kind *Father* suffers

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suffers his unnatural and perverse Son to be carried to *Gaol*, to suffer Hunger, Cold, Pain and Confinement there, as the only Mean to make him sober, considerate, wiser and better. For that *animal Food* and *fermented Liquors* will more readily, certainly, and cruelly, create and exasperate Diseases, Pains, and Sufferings, and sooner cut off Life than *vegetable Food* will, there can be no more Doubt than in any Proposition of *Euclid*, if *Reason*, *Philosophy*, the *Natures* of Things, or *Experience*, have Evidence, or Force in them; and it is very observable, that this Indulgence for animal Food was not granted, till the *Æra* of *Longevity* was expir'd, or at least they took place together; and not till the spiritual Corruptions of *Pride*, *Tyranny*, *Malice*, *Revenge*, *Murder*, and *brutal Commerce*, so universally raged, that infinite Wisdom, to begin a new World, was forced to destroy, by a *Deluge*, the whole Race of Mankind, except a few of the most innocent and least deprav'd *Individuals*, such as they were, far from perfect, but the least bad of the Race: this seems so, if any Credit be given to the *Jewish History* of Nature.

§. 4. It will be no Difficulty to one acquainted with *Revelation*, to find the like Permissions in the divine *Oeconomy*: Nothing is more plain and demonstrable from *Nature*, and its *eternal Laws*, and from Justice and Equity, than that in the original Intention,
one

one *Woman* was design'd for one *Man*, and no more ; for there being no Difference between the *Sexes* but in their outward Frame, and the *Configuration* of the Shell or Tabernacle ; (their essential Nature and *spiritual* permanent Form being of the same Degree, constant and invariable ; different *Culture* and Form making all the real Difference) ; infinite Wisdom might then, with the same Wisdom and *Propriety*, have given the *Male*, more *Eyes*, *Stomachs* or *Heads*, as more *Wives* ; and yet, for the *Hardness of their Hearts*, God permitted Plurality of Women to the *Jews*. This same People, tho' they had not only *God's* general and imperceptible *Providence*, as we now have, for their Government and Direction, but his *miraculous*, sensible and visible Presence, to instruct and guide them, yet they wanted a *King*, as the other Nations had, and he gave them one in his *Wrath*. Infinite Goodness, intending always, by the whole Power of his *Omnipotence* and *Omniscience*, to restore his lapsed and rebellious Creatures, consistent with their *Liberty*, and the *natural Powers* he had given them, and the *Harmony* of his own *Attributes*, descends below his first Intention, and drops the *primary* and *original* Perfection of his Commands to them, for a Time, to condescend to their Weakness and Infirmary, in order afterwards to bring them up to it again. As a kind *Father*, who to wean his rash and giddy Child from the
Fire,

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Fire, holds his Finger near a Candle, till he begets a sensible Fear and Dread in him of being too familiar with that dangerous *Element*.

§. 5. UPON the Foot of *natural Religion* only, and from the strict Rules of natural *Justice* and *Equity*, how any one can justify the taking away the Life of a *Fellow-Creature*, out of *Wantonness*, *Luxury* and *Riot*, and not from Necessity and Self-defence, so long as there may be found sufficient Store of *vegetable* Food to carry on the Expences of *Living*, and the more agreeable Performance of the *animal Functions*; to give a living Creature the greatest Pain it can possibly receive, and take from it the only Happiness it is capable of, *viz.* its *Life*, (which none can restore or recompense) merely to scratch *callous Organs* more sensibly; how, I say, to account for this barbarous and savage Wantonness on the foot of mere *natural Religion* and natural Equity only, without *Revelation*, I can by no means conceive. That the infinitely wise *Author* and *Lawgiver* of Nature, who sees through the whole *System* of *Intelligences* at once, and perfectly knows for what Ends and Purposes he has made them, and sent them here, and is the sole *Proprietor* of Life and Happiness, may dispose of them how he pleases, knows when they have finish'd their *probatory* and *expiatory* Course, and is
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able to recompense the Loss of a *lower* Life, by the Gift of a higher; for it is not impossible, the *Animals* may have been a lower Order of *rational Intelligences*, who, *lapsing* less, are sooner, and with less Suffering, recover'd; and since they suffer with us, they may be restor'd with us; the Apostle says, *the whole Creation travelleth together*; that is, probably, the whole *System of Saturn*, the Goal of God's Creation: For *Him*, I say, to give up the Lives of a lower Rank of Beings, for the *Expiation, Instruction, or Admonition*, or other Benefit of a higher, may be an Act of great *Justice, Wisdom* and *Goodness*. And, if it might be allow'd us to conjecture, one wise *End* and Purpose in this *Permission* of *animal* Food, might be to punish, admonish and correct us, by bodily Distempers, so as to bring us to reflect, repent and amend; or even, to shorten the Time of our Sufferings here, and by the Violence of our Diseases, and a nearer Prospect of *Death*, and a future *Reckoning*, to reclaim us sooner and more effectually; and at the same Time to advance these *Victims* to a higher State of Being and Happiness. Probably for these mention'd (but to be sure for wise and good) Ends and Purposes, has *God* by *Revelation* given us a Permission, or *Patent*, for the Use of *animal* Food: But for *fermented* Liquors, *He* has given us none, that I know of; neither are they natural, or proper; nor were they ever approv'd

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or recommended for common Use, or as proper and ordinary Drink; but only as *Physick*, or a *Cordial*, on *Festivals*, or at *Sacrifices*, on *Sickness*, or in Extremities. In the early and innocent Ages of *golden* Simplicity, no Hint supposes them commonly known or tried. And if fermented and spirituous Liquors were used only as *bitter Draughts*, *Cordials* and *chalybeat* Medicines, to brace and wind up the Stomach, and alimentary Tubes and Solids transiently, for a short Time; on Sickness, Lowness, Fainting, Fatigue, and *inclement* Seasons, as they seem to be intended by the *Author* of Nature; they might be Blessings, and great temporary and transient Reliefs; but as they are now used constantly at Meals, as common *Beverage* to dilute solid Food, and to make Persons easy under a Load of high rich animal Food, they become the efficient Causes of most Diseases; and upon the most *serious* Enquiry, I could never find an *adequate* natural Cause, for the Frequency of *nervous* and atrocious chronical Distempers now, from what they were formerly, nor of the *Stuntedness*, *Punyiness* and Feebleness, so conspicuous among the *better Sort*, from what they were before the *Conquest*, and in our *Gallic* Wars; but the free and frequent Use of strong and *spirituous* Liquors, and rich and high Foods, with foreign *Cookery*, at that Time introduced first; and living in great Towns, and using only Coaches and Chairs,
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and sedentary Employments and Diversions, And drinking *Water* only, and living *low*, is the only *adequate Antidote* and Remedy for these Distempers thus produced; for no Axiom is so certain in Physick, as that *Diseases must be cured by their Contraries*.

§. 6. THE Hurt and Damage all *fermented* Liquors do an *animal* Body, is evident from many Considerations; as, 1. That it hardens, constricts and binds up the Fibres, and strongly unites the Particles of *animal* Substances, so that they are with much greater Difficulty separated and divided, *i. e.* digested. A Piece of Meat will continue sweet and sound, for many Years in Wine or strong Beer, or in any strong fermented Liquor; the Liquor cementing and pinning together the Parts of the Meat; and the same happens when they are mixed in the Stomach; by which the *Digestibility* and easy Dissolution of it, is obstructed; so that in such a Mixture *Mutton* is turned into *Beef*, and *Beef* into *Shoe-Leather*. 2. There is in strong Liquors a crisping, corrugating, or *caustic* Quality workt on the Fibres, which burns and dries them up, and destroys their *elastic* and *ductile* Virtue, and consequently renders them unfit to be broken and divided in the Stomach. This is evident from the Use commonly made of strong Beer, as the best Plaister for *Sprains*, *Relaxations* and *Strains*; and that Brandy will really stop *Hæmorrhages* and Ruptures in the Blood-Vessels,

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by burning and wrinkling the tender Fibres and Capillaries, and so by this crisping Quality must keep Food from being readily and perfectly digested. 3. The Fire and Heat in strong Liquors, by stimulating and twitching the *Fibres* and Coats of the Blood-Vessels and Nerves, and consequently bringing them into quick and frequent *Vibrations*, and elastic Efforts, will break and tear the Fibres of the alimentary Tubes, and separate their Union and Continuity, so as at last to wear out these Organs, at least, much sooner, and with greater Pain and Suffering, than Water or aqueous Liquors possibly can. *Lastly*, It is a common and well-known Experiment, that to *stunt* the Growth of young Animals, as Dogs and Cats, they need only be frequently rubbed over with Brandy, Rum, or any Spirit. This stops the *Ductility* and Extension of the young animal *Fibres*, that they cannot be dilated and develop'd by the Force of the Circulation, and so *stunts* their Growth. From all which it is plain, that strong, but especially *spirituous* Liquors, are really *Poison* to an animal Constitution; and their ill Effects, not only in shortening the Lives, but in stunting the Growth and Stature of the lower Rank of People, from the late frequent Use of Gin, Punch, and other spirituous Liquors, have become so flagrant, as to call aloud for the just Indignation of the *Legislature*; and it is to be wished, that an effectual Remedy may be found out for so
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destructive an Evil. And I am fully convinced, that the primary and original Design of the *Author of Nature* for the solid Food of Animals, was nothing but earthy Particles mixed with Water and Air, finely divided and cemented only, with the least *Oil* and *Salt* possible, as they are found in Seeds, Fruits, young Vegetables, and *farinaceous* or *pulpous* Roots, with Water only for Drink; which alone would make the Animal last the longest, and with the fewest Pains and Diseases. But this Diet must be only tried and begun with the *Young*, while their Fibres are tender and sweet.

§. 7. THAT all sensitive, as well as intelligent Creatures, are in an *expiatory*, *purifying* and *progressive* State here, and going on to a greater Degree of Perfection, and a nobler State of Being in their several Orders, is demonstrable from the utter Contradiction and Impossibility there must be, that an infinitely wise and good Being could create sentient and intelligent Beings to *suffer*, for no other Reason but for the sake of *Suffering*; or that he should make Creatures to *suffer* for any other End or Purpose, but for *Expiation*, *Purification* and *progressive Perfection* of Being, and to establish and confirm them in their acquired State of Perfection: *Neque enim, sub justo Deo, miser esse quisquam, nisi mereatur, possit*, says St. *Augustin* most divinely. Most of

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the *Animals* are *Martyrs* for the human *Species* in Food or *Sacrifice*: Some of them are Food for one another; all of them are subject to *epidemical* Diseases and casual Misfortunes; a few of them pass their Time much more comfortably than others; all of them but unhappily at best, and go through Death at last. All this must be for some wise Purpose, and none can be nobler, than that of *Expiation*, *Purification* and *progressive Perfection* of Being; and silent *Admonition*, and teaching us, their superior *Order of Beings*. *Consciousness* of this End, either to them or us, might retard this Effect. *Childhood*, *Idiotism*, and many *cephalic* and *nervous* Distempers, can bring no *Consciousness* of the divine End and Design of this *Oeconomy* along with them, even to intelligent Beings; it is sufficient, that *Consciousness* come when the End is accomplished, or the designed *Perfection* attained. At what Time *animal* Food came first in Use, is not certainly known. He was a bold Man who made the first *Experiment*; *Illius robur et æs triplex circa pectus erat*. To see the Convulsions, Agonies and Tortures of a poor *Fellow-Creature*, whom they cannot restore nor recompense, dying to gratify *Luxury*, and scratch *callous* and rank *Organs*, must require a rocky Heart, and a great Degree of Cruelty and Ferocity. I cannot find any great Difference on the Foot of natural Reason and *Equity* only, between feeding on
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human Flesh, and feeding on brute animal *Flesh*, except *Custom* and *Example*. I believe some rational Creatures would suffer less in being fairly butcher'd, than a strong *Ox*, or *red Deer*; and in natural *Morality* and *Justice*, the Degrees of Pain here, make the *essential* Difference; for as to other Differences, they are relative only, and can be of no Weight with an *infinitely perfect Being*. Did not *Use* and *Example* weaken this Terror, and make the Difference, Reason alone could never do it. Perhaps it may be conjectur'd, that since *Sacrifices* were certainly an *original, reveal'd* or *traditional* Institution, and that no Nation under the Sun, hitherto known, was without them, they being, it would seem, a chief Part in the grand *Oeconomy* of the *Restoration*; Sacrifice, I say, might have been originally instituted, 1. To *admonish* and *inform the Sinner* silently, and without committing Violence on his *Liberty*, what he deserves; and implicitly to tell him, that he deserves the same *Death* he makes the poor Brute undergo. For the *Liberty* of Mankind seems so precious, being the Root of Intelligence, that it is wonderful in how many Shapes *infinite Wisdom* and *Goodness*, has put Himself, in the Conduct of *Providence* and Nature, to preserve it inviolate; and at the same time to instruct and admonish his free lapsed Intelligences. I believe a good natural *Philosopher* might shew with great

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Reason and Probability, that there is scarce *Beast, Bird, Reptile* nor *Insect*, that does not, in each particular *Climat*, instruct, and admonish Mankind of some necessary Truth, for their Happiness either in Body or Mind. And, 2. To continue the *Expectation* of all Ages, of some more noble and meritorious *Sacrifice*, some time or other to be celebrated. And it is not impossible, that the rude and untaught *Mob*, who were employed in the lower and servile Offices about *Sacrifices*, might have been the first who ventured on *animal* Food, (if it was not instituted afore as a *Sacrament* with the same Intention as the *Eucharist* was afterwards) their Station habituating them to bear with less Pain, the Sufferings of their Fellow-Creatures while sacrificed; and they finding it *palatable* and *luscious*, might recommend the Use of it to Others. Perhaps, I say, this might have been the Original Institution of *animal* Food among all *Nations*. However, as this is only a remote Conjecture to account for the early Commencement of *animal* Food, so contrary to the original Nature of Man, and the Design of the *Creator*, and has no Regard to those concern'd in our unbloody Sacrifice; I proceed now to observe how cautiously, and with what an evident *Forbid*, the *Jewish* Law directs this *Permit* of animal Food, *viz.* absolutely and positively not to eat the *Blood* of the *Animal* (in which not only its Life, but its
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most delicious Savour and most *deleterious* Qualities chiefly consist, and because Blood *Globules*, by their Rotundity, Volubility, and Elasticity, resist *Trituration*, that is, Digestion). Now this in Reality, and by *Insinuation* and *Moral*, is to say, That since for the *Hardness* of your Hearts, and your present unconquerable Lustings, you cannot be brought to abstain altogether from *animal* Food; yet because in the *Blood* is the *Life thereof*, and all its deleterious, morbidic and noxious Qualities, you are to drain it as much as possible of all its Moisture and Juice, (for the Serum as well as the Grume, mostly consists of *globular* Particles), and eat it plain, roasted or boiled, to drain it still more: By this Method, *animal* Food will be much less pernicious, and will approach very near to *Vegetables*. There is no understanding this *Permission* any other Way, nor is it otherwise to be reconciled to common Sense, or rational Conception, however both *Jews* and *Christians* have at present dwindled and diluted its true Import, out of Luxury.

§. 8. THIS Doctrine is further confirm'd by this surprising Circumstance in the Permission, that there is a very particular and otherwise unintelligible Distinction made between *clean* and *unclean* Beasts, either to be sacrificed, or eaten for Food; and a distinguishing *Mark* assign'd how to know the last. And
since

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since it comes from the same Source with the *Permission* of *animal* Food, these two must have some material Difference in the Nature of Things; and that can be none other but that the Flesh of these last cannot be so readily digested and squeezed from their Blood, but that it will have sufficient remaining, of a more deleterious Nature, to inflame and *mortify* the Juices of those who use it freely, and to enrage and *madden* their Passions; and he who is deeply acquainted with *natural Philosophy*, and the *History* of the unclean *Animals*, will be sensible of the Justness of this Prohibition and Observation. From whence it is natural to conclude, that tho' for the *Hardness* and Perverseness of Mens Hearts, *animal* Food was permitted and indulged, yet it was with such various *Clogs* and *Exceptions*, as might make it as little pernicious as possible. For the same Reason likewise was the *Fat* of the *Sacrifice* forbid to be eaten: And all this to shew that it was with great *Reluctancy*, and in mere Condescension, and contrary to the *original* Intention, it was thus permitted. And tho' under the new Dispensation, St. *Peter* was informed by a *miraculous Vision*, that nothing was now *common* or *unclean*, yet it was not till *Self-denial*, *Poverty of Spirit* and *Mortification*, or abstaining from the Lusts of the Flesh, were established as the fundamental Doctrines of this new *System*; which when sincerely believed and strictly followed, would leave no
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room for Difference of Food, or *ceremonial* Distinctions, which served only as a *School-master*, to bring them to these purer and more universal Doctrines of *Christ*. It is certain, at the Creation there could be no such Thing as an Indulgence for *animal* Food, if only *Pairs* of each *Animal* were created at first.

§. 9. I MUST however own, that I think some *vegetable* Food, of much *Salt*, *Oil*, or luscious Juice and *Poignancy*, as much or more deleterious, inflaming, and incrustating, than some mild animal Substances: For Example, *Onions*, *Shallot*, *Mustard*, *Horse-radish*, all the *Nut-kinds*, *Eastern Gums*, *Balsams*, *Raisins*, *Pickles*, *Spices*, *Aromatics*, strong fermented *Sours*, rich and fat late Fruits, as dry yet *plump Grapes*, much *Sugar*, and the like; these are in some delicate Constitutions more poisonous and hurtful to an human Body, than a Bit of the *muscular* and lean Flesh of *Chicken*, *Veal*, *Lamb*, *Rabbit*, *Partridge*, *Turkey*, and the like white and young animal Foods; whose Whiteness and Tenderness shews there is little or no red *Blood Globules* in them, and are consequently more easily digestible, and less deleterious. These *Vegetables* may be allowed in small Quantities, as a *Sauce* or *Relish* to otherwise insipid and unpalatable vegetable Food, to sickly Appetites; but in great Quantities, and without Caution, they will hurt, heat and thicken the Blood and Juices of tender Constitutions;

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stitutions; which is the sole Cause of the acute
Distempers of all the *Eastern* and *Southern*
Nations, who do not deal, or but very sparingly,
in strong fermented Liquors. Without doubt,
plain *Milk* (the genuine Soup prepar'd by the
Author of Nature, and of a middle Na-
ture between animal and vegetable Sub-
stances) boiled or raw, or prepared with
Seeds, as *Rice, Sago, Barley, Wheat, Mil-*
let, and the like, is the best and safest of all
Foods for such tender Constitutions, as being
in itself Blood, that has not as yet often passed
through the Lungs, to give it its *scarlet Colour*,
and deleterious Qualities, but is drawn almost
directly from the Stomach and Lacteals, from an
Emulsion made there, and Cookery of Nature,
of Grass and Vegetables with pure Water, and
designed by the *Author of Nature*, for the
Cure and Nourishment of the Young, Tender
and Delicate: And I can see no Difference be-
tween a young or tender and delicate Animal
by Nature, and one made so by a Disease; but
that such a Diet is still more necessary for the
last than for the first. The mealy Roots and
early Fruits are next to these; such as *Potatoes,*
Turnips, Carrots, Skirrets, and the like,
Strawberries, Cherries, Currants, &c. and
only in the last Place and Degree is the *Sal-*
adin, Colworts, and latter and richer Fruit-
kinds, and Winter Vegetables, as containing
too much Air or Wind. And the *Author*
of Nature has with such a Profusion of Kind-
ness

ness secured against Want or Famine, that in inclement Seasons, and bad Years, if the Earth cannot produce Plenty *above* Ground, it secures it *under* Ground in bulbous, knotted, or mealy Roots, even in Snow or Frost.

§. 10. AGAINST this Doctrine, that animal Food was permitted for a *Punishment*, and that fermented Liquors are not an Institution of Nature and its Author; those who have Regard for *Revelation*, whence the Patent for animal Food is drawn, may object, that our *blessed Saviour*, who was *without Sin*, eat and drank of what was set before him; that his first *Miracle* was supernaturally producing Wine, to celebrate the Marriage of *Cana in Galilee*; that he was accounted a Wine-biber; that he eat and drank with *Publicans* and *Sinners*; that he wrought other *Miracles* to produce *animal Food* to a Multitude; that St. *Peter* had a *miraculous Vision* to instruct him, that no sort of Food was unclean; that the *Eucharist* is celebrated in Wine; and that St. *Paul* advises *Timothy* to drink Wine for his Infirmities. To all which I answer, 1. That the Question is not what is, now, best and fittest in the *present* Ends of Providence, in order to restore and recover Man from his lapsed and fallen State; but what was probably the first Design of our *Creator*, in our primitive un-lapsed State, before we and our Habitation (the *Earth* with its *Atmosphere* and Appen-
dages)

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dages) were thus spoilt and disordered. 2. One sort of Repair, Props, or Support, may be proper or necessary for a Habitation in one Degree of Ruin and Decay, that would by no Means be necessary or proper in another or lower Degree. 3. There is neither *Virtue* nor *Vice* in abstaining from one sort of Food more than another, but as it is commanded by lawful Superiors; all that is here considered, is, which of the two, *vegetable* or *animal* Food, in the Nature of Things, by the *animal Oeconomy*, and as human Creatures and their Food are now constituted, is *physically* and experimentally fittest to carry on and prolong Life, with the least Pain, fewest Diseases, and for the longest Time. *Virtue* and *Vice* are of quite another Consideration, and depend on the *internal Principle* and Disposition; the Quantity, Manner and Order in which these necessary Supports are taken, not on the Things themselves. But if it be asked, Which of the two *Diets* is most conducive to *Virtue* or *Vice*? Which of the two is most likely to facilitate the Acquisition of *Virtue*? What is above-said, plainly determines it in Favour of a *low Diet*; for by it the bodily Passions being made cooler and weaker, the Blood and Juices being sweetened, the intellectual *Organs* thereby render'd cleaner, more agile and penetrating, *Reason* and the *spiritual Nature* of Man has more Liberty to act, and meets with less Difficulty and Resistance in its Operations. 4.

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As to our blessed *Saviour*, he having come to seek and to save what was lost, was obliged to take the World as he found it, in order to raise it from that Degree of *Perdition* in which it was then plunged. He took upon him the Form of a *Servant*; he took not the Nature of *Angels*, but the Nature of the Seed of *Abraham*; he was in all things like unto us, *Sin only excepted*. Those to whom he came, and among whom he dwelt and convers'd, could at first neither receive nor understand his *sublime Doctrines*; he had many Things to say even to his Disciples, which they could not then *bear*; and yet this Doctrine of the Preference and greater Advantages of *vegetable* than of *animal* Food, is virtually and implicitly contain'd in the general Doctrine of *Self-denial* and *Poverty of Spirit*, (in the Sense of the *Evangelic Counsels*, that carry quickest into *Perfection*, where *Celibacy* is preferr'd to *Marriage*; for in the Kingdom of *Glory*, they are neither married nor given in Marriage, but are as the *Angels* of God) so strongly and pre-eminently inculcated in the Gospel, as any who reads and considers it, must plainly see. 5. I readily grant, and have given the Reasons and *Philosophy* of these Things, that in our present lapsed State, in the present Infertility, and insufficiently nutritive Qualities of the *Vegetables*, in the present Curse on the Earth, and the Necessity of Labour, Handicrafts, *mechanical* Force, and *martial* Prowess, while *Wickedness* is so powerful,

ful, and the Wicked so numerous, there is a Necessity for high *animal* Food, and *fermented* Liquors, in some Cases, and to some Persons, to secure against and remedy these Evils. But the sole *Question* here is, Whether this Diet will prevent Diseases, or lengthen Life so effectually as the other? Or whether Providence has not designed and appointed vegetable Food for the *Cure* and *Antidote* of the Pains and Diseases naturally and necessarily arising from animal Food, and fermented Liquors? Perhaps *God*, in his moral Government of the World, has design'd animal Food, more readily to punish those who will not be drawn by Love and Beauty; *i. e.* to purify some sorts of Men by Pains and Sufferings. 6. I willingly allow, that *fermented* and sometimes *spirituous* Liquors, are excellent Remedies, temporary Filips, Whips or Spurs, in Faintness, Sickness, Labour, or festival Occasions for *Joy*, and promoting of Friendship, and on Necessities and in Extremities: But I contend, then, and then only, they ought to be used; and that there is neither Precept, Example, nor Encouragement from *Reason*, *Experience*, or *Revelation*, to use them otherwise, or as they are now used for *common* Food, and daily *Beverage*; whence they become one Cause of all the great Diseases of the present Age. From these general Considerations, all the mention'd Difficulties have an easy *Solution* to the Candid and Ingenuous: I am not fighting

ing *Prizes*, nor making Articles of a *Creed*. That infinite Wisdom foresaw, and laid in Provision and the necessary Precaution and *Antidote*, for the most deleterious Effects of animal Food and fermented Liquors, for a short time, seems to me evident for these Reasons, 1. In that He provided the *Liver*, (the *Pancreas*, and other internal *Glands*) in Animals, these vastly strong, complicated and labour'd *Organs*, to draw out the most poisonous Parts of strong Meats and Drinks: the stronger the *Liver*, and the larger that *Organ* grows, the more *Bile* it throws out on the *Common-shoar*, the *Intestines*, to deprive the Chyle of its churlish Salts, and acrid *Sulphurs*, and thus makes the *Liver* an useful Medicine to promote the animal Functions, *Digestion*, *Chylification*, and the *peristaltic Motion*, and then throw its usefess Parts out of the Habit. 2. By the creating mineral and ponderous Medicines, (*Mercury* chiefly) to open Obstructions, break saline Concretions, and dissolve the *Tenacity* of the *Globules* and *Serum*. And, 3. In providing *mineral Waters* of so various and complicated Natures, for the same Ends and Purposes, which they will, well-chosen, effect at last, as certainly as those formerly mentioned. Now it is plain to a *Demonstration*, that under a vegetable Diet, all those have little or no Use in Medicine; nay, any one who is acquainted with the Delicacy, Tenderness and Sensibility of the internal and infinitely minute Parts of

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an animal Machine, must know that they are not only in a great Degree useless, but hurtful, and tend to tear, dissolve and destroy the infinitely minute Fibrils, of which the Solids of an *animal Machin* are formed: So that their final End and Design in Providence must have been to *antidote* the ill Effects of *animal Food* and strong *fermented Liquors*, to a certain Degree, and for a certain Time, *probably* till some time after the Meridian of Life, while the Organs had attained their utmost Extension and Firmness; for it is not improbable, that none of the Mineral Waters existed under the *Form* and in the Manner they now appear, till after the *Deluge*, the *Ara* of *animal Food*, *fermented Liquors*, and the *shortness of Life*.

§. 11. To the Appearance of the present State of Nature, that seems to clash with this Doctrine, *viz.* the vast, nay infinite Mass of *Life*, or *living Creatures*, generated by Heat and Moisture, the many *Millions* of *organiz'd* Seeds of *Plants* and *Animals* destroyed every Season, the Impossibility of having any Sort of *Food*, or even *pure Water*, without destroying and devouring *Millions* of *Animaculs*; that *here* almost each Animal devours and lives upon another; and that both in the *sentient* and *intelligent* Creation, there seems to be a natural and unconquerable Appetite and craving Desire of *animal Food*, and an insatiable Thirst

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Thirst of Blood : To these and such-like Prejudices, (I cannot call them Objections) it may be answer'd, I. First, That these Facts are not denied, but are of no Weight against the Propositions here chiefly asserted, *viz.* 1. That it is *Philosophically* certain, that *animal* Food is in its own Nature more ready to produce Distempers than vegetable Food. 2. That it is therefore highly probable, that an infinitely good and wise Being would not appoint in his first Intention, *animal* but *vegetable* Food, at least to his *intelligent* and rational Creation, and which accordingly is confirm'd from *Revelation* : And, 3. The chief Assertion here made, is, That in Consequence of these two *Propositions* it follows, that *vegetable* Food, Seeds especially, must be the proper *Antidote*, and Cure of the Diseases brought on by *animal* Food. But, II. It may be consider'd, as St. *Paul* asserts, that this whole *Creation*, the whole *System*, but chiefly this our *Globe*, with all its Inhabitants, *labours*, and is under a *mortal* Distemper, and in *Tra-vail*, like a parturient Woman, to throw off this present *Load of Corruption, Deteriority*, and *Lapse*, that it may regain its original *Spirituality, Purity*, and *Liberty*; it is at present in a State of *Expiation, Purification*, and *progressive Perfection*; every Thing is out of its natural Order, the *System* is, as it were, in a Fever, and every Part and Particle is in Action, (like the Body of a Man in a *febrile Fermentation*), to throw off its peccant Hu-

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mours,

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mours, and to bring the whole Compound into *Order, Regularity, and perfect Health*. But, III. These very Appearances on which the Objection is founded, confirm to a *Demonstration*, what I assert, *viz.* That all *animal* Life here is in an *expiatory, purifying, and progressive* State, towards its original Perfection; for it would be the grossest Contradiction, to suppose that an *infinitely good and wise* Being, should give Pain to any of his Creatures, for any other End, but to reclaim and perfect them; that He alone knows when his *Justice, Purity, and the Amende Honorable*, and the Infection of Impurity, are perfectly answer'd and cancelled, in their present State of *Melioration*, and so knows when and how it is fittest to put an End to it by Death, that is, by the Rupture and Dissolution of their gross and earthy *Prison*, form'd out of this our ruinous *planetary System*, now spoil'd and defac'd; to set the indwelling *spiritual* Inhabitant free into some more *pure and refin'd System*; and that *animal* Life of all Kinds and Degrees, does and must necessarily suffer here, by bodily Wants and Infirmities, by the Injuries and Inclemencies of *Seasons*, by the *Rapacity and Ferocity* of their Fellow-Creatures, besides a thousand other *Accidents*, and at last most intensely by their Death, and the Rupture of their outward Shell or Tabernacle; From all this is a plain Demonstration, that they are in a State of Suffering, Expiation, and progressive Purification, and
that

that at last they will all be set at Liberty, and become the Sons and Children of God in some Degree or Order or other, according to his original Intention, and the Plan of this his universal *Monarchy* and Kingdom, laid before the Foundation of the World; and all this Darkness, Sufferings, and unintelligible Play, is only to save human Liberty, and produce at last *pure Love* and *naked Faith*. IV. No body ever denied, that *Animals* of all Kinds might be destroyed, even *intelligent* as well as *sensient*, when it is done for some wise or useful Purpose, as in *Self-defence*, or even for moral Purposes, implicitly to admonish and teach others their Duty, what they deserve, or what they are to *believe* and *hope*; these Purposes, with all their particular Circumstances, are under the *moral* Government of an infinitely wise Being. The only *Question* here is, Whether they may reasonably and justly be put to *Pain* unnecessarily and *wantonly*, or for no wise End or Purpose, but only to scratch *callous* Palates, when other Means of Health may be had more effectual, and no less pleasant. V. It is not altogether *Fact*, that Animals devour one another from any other Reason, but for Want of sufficient Plenty of proper vegetable Food, as Seeds, tender Plants, mealy Roots, and the like, which even the most *carnivorous* Animals will brouze on, when they can meet with it in Plenty, as is well known in *natural History*; and even the

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Fish, which of all Animals are the most voracious, will readily feed on Balls of Meal and Milk, without offering to devour one another; as the ingenious Mr. *Andrews* of *Norfolk* has found by Experiment; for having put several Sorts of small and great Fishes together into a large whiten'd Pond of clear Water, where they might all be easily seen and number'd, and feeding them with Balls made of Milk and Flower, (which were put into pervious Troughs) he found, at least thought, that they did not offer the least Violence to one another. VI. Allowing Animals to be actuated by a spiritual or immaterial Principle, of the same Nature with intelligent Creatures, yet they are not of the same Degree and Order with them; they may be intelligent Creatures of an inferior Order, beginning lower, and verging more slowly towards their intended Perfection; they may be under different Conditions of Purification, and may pass the whole of their Duration here, in the State of *Infants*, who dye before they are born, or before they arrive at the Use of Reason, and yet in other States of Being may grow and advance to a much higher Perfection of *Sensation* and *Intelligence* than we can readily imagine. For to me it seems utterly incredible, that any Creature, whether sentient or intelligent, should come into this State of Being and Suffering, for no other Purpose than we see them attain here; and it is equally incredible, that any Creature should
spon.

spontaneously exert animal and muscular Function, *i. e.* should live and feel, without some Degree of an *immaterial, immortal, and self-active* Spirit. Matter and its Laws, can never account for such Appearances. There must be some infinitely beautiful, wise and good *Scene* remaining for all *sentient* and *intelligent* Beings, the Discovery of which will ravish and astonish us one Day. Moderately wise Ends, Purposes, and Means, are unworthy of infinite Perfection; whatever *God* does must be every way worthy of Himself: His *Working* may serve many wise and good Ends and Purposes here, but the last and great End of all must be of *Dignity* and *Majesty* worthy of Him, tho' we cannot yet a great while comprehend it.

§. 12. To conclude: 1. It is plain from *Revelation*, that *animal Food* was *permitted*, and *fermented Liquors* not *forbidden*; and consequently, that there is neither *Virtue* nor *Vice* in the Use of them absolutely, but in the Order, Time, Quantity, and other Circumstances of their Usage. 2. That in our present *Situation*, and under our present Circumstances, for *some* Persons, and in Order for *some* Purposes, a reasonable Quantity of *animal Food*, and *fermented Liquors*, may be absolutely necessary. 3. It is plain from *Reason, Philosophy, and Experience*, that *Excesses* in high *animal Food*, and *strong fermented Liquors*,

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are the true efficient and most general Cause of most *atrocious* and dangerous Distempers; and consequently, that *vegetable Food*, and *unfermented Liquors*, are the true and natural *Antidote* of such Distempers. 4. That *animal Food*, and *fermented Liquors*, will more probably, and more naturally cause Distempers, and shorten Life, than *vegetable Food*, and *unfermented Liquors*. 5. That a moderate and small Quantity of *animal Food*, and *generous fermented Liquors*, will naturally tighten, harden, and strengthen, give Firmness and Force to animal Solids and Fibres, and enrich, warm, and invigorate the Blood and Juices; and consequently, is safest to all subject to eruptive Distempers, as Gout, Erisipelas, &c. in the *Fits*. But at the same time that it hardens and tightens the Solids, it condenses and thickens the Juices, and renders the Animal of a shorter *Duration* of Life, and more subject to *Diseases*. 6. *Lastly*, That for bodily Strength, *animal Food*, and *fermented Liquors*, seem fittest; but for *intellectual* Exercises, *vegetable Food*, and *unfermented Liquors*, seem appropriated; and that consequently, the best Way to secure the *golden Mediocrity*, between *bodily* Strength and *spiritual* Force, (the State fittest for the Generality of Mankind) is for the healthy to confine themselves to about a Pound, at least half a Pound, of *animal Food*, and a Pint, at least half a Pint of *fermented Liquors*, daily :

Preference of Vegetable Food. 89

daily: But for the unhealthy, *valetudinary*, and studious, to sink below this *Medium* in both these, till, by Experience and Observation, they find that Quantity of either, they are easiest under, and to stick to that, should it even be to descend totally into Vegetables, Milk and Seeds, with unfermented Liquors.

END of the SECOND DISCOURSE.

daily: but for the necessity, continuing in
and physicians, to make below this Address in
pathetic, till, by Experience and Observation
then, they find the Quantity of water, they are
called water, and to this to that, should it even
be no doubt, totally into Vegetables, Milk
and Bread, with unlimited Ignorance.

End of the Second Discourse.



DISCOURSE III.
A
Philosophical THEORY
FOUNDED ON
EXPERIMENTS
OF THE
NATURE and LAWS
OF
Minute Inanimat Bodies,
AND THEIR
SYSTEMS, in general.

Rom. viii. 22. *For we know that the whole
Creation groaneth, and travaileth in Pain
till now.*



THE
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ROYAL SOCIETY OF MEDICINE

DISCOURSE

A

Philosophical Treatise

FOUNDED BY

EXPERIMENTAL

OF THE

NATURE AND LAWS

Minute Anatomical Notices

AND

SYSTEMS OF MEDICINE

By J. H. B. ...
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DISCOURSE III.

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Philosophical THEORY

Founded on

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OF THE

NATURE and LAWS of Minute
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Systems, in general.

PREFACE.

THAT the Curious and Philosophical Reader (who possibly may be entertain'd with such Speculations) may have in one general View, what has been or will be incidentally hinted in my preceding and succeeding Works, concerning the Nature of Minute Bodies, their Systems and Laws, I have collected into a few Propositions, what I have found scatter'd in the
Works

Works of Philosophers and Mathematicians of most Note, on that Subject; particularly those of Sir Isaac Newton. These I have connected the best I could, and in some Particulars have adventur'd to supply with Conjectures by Analogy, from their general Nature; leaving every one to judge for himself, according to his Taste and Liking, there being nothing of what is here laid down very material to the practical Part of these Discourses.

PROPOSITION I.

THE *Elements*, or least and last Particles of *Matter*, are of various *Sizes*, *Densities* and *Figures*. Those of the *first Order*, or the very least, are almost infinitely small, hard and *elastic*, pervading all Bodies but pervious to none; such as are probably the Particles of the *Ethereal* or *Newtonian* Fluid. The Particles of the *second Order* are compos'd of these, and consequently are of a greater Size, but less *dense* and *elastic*, being pervious to the Particles of the first Order, and themselves pervading all others: Of this kind are probably the Particles of *Light*. The Particles of the *third* and last *Order*, are compos'd of those of the second Order, bearing such Proportion to them in Size, *Density* and *Elasticity*,

Elasticity, as they do to those of the *first Order*.

S C H O L I U M.

IT is beyond all Doubt, that the Quantity of *solid Matter* in this material *System* is very small, in respect of the interspers'd *Vacuities*. It is demonstrably certain, that a solid *Cube* or *Sphere* of a Mile or Furlong, or even a Yard in *Diameter*, being divided sufficiently small, and its Parts ranged in a proper *Order*, would furnish *Solidity* enough to answer all Appearances. Suppose the Particles all *Cubes*, and to be so united by the *Contact* of their *Angles* as to make *cubical* Interstices, then the *Vacuity* would be equal to the *Solidity*; and since Matter is divisible *in infinitum*, this *Vacuity* may be encreas'd to any Proportion of *Majority*. We actually find that *Water* and *Mercury* will pass through the *Pores* of *Gold*; and Sir *Isaac Newton* has demonstrated, that *Gold* must have many times more *Pores* than solid *Parts*, and yet it is the heaviest of all Bodies. *Light* passes through the most opaque Bodies, when shredded sufficiently thin, it scarce meets with any Resistance in its Passage through clear *Glass*; and *Æther* pervades all Bodies with very little or no Resistance: From all which it manifestly appears, how small a Proportion there is between the *Solidity* and *Vacuities* in our *System*.

P R O P. II.

THE *Elements* of Bodies, or the least and last Particles of whatever *Order*, are solid, hard and indivisible, at least by natural and created Powers, else it would be in the Power of *Natural Means* and created Agents to alter the present *Constitution* and *Nature* of Things: For a *World* made up of Particles broken and worn out, would be quite different from what it now is, and altogether insufficient to answer the Ends and Purposes of *Nature*.

P R O P. III.

Analogous to, of the same Nature, and probably from the same Cause, with *Gravity* in the great Bodies of Universe, (the *Sun*, *Planets* and *Fixt Stars*) which acts as the Squares of the Distance reciprocally, there is in the least and *elementary* Particles of Matter, a Principle of *Attraction* and *Repulsion*, whereby they *attract* and *repell* one another, according to some constant and invariable *Law*, whatever that may be.

S C H O L. I.

WHAT this *Law* is, by which the *Particles* of *Matter* *attract* and *repel* each other, no Observations or Experiments hitherto made have been sufficient to determine; only thus much is certain, that in receding from the Point of *Contact*, it decreases in a greater Proportion

portion than that of the *duplicate Ratio* of the Distance *reciprocally*; for by that Law, the Force of *Attraction* at any small assignable Distance, would be nearly the same; whereas it is manifest from Observation and Experience, that it is exerted only at or near the Point of *Contact*. Sir *Isaac Newton* has calculated from the *Inflection* of the Rays of *Light*, that the attracting Force in the Point of *Contact* is 10000,0000,0000,0000 times greater than the Force of *Gravity*; and the ingenious Mr. *Hales* has shewn by a great Variety of *Experiments*, that the *repulsive*, or *elastic* Force, (which probably arise from one and the same Cause) in some sorts of *Particles*, are likewise *immensely* great.

S C H O L. II.

IF *Particles* mutually *attract* each other as the *Cubes* of their Distances *reciprocally*, the Force of *Attraction* in the Point of *Contact* will be infinitely greater than at any assignable Distance. According to *this* Law, (which seems to obtain, at least very nearly in the smallest *Particles* of *Matter*) if the Force of *Attraction* in the Point of *Contact*, be not infinitely greater than the Force of *Gravity*, it will be infinitely *less* than that Force of *Gravity* at any assignable Distance. But tho' the Force of *Attraction* in the Point of *Contact* is very great, yet it is not infinitely greater than the Force of *Gravity*, seeing the Parts of
any

any Body may be separated by a finite assignable Force, and therefore at a *given* Distance it must vanish, or become *infinitely* small.

S C H O L. III.

REPULSION begins, and goes on, where *Attraction* ends, and o constitutes the middle Point in the *Progression* between them, or o, *i. e.* infinitely small of the same Order, is the last Term and Limit of *Attraction*, and the first of *Repulsion*; and they probably go on according to the same *Law* and *Progression*, tho' with contrary Directions: For, as Sir *Isaac Newton* observes, those Particles which recede from one another with the greatest *repulsive* Force, and are with the greatest Difficulty brought together, cohere most strongly when brought into *Contact*.

P R O P. IV.

THE *Cohesion* of the small Particles of Matter, is in the *compound Proportion* of the *Quantity* of their cohering *Surfaces*, and the *Quantity* of their *attractive* Powers; and their *attractive* Powers are, *cæteris paribus*, as their *Densities*, or the Quantities of Matter they contain.

C O R O L.

HENCE it follows, that the less the cohering *Surfaces* are, *cæteris paribus*, the less will be the Degree of *Cohesion*, and that the
least

least Degree of *Cohesion*, is when the *Surfaces* touch in a Point only, or are *Spheres* or *Spheroides*.

P R O P. V.

THE Power or Force of *Attraction*, in small Particles of Matter, increases as the Size of the Particles is diminish'd. For, as this Force acts only in or near the Point of *Contact*, it will be proportional to that *Contact*, or in the *compound Ratio* of the *Density* of the Particles and the *Largeness* of their *Surfaces*; but the *Surfaces* decrease as the *Squares* of the *Diameters*, while the *Solidities* decrease as their *Cubes*; and therefore, the smallest Particles of Matter, having the largest *Surfaces* in Proportion to their *Solidities*, and more of their Points coming into *Contact*, will have the greatest *attractive* Force in Proportion to their *Bulk*.

P R O P. VI.

THE *Gravities* of Particles decrease as the *Cubes* of their *Diameters*; for their *Gravities* are as their Quantities of Matter, which, in *homogeneous* Bodies, are as the *Cubes* of the *Diameters*.

C O R O L.

HENCE it is, that *Mercury*, from the Smallness and Divisibility of its Parts is so easily raised; and that Bodies may be suspended in *Fluids specifically* lighter than themselves.

H

P R O P.

P R O P. VII.

IF the Parts of a Body, immers'd in a *Fluid*, are more strongly *attracted* by the *Fluid*, than they are by one another, they will mutually recede from each other, with a *Force* equal to the Excess of the one *Attraction* above the other, and will be equally diffus'd through the *Fluid*: And hence the Nature of *Solution*, *Separation* and *Diffusion*.

P R O P. VIII.

IF *Particles*, suspended in a *Fluid* and *attracting* each other, are *elastic*, after their *Collision* they will *resile* from one another, and meeting with other *Particles*, they will be *reflected*, till by such *Actions* and *Re-actions*, a *Fermentation*, *Effervescence* and *Ebullition* is produced.

P R O P. IX.

IF *Particles*, suspended in a *Fluid* and *attracting* each other, are not *elastic*, they will not be reflected from one another, but coalesce into *Masses*, till their *Gravity* exceeding that of the *Fluid*, they will sink, and be precipitated. The same thing will be produced by increasing or diminishing the *Gravity* of the *Menstruum* in which the *Particles* are suspended.

P R O P.

PROP. X.

THE *Figures* of the Elements of all pure *unelastic* and incompressible *Fluids* must necessarily be *spherical*, or at least approaching thereto; for were they of any other *Figure*, their *Surfaces* would touch in more Points than one, and consequently they would *cohere*. And the *Elements* of solid Bodies probably may be of the Figure of some one or other of the regular Solids, as *Cubes*, *Triangles*, *Prisms*, &c. so that, their Surfaces coming into *Contact*, they may attract each other with the greater Force.

SCHOL.

WHAT may be the Figure of the Elements of *elastic* Fluids, as the Air, and the *Newtonian Æthereal Fluid*, is not material to enquire, since their *Fluidity* does not arise from the Figure, but the *repulsive* Force of their Particles,

PROP. XI.

THE *Elasticity* of solid Bodies is the Effect of the *attracting* Force of their Particles; for when the small contiguous and cohering Particles of a Body are, by a *Stroke*, or any external Violence, separated from each other to extremely small Distances, if this *Force* is taken off, the separated Particles will, by the Force of *Attraction*, rush back into their *Contacts*

with an accelerated *Velocity*, and the Body will recover its pristin Figure. But if the Particles are so far separated as to be without their *Spheres of Attraction*, they will remain in that *Disjunction*, and the Body will be incapable of recovering its former State.

P R O P. XII.

THAT Bodies, under a *Rotation*, fly off in the *Tangent*, is only a Consequence of that general *Law*, by which they persevere in the same State of Rest, or moving uniformly in a *streight* Line, unless they are made to change that *State* by some external Force impressed; for the Direction of a Body moving in the *Circumference* of a *Circle*, is in the *Tangent*, and it is made to describe the *Circle* only by the *central Attraction*, which ceasing to act, the Body will proceed in its proper Direction, or will fly off in the *Tangent*.

P R O P. XIII.

THE *Figures* of Bodies, and their Actions on one another, arising from the Principles of *Attraction* and *Repulsion*, together with the Motions impressed on them by *living* and *intelligent* Agents, will probably account for most of the Appearances of the *material* World, if *mechanically* adjusted, and treated according to these mentioned Laws.

P R O P.

PROP. XIV.

AIR is a *System* of Particles endued with a *repulsive* Force, which being fixt in all *animal, vegetable* and *mineral* Substances, are by *Fire, Fermentation, Putrefaction, Dissolution*, or any other *intestine Action* or *Reaction*, set at Liberty, and thrown off into an *elastic* State, and carrying along with them *Ramenta* or Abrasions of the Bodies they were fixt in, they compose our Atmosphere; which is a *Chaos* of such Particles of various *Solidities, Gravities* and *attractive* and *repulsive* Powers, acting by the establish'd *Laws* of *minute* Bodies; and hence its *Compression, Weight, Elasticity* and various Degrees of *Density*.

SCHOL.

THE *Density* of the *Air* is proportionate to its *Compression*, and therefore the *centrifugal*, or *expansive* Force by which its Particles endeavour to recede from one another, must be in the *reciprocal* Proportion of their Distances, or in the direct *subtriplicate Ratio* of their *Densities*.

PROP. XV.

EARTH is only a loose Collection of the different *elementary* Particles of Matter, of all the three Orders, thrown together without any regular Combination or *Cohesion*; as

Whiteness is a Blending and Mixture of all the differently-colour'd *Rays* of *Light*.

P R O P. XVI.

WATER is a Collection of the Solutions of tasteless and insipid *Salts*, originally *fixt*, *crystalis'd* and *dispers'd* quite through the *Globe*; but kept in *Fluidity* by Heat, like melted *Lead*. And different *Salts* are Water united with a little *Air* and some *Earths*, *acid* or *sulphureous*, in a *crystalis'd* State; as *Ice* is Water congeal'd, and Water is *Ice* dissolv'd. But this is not intended as a Definition, but only as an Illustration. All *Salts* are soluble by Water, and all Water evaporated, drops a *saline* Substance mixt with *Earths*.

P R O P. XVII.

ACIDS seem to be compos'd of such elementary Particles as are endued with a very great *attractive* Power; whence, by insinuating themselves into the *Pores* of Bodies, and *attracting* their Particles more strongly than these Particles *attract* one another, they thereby separate and divide them.

S C H O L.

POSSIBLY the Figures of Acids, may be *triangular Prisms*, or such like, to facilitate their Entry into Bodies, and to separate their Particles like *Wedges*; for all Matter must have some Figure.

P R O P.

PROP. XVIII.

HEAT, as it is a Property of Bodies, is only the brisk *vibrating Action* and *Reaction* of the *elastic repelling Nitre* of the *Air*, and the *æthereal Fluid*, with the strongly *attracting acid Sulphur*; which *Sulphur*, by its *Analysis*, is found to contain an inflammable Oil, an *acid Salt*, a very fixt Earth, and a little *Metal*.

COROL.

HENCE the *Affinity* between *Light* and *sulphureous* Bodies, and the true Nature of *Oils* and *inflammable Spirits*, which are nothing but a great deal of *Sulphur*, a fine or light *acid Salt*, a very little *Water* and *Earth*.

SCHOL.

SINCE it has been found, that a *Thermometer* in an exhausted Receiver, will rise and fall as much, and almost as soon, as another *Thermometer* placed by it in the open Air, it seems to follow, that *Heat* is conveyed and propagated from one Body to another, by some *subtle elastic Fluid*, pervading all Bodies; and it is not improbable, that the *Vibrations* of this *Medium* in hot Bodies, contribute to the Intenseness and Duration of their *Heat*. And since smooth polish'd Bodies, with *plain Surfaces*, cling together as strongly in an *exhausted* Receiver as in the

open Air, it is not improbable, that their *Cohesion* may be caused by this same *Medium*. Both Experiments go a great way to ascertain the *Existence* and Necessity of some such *æthereal Fluid*.

P R O P. XIX.

LIGHT seems to be the *vibrating* Particles of a hot Body, driven off by the *repelling* Force, with an *immense Velocity*, which is continued and augmented by the *æthereal Fluid*, and the *Attraction* of the Bodies it meets with in its Progress.

S C H O L. I.

SINCE, as Sir *Isaac Newton* has observ'd, *Light* is convertible into *Bodies*, and *Bodies* into *Light*; and that it is probable, that *Light* is only the Particles of a *hot* Body, thrown off with an immense *Velocity*, it would seem, that these Particles which constitute *Light* are the *elementary* Particles of the *second Order*, with which *fulphureous* and oily Bodies, from the great Activity, *Attraction* and *Elasticity* of their Parts, appear to be saturated and abound; for these being smaller and more *elastic*, than the Particles of the *third Order*, will be thrown off with a very great *Velocity*, which we know to be an essential Property of the *Rays of Light*; and they will likewise pervade all Bodies, which is also a Property belonging to the *Rays of Light*; there

there being no Body, however dense or close in its Texture, which, by being shreded thin, does not become transparent.

SCHOL. II.

THE *Rays of Light* seem to consist of Particles of different Sizes, (that being necessary to produce the various Colours and different Degrees of *Refrangibility*) the least of which make *Violet*, the weakest and darkest of the Colours, and are most easily diverted from the *right* Course, by *refracting* Surfaces; and the rest, as they are bigger, make the stronger and more *lucid* Colours, as *Blue*, *Green*, *Yellow*, *Red*, and are with more and more Difficulty diverted.

SCHOL. III.

THE *Sun* and *fixt Stars*, are immense *Globes* of Matter, saturated with these Particles of the *second Order*, and so being heated *red hot*, are kept in Heat by their *intestine* Motion, and the *Action* and *Re-action* of their Parts with the *æthereal Fluid*; their dense *Atmospheres*, by their Compression, keeping their Parts from flying off, or consuming too fast.

SCHOL. IV.

IT is not impossible, that our *Earth*, with its *Satellit* the *Moon*, the other *Planets* in this our *System*, with their *Satellites*, but especially

cially the *Comets*, should be all of them *Bettering-houses*, (according to the *Dutch* manner of speaking) *Prisons*, *Dungeons*, and Places of Punishment, for *Trial*, *Expiation*, or progressive *Purification* of the several Sorts, Orders and Degrees of lapsed, *sentient* and *intelligent Beings*. That they are not, and cannot be *permanent* or *eternal*, in their present State, *Philosophy* and *Astronomy* furnish innumerable Arguments, to convince any thinking Person. Most of their *Orbits* are *elliptical*, which certainly is not so simple or perfect a Figure as a *Circle*. The *Planes* of their *Orbits* cut one another at irregular various and vastly different *Angles*, which, at least, in our present way of thinking, is not so *harmonious*. Besides the unaccountable *Oddnesses* in most of their *diurnal* and *annual Revolutions*, the *Nutations* of their *Axes*, their *Rings*, *Spots* and *Girdles*, which, at least, favour not of that *Simplicity*, Perfection and Beauty conspicuous in most of the other Works of the *Author of Nature*. Moreover, as to our *Planet* in particular, it has so many untoward Marks, and oblique *Symptoms* of a designed *Deteriority*, that it would require a Volume to enumerate those daily observed by *Astronomers* and *natural Philosophers*, besides those now mentioned, which are common to most of them. Our Earth has, in particular, *barren and unfruitful Climates*, *unhospitable and uninhabited Regions*,
un-

unhealthy and mortal Seasons, Tempests, Thunder and Lightning, Vulcanos, Plagues and epidemical or infectious Atmospheres: All which could never proceed from an infinitely good and wise Being, if his Design was not to punish and correct. But all these seeming Deformities are kind and *fatherly* Designs of Wisdom, and have infinitely beautiful *final Causes* and Motives; and are strong and amazing Instances of his *Being, Love and Wisdom*, if they are reckon'd only *Correction* and *Bettering Mansions*, of no durable or permanent Stability, but verging and growing into some *progressive*, beautiful and *final State*, by general Laws, which *State*, in due Time, will appear and emerge, and then He may, as He did at first, say of all his Works, they were good and perfect in their *Order*. And then the *Son* shall give up the Dominion to his *Father*, in a much happier and more perfect Condition than it was at first made, as *He* said of Himself, that *He* came, that all God's Creatures (*Sentient and Intelligent*, and consequently their *Habitations and Mansions*) *should have Life*, (that is, have Perfection and Happiness) *and have it more abundantly*.

P R O P. XX.

FLAME is the *sulphureous* or oily Smoak of a hot Body, agitated to such a Degree as to be *ignited*.

P R O P.

P R O P. XXI.

THOSE Bodies are transparent, whose *Pores* are sufficiently small to attract the *Rays of Light*, and *rectilinear* to transmit them; Thus Paper is made more transparent, by having its Pores fill'd or lessen'd with Water or Oil.

THE following Propositions are manifest from Experiment *.

1. *MERCURY* consists of smaller Particles than any known Fluid, for it will pass where no other Fluid can.

2. THE Particles of *Mercury*, in all their Divisions, preserve a spherical Figure, from the strong Attraction of their Parts; as is evident by fine Glasses: And the smaller the Particles, the more perfect the Spheres; as the same Glasses demonstrate.

3. *MERCURY* is the heaviest of all natural Fluids, being 14 times heavier than *Water*.

4. THE Particles of *Mercury* attract some Bodies the most of any, as *Gold*; and fly from

* *Vide* Boyle; the Philosophical Transactions, and the Memoirs of the Academy Royal.

others the most, as *Oil of Vitriol*, and all *Acids*.

COROLLARIES.

1. THEREFORE the Particles of *Mercury* are the most easily rais'd by Heat, being divisible into the smallest Parts; which, though not sensible, yet are known by their Effects in *Silver Water*, *Mercurial Steams* and *Exhalations*, and their ready passing through all *animal Substances*.

2. THEREFORE the Particles of *Mercury* have the greatest *Momentum* and Force, being the heaviest of all natural Fluids.

3. THEREFORE the Particles of *Mercury*, by their *Smallness*, *Sphericity* and *Weight*, being actuated and rais'd by Heat, readily pervade all animal fleshy Substances, which are but *Spunges* with communicating Cells; as is evident from the Effects of *Fumigations*, and the *Palsies* of those who silver Glass, or dig in the Mines of that *Mineral*.

MEDICAL COROLLARIES.

1. THEREFORE the Particles of *Mercury* are the fittest to break the Cohesion of all *Viscosity*, and divide its Substance by its Weight, in Animal Tubes; from which *Viscosity*

osity all the *cold chronical* Diseases most probably proceed.

2. THEREFORE the Particles of *Mercury* are fittest to open all Obstructions in the small Capillary or *Lymphatic* Vessels, from their *Smallness, Weight* and *Sphericity*.

3. THEREFORE the Particles of *Mercury*, from their *Smallness, Weight* and *Sphericity*, are fittest to make the *Circulation* whole and entire quite around.

4. THEREFORE *Mercury* is the only proper *Antidote* for such *Palsies*, whose Cause is the *Tenacity* of the Juices in the small Blood-Vessels, pressing upon the *Nerves* and *Fibres*, and so interrupting their *Vibrations* and Actions.

5. THEREFORE *Mercury* is the best *Antidote* for the *Scurvy*, in the first Intention, by its *Smallness*, its *Weight* and *Sphericity*, breaking the *Salts* and larger Concretions obstructing the *Lymphatics*.

6. THEREFORE *Mercury* is also the best *Antidote* for the *Gout*, in the first Intention, readily opening those small Vessels which are the most difficult to be dilated by reason of their Compression betwixt bony *Articulations*, even though their *Smallness* should be such,
that

that 200 of them can make up but the Thickness or Bulk of one *Hair*. But a thin cool *Dyet* must continue them *pervious*, when *Mercury* has made them so.

7. THEREFORE *Mercury*, duly prepar'd, and judiciously manag'd, is the only proper *Antidote* for the Diseases produced by Excesses of any kind, especially of animal Food and fermented Liquors.

8. *MERCURY*, by its *Weight* and *Sphericity*, will infallibly burst those Vessels whose Obstructions cannot be dissolved or opened, driving the Substance of these Obstructions through the Sides of the slender *Lymphatic* Vessels; and will infallibly tear the small Vessels, whose Sides are very rare and slender, or whose Pores are made very large by *Putrefaction*.

9. THEREFORE *Mercury* is a divine *Antidote* or *real Poison*, according to the Person prescribing, or the Case it is prescribed in.

10. THE best Preparation of *Mercury* is that wherein its Particles are most minutely divided, and kept at the greatest Distance from one another.

11. THAT Preparation of *Mercury* is the best, where, after a due Division into its smallest Parts,

Parts, the Mixture is made with *that* Body which has the most *specific* Virtue against the Disease. Thus the *Æthiops cum Sulph.* is best for *Inflammations*, *Piles*, the *Gout*, the *Erysipelas*, &c. and that with *Antimony*, against *cutaneous* Distempers; that with *Volatiles* and *Fætidis*, in *Nervous* Cases; that with *Bark* and *Bitters*, in *Intermittents*; and so in others.

12. THEREFORE the *Aqua Mercurialis* is the very safest general Deobstruent in very weak Persons, did it not require too long time to produce any salutary Effect. *Mercury alcalisated*, or kill'd with any calcin'd Body, given often and in small Doses, is the next; *Cinnabar* next to that, and then *Æthiops*, &c.

13. ALL *Mineral* Medicines ought to be infinitely divided, before they are sent into an Animal Body; they never having been intended by the *Author of Nature* to enter there, but in their *minuteſt* Particles and Divisions; as we may see by *Nature's* preparing, in this Manner, *Mineral Waters* of all kinds, fitted for the Cure of almost all *chronical* Diseases, if join'd with a proper Regimen; except, perhaps, some few of those begot by unnatural cramming with Mixtures of Salts, Spices, Oils, and inflammable Spirits;
or

or those begot by contagious venereal Diseases.

14. *MERCURY*, with the Salts, such as *Calomel*, the *Turbith*, *Sublimat*, *red*, *white* and *green Precipitate*, are, of all Preparations, the most prejudicial and injurious to animal Habits; these saline Mixtures tearing the small Vessels, where Diseases are mostly generated, and in whose Integrity, all the Delicacy of Life consists: But they are thereby of the quickest Effect in Cases that depend on Expedition, as the *Hydrophobia*, inflammatory *Rheumatism*, and the like.

GENERAL MEDICAL COROLLARIES.

1. As *Water* alone, *Blood-warm*, is the best Diluent, so *Mercury* is the best *Deobstruent*; but as *Water* alone may be too sluggish, so *Mercury* alone may be too active and ponderous, for tender and delicate *Animal Solids*, especially in its fluid State, or mix'd with *Salts*, or too active Bodies; and therefore the absolutely best Preparation of *Mercury*, is when, being divided by the utmost possible Art, it is join'd with the most *specific vegetable* Medicines against the Disorder, that it can conveniently be united with, and fixt in.

2. As the *Fineness* or *Smallness* of Particles, together with the Largeness of their Surfaces, make *Hardness*, or the greatest *Cohesion* in Bodies, as has been shewn by Proposition IV. and V. and may be seen in fine-woven *Cloth*, *Gold*, *Marble*, *Crystal*, *Shells*, *Salts* and *Diamonds*; and as *Earths*, *Water*, *Milk*, *watery Fluids*, and *vegetable Substances*, consist mostly of Water and rare loose fine Earths, with a little grosser *Salts* and *Sulphurs* of small or no Cohesion, it is evident, that such Substances are fittest for weak, *tender* and *valetudinary* Persons, as affording all the Materials of *Nutrition*, and being more easily resolvable into their *integral* Particles; and are most proper Food for intellectual Purposes, which depend on the easy Performance of the *animal Functions*, as *nervous* Distempers arise chiefly from their labour'd Performance, compressing, by their Weight and Hardness, the too tender and delicate membranous *Tubuli* of the *Nerves*, and so stopping or retarding their *Vibrations* and *Oscillations*, tho' they are not so proper for *mechanical* Strength and Force.

GENERAL SCHOLIUM.

IN these few Propositions are contain'd the Principles of all the natural *Philosophy* hinted at in my medical Treatises. If it is just, or
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approaches the Truth, as I hope it does, then it must necessarily follow, 1. That soft, mild and cool Foods, are fittest to carry on the *animal Functions* the most readily, freely, naturally and lastingly. 2. That *Spirits, Salts, chymical Oils*, (which are but Spirits condens'd) and every thing that has pass'd the *Tortures* of the *Fire*, abounding with Particles small, hard, *caustic*, (for calcin'd *Antimony* will be increas'd one fifth in its Weight) and highly *attractive*, are most pernicious to *animal Habits*; not only burning and tearing the delicate *Fibres* and Vessels, like *Caustics* and *Lancets*, but by their *attractive* Powers, violently corrugating and contracting the *Fibres*; so that in habitual Drinkers, Drammers, and high Feeders, their *Tone* and *Elasticity* is entirely destroy'd, by their sudden and alternate *Contractions* and *Relaxations* *, while at the same time the Juices are thicken'd and coagulated by the spirituous Mixture, and so dispos'd to form *Obstructions* and *Concretions* in the smaller Vessels: And therefore they ought never to be used, but as *Spurs* and *Whips*, to push on and stimulate the sluggish *Organs* for a time, and make them carry off the Over-load with a short Vigour; and so are only proper in Extremities, as a present Filip. 3. That *animal* Foods, whose Parts have been first di-

* *Vide* Hales's Hæmostatics.

vided by *animal Organs*, and afterwards attenuated and refin'd by those of other *Animals*, and mixed with great Quantities of *animal Salts* and *Oils*, when again taken into *animal Habits* for Food, where they undergo a third Subtilization or *Milling*; or the *Flesh* of *Animals* that live on *animal Food*, are so minutely divided, as (by Proposition IV.) to acquire the greatest Degree of *Attraction*; and therefore, when introduc'd into the small *Tubes* and capillary Vessels, in great Quantities, they must form *Obstructions* of the strongest Cohesion and Tenacity. 4. That *Mercury*, in some Shape or other, is the only proper Deobstruent and Dissolvent, in all *chronical Cases*, and in those *acute* ones that come nearest to them; especially in those who have fed much and long on *animal Foods*, and *fermented* or *distill'd* Liquors. 5. That *Milk* and *Vegetables* are not only the sole rational and proper Food of tender or diseased *Animals*, but, from the Grossness of their Parts, and their small Degree of *Attraction* and Cohesion consequent thereupon, being dissolv'd by a less Force than *animal Food*, are fittest to carry on, the most pleasantly, all the *Functions* in which *Health*, *Serenity* and *free Spirits* consist. 6. That therefore *Milk*, *Seeds*, *Fruits*, and *mealy Vegetables*, with Water-drinking, are undoubtedly the most infallible Means to preserve the *Faculties clear* and *acute*, and to acquire *Activity*

vity and long *Life*, whatever *mechanical* Force and Strength may require for sudden strong Efforts. 7. On the whole, as *Water*, with a little fine vegetable *Earth*, *Salt* and *Sulphur*, seems to me, to be the *proper* Food intended by *Nature* for *Animals*; and as it is *Water* alone which conciliates that *Fluidity* absolutely necessary to Juices circulating in *Tubes*; the more it partakes of this *Element*, the fitter it is for the *animal* Functions. *Mercury* seems to be the only other Fluid that has the Qualities fitted for circulating and destroying *Viscosity*; so that, in fine, the two proper *Antidotes* intended by Nature for chronical animal Diseases, especially those of the worst Kind, seem to be *Mercury*, some-how prepared, and *Water*, naturally or artificially impregnated, the one for animal, and the other for *vegetable* Feeders.



DISCOURSE IV.
Philosophical CONJECTURES
ON
SPIRITUAL NATURE,
THE
HUMAN SPIRIT in Particular.

Gen. i. 26. *And God said, Let us make Man in our Image, after our Likeness.—*

Ver. 27. *So God created Man in his own Image, in the Image of God created He him.*



THE

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DISCOURSE IV.

Philosophical CONJECTURES
ON
SPIRITUAL NATURE,
THE
HUMAN SPIRIT in Particular.

§. 1. **T**HE *natural Faculties*, Properties or Attributes of all rational *Spirits*, and human Intelligences, (and indeed of all Intelligences of whatsoever *Order* or *Degree*) are incontestably these three: 1. *Perception* or Understanding. 2. *Willing*, Chusing or Freedom. 3. *Memory*, Reflection or Attention. Out of these *three* all the Operations of a human *Spirit* may be deduced; and suppose *living* or actuating some *Vehicle* as their *Base*: and though they may be (and are justly) considered separately, yet, in well-exercised and duly cultivated *Spirits*, they are sometimes so instantaneous, as to seem one and the same Act of the *Mind*, and are called by

the general Name of Thinking or *Cogitation*, when either in separate *Acts*, or instantaneous, and all Spirits differ chiefly in the Degrees of these *natural Powers*.

§. 2. HOWEVER uncommon the Expression may seem, yet to those who admit a *Deity*, or supreme *Spirit*, of infinite Perfection, the *Author* and first *Cause* of all Things, finite *Spirits* of all possible *Orders* can be conceived *philosophically*, no otherwise than as *Miniatures*, *Effluxes*, *Emanations*, *Infinitesimals*, or infinitely small *Sparkles*, of this infinite Source of *Living*, *Intelligence*, *Action*, *Perfection* and *Happiness*, voluntarily emitted, lighted up or *created*, by this infinitely perfect *Being*, and endow'd with his *radical* and *essential* Qualities and Attributes of *Life*, *Activity* and *Intelligence*; so that all *Spirits* are, in their own Natures, diminutive or infinitely small *Deities*, and necessarily (now they are created, and have a derivative Existence from Him) must partake of his *Immortality*, *Intelligence* and *Freedom*, or his *Divine Nature* and *Image*; and consequently can never be *annihilated*, forced, or deprived of the Powers of *Perception*, *Intelligence* and *Willing*, no more *He* can.

§. 3. THESE *Faculties* and Powers of all *Spirits* are not only to be *felt*, but distinguished in every *human* Mind, duly exercised
and

and cultivated, by *attentively* considering its Nature and Operations; but necessarily follow by *Analogy*, from the Nature of the *first* Cause, that Being of infinite Perfection, the *Deity*; who being of infinite *Wisdom* and *Power*, could find nothing without *Himself*, before Creation, to be a *Model* or *Pattern* for his intelligent Creatures; and therefore stamp'd them with his own most *glorious Image*, creating them little *Divinities*, resembling Himself in his *radical* and *essential* Attributes, so as at last to become *similar* to Him in Perfection and Happiness, in their several *Orders*, *Gradations* and *Ranks*. For *infinite* Perfection wanting nothing, and to whom no Happiness nor Perfection could be *added*, could have no other *End* or *View*, in producing rational *Intelligences* into *Being*, but to make them happy, by partaking of his *essential* Happiness, in their several *Orders* and *Ranks*; that is, in becoming *similar* to him in his *natural* as well as *moral* Attributes; his natural ones (as has been said) being *Life*, *Intelligence* and *Activity*; his *moral* ones, *Justice*, *Goodness* and *Truth*; in which *two* united consists the Perfection and Happiness of all *intelligent* Creatures.

§. 4. IN a mere *Philosophical* Disquisition, though no Argument is to be taken from *Revelation*; yet to express my Meaning so as to leave no room to be mistaken by such to whom
Re-

122 *Philosophical Conjectures*

Revelation is familiar, I shall represent it in the Words of the Scriptures. It is said in *Genesis*, on the Design of the *Creation* of the *human Soul*, *Let us make Man after our own Image*; and again, *in the Image of God created he him*; and elsewhere, *You are God's Images*: And to shew the human *Rank*, *David* says, *He was created a little lower than the Angels*; and our *Saviour*, speaking of *Marriage*, says, that in Heaven *they are neither married, nor given in Marriage, but are like the Angels*; and the same Manner of describing the human *Spirit* frequently occurs in the *Scriptures*, both of the *old* and *new Testament*.

§. 5. IT is a frequent and common Opinion of all *Pagan* and *Christian* Antiquity, that all created Intelligences have Bodies or *Vehicles* of one kind or another, fitted to their *Order*, *Rank*, Degree of *Purity*, *Habitation* and *Situation*. It is highly probable and *philosophical*, to think there is no perfectly *pure* and immaterial *Spirit*, but the *Supreme Spirit*, the *Father* and *Creator* of all Spirits; and that all created *Spirits*, how high and sublime soever, have proper and peculiar Bodies, and *organiz'd* Cases, not only to circumscribe and limit their *Powers*, and their *Extension* and *Expansion*, but to enable them to communicate, and commerciate with, to contemplate and admire the Contrivance of the *material* World;
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to converse with the lower Ranks of Intelligences, that we certainly know, have material *Vehicles*, such as we of the *human* Race are; but also to execute the Orders of the Divine *Oeconomy* and Providence, over the whole *System* of Intelligences, and material World. And accordingly we find Mention made in *holy Writ*, of a *natural* Body and a *spiritual* Body; and of the *Sun* and *Planets* having a particular *Glory*, in their Bodies, peculiar to themselves; and of the *glorious* Appearance and *Radiation* of our *Saviour's* Body on the *Mount*. And it is very absurd, and almost *blasphemous*, to think these *Myriads* of *Stars* and Luminaries, that appear in a Winter Night, in the Heavens, and its *milky Way*, to be nothing but twinkling *Tapers*, uninhabited, and designed only to be stupidly and ignorantly *gaz'd* on by us.

§. 6. WHAT a *spiritual* Substance, or of what Nature the *Substratum* of these Faculties of *Understanding* and *Will*, or of *Thinking*, is, we shall never perfectly know, till we arrive at the World of *Spirits*, and drop this coarse *earthly* Tabernacle. Indeed, we know nothing of the internal *Substance* of any Being; all we know or can know, is their sensible Qualities and the *Effects* of them on us; and something in general we learn of inanimated Bodies, and their *Laws*, from the *Uniformity* of these Effects: And we may be certain, that *spiritual*
Sub-

Substance is in most, if not all its Qualities, contradictory, at least *contrary*, to Body or *material* Substance, and *vice versâ*. For *Example*, we know that Matter is absolutely *passive*, and equally susceptible of *Motion* or *Rest*; and that *Spirit*, or spiritual Substances, are *self-active* and *self-motive*, and the immediate productive Cause of all Motion in Body, and consequently is endow'd with *Freedom* or *Liberty*. We know that *Matter* is *impenetrable*, and that two Bodies cannot possess the same *Space* at the same *time*; but *Spirits* may and can pervade and penetrat one another, at least by their *spiritual* Virtue and *Energy*; as is evident from *Persuasion*, *Conviction*, *Reasoning* and *Compassion*, and such-like spiritual Actions. It is true, the *Sphere* of their *Activities* is limited and circumscribed; but we also know, that the *Spirit* acts in every Point of that *Circumscription*: as we find by our Bodies, every Part of which is more or less sensible, by the *membranous* Mouths of the nervous *Tubuli* being spread over all the solid Parts of an *animal Body*; and we know no *Body*, or mere Matter, that is so. *Matter* is certainly divisible in *infinitum*, and may be actually divided into very small Parts; but *Spirit*, having no sensible Parts, is neither *divisible* nor *discerptible*. Persons of light Understandings, and gross Conceptions, may dispute or ridicule these Truths; but they must be *poor Philosophers*, who can think them not highly *probable*; and have a mean Notion of the Extent of Nature, and its *Author*. Four
of

of the greatest *Philosophers* of this or any other Age, to wit, Sir *Isaac Newton*, Mr. *Leibneitz*, Mr. *Hugens*, and Mr. *Fatio*, when they describe the *Matter*, which they suppose to be the Cause of *Gravity*, consider it as *infinitely* small in its Particles, *infinitely* rare, *infinitely* elastic, and moved with an *infinite* Velocity. And the *first* of these, by a very strong Figure, calls it *Spiritus quidam Subtilissimus*. What these *four Infinitudes* may effect on *Matter*, to destroy at least these gross, palpable and sensible Qualities we observe in it, such as sensible *Extension*, *Impenetrability* and *Passivity*, I will not take upon me to determine: But all the Notion we can now form of *Spirit*, is to *divide*, *refine*, *sublime* and *exalt* Body and Matter *ad infinitum*, so that we be sure it can have very little of the *sensible* Qualities; and this, I fear, is as far as *Philosophy* can go, while we have only gross and palpable *Vehicles* of Clay. For by *Analogy* to infinitely divided, subtiliz'd, sublim'd and refin'd *material* Substance, we form the only Idea, Notion or Perception, we can now frame of *spiritual* Substances, and that is but a gross one, and neither just nor true.

§. 7. *LIVING*, *Sensation* or *Actuation* of Matter, is not easy to define or describe. *Existence* or Being belongs to *Matter* as well as *Spirit*; but *Life*, *Sensation* or *Perception*, and their Consequences, belong only to some one *Rank* of Spirit or Mind; and I may defy all
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the *Philosophers* and *Mathematicians*, that ever have been, to explain consistently, from *Matter* and *Mechanism* alone, as it now obtains, the *Life*, *Growth* and *Fecundity* of the lowest *Plant* or *Vegetable*, at least its *Seed* or *Seeding*, much less of the least *Insect* or *Animal*, and least of all of a *rational*, *sentient* and *perceptible* Being: So that where-ever there is any *Degree* of *Life*, *Vegetative*, *Sensitive* or *Rational*, there is probably some *Degree* of a *Soul* or *Spirit*, *immaterial*, *immortal* and *progressive*; so that *Life* or Animation, in all *Creatures* in general, is indeed *Matter* *organiz'd* and actuated by a *Spirit*, or *Soul*, of some one *Rank* or *Degree* or other: I mean only created *Life*, or *Life derivative*, as it is in *Creatures*; for in the *Creator*, *Life* is without *Matter*, without *Body* or *Vehicle*, and without *Limits*, or Possibility of Non-existence or not Living. The best Notion, Idea, or Perception, we can frame of created *Life*, is that of a nice, delicate, finely contriv'd *Machine*, of a vast Variety of *Organs* set in Motion by the *first Cause*, and continued by an internal self-motive *Spring*, which *Spring* is this *spiritual Substance*.

§. 8. As we have some Notion of what Extent the best-form'd and most cultivated human *Spirit* is, there may be *Myriads* of a lower Rank of the same *Species*; and that as under the human *Species*, there is an almost
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infinite Variety of the *brutal* and irrational *Species*, and under these, a like or greater Variety, of the *vegetable* Kind, from the Moss on the *Wall* and the *coralline Sea-plant*, up to the highest *Divine, Philosopher* or *Mathematician* of the human Race; and that all the several *Species*, from the highest to the lowest, sink so gradually into one another, that it is impossible to determine where one *Degree* ends, or the next begins: So it is also highly probable, that above the *human* Species there are *Orders, Ranks* and *Hierarchies*, rising gradually and insensibly, without *Limits* and without *End*. This the Dignity, Power, Wisdom and Goodness of the *first* infinitely perfect Being, and the *Analogy* of Things, seem to oblige us to *conjecture* or hope; and the infinite Variety of *Systems, Fixt Stars*, (which we known to be *Suns*, and very probably have *primary* and *secondary Planets*, *analogous* to ours) and the infinite Expansion of *Space*, makes it probable and *philosophical*. And as an *Angel* is only of a little higher and more noble Order than the *human* Race, and all created Intelligences have *Vehicles* or Bodies of an *Order* and *Purity* *analogous* to their *Rank* and *Degree* in the *Scale* of Intelligences; we may fairly and *philosophically* define a pure original, not *lapsed, Angel*, of the lowest *Order*, a *spiritual* Substance of the next immediat Order above the *Human*, actuating a divinely *organiz'd* Body, of a Purity
and

and Sublimity *analogous* to their Order, and the Perfection of his informing Spirit.

§. 9. WE have a pretty clear Perception of what the human Race is at present, both in their Body and Spirit. He that has a just, though not an adequate Idea of *infinite* Perfection, that is, of *infinite* Power, Wisdom and Goodness, can find no possible Reason or Motive, why such a *Being* should create Intelligences, imperfect in their *Order*, unhappy and perishing, when the *same* Power, Wisdom and Goodness, could either have totally abstain'd from creating *them* at all, or have made them to be at last happy in their *Order* and *Rank*, consistent with their Natures and his own; *Malice* and *Difficulty* having no Place in such a *Being*. But any one who considers this ruinous disorder'd *Globe*, and the Miseries, Darkness and Wretchedness of the whole *System* of Intelligences that inhabit it, cannot but conclude one of these *two*, either that their *Author* had not Power to make them otherwise, or that they have wilfully forfeited their *Rank*, and his Favour and Protection, by transgressing the Terms and Conditions on which they were intitled to it; and so being left to reap the Fruits of their own Labour, sunk into a *lapsed* disorderly Condition.

§. 10. *INFINITE* Power, Wisdom and Goodness, could, primarily and originally, bring no Intelligence into Being, with rational and intelligent *Spirits*, actuating divinely *organiz'd* Bodies or Vehicles, but under these *two* Conditions: 1. That the *organiz'd* Body should be supple, pliable, and joyfully obedient to all the *Dictates* and Commands of the free intelligent *Spirit*: And, 2. That the *Spirit* should be supple, pliable, and obedient to the *Dictates* and Influences of the *Eternal* and *infinitely* perfect *Spirit*, its *Author* and *Creator*: And in these *two*, its *original* Innocence, Happiness and Perfection, must necessarily have consisted. And this was and must have been the true *original* and *paradisaical* State of both Body and Soul of the human Race; and must be the Constitution and Complexion of the *unfallen angelical* State, and of all the *Hierarchies* of unlapfed *Spirits*. Which *two* Conditions, I think, necessarily infer a *pre-existent* State to our present one, since we do not find them in ourselves now.

§. 11. ALL created Intelligences being *free* and finite, must of Consequence be *fallible*, and liable to run into *Disorder*, as well as capable of obeying *Order*: For they could not be *free*, unless they had the Power of chusing either Side; Self-activity being of the *Essence* and Root of *Intelligence*, and perhaps the Source

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from which it springs; so that all created *finite free* Intelligences were naturally capable of Falling, of Rebellion and Disorder. An *infinitely* wise and intelligent Being, of sufficient Power, could not make another intelligent *Being* with Desires, Impressions and *Pantings* after a State which was according to Order, to his Nature, and the Nature of Things, unless at the same time *He* had appointed Means and proper Objects to satisfy these just and natural *Desires*; no beneficent and good Being could act so. Now that we (at least many of us of the *human* Race) have yet a Notion and *Idea* of a better State of Being and Acting, than we find ourselves in, and wish and pant after it, is most certain and undeniable; every honest and thinking Person must find *a Law in his Members, that wars against the Law of his Mind*, and wishes and desires to be freed from the one, that he may conform to the other. Now this is what is called the *Lapse* or Fall; and if this State of Imperfection last for ever, so must the *Fall*; and till this Desire or Panting be satisfied, the intelligent Creature cannot be completely happy; and for this End was the *Oeconomy* of *Jesus* intended.

§. 12. How and by what *Steps* the *Lapse* was brought on, is of no Consequence for us precisely to know. The *Design* and Point in *View* of all the *Oeconomy* of Providence, and
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of *Jesus*, is to restore us, with the Consent, Concurrence and Integrity of our three *radical* Attributes, of *Living, Activity* or Freedom, and *Intelligence*, which He cannot do Violence to, they being immediately derived from Himself, whose *Images* and *Miniatures* all Intelligences are: And the Means that alone can effect this, without intrenching upon these essential and radical Qualities, are *pure Love, naked Faith, and universal Resignation*; which Means we could not perfectly use, if *precise* Truths, particular and specific *Steps*, and the naked Nature of Things, were always pointed out to us: This (at first at least) would infallibly weaken our *Faith* and *Trust*, counteract our *Resignation*, and destroy our *Liberty*; and therefore all that is reveal'd concerning *this*, and the other Truths of past, future and invisible *States*, is general, undetermin'd, and indefinite; and the *Precision* is promis'd only on our Advancement and Progress. *He that doth the Will of my Father, shall know of the Doctrine*: Our *first* Lesson is just what is absolutely necessary to begin our Return; the Knowledge of more Truths and greater *Precision*, is to reward our Progress. The next immediate Step, or what is to be done daily and hourly, we are never ignorant of in our Duty; and that is all that is necessary; the rest are all wisely put out of our Reach, and do not belong to us now, till we advance that Step; and when we

come into the proper Disposition of Body and Mind, to benefit by the just and precise Knowledge of these mentioned and such-like Divine Truths, (though absolute *Precision* be inconsistent with *Finitude*) we shall admire and adore the Wisdom of our *Teacher*, for having conceal'd from us what would then have hurt us, as much as for these *general* Truths, which serve sufficiently to *animate* and encourage us in our now travelling and *probatory* State; for both are directed with *equal* Wisdom. If we are ignorant, it is because we are not come into the proper Disposition to benefit by Knowledge, or that more precise Knowledge would hurt us, and draw us out of our *Orbit*, or shortest Road.

§. 13. IF we may be allow'd to conjecture with Humility and Modesty, about such unreveal'd and indefinite *Truths* and *States*, we may reasonably think, that this *Lapse* was not brought about all at once, but *Step by Step*, by many *Machinations*, Plots and Contrivances of the superior *lapsed Intelligences* on the Inferior. *Nemo repente fit optimus aut turpissimus*. Finite Intelligences must form and acquire all their *Habits* by repeated *Acts*, and *Step by Step*: So that in all Probability, the *Fall* might have been a long time in bringing about; and innumerable Numbers of all the several *Ranks* and *Orders*, and some of all the different *Hierarchies*, might have been brought

brought into this *general Rebellion*, and have gradually departed from that *pure Love, naked Faith* and *universal Resignation*, which alone made the Essence of their Perfection and Happiness; though in the *brief* contracted Account we have of it in *Revelation*, it is compriz'd in a few general Words, which is all we in our present *State*, it seems, could bear, without Violence being committed on our *Liberties*, our universal *Resignation* obstructed, and the Merit of *pure Love* and a generous Trust and Confidence in infinite Perfection destroy'd; more explicit and detail'd Accounts, might have nourished *Pride, Presumption* and *Self-sufficiency*, and so sunk us deeper.

§. 14. OUR *Senses* were given us to *commerciat* with material Objects, and to perceive and enjoy the Beauties of the *inanimate* Creation; as well as to limit the *Extension* and *Expansion* of our Powers and Faculties; and by them all our Sensations, *Ideas* and Pictures of Bodies and inanimate Creatures, are convey'd to the *sentient* and *intelligent* Principle. The Key and Mean of all our *natural* Knowledge of them, is *Experiment* or Observation, perform'd by our Senses simply, or improv'd by *Art*, and the *Logic* of all human and natural Knowledge about them, is *Proportion* justly apply'd: For *Syllogism* and formal Argument, is but *Proportion* express'd in abstracted Terms, or the *Ideas* meant by these

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Terms; and this is the true and only Mean of natural Knowledge about *Bodies* and their natural Qualities and *Laws*. In *spiritual* Truths, imperceptible and immaterial *Beings*, (*viz.*) about their Nature, Qualities and Ranks, can know nothing naturally and humanly, (unless it be infus'd and impress'd by some other *Spirit*) but by *Analogy*, *Similitude*, *Allegory*, *Trope*, *Metaphor*, or *Figure*, referring them to, and comparing them with, our own intelligent and sentient *Spirit*, and its Manner of Operation; and then cloathing them with such Terms, or referring them to such Knowledge, as we have receiv'd from *Sensation*, or from *Proportion*; and this is the only *Mean* and Instrument of human Knowledge we can possibly have, in the Nature, Qualities and *moral* Relations of *Spirits*, *spiritual* and *moral* Actions and Duties. The *sentient* and *intelligent* Principle, or *Soul*, is the Spring or Source of both *Keys* or Kinds of *Logic*, without which both would be equally useless. Culture and Experience is in *spiritual* Knowledge, what *Experiment* and Observation is in *sensitive* Knowledge; *Analogy* is to the *first*, what *Proportion* is to the *second*; *Similitude*, *Allegory*, *Trope*, *Metaphor* and *Figure*, (all the Appendages of *Analogy*, or a more distant or near Approximation to it) are what a more or less accurate, a general or more particular *Experiment* and Observation, or juster and clearer *Proportion* apply'd

apply'd to material Objects, is in *sensitive* Knowledge; and a close, simple, full and cogent *Analogy*, is as just and coercive a Demonstration in *spiritual* Knowledge, as a *Mathematical* or *Geometrical* one is in *sensitive* Knowledge. *Scripture, Revelation*, and our own inward *Feelings* of the Operations of our *Soul*, give the *Data*, (*viz.* the general Propositions, the accurate Observations on them) *analogous* to Mr. *Flamsteed's* or Dr. *Halley's* Observations of the *Appulses* of the Moon to the Fixed Stars, from sufficient Numbers of which, the great Orbit of the Lunar Revolution is determin'd, by comparing them with the general *Law* of Attraction. Here *Revelation* gives us the *Observations*; the Knowledge we have of the Nature of the Operations of our own *Spirits*, gives us the general *Law*; and *Analogy* may answer to *Algebra* and *Calculation* in *Astronomy* and mix'd *Mathematics*; and we may err and blunder in the *first* for want of Care and Attention, as we may in the *last*, being ever finite, and consequently fallible.

§. 15. THE Account we have in *Revelation* of the *Lapse*, may have a *literal, natural* and material Meaning (as all the Words and Works of *God* have a *natural* or *literal, spiritual* and *divine* Meaning and Use, else he were not *God*, that is, a Being of *infinite* Perfection); and these Meanings may only deve-

lope and unfold themselves, and appear to different Persons, according to their different Degrees of *Purity* and Perfection; the *literal* and *cortical* Meaning and Use, may be fitted to *elementary* and initiating Persons, and be *just* and *true* in its Degree; and the *others* proper only for the more advanced; and this with infinite Variety, Justness and Property. Now in *Moses's* Account of the *Lapse*, the *Tree of Life*, of the *Knowledge of Good and Evil*, the *Serpent*, *Paradise*, and all the *Scene* and *Group* of this mysterious Affair, was certainly *literal*, *material* and *real*, as there represented and described; but perhaps happen'd not till the last Act of this *Tragedy*. *Paradise* was certainly a most delicious and enchanting Place of *material* and bodily Delights; the *Tree of Life* and its Fruit was design'd to perpetuat the Life and Health of the then new-modell'd, though not perhaps *Ethereal* Vehicle; the *Tree of Knowledge of Good and Evil*, certainly communicated by its Fruit, Pain, Diseases and Death to this partially incrusted Body: The *Serpent*, no Doubt, was a lapsed *Spirit*, embodied in this then more *beautiful Animal*. Now as all this Scene, may have also *spiritual* Meaning as well as a *literal* and elementary one, of more Consequence to our Happiness and Perfection to be known and believ'd, as the *Spirit* is of more Value than the *Body*; why may not *Paradise* mean in this Sense, the *three* original and fundamental Powers of
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the Soul, *Living, Activity* or Liberty, and *Intelligence*, or its original and immutable Nature and Constitution, intrusted with us finite Intelligences, to cultivate, improve and exalt? The *Tree of Life* be *Him*, from whom all Life and Being proceeds, the *Father* of us all? The *Tree of Knowledge of Good and Evil*, the primary *Image* of the *Deity*, the *Son of God*, by whose *Oeconomy* Evil known and felt, could only be done away and eraz'd, or his divine Nature, Justice, Goodness and Truth, which *Image* was in the human Nature defac'd, by trusting it to his own *Spirit* and Liberty? The *Serpent*, the *grand Deceiver*, or *lapsed* spiritual Nature in General, or one of the highest *Order* of the *lapsed Hierarchy*? And so the whole Scene of the *Lapse* may be more properly and feelingly *allegoriz'd*, or explain'd in plain Terms to an honest and ingenuous Heart, (*viz.*) thus: All created finite Intelligences being *free*, and consequently *fallible*, innumerable Numbers of them, through *Pride, Self-sufficiency*, and Desire of *Independence*, trusting to, and conducting themselves by their own *natural* Lights, as being made little *Deities*, and deriving with their Being from their Author, a *Ray, Efflux*, or *infinitesimal* Emanation of his *Self-existence, infinite Activity* or Power, and infinite Wisdom, that is, of his Nature and essential Attributes; deriving, I say, *dependent* and *derivative* Living, Freedom and Intelligence,

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but affecting Independency, and departing from *pure Love, naked Faith* and *universal Resignation* to infinite Perfection, they gradually sunk into *Selfishness, Propriety* and *inordinate Love* of the Creatures; and instead of being govern'd absolutely in all things by the Providence, Influences, Impulses and Suggestions of the *Eternal Spirit*, they affected to be govern'd by their own natural Spirits, and selfish and narrow Views and Prejudices, and became, as it were, *independent*, unguarded, and unrestrain'd *Thinkers* and *Actors*, prying into and determining in all Matters whatsoever; and instead of being resign'd to the *universal Reason* and sovereign *Will* and Order of Divine Providence, found Fault with, criticis'd, grumbled at, and blasphem'd the Conduct and *Oeconomy* of infinite Wisdom, and gradually departed from *pure Love, naked Faith*, and *Trust*, and *universal Resignation*, the *sole* Means to preserve them in the Perfection of their dependent State, and in *Similarity* to his *moral Attributes*; and so fell from the perfect Happiness of their Rank and derivative Being; *Self*, spurious *Self*, became *transubstantiated* into their thus deprav'd Natures.

§. 16. WHEN human Nature had thus *lapsed*, by affecting Independence, and desiring to govern itself by its own natural Spirit solely, and wallowing in the Objects of Sense, and swallow'd in *Creature-pleasures*, it being
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an *eternal Law*, establish'd in Nature, (for many wise and great Ends) and, by *Analogy*, (as we find it) extending from *material* to *spiritual* Things, viz. that *Like draws and is equally drawn to Like*; or that Bodies and Spirits attract and unite with *similar Bodies* and *Spirits*, from the universal Principle of *Attraction* and *Union*; the human Body did hence necessarily and *mechanically* (as it were) contract a Rust, Grossness, *Stupor* and Inactivity, and became restive and disobedient to the Commands of the natural *Spirit*, gradually degenerating into an *earthly, gross, material* Prison or *Dungeon*; and the *Spirit* was hereby more contracted, restrain'd and limited in its original and immutable Attributes of *Living, Activity* and *Intelligence*, as to their Extention, Purity, the Quickness and Exertion of their Acts, (for all Spirits are limited and tied down to the *Nature, Order* and *Purity* of their *Vehicles*, while their Union lasts, though their natural Powers in their *Fund* and Essence be immutable, and constantly the same) so that their natural Spirits now being assisted by the *supernatural Grace* and Influence of the *Eternal Spirit*, procur'd by the Mediation of *Jesus*, must work out their Recovery and Restoration by gradually returning to their *original Order*.

§. 17. PERHAPS, as all animated Beings, *Sentient* or *Intelligent*, must necessarily be
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cloath'd with some *Vehicle*, purer or grosser, *ethereal* or *planetary*, fitted to the *Mansion* they are confin'd to, and to their Degree of Purity in their moral Powers, and their Extention or Rank of natural Powers; so all *created free Intelligences*, of whatever Order or Degree, must necessarily pass through some State of *Probation*, Apprenticeship and Trials, of their *Love*, *Faith* and *Patience*, before they can arrive at their *final*, immutable, and for ever *permanent* State, and the *Mansion* they are eternally to inhabit afterwards. That something like this was the general Sense of Mankind, seems to be hinted in all *Pagan* Antiquity that we have any Accounts of, *Egyptian*, *Syrian*, *Grecian* and *Roman*, by their *Initiations* into the *Mysteries* of their *Gods*; and this, chiefly, in order to produce an habitual Firmness, Force and Stability, on finite, free, labile Intelligences, in the different Institutions. It would seem, as none but *God* is a pure *Spirit* in his Nature and Substance, none but *God* can be *infallible* and *impeccable*: And that all Creatures being finite and *free*, must necessarily, by their Nature, be *labile*, *falible* and *peccable*; and that even infinite *Wisdom* and *Power* could not make a *Creature* (for *God* cannot work Contradictions) that was of its own Nature, *illabile*, *infallible* and *impeccable*; but that before that *secondary* Nature of eternal *Infallibility*, *Illability* and *Impeccability* could be brought about, on the
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most perfect of created Intelligences, it must necessarily be, by confirm'd *Habits*, produced by repeated *Acts*, and perfected into *pure Love* and *naked Faith*, or into an absolute Surrendry of their *natural* and *moral Powers*, to infinite Perfection, which alone can produce derivative *Infallibility* and *Illability* on them, and so *eternize* Perfection and Happiness, and which only can be produced by various Trials, Essays and Temptations to the contrary: *He who never was tempted, what knoweth he?* Thus the *Son of God*, as *Man*, was made *perfect* by Suffering: As a *Potter* gives Firmness and Impenetrability to his *Earthen Ware*, by keeping it in the Fire till it vitrifies. Had *Lucretia* lived to all Eternity, her *Chastity* would never have been doubted; whereas *Cleopatra* must not only first have made an *Amende Honorable*, but have pass'd through several severe new *Trials*, before her's could have been believ'd. We plainly find by *Revelation*, that many of all the several *Hierarchies* fell on their *Trial*; for tried they must have been, else they could not have *fallen*; for *Reaction* always supposes *Action*. As it is the Nature of *Pride* and *Malice*, to be spiteful, infectious and tempting, (in Hopes that Numbers may make them overlook'd, or too powerful, and so secure) we find they, or their Leader, (suppose his Name *Lucifer*) had a great hand in the human *Lapse*, as it is glanced at under the *Serpent* that tempted *Eve*.

Eve. And from this *Fall* of the *Angels*, the natural and plain Account of *Dæmonology*, and the early impious *Heresy* of the *Manichæans*, (*Lucifer* and his *Angels*) is to be deriv'd. What the *Trials* of these *fallen Angels* were, and in what manner those of the *Angels* in the several *Hierarchies* who stood, combated, kept firm and unshaken, and thereby were for ever confirm'd, *establisht* and *eterniz'd*, and perhaps increas'd and enlarg'd in *Purity*, *Lustre* and *Glory*, by their Victory; is not reveal'd, nor to be discover'd but by *Analogy* or *Conjecture*. The *History* of the human *Lapse* is so brief and obscure in *Moses*, (perhaps partly *allegorical*, partly *literal*) with a plain Design to damp idle or hurtful *Curiosity*, and so prevent our being hurt thereby, by withdrawing us from the *one thing necessary*, that it amounts almost to a total *Forbidding*, and a Warning from prying with too much Eagerness into this *mysterious* Affair; and to leave things secret (the *Secreta Imperii Divini*) to *God*. All that is certain is, that we are *lapsed* at present, or in a State of Trial and Probation, (we of the *human* Race on this ruinous *Planet*) and cannot possibly now be as we came out of the Hands of our infinitely wise, good and powerful *Creator*. *Pre-existence*, the Manner of our *Lapse*, the Duration of our Banishment, and the last Term and Limits of our *Restoration*, are, with *infinite* Wisdom and Goodness, in their Detail conceal'd

ceal'd from us, because they would infallibly hurt us; if more *precise*, they might obstruct the Merit of *Faith*, or draw us out of the shortest Way. *Either* of these two Manners of explaining the *Lapse*, may suffice an honest modest *Philosopher*, (who is sensible of his own limited Faculties) to make the Affair neither improbable nor impossible; especially when he finds himself both imperfect, unhappy, and unfit to be finally united with a *Being* infinitely perfect and happy, as He now is. I chuse the *first*, as more conformable to *Revelation*, and the Form of *sound Words*; and every modest *Christian Philosopher* will be cautious *not to be wise, above what is written.*

§. 18. WHETHER this *Globe of Earth*, as we now inhabit it, was the *original* and *primitive* Seat of *innocent* and *unlapsed* human *Spirits*, and by the *Energy* and Force of the *Lapse*, was gradually and necessarily, and, according to the present Laws of Bodies, turn'd into the ruinous, dark, dismal State it is now in, and such elementary and clayey Prisons made of it, as our present *Vehicles*, and the human *Race*, with all the *Spirits* concern'd in the *Rebellion*, thrust down and confin'd upon it, is not material to be known, nor perhaps *philosophically* to be determin'd: It seems most probable, and conformable to the *Analogy* of Things, and the common *Laws* of Nature,

Nature, that it gradually and naturally changed from its *original* Beauty and superior Place among the *Stars*, into its present ruinous and decay'd *State*, from the natural *Malignity*, and deleterious *Energy* of the *Rebellion* in its primitive Inhabitants, which perhaps was gradual. What is certain is, that such a Place as *Paradise* is describ'd, is now no-where to be found on it; and that *balancing* the Inconveniencies with the Advantages, of want of *Light* and *Sun*, and of cold, uncertain and various *Seasons*, of *Barrenness*, and Mountains cover'd with *Ice* and *Snow*, of the one Part, with the *Hurricanes*, *Tempests*, *Volcano's*, *Earthquakes*, *Thunder* and *Lightning*, poisonous *Insects*, and ravenous and savage *Beasts*, scorching Heats, and *pestilential* Winds, Blasts or Damps, of the other, the whole *Globe* is pretty near equal in Conveniencies; and no particular Place without its *Comforts* and *Inconveniencies*. So that either *Paradise* was on some other *Planet*, or (which is most natural to suppose) *Crime*, *Rebellion* and Disorder have had a *physical* and necessary Influence, on the Matter or Vehicle belonging to each human *Spirit*; and thus the whole Mass of rebellious *Intelligences*, with the *Globe* they inhabited, was naturally and *physically* chang'd and disorder'd. I say, it is most natural and *philosophical*, and perhaps a necessary Consequence of *physical* Efficiency and *Energy*, to conclude that the *Spirit*, according to its

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Degree of Purity or Depravity, should purify and sublime, or corrupt and disorder the *elementary* Vehicle, with which it is cloathed: as *Fire* turns Bodies into its own Nature, and *Cold* deadens and increaseth them, according to the Degree of their Intenfeness. We see *Luxury*, inordinat *Leachery*, Riot and Laziness, first increaseth, then inflame, and at last *mortify* and *putrify* human and animal Bodies; and Abstinence, a low and cool *Regimen*, Exercise and Air, *lighten*, enliven and *volatilize* them. And it is not impossible, that a whole Race, and all the Inhabitant Mass of such corrupted and putrified Bodies, and deprav'd and degenerated *Spirits*, may have had such an insensible and gradual Influence on a whole *Globe*, its *Atmosphere* and different Regions, as quite to alter its *original* Nature; as we see Heaps of putrifying *Fish*, *Insects*, and the Carcasses of Men, by the *Fermentation* and *Volatilization* of the animal Salts, (from intense Heat) produce an universal *Plague* and *Pestilence*, as was that of *Athens*, and many others. Thus far the Change of our *Planet* might have been a natural and necessary Consequence at least, the *Elements*, or Beginning of such a Depravation of the Bodies of its Inhabitants, and their Habitation: which, no doubt, infinite Wisdom and Power, (who directs the natural and necessary Effects of his *inanimat* Creation, for the moral Purposes of his *intelligent* Creatures, supernaturally) and out of the *general*

ral Law establish'd for *material* Bodies and *spiritual* Substances, may have heighten'd, exasperated, or even quicken'd, according to his Pleasure, for the wise Ends and Purposes of his *Providence*; and thus might have destroyed that *Paradise*, which by Rebellion and Disorder had been abus'd, *viz. supernaturally* and contrary to the general *Laws* of the *Celestial* Motions, might have changed the *Orbit*, the *Centre* of *Rotation*, the Distance of the *Earth* from the *Sun*, and the *Angle* of the *Ecliptic* with the *Equator*; to reverse the *Elements*, destroy its *Figure* and Structure, and thus to weaken the Fertility, and produce the rest of the Appearances we now observe on our *Planet*, and throughout the whole *Solar System*, which have many evident Marks of *Ruin* and Desolation; and this for a Punishment and expiatory Purification of the *lapsed* Inhabitants: And thus also the *Deluge* might have been brought on, after the Destruction of a *paradisaical Globe*, by altering only its *Centre* of *Gravity*; and after the same Manner other Changes might have been produc'd.

§. 19. AN *animal* Body is nothing but a *System* or Aggregat of mere mechanical Powers, *viz. of Ropes, Pullies, Levers, Tubes, Glands, Strainers*, and the like; *viz.* One great Pipe with infinite Branches, (infinite in Number, Fitness and Delicacy;) secreting proper and *specific* Liquors, to keep them (these Solids) in Repair, and

and preserve them in their due Tone, and a proper Degree of *Elasticity*, thereby to serve the Intentions, and answer the *Ends* of the intelligent Spirit, while confin'd to this *Planet*. And as I have often used the Similitude, I still find it the most proper, *viz.* that the Body, this earthly *Vehicle* and *Machin*, is, as it were, a curious finely contriv'd *Organ*, or musical Instrument, whose *Keys*, *Stops* and *Pipes* were all originally, elegantly adjusted and duly tun'd, for the Use of the *Musician*, or indwelling *Spirit*. In this Fitness and Propriety to answer the Purposes of the *Creator*, does the *Union* consist; if that is partly disorder'd, this *Union* is partially dissolv'd; while the great and necessary Parts are tolerably sound, the *Union* will still subsist, tho' imperfectly; but if these essential *Organs* are quite spoiled, the *Union* will be totally dissolv'd, and the Inhabitants, by the eternal *Laws* of *Spirits*, must necessarily find out, and pass into some other *astral Vehicle*, or *musical Organ*, proper for its then Degree of Purity or Corruption; as an *Insect* is, by the great *Law* of *Instinct*, directed to deposit her *Eggs* on those Leaves or Trees that are fittest to preserve and *vivify* them; or a *Bird* seeks by *Instinct*, the Situation and Materials for her *Nest*, that is most proper to shelter and accommodate her *Young*; and this perhaps in a continual Progression, from *astral Vehicle* to *Vehicle*, perpetually refining, as the rational free Intelli-

gence purifies in its *moral* Capacity or Attributes.

§. 20. *MATTER*, or Body, is essentially incapable of any thing but *Division*, *Figure*, *Motion* and *Situation*. It is naturally *passive*, and to make it *active*, or capable of *Self-motion*, is an absolute Contradiction and Impossibility; for *two* opposite and contrary Principles can never subsist in the same Subject: and therefore it must be intirely inert and *passive*, and for ever continue in the State it is put in, unless it be chang'd by some *external Force*; and that can never be effected but by a *Spirit*, or spiritual Substance: which, on the contrary, is essentially *self-active* and *self-motive*, and by its Agency determines the Motion and Rest, and different Directions and Actions of Bodies. It is true, this *Agency* is under certain Restrictions, being limited and subjected to the general *Laws* of the *Nature* of Bodies; but the Beginning, End and Degree of the *Force* and Motion, and all other Changes produc'd in Bodies, are from the *Energy* and Action of *spiritual* Substances, either *primary* or *secondary*, original or created; so that where Matter, *Mechanism* and its Powers and *Laws* end, there *spiritual* Agency and *Energy* begin. And therefore I fear, that Sir *Isaac Newton's Spiritus quidam subtilissimus*, *Descartes's* and *Leibnitz's Vortices*,

Vortices, *Hugens's* and *Fatio's* infinitely rare, rapid, subtil Matter, with the Qualities they must endow them, to solve Appearances, (I mean only in animated Bodies, for in Inanimat it may be required, nay some such Fluid seems necessary, I think) is, I fear, imaginary and without Foundation, from sufficient Experiment, or the *Anology* of Nature; unless by their infinitely subtil Matter, they mean real *spiritual* Substance, or else the first *Elements* of Bodies; for Matter must be extended, divisible, *inert*, and gravitat, else it can be no longer Matter; and when such immaterial, and, as it were, self-moving Matter is granted, it will separate us, but one Step further from *spiritual* Substance and Agency; or the perpetual Influence of the *First Cause*, in whom all things *live, move and have their Being*. And, I fear, the whole of the Supposition, how *mechanical* and adequat soever, to answer Appearances in all *animated* Beings, and in all Accounts of it given by these great Men, has not that Simplicity and Beauty conspicuous in, and *essential* and necessary to, all the Works of God, *i. e.* to *infinet* Wisdom and Power. Of the same kind are *animal Spirits*, in the Account of *muscular Motion*; and, on the whole, I can conceive Matter no otherwise, but as divided, extended, mov'd and figur'd, and actuated and directed by *Spirit*, which only can act on it, by its own *self-motive Energy*, tho' that too is limited and circumscrib'd by Mat-

ter, in all created *Spirits*. If Experiment or repeated Observations should ascertain the Existence of such an infinitely rare and *elastic* Matter necessarily, (which I fear it will hardly do) then we must submit to receive it; but, I think, since *Resistance* will always necessarily accompany Matter in *Motion*, how small, rare or *elastic* soever, it will of consequence at last alter the Figure and Direction, and abate the Force and Figure of the Particles, so as to render them unfit to produce the Effect, and answer present *Appearances*; and perhaps this System may be so ordain'd at first thus to end. But still, as we must stop somewhere at last, and admit of *spiritual* Agency to impress the *first* Motion, nothing but repeated and undeniable *Experiment* and *Observation* should induce us to multiply Causes, and allow any such Fluid intervening between *animated* Matter and the *first* or *secondary* Movers. This will be better understood by an *Example*: It is well known what Pains have been taken, and how many *Hypotheses* have been fram'd, not only by *Physicians*, but *Geometers* of the *first Rank*, to explain *muscular Motion*, and all, I think, hitherto in vain. This subtil Matter under the Name of *animal Spirits*, (or at least in propagating them) and even Sir *Isaac's Spiritus subtilissimus*, has been employ'd for this Purpose, tho' with little Satisfaction to most attentive and qualify'd Judges. How much more natural,

tural, *philosophical* and *simple* is it, to suppose the *Nerves* to be infinitely delicate and *mechanically* adjusted membranous *Tubes, Twists* or *Ropes*, whose *Elasticity* and *Mechanism* is preserv'd by an internal milky soft *Pith*, which Membranes receive their first Impression and *Impulse* from the *self-motive Principle* within us, (for the *self-moveing Principle* must communicat the first Impulse either on this suppos'd intermediat *Fluid*, or on these *Membranes*, and either of them is equally unintelligible and explicable; but the last is the shortest way, and therefore likeliest to be the Method of the *Author of Nature*, who always works the shortest Way, and after the simplest Manner, as may be mathematically demonstrated in all his real and natural Workings) and communicat and propagat it by proper and *harmonious Oscillations* to the Muscles, by whose *mechanical* Structure those *harmonious* Motions are excited into Action, by that admirable Mechanism so fully and justly explain'd, by the learned and ingenious Dr. *Alexander Stewart*! How much more simple and natural is it to conceive, that the Surfaces of Bodies, their Effluvia or repelling *Steams*, communicat certain justly proportion'd and commensurable *Undulations, Vibrations* and *Tremors* to such membranous *Pipes*, which the natural *Sagacity* of the intelligent Principle knows by its own innate Powers, to indicat the Presence of such and such Bodies; in the

same Manner as the *Governor* of a besieg'd Town, or the several Ships of a *Fleet*, understand what such a Number of *Guns*, or such a *Flag*, import and signify! Thus Things are easy, intelligible and simple. We daily see and hear, what fine Pieces of *Music* a skilful *Musician* can fling off a well-tun'd Instrument, from the various Motions of his *Fingers* or *Voice*: But this I propose as a mere Illustration. If *Experiment* should shew the Necessity of the mentioned *ethereal Fluid*, even then, I think, it will take Place only in *unanimated Nature*. And if there is any Regard to be had to such an *Hypothesis*, before it be absolutely decided by Experiment, it must be, because *Nature* and its *Author* never act by *Starts*, *Fits*, and *Intervals*, but by slow, uniform and imperceptible Degrees, tho' the Progression is often not to be determin'd by finite Experiments, or finite Capacities. But even tho' the Organs of Sense may and do want *Media*, the *animal Functions* are too intimat and necessary to Life to need such.

§. 21. *LIFE, Activity and Intelligence*, are natural and necessary in some Degree to all *spiritual* Beings, as all the Consequences and Combinations of them are; as being *Minia-tures, Sparkles or Infinitesimals* of the *Deity*. All of the same Order, *Rank* or *Hierarchy*, have these nearly in the same *Degree*; and these *Hierarchies* and *Ranks*, differ only in their

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Degrees of these primary *Attributes*. What may make the most apparent Difference in this *State* of things, in the *Individuals* of the same *Rank* or *Species*, is, perhaps, the more coarse or elegant *Texture*; or the *Fitness* or *Unfitness* of their *ethereal Vehicles* in their first *Formation*, as they primarily came out of the *Hands* of their *Maker*. All the *radical* Differences conspicuous in the human *Race* now, are owing to the different *Frame*, *Texture* and *Culture* of their bodily *Machin*, and its spiritual *Organs*; so that *originally* there must have been no Difference of *Sexes*, because at *last*, in their restor'd and recover'd *State* there will be none; they will, in that respect, be like the *Angels*, as *Revelation* expressly asserts. Something *analogous* to *Creative Fecundity*, possibly, may be even in *Angels*, and primarily may have been too in the *human Race*, because of their *Similarity* and Resemblance to those *Angels*, and to their grand Original the *Deity*; I say, some *miniature* Resemblance of his *Creative Power* might have been in them. Beneficent Nature must be necessarily *communicative*, and earnestly desirous, there may be infinitely more Beings to contemplat, worship and adore the infinitely perfect Being, and admire the Operations of his *Hands*, to imitat Him, and partake of his *Felicity*. But how this *Creative Power*, or earnest Desire of more Intelligences, operated then, I will not take upon me to conjecture: But certain it is, that the Division
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of the *Sexes* was after the *Lapse* was begun, and, perhaps, when it was far advanc'd; possibly to put a Drag on it, and prevent the final Degeneracy into *Self-love*, or an idolatrous and unnatural Commerce with the *brute* Creation.

§. 22. It is both *philosophical* and highly probable to suppose, that the Bodies as well as the *Spirits* of all the *human* Race were created at one and the same time; at least were sent into these *Adamical Dungeons* they now inhabit, at one and the same time. The Spirit endow'd with the *three* radical Qualities of *Life, Activity* and *Intelligence*, in the Perfection that belong'd to its Order and *Species*; and the Body, in the Perfection of their then Estate, at least in the original and first Stock, in whose Loins were included in *Miniatures* and *Infiniteimals*, in a perpetual Progression descending, all the Race and Mass that should ever *exist*, of that Species. This will be no Difficulty to those who know and understand, the infinit Divisibility of Matter, and the Doctrine of *first, second, third* and consequent *Fluxions* or *Differences*, as they are now demonstrated and explain'd. These *infinitesimal* Bodies have probably been animated, and growing in their own Manner, and according to their *Laws*, from their first Formation, and from the Time of the primary general *Creation*, till they arriv'd at their full Maturity. No doubt both these *miniature* and *mature* Bodies,

Bodies, were vastly different from what we find our *lapsed* earthly Tabernacles now are. As the *Spirit* was perfect in its Kind, so was the *Body*: As the *Spirit* was pliant, supple, and chearfully obedient to the Influences of the *Eternal Spirit*, (which was breath'd into it by the Spirit of God, *viz. pure disinterested Love*) so was the *Body* pliant and obedient to the Commands of the human *Spirit*: All was Order, Peace, Love and *Harmony*; and probably the Frame and Figure of the Body might be in many Particulars different from what we now find it, as we have observ'd of the Difference of the *Sexes* in the former *Section*; and these Differences may be necessary in one State of the Progression, and may naturally drop off, and decay, in another, when of no further Use: Instances of which we may see in the different Shapes of *seminal* Animalculs, *Eggs*, *Nymphæ* and *young Insects*, from what they have when arriv'd at Maturity; of a *Chick* in the *Egg*, from what it is when perfectly grown; in the several Stages of the *Silk-worm*, and most other animated Beings, Vegetables as well as Animals. And this is a just and wise Contrivance, and evidently demonstrates *Design* in the Maker, to fit the living Creature for its several Situations. But what is most material, is, that even this now *Adamical* and gross Tabernacle of ours, must necessarily contain under it, the Principles, *Elements*, Springs and *linear Root* of that *ethereal*
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or *paradisaical* Body it was created in, and of that perhaps *glorious* Body it will be restor'd to at last in the final Recovery (which perhaps are both the same). But this can be no Difficulty to those who know that the Rays of the *Sun* are but Matter and Body, which may be contain'd in a Dungeon of Putrefaction, and in a *Dunghil* as well as in the *azure Sky*; and that the Particles of Matter *attract* and *repel* each other in different Circumstances, and purify and sublime as well as incrassat and condense, by the mere Force and Energy of the present *Laws* of Nature: And this *Law*, by which the whole Stock of such an Order and Rank of Intelligences advances in a certain *Progression* towards Happiness and Perfection, (the Confirmation and Stability of which is only to be found in the *last* and most perfect State of Purity and Happiness, as being *free*, but *finite*, and consequently *fallible* Creatures) must absolutely depend on and be brought about by Experience, confirm'd Habits, many appropriated *Trials*, and much gradual Labour; for nothing is more certain than the Axiom, *Nemo repente fit turpissimus aut optimus*. This *Law*, I say, of deriving the whole Race from such a radical Stock in an increasing *Progression*, was a *noble* Design, and of infinite Love and Wisdom, for rendering the succeeding and posterior Generations Partakers of all the Acquisitions of *Wisdom*, *Knowledge*, and other *Improvements* of their Predecessors: But as *Corruptio optimi est pessima*,

Summa, by the *Lapse* all the contrary has happen'd, and

Ætas parentum pejor avis tulit

Nos nequiores, mox daturos

Progeniem vitiosiore.

So that what infinit Love and Goodness could not effect, that is, render *finite fallible* Intelligences *fixed*, and eternally *stable* in Order and Purity: *Punishment*, *Experience* and *Trial* may at last effect, tho' in an unnatural and retrograde Manner: But for this Misfortune, infinit Wisdom is no more to be blam'd, than a kind *Father* that leaves a comfortable Subsistence to a *prodigal Son*, is to be charg'd with the Miseries and Diseases he has contracted in squandering it.

§. 23. THERE may possibly be original Difference in the Complexion and Frame of the Spirits of the same *Rank* and *Order* of Intelligences: some have one or more of their *natural* and *radical* Attributes in a greater Degree of Perfection than others, which certainly are heighten'd by the different Degrees of Perfection and Improvement of their *moral* Qualities; it being sufficient to constitute their Degree or Rank, that the *Sum total* of their Qualities, one to compensat the other, be originally pretty near *equal*. But I should think the greatest Difference consists in the *Culture*: *The righteous Man is more excellent than his Neighbour*, says the *Royal Prophet*; which

which is only from his *cultivating* into higher *Habits* his *moral* Qualities; and it is the same with both Parts of the Compound, the Qualities of which, in all *finite free* Intelligences, must ever depend, to a certain Degree, on *Culture* and *Improvement*, in the Docility or Facility of the *Spirit*, and *Pliancy* of the Body. He that by *Study*, entering into his own Heart, thinking, reflecting, remembering, and acting, cultivats his *Spirit*, will continually acquire a Facility, Quickness and *Penetration* in *intellectual* Operations; and he that by *Air*, *Exercise*, a low *Diet*, and proper and well-tim'd *Remedies*, improves and heightens his Health, and perfects his *animal Functions*, will be fitter and more capable to improve his *intellectual* Faculties. The bodily *Machine*, disorder'd or spoil'd, will sink, debase, blunt and confound the Operations of the *Spirit*; and the *Spirit* violently agitated, or too closely confin'd, will disturb the *Oeconomy* of the bodily Functions: and the perfect State of Health, and the last Perfection of all intelligent Creatures, consisting of an intelligent *Spirit* and a material *Machine*, depends on the perfect *Sanity* and *Harmony* of both united, in their respective *Order* and Rank. A superior Degree of Perfection in either, will consist with an inferior Degree in the other; but when either the *Spirit* is quite uncultivated, or in an *infinitesimal Degree* only, the *radical* Qualities of *Living*, *Activity* and *Intelligence*,

telligence, may be dwindled into that one of mere *Living*, as in Children and *Ideots*, perhaps *Brutes*; and when the Body is much in Disorder, the *spiritual* Faculties, however cultivated, either wander at random, or act irregularly. But the *Fund* of the *Spirit*, or the radical Qualities, may be eternally the same, invariable and unalterable in their *Order* and *Rank*, whatever happens to the bodily *Machine*; only the sensible and *elicited Acts* will vary and alter; or, which is the same thing, the radical Qualities of *Living*, *Activity* and *Intelligence*, may be invariable in the *Rank* and Degree proper to such a *Species* of spiritual Nature, whatever Machine or bodily *Organ* it be cloathed with; only it cannot exert its elicit or exterior *Acts* without a proper *Machine*: As a *Musician* is still in his Nature and *Fund* a good *Musician*, whether he has an *Organ* or musical Instrument to play on or not, or whatever sort of musical Instrument he has; but he never can perform an *harmonious* pleasant Piece of *Music*, without having a perfect and proper *musical* Instrument. An *Angel* is still an *Angel* in his Nature, whatever *Vehicle* he appear in; but cannot perform his Office to the human *Species*, unless he appear in some Shape or *Vehicle* familiar and proper to his Commission. So that as to the human *Species*, the present Body and *Vehicle* was design'd, and is necessary only to commerciat and communicat with the *System* of Bodies or Beings

ings cloathed with material and sensible Appearances and Qualities, as they now are in their ruinous State: For as to invisible, imperceptible, and *spiritual* Objects and *Beings*, the first *Elements* of any Knowledge about them, must intirely and solely be deriv'd from *Analogy*, to the Ideas and Resemblances of Things, convey'd to the *sentient* Principle through the *Senses*; and when these *elementary* Steps are gone through, and become familiar and easy, *spiritual* Agency and Operation (if such be allow'd) may then begin its Influence and Effects: For when the Mind has been duly cultivated and habituated to a Faculty of *Thinking*, to *abstracted* Sentiments, Reflections and *Ideas*, then rational, *spiritual* and closer *Thinking*, becomes familiar and easy: But the *Rudiments*, and initial Procedure, must be deriv'd through the Senses, in Perceptions and *Ideas* excited by Matter and its Qualities, but improved by *Analogy* and its Appendages, *Trope*, *Metaphor*, *Similitude* and *Hieroglyphic*.

§. 24. THE natural Progression and *final* Cause or Reason of this *Oeconomy*, as far as *philosophical* Reasoning may go in such Matters, may be this: The original and *radical* Qualities of all *spiritual* Natures being (as has been often said) *Liveing*, *Activity* and *Intelligence*, and these being unalterable and eternally the same, in the specific *Order* and Rank, a vast Number (perhaps of all the several *Orders*

ders of the *Hierarchies*) *lapsed* and fell, and ran into Rebellion and Disorder, (being finite and free) and so defac'd and lost their *moral* Qualities of *Justice*, *Goodness* and *Truth*. Infinite *Wisdom* and *Love* then, always intending to recover and restore his *lapsed* Creatures, must, by the eternal unalterable *Laws* of his Nature, bring it about in a Manner consistent with their original and *radical* Qualities; that is, by preserving their *Life* or *Liveing*, their *Activity* or *Liberty*, and their *Intelligence* or *Understanding*. In losing their *moral* Attributes, they perhaps lost or spoil'd, their *paradisaical* or *glorious* Body with which they were originally cloath'd, and were new-cloath'd over it, with a crass, unactive *Tabernacle* or Prison, such as we find our present *Adamical* one now is; by which means our *radical* Qualities were greatly confin'd, and more narrowly circumscrib'd, and we were reduc'd to a State of *Annihilation* and Extinction as to them (as it were) for a long Tract of Time: Our radical Qualities of *Liveing*, *Activity* and *Intelligence* being thus reduc'd to the single one of *Liveing*; as the whole human Race actually once were in the *Loins* of their first Parent *Adam*, or whoever was the first of the human Race. From that time they have been *developeing*, extending and unfettering their *Adamical* Tabernacles (every one in his Order) thus spread over the internal *ethereal* Vehicle, till they came to a certain Degree of Maturity, and had

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form'd the several new-cloath'd *Organs*, Pipes and Springs of this *second Adamical Machin*, fit to perform the *probatory* and *expiatory Harmony*, in this Period of Duration, in order to acquire and regain their *moral* Attributes of *Justice*, *Goodness* and *Truth*, and to return into *Order*, and, consequential, *Happiness*: Finite Beings, are absolutely incapable to regain these *moral* Attributes consistent with their natural and necessary ones, but by a gradual Progress, (*viz.*) by *Labour*, *Patience*, *Experience* and *Trial*, by which they may be gradually confirm'd into permanent *Habits*, and advanced to the Degree of their *Order* and *Rank*, or perhaps higher; and thus their natural Attributes being depress'd and sunk into an Equality with their *moral* Ones, by being thus cloathed and circumscrib'd with gross Vehicles, their natural Powers are preserv'd from Violence, and only *sopited* for a time, till the *moral* Qualities begin to rise; and then both may go on in the same Pace, which, it would seem, could, by no other possible or imaginable Means, be so consistently brought about. For the natural Attributes of *Liveing*, *Activity* and *Intelligence*, preserv'd at their utmost original Extent, must necessarily have counteracted and clashed with the Acquisition of the *moral* Attributes to any Degree of Perfection. For Example; innate, *precise* Knowledge, and a penetrating Understanding, in any thing, in this our *lapsed* Estate, would necessarily have counteracted

teracted Dependence, Meekness, Poverty of Spirit, Humility, *pure Love*, and universal *Charity*; and unbounded *Liberty* must have clash'd with Restraints, *Submission* and *Resignation*, now (at least) so absolutely necessary to the Acquisition of the *moral* Powers to any Degree, and so of the rest of the moral Attributes. But by thus depressing the *natural* Attributes to the *Level* of the *moral* ones, both may, without Violence, be in time restor'd to their appointed Order and *Degree*; that is, they gradually and Step by Step, may be turn'd into permanent *Habits*, by the Divine Grace, and the *Oeconomy* of *Jesus*.

§. 25. HENCE, the *moral* Attributes being defac'd by the *Lapse*, and the *natural* ones brought down to a Level with them, by confining them to gross *Vehicles* or Prisons, the whole of the *intellectual* Operations must, in some measure, depend on the bodily *Machin*, as well, as the Degree and Perfection of the *moral* Attributes, in this present *lapsed* State, at least in its first Steps and Initiation. The *intellectual* Operations can never be so regularly and perfectly exerted, while the *Body* is in Disorder; a sick and diseased Person seldom *perceives* truly, nor reasons justly; and a *vicious* Person never judges solidly, that is, by *Number*, *Weight* and *Measure*, nor acts perfectly. But that this may be more clearly understood, it may want a little further Detail.

I say nothing here of a possible *passive* State in advanced Christianity, that being above *Philosophy* or *Conjecture*, and perhaps the last *Scene* of the *Drama* of Restoration.

§. 26. WHAT Men call a *Genius*, or a Man of fine natural Parts, a *Hero*, or a *Philosopher*, (before the Fund, the whole created spiritual Substance, or the moral as well as the natural Attributes, be acquir'd and cultivated into a Habit) is much owing to the Perfection of the *Machin* or Vehicle, and its spiritual or *ethereal* (now cloathed over with Clay) *Organs*. The *intellectual* Faculties require proper *Organs*, Springs, Ropes and Pipes, to perform their Operations by, as well as the Senses; and these probably are the *Arteriolaë*, *Fibrils* and *membranous Tubuli* prolong'd, of the cortical and glandular Parts of the Brain, which are diversify'd and delicatly modify'd *ad infinitum*; the Detail and Mechanism of which never was, nor perhaps ever will be, *philosophically* explain'd: But that the Perfection of the *intellectual* Operations in our present State, depends, in some measure, on the Soundness and *Integrity* of the Body, and these particular *Organs*, there are many undeniable Evidences to prove, as shall be afterwards shewn. What I would here insinuat is, that the *Delicacy*, Fineness and Perfection of one *Set* of these intellectual *Organs*, beyond that of another *Set*, is that which makes the *Genius*, *Hero* or *Philosopher*.

pher. Thus the Health of the Body being good and sound, if a Man has warm, but sharp *Blood*, with very *elastic* and strong *pungent Nerves*, but the particular *Organs* of *Thinking*, Attention and Reflection, indifferently agile only, he may make a *Hero*. If his Blood be *cool*, *soft*, *mild* and *sweet*, and his intellectual *Organs* very *elastic* or agile, he may make a *Philosopher* or *Law-giver*: And so of the other Differences of natural *Spirits*, among the human *Race*, in all of whom the *Fund*, or natural Attributes, may be pretty near *equal*. But whatever Equality there may be in the *natural* Qualities of such *Spirits*, the Difference in the *moral* ones, makes the human *Species* to differ at last widely, even in the Exercise of *natural* ones. For the true *Criterion* of a right and sound Understanding, and perfect Judgment, is to examin things by *Number*, *Weight* and *Measure*, according to their Nature and Relations, and then to estimat and prefer them, according to their *intrinsic* Worth and Importance thus determin'd; and in this Sense it is true only, *that the righteous Man is more excellent than his Neighbour*: that is, wiser as well as better. And that the Acquisition and Culture of the *moral* Qualities, not only shew the Justness and Strength of the *natural* ones, but also inlarge, augment and perfect *them*, both as they necessarily mend and improve the bodily *Health*, by Temperance and Abstinence, and consequently rectify and

tune the *Organs* of the intellectual Faculties, but likewise as they cultivate and extend all the Powers of the *Spirit*, by Study, *close Thinking*, by *Actions*, and *Abstraction*, and other intellectual Operations, imploy'd in the Acquisition and Exercise of these *moral* Qualities.

§. 27. THAT the *Perfection*, and full, free and just Use of the *intellectual* Faculties, depends, in a great measure, on the Soundness and Health of the bodily *Machin*, more particularly of the *Organs* of these *intellectual* Faculties, is evident from many Considerations: 1st, The Body was design'd to centre and circumscribe the *spiritual* Powers, to confine and imprison them for a time, and fit them only grossly to *communiat* with other Bodies on this present *ruinous* Planet, and must purify and refine, according to the Degree of the Acquisition and Perfection of the *moral* Attributes, as has been explain'd; and every Step in this Acquisition necessarily tends to *develop* and *enlarge* the *natural* and *radical* Attributes, as has likewise been hinted; from whence their mutual Dependence on each other becomes evident. In this our *lapsed* State, our gross and earthly Prisons were design'd by infinit Wisdom, to curb, centre and restrain the exalted *Functions* of the *radical* and intellectual Faculties, in Proportion to the Defacement and Decay of the *moral* ones, that being both on a *Level*, they might rise, advance and perfect by equal

equal Degrees, without Clashing or Contradiction; without which our Ruin must have been eternal, our *Lapse* perpetual, and our *Recovery* impossible; the *natural* and *radical* Qualities, in their utmost Extent, being evidently contradictory to, and destructive of, the Acquisition and Improvement of the *moral* ones; and the whole *Restoration* must be brought about by the Culture of the *moral* Qualities, which perfect and develop the *natural* ones, and thereby *purify* and *sublime* the *Vehicle*, extend and form the intellectual *Organs*: So that in the first Steps at least of this *progressive* Purification, the Perfection of the *Acts* of the *intellectual* Faculties depend on and are in proportion to the Perfection of their *natural* and bodily *Organs*. 2dly, We experimentally find, the *intellectual* Faculties and Operations depend on the Body, in all *acute* and *chronical* (especially those called *nervous*) Distempers; the *Raveings*, *Incoherences* and *Distractions* in the *first*, and the unaccountable *Terrors*, *Panics*, *Inconstancies*, Dispondence and *Cowardice* of the *last*, are sufficient Proofs of *this*; and demonstrat the Necessity of a proper *Crase* in the Juices, and the Soundness and proper *Elasticity* of the Solids and *Organs*, in all the intellectual *Functions* and Operations, but eminently so in the first Steps of our Renovation. 3dly, We actually find, and are ocularly sensible, in an *Embryo*, in Infancy, in *seminal Miniatures*, that the

whole of the *natural Powers* are concentrated and imprison'd; and that it is in their Growth only, and in the developing of their *Organs*, and in the Inlargement of the Doors, Windows and Aperture of the Senses, that their intellectual Faculties ever enlarge themselves to any Degree. 4thly, We find that *Luxury*, *Leachery*, Intemperance, Laziness, strong and violent *Passions*, inclement and pestilential *Air*, Bruises and Accidents, that injure the *arterial*, and *nervous System*, always hurt, and sometimes destroy the *free Exercise* of these Faculties, and the Acquisition of Virtue (at least of some Virtues) as well as *Science*; and that proper Remedies, and due Management, recover and restore them again. 5thly, Abstracting from the *Probability* and *analogical Evidence*, that the Bodies of the whole Race were actually form'd, liv'd, grew and extended in the Loins of the first *original* Pair, we see plainly, (as I have hinted) that every Individual begins with, as it were, a mere *vegetable* Life, while in *Embryo*, in seminal *Miniature*, and in the Mother's Womb; that when it is born, it has scarce more than an *animal* Life, in which it continues much longer than any other *Animal* we know; and that it rises by slow and imperceptible Degrees into a *rational* Life: From which it is evident, that the Powers of the *Soul* are sunk, concentrated, imprison'd and contracted by its unform'd Tabernacle or *organical* Vehicle, and cannot exert its intellectual *Functions*, but

gradually and insensibly, and as the bodily and intellectual *Organs* are form'd; and that for this wise and gracious End, That the *moral* Powers and Virtues of the Soul may have *Time, Liberty* and *Leisure*, by repeated *Acts*, to turn into *Habits*, and so all *three* may equally develop and extend together, (*viz.*) the *natural* and radical Powers, (which in their Capacity, and original *Energy*, are invariable) and the *moral* Attributes of the Soul, and their mechanical and material *Organs*. 5thly, But what is in this Case a Demonstration, is, that all the vital Functions and *Sensations*, are all perform'd by the *Spirit*, by the Intermediation only of Motions, *Vibrations* and Tremors, properly modify'd and impress'd by Bodies, or their *Effluvia*, on rightly dispos'd *membranous Tubuli, elastic* Threads or Filaments; which Motions or *Vibrations*, the *Soul* naturally, and by its own innate and *radical* Powers and Sagacity, knows to denote the Presence of such and such Bodies, and their Actions. Thus *Seeing* is perform'd by the Impressions of the Rays of *Light*, emitted or reflected by the Surfaces of Bodies, which by the Size of their component Particles, and other Circumstances, exciting particular *Vibrations* and *Undulations* on the *elastic optic Nerves*, point out to the sagacious *Spirit* (innately and naturally endow'd with such a Capacity of Perceiving and Judging) the Presence of such and such Bodies: And in a Manner *analogous* to this, is *Hearing, Feeling*, and all the other Senses

Senses perform'd, and muscular Motion may be perform'd much in the same way. 6thly, To confirm all this, and that Observations and *Fact* may justify and demonstrat *Speculation*, it is certain, and almost infallible, that *ponderous* Medicines, duly and properly prepar'd and adjusted, and a *low, cool, thin Diet*, persisted in, a due Time, and join'd with Air and Exercise, will generally restore the *free* and perfect Use of the *intellectual* Faculties, not only to those who have destroy'd or hurt them by *Luxury* and *Laziness*, but even to such as have deriv'd them with their Birth, or from Accidents or Parents, if the *Organs* themselves be not intirely confounded or spoil'd; at least in some Degree, sufficient to demonstrat the Proposition; and every one knows that this *Method*, and these *Medicines*, only mend the Juices, and open Obstructions. Of this I could give some such Instances, having treated several such Cases, that I could venture my Reputation on some Degree of Success of the Method, when apply'd early and in due Time, before the *noble Organs* be quite spoil'd. And if *Philosophy* have any thing certain or true, it is this, that *quo posito ponitur, & quo sublato tollitur, in eo consistit ejus rei Essentia*. A great deal more I could urge, but this must suffice to the honest *Inquirer*, and fair *Philosopher*; else, nothing will.

§. 28. FROM all which it is evident, that it is to *Experience, Culture* and *Probation*, removing Obstacles and Impediments, that we must apply both for the Extention and Improvement of the *natural* and *moral* Powers of the *Soul*, and for the Perfection of the intellectual *Organs* of the Body. All *three*, since the *Lapse*, have been contracted, imprison'd or concentr'd, as it were, to a *Punctum Saliens*, (as the Naturalists speak of the beginning *Incubation* of a Chick from an Egg) to be extended and dilated to a given State of Maturity and Perfection, altogether proper for its *Order* and Rank, and alone and only to be brought about at first by the Culture of others (its Parents, Nurses and Masters) while under Age, and afterwards by its own *Industry, Attention* and *Diligence*, in a proper Method, when come to Maturity. So that the whole Perfection of Body, *Soul* and *Spirit*, (by Soul and Spirit I always mean the *natural* and *moral* Powers) depend on proper *Culture, Experience* and *Trials*; and our whole *lapsed* State is probatory, *experimental* and *progressive*, and from our vegetable, through our brutal and rational, up to our *restored* first *paradisaical* and last divine, fix'd and immoveable State; the whole Progress is in a great measure our own Work, tho' under general *Laws*, both for *Spirits* and Bodies, but with supernatural (or if you please, *miraculous*) Aids and Assistances from

from time to time, to be the Rewards and Motives of our Diligence and Zeal, tho' perhaps they are never to be felt or distinguish'd, till the whole Progression is at an End; which Progression might or may be much after *this Manner*, as far as can be conjectur'd from things as they now appear. The human Race was originally made in the *Scale* of Intelligences, and in that *Cone* of Creation (if I may be allow'd the Similitude without offending weak Minds, and low *Philosophers*) which seems to ascend, from *inert* and *passive Matter* through the human *Species*, to the *Angels*, and beyond the *Cherubims* and *Seraphims*, up to the utmost Extent that created finite free Intelligence reaches: (all which, in their natural Powers, are *Infinitesimals* respectively and unalterably of their great Original, the *Deity*, but at an infinitely infinit Distance from Him, as they ought and must be, but in a verging Progression of *Similarity* to him, in their *natural* as well as *moral* Powers) I say, the human *Species*, being made a little lower only than the *Angels*, with Bodies or earthly *Machins*, supple and pliant to their indwelling *spiritual* Intelligences, and with *Spirits* supple and pliant to the Influences, Impulses and Commands of the *Father of Spirits* (in which their Innocence and Felicity consisted); and being free, and consequently capable of a *progressive* Procedure, from this original State of their Crèation, either forward to Perfection and Happiness to

a certain Degree, which probably might fix them in the Extention of their *original* Powers, (tho' not in the greatest Perfection of their *moral* ones) and consequently in their greatest Happiness; or a *Departure* backward into Disorder, Rebellion, spurious *Self-love*, inordinat Love of the Creatures, *Propriety*, and consequently *Misery*; their *Creator* eternally designing to restore them to their first or perhaps a *higher* Rank, plac'd them first upon this Ball of Clay, (which had been either naturally and *physically* ruin'd and spoil'd, by their own immoral Taint and Corruption, or was by his own *omnipotent* Agency) and confin'd them to *Prisons* and *Dungeons* made of this *Planet*, tho' with infinit Wisdom and Elegancy, and with a sublime Delicacy adjusted to the Nature of their *Lapse*, or the Ends of their *Probation* and Purification; whereby their natural Powers being *cramp'd* and centred to the Degree of the Decay of their *moral* Powers, they may by their own Labour and Culture (but supernaturally assisted) advance proportionally in both, to the Stature and Degree appointed them in their original Formation, and perhaps higher; and in the meantime, perhaps dropping through many different *Vehicles*, and material Bodies, grosser, or more sublime, either *Dungeons*, or partially glorious Bodies, as they have advanced or gone backward in the Acquisition of the *moral* Attributes, *Justice*, *Goodness* and *Truth*, or (which

is

is the same in the *Christian* Language) of the Cardinal Virtues, *Faith, Hope* and *Charity*; which, justly explain'd, are of the same Import.

§. 29. THE human *Soul*, or intelligent Principle, has its *radical* Qualities and Faculties, that it was endow'd with in its first *Creation*, essentially inherent and *innate* in its Nature, and in their full Extent and Perfection, even now in this *lapsed* State, perhaps beyond the Vigour they can ever arrive at in this mortal Life, only cramp'd and sopited by this gross and earthly Prison (like a *Felon* in a *Dungeon* or condemn'd Hole); and as it has the Power or Root of the Senses of *Seeing, Hearing* and *Feeling*, almost the same as when at intire Liberty, in its ethereal Vehicle, tho' now confin'd to Darkness, *Silence* and *Unactivity*, and can only see and hear as through a *Grate* or narrow *Chink*; yet it has its natural Powers, and their bodily *Organs*, as vigorous and lively, as when it was at large, tho' it be not in a Capacity to exert them in the same Degree, by reason of its heavy clay Coverlet: And this gross earthly Tabernacle actually contains under it, the *organical* Lines and *Stamina* of that glorious *paradisaical* and first created Body it was endow'd with before the *Lapse*, or of the more glorious one it will be solely cloath'd with in its *final* Perfection and Restoration, tho' both (for they are one and the same) now cover'd
over

over and encrusted with gross mouldering Clay; and both Soul and Body, as they are now in this *lapsed* State, will gradually drop and put off this *Adamical* Tabernacle, and slide into another, and perhaps a third, according to the general *Laws* of Purification, and in Proportion as the *spiritual* Inhabitant advances in Perfection, till at last it arrive at that *fix'd* and *permanent* State, and the Place and *Mansion* it was design'd for in the universal *System* of Intelligences.

§. 30. FROM this Account, if agreeable with the universal *Analogy* of Things, and the general *Laws* of Providence relating to the *Lapse* and Purification of Intelligences; it will follow, that intellectual Acts and Exercises are but *Remembrance*, and removeing Impediments, or but the Spirit's returning to its *original* and primitive State: That *Culture*, Study and Reflection, and all the Operations of the *Mind*, are really (and not figuratively) but *lopping, pruning*, dressing and removeing Obstacles and Incumbrances, and forming the bodily *Organs* to a proper Suppleness and Facility, for the Performance of *spiritual* Exercises, and to produce *Habits*: That the Study of *Arts* and *Sciences*, and all other Knowledge, is but *Remembrance* and Recollection, opening Passages and *Apertures*, to admit more Light into the *Prison* and Dungeon; which can only effectually be done by the Acquisition

quisition of the *moral* Powers of *Justice*, *Goodness* and *Truth*, or of *Faith*, *Hope* and *Charity*; and this not figuratively, but in Reality, and by fix'd Habits. In a word, the *Soul* has essentially and radically in its *Fund* and Nature, *innate* and *permanent*, all the natural Powers in their full Extent and Degree that ever it can possibly arrive at here, but they cover'd over, sopited and concentrated by the gross *Adamical* Prison; and is only depriv'd of its *moral* Powers in its present *lapsed* State, which *moral* Powers it is sent here to recover.

§. 31. THE Exercise of the *natural* Powers of the *Soul*, (*viz.*) of *Liveing*, *Activity* and *Intelligence*, is the general State and Complexion of all spiritual Natures: *Liveing* means, supposes and implies the *actuating*, informing, directing and superintending the several Motions and Functions of a divinely organiz'd Material, either *Ethereal* or *Planetary*, grosser or more refin'd Vehicle, according to the *Oeconomy* of Providence in its Restoration, and in giving Motions and Directions to Bodies or Matter to a certain Degree. *Memory* is but an Affection or Modification of the *Understanding*, fixing it to a particular Object; as *seeking* any thing absent or lost, is but a particular Attention and Observation or Detention of the *Eye* on the different Objects presented; and that the *Understanding* has proper *Organs* for the different Uses and Purposes

Purposes of Perceiving, Considering, and fixing its *Attention*, as the *Eye* has various Muscles, Tendons, Humours and Glands, for directing, fixing and perfecting its *Sight*; and *Memory* is just such a *Modification* of the Understanding, as *Searching* or Seeking is of the *Eye*; and all is perform'd through the *mechanical* Powers and *Organs* of the Body, by the innate Sagacity of the Mind: and hence it comes to pass, that when these *mechanical* Powers and *Organs* of the Body are quick and agile, to present Variety of *Images*, *Pictures* and *Ideas* with Readiness, the Person is *ingenious*, *fanciful*, *poetical*, or of a quick and lively Imagination. If the *Organs* of the Imagination, the nervous *Fibrillæ*, the membranous *Tubuli*, be strong and firm, the Impressions or *Ideas* being durable, the *Memory* becomes strong. The Understanding is merely *passive*, it is like the *Vis Inertiæ* of Matter, or Reflection and Refraction in it, of which it is the *analogous* Quality in the Soul; and this *Vis Inertiæ* is one of the last Steps of the descending Miniature of the divine Original in his inanimat Creation. *Truth* is to the Understanding, what *Light* is in animal Life to the *Eye*; it must be receiv'd absolutely, and only according to the then State of the *Mind*. It is the *Will* that is the ruling and directing Faculty of *spiritual* Nature, and its *analogous* Quality in inanimated

Matter, is *Attraction* and *Repulsion*: all depend on it; it rules absolutely, and without Controul, even sometimes over the Understanding, and every Faculty of the *Soul*. It is the *self-active* and *self-motive* Principle, acting above and beyond Matter, at a Distance, without the Intervention of a material *Medium*, by its own *Energy*, and after its specific manner of Operation; as is evident from *Instinct*, *Impulse*, *Sympathy* and *Antipathy*, Conscience, natural Affection, and the like *immechanical* Affections of the Soul. *Matter* only limits and modifies its Operations, and renders it capable to commerciat and communicat with Bodies, by acting upon them, and being reacted upon by them. The *Will* may and can act without and contrary to the Judgment, Conviction and Approbation of the *Understanding* (Self-activity and Self-mobility necessarily secluding all foreign Aid); and from it the first *Springs*, Direction and Perfection of the *Understanding*, often take their Rise; but generally they advance by the same Steps in their Purification; only the *probatory* and purifying Process in the *lapsed* State, both in the Acquisition of the *moral* Attributes, and in the *Culture* and *Development* of the bodily *Organs*, of the Faculties, gradually and by uniform Acceleration (like the *Velocity* of descending Bodies) receives its constant Impulse from the *Will*.

§. 32. SOME have thought, that the *Wills* of all *Intelligences* were so order'd by the divine Decree and Appointment, that they should be so absolutely free, as to become even independent of his *Influence* and *Pre-science*, and that their *Liberty* should be in a natural *Equilibrium* to do whatever their original Powers could possibly effect, and be determin'd by their own *Strength* only, and affirm'd that so much a *self-motive* Power does necessarily imply; and that accordingly, *God* was not actually certified of the *Lapse*, till it happen'd, in the *Angelical Hierarchy*. That the divine Nature may actually have *arbitrary Ideas*, they think, necessarily follows, from his natural infinit *Liberty*, which they suppose a Consequence of the absolute *Infinitude* of all his Attributes, and the *Base* and Root of his infinit *Intelligence* or *Omniscience*. For no Creature is *free*, but must be at the same time *intelligent*, and all intelligent Creatures are naturally *Images* of *Him*; and since *intelligent* Creatures, such as we are, have *arbitrary Ideas*, (as is evident from our being able to act contrary to our *Judgment*, and contrary to our present and future greater *Good*, were it but to shew the Nature of our *Liberty*, in any one Instance, for *Example*, to suffer present or future certain Pain, as in *Suicide*) therefore there must, by *Analogy*, be concluded

a correspondent Power of infinitely more Force and Perfection in the divine Nature. It is true, *Omniscience* could certainly *foreknow* whatever *Omnipotence* could effect; but both *Omniscience* and *Omnipotence* being in the divine Nature infinitely *free*, they think it a higher Instance of Perfection and Power, for a *free Omniscience* voluntarily to design not to know what his *Omnipotence* might effect on his free *intelligent* Creation; and that it implies not want of Perfection and Power, but, on the *contrary*, is a much higher Instance of Perfection and Power, for an infinitely *perfect Being* to create Intelligences, that should be naturally in such a Degree of *Freedom*, that even He Himself should not foreknow what they were to do; but should, as it were, *voluntarily* and *arbitrarily* suspend (*Jesus Christ*, say the *Fathers*, suspended the Influence of his *Divinity* on his *Humanity*; *He made Himself of no Report*, *He took upon Himself the Form of a Servant*, the greatest Instance of his *Divinity* possible) the Influence and Penetration of his *Omniscience*, to magnify and manifest his *Omnipotence*. He might, no doubt, have foreknown every thing that should ever be effected, or brought to pass, by the *self-motive* Powers of his created *miniature Images*; but He might also designedly and arbitrarily not *foresee* or *foreknow* all this, to *enoble* his intelligent Creatures thereby, that
so

so they might be *free* even from his *Espial* and *Observation*, for a Trial of their *Faith* and *Patience*, (as a tender Mother tries her *Fondlings* Strength and *Gait*, by letting go the *Leading-string*) and thus leave them a Possession and Property, (that they might be fitter Objects of his *Commerce* and *Glory*) and that they might have something in *Dominion* and *Heritage*, that in Gratitude they might render back to *Him*, which even He (now He had created them) could not *force* from them. Perhaps such a *Creature* might become a nobler Instance of infinit *Wisdom* and *Power*, than one, all whose future Thoughts and Actions were certainly foreknown even by *Omniscience*: as a skilful *Watch-maker* might make a *Watch* or *Clock*, whose Time of Going or Striking he might not foreknow, or could not foretel, that absolutely depending on the Length of the *Chain* tied to the *Spring* or *Weight*, which he had in his Power not to have measur'd. This bold and profane Supposition, of *God's* design'd and *arbitrary Non-foreknowledge* of his finite free Intelligences future Actions, would indeed intirely take off all the *Difficulties* and *Objections* against the *Lapse*, about *Liberty*, *Prescience*, and *Predestination*; and justify the Darkness and Distresses in *Providence*, *Revelation*, and the whole *Oeconomy of the Restoration*: but whether it is perfectly con-

sistent with the *Harmony* and *Simplicity*, and absolute *Infinity* and Dignity of the divine Nature and *Attributes*, I dare not take upon me to determin. And since infinit *Sagacity* and *Penetration* (like that of a *wise* and *good Minister* of State) will account for *Prescience*, without influencing or intrenching on *Liberty*, I am much rather inclin'd to subscribe to it. *Infinit Perfection* can provide for the Perfection and Happiness of his Creature, without any Prejudice to *Himself*.

§. 33. ALL *intelligent* Creatures being (as I have often said) *Effluxes*, *Emanations*, and analogous *Infinitesimals* of the *Deity*, must necessarily be impress'd with his *Image*; for though they be finite, dependent, and created, yet being *free*, so far they are little *analogical Divinities*; and though they flow'd from Him as their *Source*, yet by this their *Liberty*, they are able to hold, as it were, in *Property*, an *infinitesimal* Portion of his spiritual Nature and Qualities, and thereby have something of their *own* to give Him back, and thus to *commerciat* with Him, and at last to return to Him as their *last End*: just as the *last* and *least* Particles of Water (being probably *spherical* or *spheroidal*) may retain their own Figure when receiv'd into the universal *Volume* of all Fluids of the *Ocean*, and are actuated by its Motions; or like the *Fish*, which though in the *Sea*, yet all

all of them preserve their own Forms; or rather like the *Iron* in the Oven, which being turn'd into liquified *Fire*, yet retains its own Shape. Just so, all created Intelligences may preserve their own Principles of *Individuation*, when they are restor'd to the *Rock* out of which they were hewn. But these lame and unanimated *Allusions* I adduce only as *Illustrations* of this incomprehensible Subject; for *Creation*, though a necessary Article to be believ'd in all the *Systems* of *Natural Religion*, is as incomprehensible and inexplicable as any *Mystery* in *Reveal'd*, unless it be by *Analogy*; and it is no hard Matter then to conceive any thing *is*, that actually *exists*, especially where infinit Power is suppos'd the *Cause*, and when it does not involve an absolute Contradiction, as these *analogical* Allusions shew this does not. However this Explication be receiv'd, I think it *self-evident*, that in their *Creation*, or *Emanation* from the *first Cause*, all *Intelligences* have been impress'd with *God's Image*, and are really thereby *infinitesimal Deities*: And that the natural *Powers*, *Attributes* and *Faculties* we feel in our own Souls, may fairly be carried up to *absolute Infinitude* by *Analogy*, and in some imperfect and gross manner, be so rais'd as to give a shadowy Glance, or faint *Idea*, of the *supreme Being* the *Deity*: And that our Liberty may not be violated, and our Restoration may be secur'd, I fear this is as

precise as we can reach in this our *lapsed* Estate, while we dwell in earthly Prisons, I mean by *Philosophy* or mere Reasoning only, without *Revelation* or divine *Faith*. And therefore, whatever *natural* Powers, Qualities or Faculties we find in our own *Souls*, (at least in the best and most perfect of our *Race*) we may safely conclude, there are Powers, Qualities and Faculties, eminently correspondent and *analogous* to them, in the *divine Nature*, with the Difference that *absolute Infinitude* has to the *lowest Finite*: and on the other hand, that there are *miniature* Resemblances in all finite *Intelligences*, correspondent and *analogous* to the essential and fundamental Attributes in the *divine Nature*; and consequently that we may fairly reason and *philosophize* (with the Modesty and Humility that become the *lowest* of Intelligences) from our own *spiritual* Nature, up to the *Divine* spiritual Nature, keeping within the Bounds and Proportion mentioned. For Example; we find and certainly know, that in our own *spiritual* Nature there are Liveing, Understanding and Will, and that all our intellectual Operations are but *Modifications* of *these*: *These* then must be the *natural* Image of the *divine* Being originally impress'd on our *Souls*. We learn from *Revelation*, that in the *divine* Nature, there is a *Trinity* of Persons, in *Unity* of Substance. We may then
fairly

fairly conclude, that, in some Manner or other, the *three radical Powers of Liveing, Understanding and Will*, are the *natural* miniature Image and Representation of this *Trinity* in Unity. In the divine Nature, the three *analogous* and correspondent Attributes are, *Self-existence, Omniscience and Omnipotence*; in other Words, Necessity of *Being*, infinit *Wisdom*, and infinit *Activity*. In all created Intelligences, there are a *deriv'd* Being or Liveing, *finite* Understanding, and limited *Will* or *Freedom*. This *Analogy* or Correspondence, I say, between the *divine* Nature, and the *spiritual* Nature of all finite Intelligences, may give us at least some general Notion of the *Trinity* in *Unity* (for *Precision* is incompatible with *Finitude*, and all I pretend to here, is to remove Contradiction and Impossibility, from an uncomprehensible and inexplicable *Mystery*). *Self-existence*, or Necessity of Being, is the proper *Characteristic* of the *Father* in Revelation. *I am that I am*, or I am the sole Being, that is *necessary Existence*. The *Word*, the *Wisdom*, the *Understanding* of the *Father*, the *express Image* of his intelligent Nature, the *sovereign Reason*, is the *Characteristic* of the *Son* in Scripture. The *Holy Ghost*, or the Spirit of the Father and the Son, (*viz.*) their infinit *Activity, Energy and Power*, is represented there as a *liveing, enlightening, actuating, comforting*
and

and *instructing* intelligent Substance, and shadowed out to us by the most penetrating *energetic* Things known, to wit, *Wind, Light and Fire*; and so may be explain'd by our *self-motive* Power, our Liberty, the Spring of *pure Love, naked Faith*, and *universal Resignation*. All these *three* (and I think the natural Attributes of the Deity are but Three) natural Powers and Faculties are comprehended in one *spiritual* Nature, in all created Intelligences: in them they are *Modalities* only, Powers or Faculties; but in the *divine* Nature, they are *Realities*, and active distinguish'd Subsistences, because of its infinit *Activity*. For nothing is more certain in *Philosophy*, than the *metaphysical and scholastic Axiom, that every thing in God, is God*. I might, with a good deal of *philosophical* Propriety, run this *Analogy* up to all the Qualities and Attributes ascrib'd in *Scripture* to the Persons of the *holy Trinity*; but I give it only as a philosophical *Emblem, Allusion or Similitude*, to reconcile that *inexplicable Mystery* to modest, sober and guarded Thinkers; for it is still much better to adore and obey, and wish or pray, to believe as the *Holy Spirit* in Revelation intended, the *best we can*, in the *holy Trinity*, than to *philosophize* about it. The two capital Errors in the Doctrine of the *Trinity*, (especially of the *Incarnation*) and divine Nature of the *Persons*,

Persons, (which is the Hinge of the Doctrine of the Trinity) is the *Arian* and *Sabellian* Heresies; both which are of great Detriment to Christian Perfection, and the Practice of its cardinal Virtues, *Faith*, *Hope* and *Charity*, or the Acquisition of the *moral Powers* of the *Soul*; but with a very notable Difference, the *Arian* being of infinitely more Detriment to *sublime practical Christianity*, than the *Sabellian* Heresy. The *first* dwindling and sinking the Merit, Dignity and Love, his Sufferings and Satisfaction, and consequently dishonouring and debasing the *divine Nature*, Purity, and the Merit of the common *Saviour* of the *lapsed* Mortals; and thereby the Motives and Necessity of *pure Love*, *naked Faith* and *universal Resignation*, the sole Means of our Recovery and Immobility: And perhaps among all the *Apostles*, *Martyrs* and *Confessors*, and universally acknowledg'd *Saints*, there will not be found one who notably lean'd to this *Heresy*. The *Sabellian*, on the contrary, tho' certainly *Heretical*, too arrogantly departing from the *Form of sound Words*, yet has preserv'd the *Dignity* and Purity of all these *Motives*, the Greatness of the *Love of God*, the *Sanctity* of his Nature, and *Heinousness* of Sin, and is only too philosophically *nice*, out of a Dread of intrenching on the *Unity* of the divine Nature. I was the more willing to retouch this *Speculation*,
because

because what I have advanc'd about it in my *Philosophical Principles of Reveald Religion* has been misunderstood; else I had not meddled with it *here*, as being out of my present Province, for which I ought to beg the Reader's Pardon. This *Mystery* was not reveal'd to puzzle our Reason, but for a Trial of our *Faith*, and a Motive to our Resignation; and because its Truth was necessary to the Conception of the general *Plan* of the Restoration, and the understanding, practising and perfecting the Christian Virtues and *Morality*.

§. 34. THE *Soul* and *Body* at first sopited in a State of mere *vegetable* Life, (in the *seminal Animalcul*, and in *Embryo*) is there developing, *vegetats*, and lives, (perhaps for many Ages) according to their own general *Laws*, and the secret Designs of Providence; in Time, the *Compound* comes into the *Light*, and is born into the World; and then, from the Velocity of its Growth, and the *Development* of the *Organs* of its Faculties, (the nervous membranous *Tubuli*, and the *glandular Machinulae*, perhaps increasing first) becomes *sensitive*, and enjoys *animal* Life: The Nature of *gross* Matter, the Miseries of this ruinous *Globe*, and the present dark State of Things, inclement or deleterious *Air*, Negligence and Ignorance, and many other Accidents, (all under the Direction of

of an *infinitely* wise Being, for kind and gracious Purposes) make the slender Individual now become *sensitive*, and feel Pain, Misery and Distress, even before it is *conscious* or capable to know the *Cause*. Instinct, (a plain but *innate* Effect) Pains and Sufferings, make it *mechanically* (as it were) avoid the Approach of the Causes possible or probable, by which these Pains are produc'd. Hence natural Aversion, Reluctance, and some Endeavours to retire from Excess of Colds and Heats, improper or too much Nutriment, and all noxious Bodies and *Animals*. These *Sensations* and Feelings lodg'd in the *Memory*, with the innate *Instincts*, *Sympathies* and *Antipathies*, grow stronger, till they are gradually confirm'd into *Habits*; and on these infant *Habits* and *Ideas* begin the Dawnings of *Reason*, *Reflection*, *Memory* and *Will*, and all the Play of the *intellectual* Faculties on their now developing *Organs*. If the Body is strong, its Appetites and Passions are proportionally so, which inordinatly gratified, naturally and necessarily beget strong and new Pains and Punishments; these, on Reflection and Remembrance, awaken *Conscience*, arising from an *innate Instinct* radically implanted in spiritual Nature, to excite and encourage a Love of *Order*, and punish Disorder; and *Conscience* actuated and enliven'd by still further Reflection on the necessary and natural Connexion
between

between *Disorder, Crime* and *Punishment*; on the first Dawnings and Awakening into rational and *conscious* Life, if Children were duely and strenuously nurtur'd and cultivated by frequent Acts, as Occasions offer, and supported by due Temperance, Air and Exercise, in the bodily and *organical* Powers, and by bringing the Appetites and Passions in Subjection to the *Spirit*, and thereby labouring to acquire a Facility and Readiness in the Exercise of the *moral* Powers, as the *natural* ones advance; they would, in due Time, raise the *Adamical* Compound to all the Perfection and consequent Happiness this present *State* would admit, in the full and free Exercise of the *natural* Powers, and the Acquisition of the *moral* ones; tho' not to the greatest, yet to a competent Degree, and to the most perfect and orderly Condition this present probatory and expiatory State will admit. But the Nature of Things in and about us is such, and the Miseries and Sufferings are so constant, unavoidable and pungent, as will naturally and necessarily excite in a Mind cultivated after the Manner has been describ'd, an anxious Desire to inquire and examin if there be any possible Means to be freed from them at last; and if there can be any rational and probable Way to secure, at least after this *State* is past, and this *Adamical* clay Tabernacle is laid down, some State of Being, at least no worse, and as much better

better as may be, on our going into another Mansion : And this is the precise Condition of Mind infinit *Love* and *Wisdom* intends to bring his rational *lapsed* Intelligences into, by this wise *Oeconomy* ; for under such a Disposition, sooner or later, they will be fitted to hearken to, to examin and seriously to inquire into the Truth of *Revelation*, and heartily to say, *Lord ! what shall I do to be saved ?*

END of the FOURTH DISCOURSE.

Phi-



DISCOURSE V.
Philosophical CONJECTURES
ON
NATURAL ANALOGY,
ITS
LAWS,
AND SOME OF ITS
CONSEQUENCES.

-
- 1 Cor. xiii. 12. *For now we see through a Glass darkly —*
2 Cor. iv. 18. *While we look not at the things which are seen, but at the things which are not seen: for the things which are seen, are Temporal; but the things which are not seen, are Eternal.*



THE

DISCOURSE

Philosophical Conjectures

ON

NATURAL ANALOGY.

BY

J. A. W. S.

AND SOME OF ITS

CONSEQUENCES.

A COR. XII. 12. For now we see through a glass

A COR. IV. 18. While we look not at the things which

are seen, but at the things which are not seen: for

all things which are seen, are temporal: but the

things which are not seen, are eternal.

DISCOURSE V.

Philosophical CONJECTURES

ON

NATURAL ANALOGY, its
LAWS, and some of their CON-
SEQUENCES.

THINGS may differ in the *Degrees* of the same Qualities, as well as in *Kind*; as in a *Cube* of Gold and one of Lead, in *spiritual* and *material Substances*, and the like.

DEFINITION I.

DIFFERENCE in *Degrees* only, is where things having their *essential* Qualities common, admit in these Qualities, a *More* and a *Less*, or a Difference in their Degrees. For Example; A *Miniature* and a Picture to the Life; a *Cube* and a *Parallelopipedon* of the same Substance, and on the same Base; a *Man* and a *Child*.

DEFINIT. II.

DIFFERENCE in Kind, is only where some *essential* Qualities in the things
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compar'd are *common*, some are *different*; as a *Vegetable* and an *Animal*, *Matter* and *Spirit*, a *Cube* of Gold and one of Lead.

DEFINIT. III.

By *Ratio*, is here meant the Relation or Reference of any two things compar'd to one another, whose essential Qualities admit of *Degrees*, or of a *More* and a *Less*; as between a *Brute* and a *Man*, a *Man* and an *Angel*, and between different *Bodies* of the same Substance.

DEFINIT. IV.

SIMILARITY, is where there is an Equality or *Sameness* of *Ratio's* in the Substance, and essential Qualities of things, *differing* only by a *More* and a *Less*. For Distinction's sake, in abstracted or simple Ideas, or in *Qualities*, I should call this *Sameness* or Equality of *Ratio's*, a *Similitude* or *Likeness*; as in Problems of *Arithmetic* and *Geometry*, in Heat and Cold, in Light and Darkness, and the like. In *Things*, *Substances* or *Aggregats* of Qualities, I should call it *Similarity*; as in all the Individuals of the human *Species*, in *Animals* and *Vegetables* of the same *Tribe*, and their Progress from the *Embryo* or *Seed*, to Maturity, I should pronounce them, I say, in a *Similarity* of *Ratio's*.

DEFINITION V.

THINGS, Substances, and Qualities, are meant to be progressive, or in a Progression, which are constantly increasing or decreasing similarly: For Example; The concave Surfaces that make a Globe, (as the Coats of an Onion, the Membrans of the Cornea of the Eye) the Puncta Salientia, that become Animals; the Mathematical Point, whose Fluxion describes a Line; the Mathematical Line, whose Fluxion makes a Surface; and the Mathematical Surface, whose Fluxion makes a Solid.

SCHOLIUM.

*SPACE and Time, Motion and its Velocity, seem to be no Realities, at least no external Realities, but the mere Modifications, and different Circumstances and Situations of Bodies or Matter, and so nothing but mere abstracted Ideas, or an easier and clearer Manner for our finite Conceptions, which cannot comprehend any complicated Thing at once. A particular Space, or the Locality of a Body, seems to be a mere Mathematical abstracted Solid, (so to speak) or the last Limit or Term of a Mathematical Solid, or of Body *evanishing*; such an one as a Point is of a Mathematical Line, a Line of a Mathematical Surface, and a Surface of a Mathematical Solid; only here the whole Content of the Mathematical Solid, or *evanishing* Body, is com-*

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prehended

prehended in the *Idea*. The same way of Reasoning may be applied to *Time*, *Motion*, and *Velocity*, which are but the *Limits*, *Modifications*, and particular Circumstances of *Body* or *Matter*, and have no external *Realities*; but like the *Shadow*, that depends on the *Light*, shining on the *Body*: they all admit of *Degrees*, or a *More* and a *Less*, as belonging to, and connected with, *Matter* and *Bodies*. A particular *Space* is to a particular *Body*, what *o*, or the relative *Infiniteſimal* is to a particular given Progreſſion; and an *Inſinit Body*, like *inſinit Space*, is a mere imaginary *Idea*, the laſt Term or Limit of an aſcending Progreſſion, as *o* is of a deſcending one. Suppose, for *Example*, a Progreſſion of the Powers of Natural Numbers, or their Coſſic Characters, deſcending, &c. $+x^4+x^3+x^2+x+-x-x^2-x^3-x^4$, &c. the middle Term, *o* or $\frac{x}{\infty}$ will represent a Mathematical Point, and $+\infty x$ will represent an inſinit Body, and $-\infty x$ *inſinit Space*, $+x$ a particular Body, and $-x$ a particular Space; and ſubſtituteing for $+\infty x$, $x+x+x+x+x$, &c. and for $-\infty x$, $-x-x-x-x-x$, &c. (or what Number of unknown Quantities, or howſoever compounded, with their variable or conſtant Powers) and treating them according to the Nature of their Composition in a given Expreſſion, by the common Rules of *Coſſic* or *Arabic* Characters, and rejecting all the *finite* Terms, or thoſe of a lower Order of ſuch abſtracted Inſinit, and reſerving only
the

the *highest* Terms of the Expression ; and you will readily and intelligibly have all the *Mysteries*, and solve all the *Problems* discovered by *Fluxions*, *Differentials*, and *Series's*, in *Numbers*, *Space*, *Time*, *Motion*, *Velocity*, and *Bodies*, and see that all this *mysterious* and admired *Play* of the Understanding, is wholly about abstracted *Ideas*, and the Modifications of *Body* and *Matter*, which our narrow, limited and finite Faculties not being able to apprehend and conceive distinctly in the Complex, are forced to *parcel* out and divide thus into single intelligible Parts, merely for their own Convenience ; and so is a mere *Technical* Art of the Understanding and Imagination to assist the *Memory*.

DEFINITION VI.

RELATIVE *Infinity*, or Infinitude in Creatures, (whose Nature consists in being more or less respectively than any *assignable* Quantity whatever) is such as increases or decreases perpetually ; yet by no finite Power can be actually brought to nothing, and no finite Faculty can actually assign its *limiting* Terms, *viz.* the *greatest* and the *least*. In this Sense it is, that we suppose the least Particles of Bodies to be hard and indivisible ; that Body or Matter cannot be infinite ; that Matter is divisible *in Infinitum* ; that *Attraction* at a certain finite Distance becomes *Repulsion* ; that *positive* Quantities become *negative* in convergent

Progressions, or from *negative* become *positive* in divergent Progressions; which Progressions may be infinitely varied, even to a created or relative Infinitude, as Mathematicians know.

DEFINIT. VII.

ABSOLUTE Infinitude is the sole Property or Attribute of the *Deity*, who is *infinitely Infinit* in all Excellencies and Realities, which, though infinitely various, are at the same time infinitely *simple* and *one*. This is evident from the *Simplicity* and *Unity* of his Nature, as a true *Philosopher* must see.

DEFINIT. VIII.

THINGS are contradictory only, which absolutley and totally destroy one another, and mutually *annihilat* their Substance, Subsistence, and Qualities. Thus it is in things created, (if *absolute Contradiction* can subsist in them) Heat and Cold in the same Degree, Light and Darkness in the same Degree, *negative* and *positive* Terms of the same Progression, finite and infinit of the same Kind. But nothing seems to be so absolute a Contradiction as *necessary Existence* and *Non-entity*, absolute *Nothing* and absolute *Infinitude*.

SCHOLIUM.

It is doubtful, whether or not there can be any real and complete Contradiction between
created

created Substances, Things and Qualities, since they must all necessarily be *Pictures, Emblems* or *Miniatures* of the *Deity*, and the divine Attributes, Substance or Nature. There seems to be necessary, an *Energy, Action* and *Reaction* in the contradictory or totally annihilating Substances, Things or Qualities; as that between the good and evil Principle in the *Manichean System*; between absolute Nothing and absolute Infinitude, in the true *Philosophical System*; between *Creation* and *Annihilation*: For in all created Things, Substances and Qualities, there is *Subsistence* and Reality, (*Spiritual, Intellectual* or *Material*) which cannot be annihilated or render'd totally contradictory, but by the same *absolute Infinitude* by which they were created or ordain'd; and infinit Perfection can at no future Time be contrary to itself; *the Works of God are without Repentance*; and *Reaction* always supposes *Action*. In created Substances, Things and Qualities, there seems only to be a *Contrariety*, that is, a Contradiction or Annihilation of *some* of the Qualities, and their respective Degrees. Thus *material* and *spiritual* Substances may be contrary to one another, but not contradictory; being actually united, and some-how ally'd, in all intelligent Beings; and having some Qualities *common*, as actual *Existence*, and a Power of intending and remitting their *Energy*, or of *Expansion* and *Contraction* in their Substances and

Powers, *analogous* to *Elasticity* in Bodies. They must indeed have Limits and Bounds of their Activity and Self-mobility, beyond which they can do nothing, which Powers *Matter* seems design'd to terminat and counteract (as Shadows die away in thick Darkness). *Matter* may suspend, contract and destroy the Action and Exertion of these *spiritual* Powers, but cannot annihilat their *Substratum*, nor destroy their *Root* or *Fund*; for after their Concentration by Matter or Body, they will still subsist in the *Substratum*, either in *Root* or *Act*, in a finite Magnitude, or *infinitesimal Miniature*.

DEFINIT. IX.

ANALOGY is a *Similarity* in Substances and essential Qualities, differing only by a *More* or a *Less*, or in Degrees.

SCHOLIUM.

ANALOGY is of two kinds, *simple* and *complex*; that is, perfect and complete, or imperfect and incomplete.

DEFINIT. X.

SIMPLE Analogy, is where there is a perfect and total *Similarity* of Substances, and essential Qualities, differing only in Degrees. As that between a *lumbaginous Animalcul*, a *seminal Embryo*, a *Child* and a *Man*; that between a *Seed* and a *Plant*. Of this Nature are all the particular Answers to indetermin'd
Pro-

Problems in *Algebra*, and all the particular *Curves* that answer the same Conditions in *Geometry*, of which there is an infinit Variety.

SCHOLIUM.

THERE are (I think) *Substances*, Things and Qualities of a *middle* Nature, between the *Extremes*, or the *greatest* and *least* of their Terms, in every created Reality; as between any two finite given Terms in Quantities, there is an Infinity of *mean Proportionals*, actual and assignable; as between x and y there is the *Mean* \sqrt{xy} , and between x and \sqrt{xy} there is $\sqrt[3]{x^2y}$; and in a Circle of an infinit *Diameter*, between any finite Part of the *Diameter* and the other infinit *Segment*, there is the Perpendicular, (a mean *Proportional*) which is neither infinitely *Small* nor infinitely *Great*, (I speak only of *relative* Infinitude) and which I should call *Indefinit*; so in Substances or *Substrata* of Qualities, whether *Material* or *Spiritual*, (the two Terms or Limits) some may approach or *verge* towards gross indiscerptible or imporose *Matter*, or pure *Spirit*, in all the Degrees of *relative* Infinitude, which never can by any Power less than *absolutely* infinit, arrive at either of the Extremes. This in *Algebra* and *Geometry* is demonstrated; and the absolute Infinitude, Purity and Simplicity of the Divine Nature makes this Distinction necessary here.

COROLLARY I.

HENCE it will be reasonable to suppose, that as *Matter*, by its infinit possible Division, Minuteness and Rarity, by its Elasticity and Velocity, may be sublim'd and refin'd into *relative* Infinitude, so as to become, as it were, Sir *Isaac Newton's Spiritus quidam Subtilissimus*, and meet only with an infinitely small Resistance in passing through gross and porous Bodies, such as our *Planet* is; so *spiritual* Substance may be *analogically* supposed to be capable of all the relative Degrees of Purity and Sublimity, or Grossness and Density, till it terminat in the lowest or highest *spiritual* Substance, which yet will ever be contrary, though not contradictory, to *material* Substance.

COROLLARY II.

HENCE it will follow, that this infinitely refin'd material Fluid, of indefinit Rarity and Elasticity, will meet with no sensible Resistance in passing through gross *planetary* Bodies; yet its Parts being still *Material*, and subject to the *Laws* of all material Bodies, must at least meet with some *infinitesimal* Resistance, and have some *Reaction*; as the *Rays* of the *Sun*, being Oceans of material Particles, constantly emitted from his Body, must necessarily lessen it, though insensibly and infinitely little, yet *really*; so that neither of them can be design'd to last to an actual Eternity

Eternity in their present State ; they may be so alter'd on proper Occasions, by the Power and Influence of Him who first created them, as to answer the Ends of his wise Providence, but cannot continue as they now are during all his *Eternity*.

DEFINITION. XI.

COMPLEX or imperfect *Analogy*, is where there is only a *Similarity* between a certain Number of essential Qualities, that differ in Degrees, and are diversified in other Qualities less essential ; as that between a *Man* and an *Angel*, that between a *Man* and a *Brute*, or that between a *Plant* and a *Brute* ; and the several *Ranks* and *Orders* of Being emerge as these Qualities increase and multiply.

PROPOSITION.

ALL Creation, the whole System of the Universe, with all the particular Systems in Nature, all Beings animated and inanimat, all Substances, Qualities and Realities whatever, and every individual Circumstance in Nature, is nothing, and necessarily can be nothing, but the Supreme Being, his Nature and Attributes, transubstantiated into Being and Preceptibility, pourtray'd and shadow'd out and drawn forth ad extra. *Mundus universus nihil est nisi Deus explicitus.* But the *Workman* will eternally be different in *Kind* from his *Work*, the *Cause* from the *Effect*.

DE-

DEMONSTRATION.

BEFORE *Creation*, *Omnipotence* itself could find no *Pattern* or *Model* for his Operations *ad extra*, but Himself, and his own Attributes, or the *Ideas* of his own Mind; which being infinitely perfect, must necessarily have been the *best* and most eligible to imitat and copy out in his Productions; and *Perfection* being *simple* and *one*, by the Necessity of his own perfect Nature, He could act outwardly no other way than by this *Analysis*; and this is a Demonstration *a priori* from the *Cause* to the *Effect*, if any thing can possibly be such; and in *fact*, it holds equally strong *a posteriori*, so far as the wisest and best-cultivated human Spirits can reach or investigat, takeing in the necessary *Conditions* and Circumstances, as far as Experiment and Observation can discover; which I intend to shew and illustrat in a few Instances.

§. I. THE *vegetable* World, in its Variety, Elegance and final Causes, is a most astonishing Proof of God's *geometrical* Knowledge and Skill, (so to speak) and fully shews what *Matter*, the grossest and most unactive Substance, can do, when contriv'd and directed by his Wisdom and Power. In *Plants* and *Vegetables*, there seems to be no *spiritual* or self-motive Power; but only a *material* Spirit, or such an one perhaps as Sir *Isaac Newton's*
Spiritus

Spiritus quidam subtilissimus: Here, and in *material Agency*, that Fluid seems necessary; and the few Observations he has offer'd to infer its Necessity, (which the present Experiments and Discoveries about the Cause and Laws of *Electricity* and *Magnetism* wonderfully confirm) are supported by its Implication here in *vegetable Nature*, in order to explain the *Actuation, Growth* and *Increase of Plants* and *Minerals*; all which vegetat and increase according to *general Laws*, which no less Power than that of the *Author of Nature* could so wonderfully have contriv'd and perpetuated. For though by Heat, Moisture and *Attraction*, from a *supramechanical* original Formation and Arrangement of the indivisible *Particles* of Matter, or original Elements, their future Progression, Development and Multiplication may be now, in the gross, understood and explain'd; yet the Cause of *Attraction* and *Elasticity*, the first Impulse, and motive *Energy*, and the Continuance of these Powers and Activity, can so probably be accounted for from no other *Principle*, as this relatively infinitely *rare* and *elastic* Fluid, the Size, Figure and Laws of which could come only from this infinitely powerful and wise *Geometer*.

§. 2. THE totally inanimat Creation (consisting either in the Fragments of the animated Parts, or in the now aggregated or compounded *Molecules* of the *primary Elements*)
shew

shew and speak the Wisdom and Skill of their *Artificer*; but more especially the *Systems* and Collections of these *elementary* original Particles, *viz.* *Air, Water, Light, Salts, and Mercury*; how proper their *Size, Figure* and *Laws*, for the Uses and Ends proposed? This *Speculation* would rapturously imploy the Eternity of a *sagacious* natural *Philosopher*. Sir *Isaac Newton* has, with great Penetration, discover'd many hitherto unknown *Mysteries* and *Miracles* of Wisdom, in the *Theory* of *Light* and *Colours*. I will only suggest on the Head of this and the former *Proposition*, that had it not been for the first Contrivance in the *Systems* of minute Particles now mention'd, there could not possibly have been any proper Materials for the *Food, Growth* and *Increase* of the *Vegetables, Minerals* and *Metals*; and had it not been for the Combination and Arrangement of the *Elements*, into such middling integral Particles, as are these of the *Vegetables*, there could have been no proper and peculiar Food for the *Animals*; the whole *System* being so disposed in a perpetual *Climax*, that all its Parts mutually depend upon and are subservient to one another; the *Tubes* of *Vegetables* being *mechanically* fitted and *harmoniously* adjusted to *mould* the Form, the Size, and combine these Elements into the middling nourishing integral Particles, for the Food of Animals, by the Solar Heat, and the Laws of Attraction in minute Bodies.

§. 3. IN *sentient* and *intelligent* Beings, from the brute Creation, through *Men* and *Angels*, up to the *Seraphims* and *Cherubins*, as far as *Creation* reaches, the *Analogy* is plain, simple and necessary. The *three* natural Powers of *Liveing*, *Intelligence* and *Liberty*, in their spiritual self-active Principles, cloath'd and circumscrib'd by *æthereal Vehicles*, seem to be there in a perpetual *Climax*, and differ only in Degrees. The essential Difference between this and the *vegetable* and *mineral* Creation, (which are both of the same Order and Tribe, and by the same vegetative Laws, diversified under different Circumstances, (like the initial Terms of an *algebraic* Canon converging into the higher and more advanc'd Terms) equally grow and increase) seems to consist in the *self-motive* and *self-active* Powers of the former, of which the *latter* is intirely destitute. The *vegetable* Creation seems only to be actuated by the *Powers* of Matter, and is consequently *inert* and *passive*, and continue for ever in their Place and Situation, unless forced from it by some external *Impulse*; whereas the *brute* and animated Creation have a *self-motive* Power; so that *Vegetation* intirely depends upon the Powers of *Matter*; and *Animation*, in all its Degrees, requires a *spiritual* Substance of some Rank or other: And here the essential Difference between vegetable and animal Nature lies, *viz.*
in

in the *locomotive* Power of the latter, of which the former is destitute intirely, and is merely *passive*. But since the *brute* Creation, in some Degree, plainly manifests all the *Passions* and *Affections* of Mind, that we of the *human* Race are capable of; since they *live*, or are actuated by a *self-motive, self-active* Principle; since they *feel* Pleasure and Pain, and may be (at least most of them that fall under our Observation) made to *learn* and *understand* some things (which is a Proof that they are endow'd even with *Intelligence* in a lower Degree); and since all of them, from the minutest *microscopical Animalcul* up to the *Elephant* and *Whale*, suffer, and must necessarily suffer, a Million of different ways here, at last most intensely by their *Death* and Dissolution, it is highly *probable* that they are in a *lapsed, expiatory* and *progressive* State of Being, and may advance to higher Degrees of Perfection and Happiness, like the *initial* Terms of a diverging *Progression*: This the *Analogy*, perspicuous and necessary in all the Works of infinit Wisdom, and the various and manifold Operations of *God's* Power, makes highly *probable*, rational, and *philosophical*. Infinit Benevolence admits of no Stop or Bounds in its Communication of Being, Happiness and Perfection, but what arises from the Difference of the *Order of Nature*, or of *Things*.

§. 4. As to us of the *human* Race, our *original Powers*, the Order, Rank and present State of our spiritual Nature, and self-motive Substance, with its original *æthereal* Vehicle, at present cover'd over with a *Crust* of the Substance of the gross ruinous *Planet* we inhabit, so much has been already said in the former Discourses, that to avoid *Tautology*, (which I have perhaps run too much into), I shall not come over the same Subject here.

§. 5. THE *angelic Hierarchy* must, in its own Nature, and from our present *lapsed* State and Condition, be absolutely unknown to us, but in so far as *Revelation*, or *philosophical Analogy*, give us some dark *Hints*; but such *Hints* they do give us, as imply no Contradiction, but on the contrary have a great Degree of *Probability* and Verisimilitude, and naturally flow from the infinitely various Wisdom of the great Author and Cause of *Creation*: We may err in the Detail, but not in the general *Idea* about them. We see what a Variety (an infinit Variety) of *Vegetables* and *Animals*, in their several *Tribes* and *Species*, He has produc'd; and if we could possibly observe and class them, taking in those we cannot discover but by the Help of *microscopical* Art, we should find this Variety increase infinitely more in the *animated*, than in the *vegetable* Creation, rising in a certain *harm-*
P *nious*

nious Progression and Variety, and which, no Doubt, is multiplied in the same Proportion in the *angelical* World. For, as things combin'd multiply or increase in the Number of their Qualities or their Degrees, so do the *Combinations* possible and actual, as is well known to *Mathematicians*. The *Fixt Stars*, with their *analogous* planetary *æthereal* pure and sublime *Systems* and *Apparatus*, seem most probably to be the *Seats* of the unlapf'd *angelical Hierarchies*; and he that knows, or has a dark Notion only, of the *Number* of those already discover'd, the *Number* of those hid in the *Milky Way*, as it is called, and the infinite *Extension* and *Expansion* of *Space*, which, in order to preserve the Situation, Distance and *Equilibrium* of these *Orbs*, must be filled with *analogous Luminaries* or *Systems*, may have some Idea of the infinit *Number* and Variety of these *Hierarchies*. They must all have some *generical* Nature, as well as *specific* Differences: This *generical* Nature may probably be no other, than the *fundamental* and *essential* Attributes of the *Deity*, viz. *Liveing, Understanding* and *Will*, or *Father, Son* and *Holy Spirit*, as has been *analogically* illustrated, and which, in gross solid Matter, are shadow'd out in the *trine* Dimensions of Bodies. Their *specific* Differences no finite Capacity can possibly assign or comprehend, but there are two very eminent, essential and *luminous* ones, suggested to us from *Revelation*,

velation, and confirm'd by *philosophical Analogy*, viz. those of the distinguishing Characteristic of the *Son* and *Holy Spirit*. St. *John* says, *God is Light*, and in Him is no Darkness at all; and in another Place he says, *God is Love*, and he that dwelleth in *God*, dwelleth in *Love*: That is, the Divine Nature and Substance is *Light* and *Love*; and accordingly, the highest Orders of the *celestial Hierarchies* are eminently *Light* and *Love*, or they are infinitely *Luminous*, or infinitely *Ardent*; which two Qualities make the *Characteristic* of the *Che- rubims* and *Seraphims*, as their *Names* import; and these two Attributes of the Divine Nature seem to pass variously, and in different Degrees and *Gradations*, through all Creation down to inanimat Nature; and in each Individual, they are both radically and actually existent, but in different Degrees, according to their several *Orders*. *Existence*, or *Liveing*, is common to all created Beings, which is an analogous *Participation*, *Picture* or *Image* of the *Father* and Creator, by whom are all things. Some Bodies are nothing but *light*, luminous and transparent, as *Fire*, *sulphurous* Bodies, and all *minute* Bodies, violently agitated, or put into brisk *vibrating* Motions; and every Body *shredded* sufficiently thin, becomes *diaphanous*; and all Bodies whatever, *reflect* or *refract* Light. Some Bodies, again, are more or less *attractive*, as *Salts*, *Oils* and *Sulphurs*; and some at certain Distances less

than infinite, are *repulsive* (which is a flagrant Picture of Lapse, Corruption and Rebellion in *spiritual* Nature). All these Qualities have their *analogous* and correspondent Powers in *spiritual* Nature, which to a *Philosopher* of any Penetration were superfluous to detail. For in *spiritual* Beings and intelligent Natures, these two Qualities and their higher Degrees, in some more than in others, are so conspicuous, that they cannot be over-looked. In all *Founders* of *Republics*, and *Civil Societies*, in all *Law-givers* and *Philosophers*, in all *Apostolical* Men, in the *Inventers* of Arts and Sciences, even in the Broachers of *Heresies*, this Quality of *Light*, however coarse, turbid, and confin'd, seems to have been their *Passion*, their *Fort*, their *Characteristic* and over-ruling *Byass*; and in all the *Hermetical* Tribe, the *Solitaries*, the true contemplative *Philosophers*, the *Founders* of *Orders*, *Monasteries* and *Collegiat* Life, in true and zealous *Patriots* and Lovers of their Country and *Species*; in short, in all the *contemplative* and abstracted Persons, *Love* seems to be the *predominant* Affection; and this Division runs through all, even corrupt and lapsed Nature, and makes the great *Distinction* of Mankind, into the *Governed* and *Governing*; those who defend Truth, and those who attack Error; those who *thrust*, and hit the Mark best, *i. e.* the *Law-givers*, or their *Makers*; and those who *parry* best, *i. e.* *Politicians* and honest *Statesmen*; those fitted by Nature to

command, and those that are made only to be *commanded* and obedient; that is, all the *active* and *social*, or the *Children of Men*; and the *Sons of God*, or the *Thinking* and *Contemplative*. But this Difference is with infinit Variety, great Imperfections, foreign Mixtures, and *diabolical* Influences in corrupt Nature; but never the one in any eminent Degree, without some Degree of the other, as they are both united to *Infinitude*, in their divine *Original* and *Cause*; and these Differences make up the *Specification* and *Individuation* of the several Particulars of *lapsed*, free and intelligent Nature, and the Difference of the Conduct of *Divine* Wisdom, in their Purification and Restoration, who with infinit Wisdom and *Propriety*, conducts all and each, without *Violence* on their Freedom and specific Qualities, or *Dissonance* to the *Harmony* of his own Attributes, to their great and *final* End of Being; which is the wonderful *Oeconomy* of the general and particular *Restoration*; and this Difference and Distinction of the original Qualities and Affections of the Soul, *viz.* *Light* and *Love*, and the different *Manœuvre* and Conduct of Providence in this State towards them, is founded on the different Parts they might have acted in the general *Lapse* of Mankind, and the different *Offices*, Seats and *Mansions* they are to be prepar'd for in the universal Monarchy of the *Restoration*; and may make the otherwise *unaccountable* Difference of the *Bodies*, *Spirits*, *Tempers*,

Capacities, and outward and inward Success in this State, of two Children of the same Birth, as *Twins*, or two immediately succeeding one another of the same Parents, under the same Education and Beginnings in the World, and on the same Bottom; which every one must have observ'd to be as various, different and distant as the *Poles*, and in a manner *diametrically* opposite, even otherwise unaccountable and odd.

§. 6. THAT the *fixt Stars*, and their analogous *planetary satellitious* sublimer *aethereal Systems*, may possibly be the *Seats* and *Mansions* of the *unlaps'd, tried* and *purified angelical Hierarchies*, and of restor'd, purified and glorified *sentient* and *intelligent* mortal Beings, seems not only probable, *philosophical*, and according to the general *Analogy* of Things; but is strongly and frequently hinted in *Revelation*, as every one who is familiarly acquainted with it must know. *God's Throne*, his *Shechinah*, the Heaven of Heavens, his Dwelling-place, is always represented *above*: *Elijah* went upwards, *Christ* ascended, and the Seats of the blessed are always represented as among these celestial *Orbits*. And though *Analogy* may not *apodeictically* demonstrate a *Fact* or *Truth*, especially as to its *precise* and *specific* Nature and secondary Qualities, in the Detail, about *im-perceptible* and *spiritual* Beings (precise
Truth

Truth in these Matters being not only incompatible with *Finitude*, but counteracting *Faith, Trust* and *Resignation*, the sole Means of our Recovery and progressive Purification, being absolutely destructive of *Liberty*, and clashing with the *Divine* Attributes of infinit Justice and Purity, and his absolut Dominion over the Creation); yet when *Analogy* and *Revelation* concur in the same general Conclusion, it is so high a Presumption and Probability as comes nearest a *Demonstration*; at least to those who have any Regard for Revelation; for to such it will be self-evident, that infinit Wisdom, and absolut Infallibility, will never make the most distinct Approach to any *Allusion* or Similitude, that borders on things in no Degree of Alliance, *Approximation* or Neighbourhood, or where the *Contact* is not as near as Circumstances will admit, or that is not as the first Terms of a convergeing *Progression*, or *one* that will lead his low, wandering, blundering Creatures into gross Mistakes; that Bodies or Vehicles of spiritual Substances must have an *Ubi*, a *local* permanent Situation at last, is certain; that these numberless glorious *Luminaries* were lighted up with such a Profusion of *Lustre*, only for us stupidly to gaze at, is ridiculous. That they must be infinit in their Number, (I mean always creaturely relative *Infinitude*) follows from the infinit Expansion of *Space*, and the *Equilibrium* necessarily to be preserved, in order to perpetuat the Situation, Distance and Relations of these glorious

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Luminaries. That they may be of an infinitely purer, more refin'd and sublim'd Matter than even that of our *Sun*, (who was design'd grossly only to picture out the Divine Nature to us *lapsed* Mortals, and to enlighten and cherish us a little, and our dark Prison, during our *Probation* and *Recovery*, and not made for Perpetuity; and which is cover'd over and compress'd with a gross dense *Atmosphere*, with *Maculæ* and *Spots*, that possibly may hinder its too quick and violent Consumption) is highly probable. These *fixt* and permanent *Luminaries*, with their analogical *planetary Apparatus*, may be the Seats of the *Bless'd*, whose glorious *Vehicles* may be of the same Matter and Substance with their respective *Mansions*. These *æthereal Planets* and *fixt Stars*, may be so situated, and so *harmoniously* plac'd in regard to one another, that the Rays, and, as it were, spiritual or *æthereal* Matter, which they perpetually pour forth and emit through the whole *Expansion* of Space, may by a perpetual *Flux* and *Reflux*, and *melodious Vibrations*, be return'd back again upon one another, and so perpetuat and *eternise* their *Lustre* and *Glory*. The Rays of our Sun have Fits of easy *Transmission*, *Refraction* and *Reflexion*; according to Sir *Isaac Newton*, its Particles have a greater *Byass* on the *one* Side than on the *other*; they attract one another in an infinitely greater Proportion than their Power of *Gravity* in general. *Bodies* may
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be turn'd into *Light*, and *Light* into *Bodies*. Some *Diamonds* and precious Stones are *luminous*, emit *Light*, and shine in the Dark. Several *Phosphors* (liquid and solid) emit *Light* at all Times, both in *Air* and *Water*; and the *Asbestos* and purest *Gold* bear all Degrees of Heat and Fire without much Alteration; and the purest *Glass* in the *Focus* of the strongest *Specula*, only continues liquid without any other Change. These *Facts* I suggest only to shew that *Light*, as well as other *Bodies*, may be various, of different Purity and Sublimity, differing in *Degree*, though not in *Kind*; and much more might be suggested here, to shew the various Nature and different Qualities of *Light* and luminous *Bodies* one from another, if necessary, to illustrate this perhaps *imaginary* Speculation, at least save it free from Contradiction or Impossibility; but I propose in this mere *Conjecture*.

§. 7. THAT *infinite Wisdom, Power* and *Love*, could produce no *sentient* or *intelligent* Being *ad extra*, without impressing in the *Fund* and *Essence* of its Nature, an *infinite Love* to Him, an insatiable and unextinguishable Desire, Thirst and *Ardour* to be reunited at last with Him, as its supreme Felicity, is as *absurd*, and, I think, *blasphemous* to doubt, as to doubt of his *Being* and Existence. To think otherwise, is to question his *infinite Perfection*; for *infinite Perfection* must be
single

single and *one*; and sentient and intelligent Beings, without this radical and innate *Ardor* for *Happiness*, that is, to be at last united and to commerciate with infinit Perfection, seeing, by the *Sensibility* and *Intelligence* of their Nature, they are capable of it, in their Order, would be an *Effect* without a *Cause*, or an *Action* without an *End* or *Purpose*, at least without intending the self-evident *best* End, which is a Contradiction the most absolute to infinit Perfection. No *sentient* and *intelligent* Being ever was without an *Ardor* or Bent towards *Happiness*; it is a *radical* Principle in their Nature, and never counteracted, though its Nature and true Cause is often mistaken, may be unknown or forgot, yet it can *finally* consist only in this *Reunion*. But Sensibility and Intelligence, being by their Nature and Essence *free*, must be *labile*, and by their *Lability* may actually *lapse*, degenerat, and by Habit acquire a *second Nature*, opposit and contrary to this implanted *Byass* and Tendency towards a *Reunion* and permanent *Commerce* with their original and *first Cause*; and by *Selfishness*, inordinat Love and Idolatry of their *Fellow-Creatures*, sopit and extinguish this central *Byass*, at least as to *elicit Acts*, though not in the *Root* and *Fund*: And in this *Contrariety*, *Distraction* and tearing asunder of these *moral Powers* in *spiritual Nature*, the Essence of *Misery* and *Hell* itself chiefly consists. So long as this contrary, habitual and foreign *Byass* lasts, so long must
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the *Unhappiness* and *Tortures* of such *sentient* and *intelligent* Creatures continue; like the *Chill* and *Cold* in the *Comets*, while in the Parts of their *Orbit* most distant from the *Sun*; or like the small *Particles* of Matter, which out of the *Sphere* of their *Attraction* become *repulsive*, and by the Law of their *Passivity* continuing ever in the *State* into which they are put, must for ever proceed in this their *repulsive* Course. But this contrary *Byass* to *Reunion* with their infinitely perfect and happy *Original*, being *adventitious* only, and by *Habit* only confirm'd into a *second* artificial *Nature*, the infinit *Love*, *Wisdom* and *Oeconomy* of the *Son* of *God* was contriv'd and design'd to melt down, *annihilat* and destroy, that the original innate *Byass* might operate and take Place; and without this infinitely wise *Oeconomy*, to me it seems, the permanent Order, Peace and *Harmony*, and consequent *Felicity* of universal sentient and intelligent Nature, could no other possible way have been or be establish'd at last.

§. 8. It is not impossible, but extremely probable, and according to the universal *Analogy* of Nature, that our *Planets* and their *Satellites*, should be the more tolerable *Fails*, *Prisons* and *Dungeons* of the several *Orders* and *Degrees* of *lapsed*, *probationary*, *sentient* and *intelligent* Beings. That some of them are straiter, less comfortable, more dark, dismal

mal and unhappy than others, there is no doubt can be made. That they are not, nor cannot be design'd for an *eternal* Duration, in their present Condition, is highly probable. We see on this our *Planet*, that the Bodies, Tempers and Habitues of *sentient* and *intelligent* Beings, that continue long in such particular *Climats*, and under such Influences of the Celestial Bodies, alter, and take a *Turn*, according to the general Laws and Temperature of that *Climat*. The *Planets* and their *Satellites* have an infinit *Propriety* and *Fitness* for being more tolerable *Bettering* and *Correction-Houses* and Prisons, for lapsed, sentient and intelligent Beings: They are no ways, nor cannot become, in their present Situation, *Pleasure-Houses*, Paradises, and happy *Mansions*, nor permanent Dwelling-Places for perfect and glorified Intelligences. The *natural* Language of the *Deity* to us in our present Condition, can be no other but by *Types*, *Similitudes*, *Allusions*, *Parables*, *Allegories*, *Analogy*, and *final Causes*, without Violence on our *Liberty*, our Acquisition of *Faith*, *Hope* and *Charity*, or debasing his own infinit Purity and Perfection; at least about invisible and imperceptible Beings and States under our present *Lapse*; and therefore I conjecture, that our *Planets*, and their *Satellites*, are design'd by infinit Wisdom for the temporary *Jails* and *Correction-Houses* of *lapsed*, probationary, *sentient* and *intelligent* Beings; and that their
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superinduc'd Vehicles, or other *penal* and *penitential* Habits, are of the same Substance and Materials with the respective *Prisons* they are confin'd to.

§. 9. THAT the *Comets* cannot be the *Seats* of blessed Spirits, I think, is self-evident: That they are not made only to supply our *Planet* the *Earth*, or even all the other *Planets* with *Moisture* and *Humidity*, only, is as evident. The *Number* of them (perhaps half a dozen in a *Century*) that have been observ'd and seen, and of which we have some Records, with their sensible Effects, Appearances and *Periods*, are abundantly too *many* for that *far-fetch'd* and *precarious* Purpose only. Our *Water* most certainly decreases, and must necessarily be exhausted in time; as do the *Heat* and *Rays* of the *Sun*; but not so sensibly as to lay a Foundation for Experience and Observation by our Senses or Art: But rather to increase our sensible Punishment, and natural Purification, at the last Stage. And it is highly reasonable and *philosophical* to suppose, that our whole *System* was design'd by our *Creator* to last in its present Situation, only so long as was requir'd for the *Probation*, *Purification* and *Expiation* of lapsed *sentient* and *intelligent* Beings, which both *Revelation* and *Philosophy* shew cannot be an *infinite Duration*; but that the whole *planetary System*, within the *Orbit* of *Saturn*, is progressively

gressively and by *general Laws* verging towards some grand *Catastrophe* and *Jail-Deliverance*. The *Elect* seems to imply, the *Officers* and *Governors* of this *new Jerusalem*, this *political* future State, this universal *Restoration Monarchy* of the *Father of all*; and the *Period* of the Duration of this present *probatory* State of the *System of Saturn*, seems confin'd and limited in *Revelation*, to the Number of the *Elect's* being accomplished, that is, to the Time when all the necessary *Officers, Governors* or *Magistrates* of this *new* universal Government is formed, finished and accompliated, and then will be the End, *Crisis* and *Period* of this *probatory* State. I say then, the *Comets* cannot be the Seats of the Bless'd, if Alterations of Heat and Cold, *Summer* and *Winter*, in some more temperat and moderat Degree, be necessary for tolerable liveing, in Bodies *crusted* over with the Substance of which the *Habitation* is made, (as it is *philosophical* to think of the Inhabitants of the *Comets*) seeing their *Orbits* are so *excentric* to the *Sun*, the *Foci* of their *Ellipses* so vastly distant, that they must pass for Ages through both Extremes of Heat and Cold, and be perpetually involv'd either in *Fine* or *Darkness*, and so in extreme Misery, as to their incrusted *Machins*; and consequently they probably are the *Prisons, Condemn'd-Holes* and *Dungeons* of *God's Kingdom*, and universal *Monarchy*.

§. 10. IT is both *rational* and *philosophical*, and according to the natural *Analogy* of Things, to suppose, that the *next* World, or its several Steps of Progression, and its initial Steps or first Terms, and the invisible impreceptible State of *Things*, in the *other Life*, has a great and near Similitude and Resemblance to this present State; and that they differ chiefly in *Degrees*, the *other World* being of an infinitely greater Purity, Sublimity and Perfection only, without the *Errors*, *Darkness* or *Miseries* of this Life. *God is the same Yesterday, To-day, and for Ever*, immutable and invariable in his Nature and Attributes; and, as has been often hinted, all his Works *ad extra*, and the Operations of his Wisdom and Power, have a perpetual ascending *Analogy* and Progression towards Him, his Nature and Felicity. It is true, *Revelation* informs, that *Eye hath not seen, Ear hath not heard, nor hath it entered into the Heart of Man to conceive the Glory and Happiness that God has reserved in another Life for them that love Him*. But as that refers chiefly to the inward Joy and Happiness, *Extasies* and *Transports*, that the consummately Blest'd feel in their Commerce and *final Union* with *Him*, their infinitely perfect Source and Original; so it does not affect their outward *State*, their *Polity*, external Order and *Mansions*, of which only I am here speaking; and of which the Description and Account

count by *Revelation*, intimats plainly a great *Affinity* with the most perfect and happy Condition of our *now* World; and it is highly probable, they differ more in *Degrees* of Perfection than in *Kind*. The *new Jerusalem* is liken'd to a City, a State and *Republic*; it has its People, Subjects and Officers; it has *Temples*, *paradisaical Gardens*, *Rivers of Pleasures*, a *perpetual Spring*, and all our best and most *beatifying* Delights and material Comforts here. I know all this Language and Description is but *Allusion*, *Figure* and *Allegory*, and must be understood chiefly of our *Creation* or *glorified* Bodies; but as every created Being, *sentient* and *intelligent*, has a Body or Vehicle as well as Spirit, an *æthereal*, planetary, or a glorified *Vehicle*, the last inseparable and immortal, as well as a *spiritual self-motive* Substance, the Body or glorified *Vehicle* may have *analogical* Food, some Fruit of the *Tree of Life*, which in *Paradise* itself perpetuated the *Immortality* of, and would have *eternis'd* the *Creation Vehicle*; it must have an *Ubi*, a *Mansion* and Dwelling-Place; it must have *analogous* Pleasures of an innocent, spiritual and sublimer Nature, proper to its Order and Rank, and proportion'd to the Purity of its then *Body* and *Soul*; there must be different *Orders*, *Ranks* and *Distinctions*; superior Officers and Subalterns, a *Government* and *Polity* in the *new* as well as in the *old Jerusalem*: In short, they will probably differ not
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in *Kind*, or absolute and total Contradiction, from the best and most perfect State of Things here, that can be imagin'd or describ'd, at least in the first Steps or Terms in the progressive *Perfection* and *Happiness*; but in Degrees, and in *Negation* of all that is imperfect, *dissonant* and disorderly in this *present State*; but this in an *infini*t, that is, a relative or creaturely *infini*t superior Degree; and into the *final*, consummat and perfectest State, we must mount only by *Degrees*, and *Steps*, through many *Mansions* and progressive *Order*; and by acquireing an habitual *Stability*, by repeated *Acts* and *Trials*, be confirm'd in eternal Purity and Felicity at last; and one *Stage* of Being will be perhaps but an *Apprenticeship* and probatory Initiation for a higher and better, and this without Bounds and without Limits (I mean only as to the bodily *Restoration Vehicle*, its *Mansion*, *Food*, created Pleasures and Enjoyments, which can only flow from the Fund, the spiritual Inhabitant's being restor'd and perfectly united with, and transform'd into the *Divine Nature* and Qualities). This *System*, modestly explain'd and cautiously guarded, in the Proportion of *Perfect* to *Imperfect*, *Infini*t to *Finite*, Innocent to Lapsed, would, I think, take off many Difficulties in *Revelation*, in the *Oeconomy* of *Jesus* and the *Restoration*, the different Methods of Providence, and its present Appearances, and our Mistakes

of the *Sentiments* and Writings of *inspir'd* Authors. For it is impossible the Spirit of God should insinuat any *Resemblance*, Alliance, or *analogical* Similitude between things that differ *generically*, were *disparata* and incompatible; but between such as were verging by Progression, and in an *Approximation* to the real Perfection of their Natures. Lapsed Beings are infinitely distant at present from such a *final Union* and relative *Identity* with their Source, and his *Throne* and *Shechinah*: But must be like the *Assymptots* of *Hyperbola's* and their *Curves*, eternally approaching to, but never able totally to coincide.

§. II. *ANALOGY*, 'tis true, can never demonstrat the actual Existence and real Being of any thing to us: *Sensation* only and Experience can do that. It is only capable of explaining and illustrating the Nature, Substance and Qualities of Things already made and created. It is, as *Quintilian* very elegantly describes Analogy, *Ejus hæc vis est, ut id quod dubium est, ad aliquod simile, de quo non quæritur, referat, ut incerta certis probet*. But then it takes off any Contradiction and Impossibility from its *Existence*; makes it possible, probable and rational; and renders it a fit Subject for the *supreme Reason* and *Power* to work upon, if He pleases, and *similar* to his other Operations; it clears all possible Objections,

jections, and *Difficulties*, and makes it natural and intelligible; and that is precisely what our present Condition and Situation requires, or will admit, for the Acquisition of the *moral Powers, Faith, Hope and Charity*, to secure our *Liberty* from *Violence*, and the *Divine Attributes* from *Dissonance*. And if the fundamental *Proposition* be admitted, viz. that all the Works of infinit Wisdom and Power *ad extra*, are and can be nothing but Pictures, Resemblances and Signatures of *God's Nature, Substance and Attributes*, in *Miniature, impress'd or prominent*: In a word, if it be true, as has been said, that *Mundus universus nihil est nisi Deus explicitus*; and, I think, nothing can be more self-evident; then most of the Consequences I have drawn from this great Truth are necessary, natural and obvious; especially when Revelation suggests the same Truths and Conclusions, at least in general. We may very readily err in the *Detail*, and in the Eliciting and Application of a particular Case; but not so readily in the *general* Law, as is common with *Algebraists*, they often blunder in the Application, who were in the Right in the *Canon*.

§. 12. WE may blunder and be mistaken in our particular Conclusions and Deductions from this universal *Analogy*, I say, as well as in *Geometry* and *Algebra*, being weak, fallible, and imperfect Creatures: But our Errors and

Blunders in the *first*, will sometimes proceed from a different Cause from our Mistakes in the *latter*. A wrong Head, want of Culture, and *Precipitation*, are generally the Cause of our Mistakes in *Geometry* and *Algebra*; but in *Analogy*, especially that *Analogy* which concerns the moral Attributes of the Divine Nature, the *human* Soul, the *holy Scriptures*, and invisible States, it is owing often to a wrong *Heart*, *Pride*, and Self-sufficiency. We are afraid such pure and sublime *Theorems* should be true; they hint the *Necessity* of a greater Purity in us than we are willing to cultivate at present. If we ascribed all Perfection, every *good Gift* and *perfect Donation*, to the supreme Cause; and were at the same time humbled and contented even with our own Ignorance, Errors and Blunders of *Love* and *Resignation* only; if our Sentiments and *Ratiocination* were intended for his *Glory* and *Magnificence* solely, and our own Humiliation, satisfied with this single Truth alone, that God is *God*, that is infinitely *perfect*, they could neither hurt us nor others. But if our Heads must needs be at work (as mine has here); if, like Children, we must play with *Ideas*, and *philosophise* about the Kingdom of *Invisibles* and *Imperceptibles*, and the *Arcana Imperii divini*; if we cannot at first, at least and in our Years of *Probation* or *elementary* State, arrive *per saltum* at pure *Love*, *naked Faith*, and *universal Resignation* (the only solid Means of

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Infallibility and Stability); then the best and surest Method is to deal in *Analogy*, as the *Mathematicians* do in *Algebra* and *Geometry*, to acquire a Facility in solving difficult *Problems* with Readiness and Accuracy; *viz.* by laying up in our *Memory*, or having ready at hand a *Penus Analogica*, as they have a *Penus Analytica*; in beginning with the most *simple* and least complicated *Analogies*; in attentively observing the *Ratio's*, Relations and References of Things, Substances, their Qualities and probable *final Causes*, and finding out their Degrees and Progression. The *Astronomers* had with Exactness and Accuracy discover'd and settled the *Orbit*, *Period*, *Distance*, and Laws of the *Sun* and *Earth*, before they attempted with any Success that of the *Moon*; and Sir *Isaac Newton* had settled and adjusted the Laws, Motions and Appearances of the *Solar System*, before he attempted the *Moon* and *Planets*; and had for seven Years studied experimental *Chymistry*, before he set about to investigate the Nature and Laws of minute Bodies and their *Systems*; he had cultivated and made many and various Experiments, by separating, combining and *analysing* the *Rays* of *Light*, through many *diaphanous* Mediums, before he attempted to discover the Nature, Figure, and Laws of their component Particles. *Analogy* and its Appendages, *Type*, *Allusion*, *Similitude*, *Parable*, *Hieroglyphic* and *Allegory* (all more remote or nearer Approaches to

Analogy) is the only natural Language the *Deity* can speak to us at present, under our Degeneracy and *Lapse*, consistent with his *Dignity* and *Purity*, and the Preservation of our *Liberty*. He may speak to us mediately by his *Angels*; He may speak to the Wills by his *Holy Spirit*, and to our *Understandings* by his *Word* his only begotten *Son*, and in the holy Scriptures by his *Prophets*, *Apostles*, and *Saints*; but his sole, *natural*, articulat, indelible and universal Language, can possibly be no other but his Works of Wonder *ad extra*. *The Heavens declare the Glory of God*: By the Characters and *Hieroglyphics* intimately impress'd on them; and they can only be read or understood by *Analogy* to *Him*, to *us*, and to *one another*. If then we began with this inanimat World, in (which only true natural *Philosophy* from final Causes can instruct us) thence proceeded to the *vegetable* World, then advanc'd to the *brute* Creation, (where *natural* History and *Chymistry* will be of great Service) and at last ascended to *intelligent* Beings, through the *angelic* *Hierarchy*, till by *Analogy* we arriv'd at the *Supreme Cause*; this Method would be the most natural and secure, in a *natural Progression* by *Analogy*: And if with Humility, Modesty, and begging the Direction of the *uncreated* Wisdom, we persever'd with Patience: this divine *Philosophy* might, in time, (cultivated by different Hands) be of Service to the *contem-
plative*

plative Christian Philosopher himself, as well as to others. But my Meaning will be better understood by a short *Recapitalation* of what has been said, and an *Illustration* by an Example.

1. WHEN God intended to bring Creatures into Being, He could not chuse but make them after the most perfect Pattern : He therefore stamp'd his own *Image* upon all his Works. Hence the Creatures, being all *Miniatures* of the Deity, must bear a mutual Resemblance to Him and to one another. This *Resemblance* is what we call *Analogy*, and runs through the whole *Scale of Beings*; every *Being*, besides its *peculiar* and distinguishing Quality, whereby it is determin'd to this or that particular *Order*, and has the *Pre-eminence* of all below it; being also possess'd of all those Qualities that are to be found in any of the inferior *Orders*. As a *Curve* of any of the *Orders* has all the Properties of the inferior *Orders of Curves*, besides those that belong to its own Class or *Species*.

2. THESE different *Orders* or Ranks of Beings, being distinguish'd by their respective Qualities, the *first Term* of this infinit *Scale* will be simple *Existence*; the Addition of *one* Quality will constitute the *second Term* or *Order*; of *two*, the *third*; and so of the rest; whence the Number of Qualities with which

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any Being is endow'd, will determin its Place in this *Scale*, and shew its Distance from the *first Term*. Besides this Difference in the several *Orders* of Beings, there is also a Diversity among those of the same *Order*, which proceeds from their possessing some of the common Qualities in a more or less eminent Degree.

3. As *God* can have but one *Model* in all his Productions, every *System* of Beings will resemble all the other *Systems*, and each will be a Copy of the whole *Creation*. The *material* World will be a Transcript of the *spiritual*; and the *Laws* and *Oeconomy* of the *one* will be analogous to and correspond with those of the *other*. Besides this general *Analogy*, there will be a more immediat and flagrant Relation between each *material System*, and the Intelligences to which it belongs; the Structure of the Bodies and other material *Organs* of these Intelligences, together with the whole Frame and Contexture of the material *System*, being such as will best suit the Nature, Rank and *Order* of these *Intelligences*. And this Relation probably will subsist and attend them in all the *Changes* and *Periods* through which they pass; so that should the intelligent *System* lapse from its Purity and Perfection, the material *System* would fall into Disorder likewise, and undergo some *similar* and *analogous* Change.

4. OF this general *Analogy* between the *spiritual* and *material Systems*, there are many *Traces* plainly to be discern'd by an acute and *contemplative Philosopher*. To instance only in the Similitude which our *solar System*, as now disorder'd, bears to the *lapsed Intelligences* that inhabit it. (In the Centre of this *System* is plac'd the *Sun*, a bright and lively Image of the *Deity*, his material inanimat *Miniature*; the *Planets* and other *celestial Orbs* revolving about him at their respective Distances, and performing their Revolutions in different *Periods* of Time, will represent the several *Orders* of *lapsed Intelligences*, the different Degrees of their *Lapse*, and the Duration and Continuance of their *probatory* State. This glorious Body, the *Sun*, infinitely surpasses all the other *Orbs* in Magnitude and Lustre; they are no more, compar'd to him, than Points in the *Circumference* of a *Circle*. They have no Brightness of their own; it is all deriv'd by *Reflection*, and is more or less, according to their Distance from him.

5. THE chief Properties of the *Sun* are *Attraction*, *Light* and *Heat*. The *Sun's Attraction* extends to the remotest Parts of the *System*, acting at all Distances, with a *Force* increasing in a certain Proportion as these Distances decrease. 'Tis by this *Attraction*

traction that the *Planets* are retain'd in their *Orbits*, and kept from flying off in the *Tangent*, to which their *projectile* Force gives them a constant Tendency. Should the *Sun's Attraction* cease but a Moment, the whole *System* would fall into the utmost Disorder, and be irrecoverably ruin'd. How like is this *Attraction* to the *Love* of *God*, continually operating upon all created *Intelligences*, and powerfully solliciting them to a nearer Approach and Resemblance to Himself! Its Influence is constant and invariable; were it possible it should have the least Intermiſſion, the whole *Creation* would fall into utter Ruin and Destruction.

6. THE *Light* of the *Sun* is diffus'd throughout the whole *System*; no *Celestial* Body is endow'd with this Quality but himself. This is an *Image* of that *Light which enlightens every Man that comes into the World*; an *Emblem* of Him who came forth from the *Father of Lights*; the *Light* and *Sun* of the new *Jerusalem*, and of *spiritual Nature*.

7. THE *Sun's* Light is always accompanied with Heat, the Principle of *Life* and *Vegetation*. In the other celestial Bodies there is some small Degree of this Quality, but it is originally deriv'd from or produc'd in them by the *solar Heat*; without which they would be barren and inhospitable *Desarts*. This

re-

represents the Influences of the *Holy Spirit*, which are inseparable from the *Light* of the *Gospel*; and are the Principle of our *spiritual Life*, animating and cherishing every intelligent Being, and making it productive of all the Fruits of Righteousness.

8. LET us next consider the Properties of the *Planets*, and other Bodies that revolve about the *Sun*. Their various *Magnitudes* and *Distances* from the *Sun*, with the *periodical* Times of their Revolution, will express the several *Orders* of *lapsed Intelligences*, the different Degrees of their *Lapse*, and the particular *Periods* of Time allotted for their Trial and *Probation*. Some of these Bodies, as the *Comets*, move in *Orbits* that are very *Ellyptical*, going off to immense Distances from the *Sun*, where the Influence of his *Heat* and *Light* is almost insensible; but by the Force of his *Attraction* they are again drawn back, and brought even to a nearer Approach than other Bodies that move in narrower *Orbits*.

9. THE *Planets* are constantly acted upon by two different Forces, viz. *Gravity* or *Attraction*, and the *projectile* Force. These are contrary to one another, and always act in opposite Directions; the *projectile* Force giving the *Planet* a constant Tendency to recede from the *Sun*, and to fly off in the *Tangent*; while

while the Force of *Attraction*, by drawing it the contrary way, prevents that Effect: So that by the joint Action of both, the *Planet* is kept in its *Orbit*. The *attractive* Force, though continually influencing the *Planet*, is not a Quality of it, but proceeds from the *Sun*; the only Quality belonging to the *Planet* is that of the *projectile* Force. This will shadow out the *Lapse*, the Action of *Selfishness*, and the inordinate *Love* of the Creature, with their Opposition to the *divine Love*.

PHILOSOPHERS tell us, that the present State of our *System* cannot be of long Continuance; but that the *solar Attraction* must necessarily prevail over the *projectile* Force of the *celestial* Bodies; and all the *Comets* and *Planets*, with their *Satellites*, be at last *absorb'd* and *swallow'd* up in the *Sun*.

F I N I S.

A N
A B S T R A C T;

Or, A Brief, but Distinct

R E P R E S E N T A T I O N
O F T H E
Doctrines *and* Sentiments

Contained in the preceding

D I S C O U R S E S.

OF THE
ABSTRACT
OF A Brief, but Distinguishing

REPRESENTATION
OF THE
DOCTRINES AND SENTIMENTS
CONTAINED IN THE PRECEDING

DISCOURSES.

A N
A B S T R A C T
 O F
D I S C O U R S E I.

PHILOSOPHICAL CONJECTURES
*about the Nature and Qualities of
 the Original Animal Body, and of
 its Progressive State, in its several
 Stages of Existence.*

THAT there may be *Animals*, (and
 consequently animal *Organs*) per-
 forming *analogically*, at least, the
 animal *Functions*, less than our Senses can
 discover, assisted by our best *Art*, possibly
 less, than our Imagination can frame an Idea
 of Page 1
 Several *Demonstrations*, shewing the utter
Impossibility, that an *animal* Body could be
 first form'd, or can be now continued, by
 mere

mere Mechanism, or the Laws of Nature now obtaining; but must be the immediat Work, continued and supported by the constant Influence of an omnipotent and omniscient *First Cause* 3

That the *least* and *last* Particles of Matter can be divided by no finite Power whatever 4

That their *Figures* were probably at first only *Spheres, Cubes, and equilateral triangular Prisms* ibid.

That our now porous and confus'd *Elements, Salts, Water, Light, Air, and Earth*, still have *inherent* Qualities, which distinguish them from each other, which they never totally lose, tho' these may be swallow'd up, when combin'd *unharmoniously*, as they now are 5

That the original *Creation*, and the *Resurrection* Body, might have been, and may be, of this first kind of simple *Elements*, *harmoniously* combin'd; but are now crufted over, and *discordantly* blended with the gross secondary Elements of this *ruinous Planet* we inhabit 6

That the Fineness of the original *æthereal* animal Body, may have been in *Proportion* to its *Order*, and the Perfection of the natural and moral Powers of the *Soul* conjunctly 7

That this *analogically, spiritual* (so to speak) animal Body, might have been *roll'd* up, and

and *concentred*, into a *Miniature* of a *Miniature in Infinitum*, in the Loins of the *first Adamical Parent*, till by its being sufficiently plaister'd over with the Matter of this ruinous *Planet*, it became able to bear its now *Inclemency*, and be born into this World 8

That this *primitive, æthereal*, divinely *organiz'd Body*, by an *individual Fitness* and Congruity to the informing spiritual Substance, might have been thereby so intimately and *commensurately* united with it, that they could never after be separated by any finite Power, no more than the *original Particles* of Matter could be divided by such a Power *ibid.*

That the confineing this original *spiritual Body and Soul* so long a Time to so dark a Prison, as the *Seeds and Eggs* of Animals are now, might have been for *progressive Purification, Correction and Punishment* 9

That it is *Fact*, that the *wisest and best Men*, have been at first mere *Vegetables*, afterwards mere *Brutes*, and but at last *rational* intelligent Beings 10

That *sentient and intelligent* Beings are by their *derivative* Nature immortal and unannihilable, and because *God* can never be contrary to Himself; but are in a *progressive* State towards Perfection and Happiness in their Order, like the several Orders of *Hyperboloids* 12

That the *natural* Powers being uniformly constant and invariable, and the *moral* Powers being cancell'd by the *Lapse*, had not the *natural* Powers in their full Vigour been suspended and fetter'd, they must have *counteracted* the Acquisition of the *moral* Powers 13

That *precise* Knowledge, and *mathematical* Certainty, in the real Nature, and of the intimat Substance of any complex Thing, is incompatible with *Finitude*; and that the *Degree* of Certainty in Things, is only in Proportion to the *Amplitude* of the Faculty 16

That subjecting all Creation to *general Laws*, was one infinitely wise and effectual *Mean* to secure *Liberty* inviolate, and to *harmonize* the Divine Attributes, in the great Work of Restoration 17

That the only thing worthy of a *Philosopher*, is, by *Experiment*, *Attention* and *Induction*, to collect as many of these *general Laws*, as he possibly can 18

That God being *Simple*, *One*, and always the same, must necessarily act by *general Laws* in all *Creation*; but that good and wise Men have been deterr'd from studying them, in *spiritual Nature*, out of Dread of the odious Appellation of *Enthusiasts* 19

That the Study of these *general Laws* of infinit Wisdom and Sagacity may be a Part of
of

of the Employment of happy *contemplative*
Spirits hereafter 20

That an infinitely rational and perfect Being
could possibly have no other *Pattern* or
Model for his Works of Creation at first,
but *himself*, his own *Substance*, *Nature*
and *Attributes* 21

That therefore there must be one perpetual
Analogy and *progressive Perfection* run-
ning through all the Works of an infinitely
rational Being; and that as *Proportion* is
the *Key* of the material, *Analogy* is the
Logic of the *spiritual* World 22

That *Suffering* is a *mechanical* and necessary
Consequence of our present *Situation* on
this *ruinous Globe*, and that none ever could
avoid it absolutely, but in Degree, and that
thro' the Merits and *O Economy* of *Jesus*
only. *Sufferings* become *Blessings* because
Means of Restoration 24

That this *Suffering* is a natural and *mechani-
cal* Purification and Perfection of the *Sub-
ject* 25

That *Consciousness* of the *End* or Occasion
of this *Suffering* is no way necessary to-
wards the beneficial Effects of it: That
Consciousness would be prejudicial in the
first Steps of this Purification; and only
when its *End* is obtain'd, can it be benefi-
cial to *clench* its Effects 26

That the great *Problem* and Difficulty with
the *Best of Beings* (so to speak), and in the

Oeconomy of his Providence, and the Reason of the present Darkness in it, is to restore *lapsed* Creatures, in Consistence with their *Liberties*, and the *Harmony* of his *Divine Attributes* 27

That the general Methods of Providence in restoring *lapsed* Intelligences, are plainly,
1. The continuing *general Laws*. 2. The suspending the *elicit* Acts of the natural Powers for a Time, by Ligatures of this ruinous *Planet*: And, 3. By the admirable and adoreable *Oeconomy of Jesus* 30

That it is a Contradiction to suppose a *beneficent* Being would create *sentient* or *intelligent* Beings, for *Suffering*, merely for *Suffering's* Sake *ibid.*

That the *Sufferings* of the *sentient* and *intelligent* Creatures, in this present State, necessarily supposes a State of *Pre-existence* and a future *Lapse*, or a *Course* of *Trial* and *Probation* 32

That there may be other *States* and *Mansions*, in *infinitum*, of *progressive* Purification and Perfection; and that *Suffering*, which in the Divine Purity, and the Nature of Disorder, must have been *eternal*, is made temporary only, by the Merit and Suffering of *Jesus* 34

That *spiritual Substance* may be conceiv'd analogous to, and not contradictory to Matter sublimed and refined by the Power of *Omnipotence*; but even this *Idea* is imperfect,

fect, and not satisfactory, their Substances being naturally destructive of each other, and their Qualities in all their Modifications equidistant.

37
That the *spiritual Body*, and immaterial *Spirit* crusted over with Clay, may for its Purification progressively be an infinit time in *developeing* these natural Powers, and in acquiring the moral Powers defaced by the Lapse; but that now under the *Oeconomy* of *Jesus*, this will be perfected in a finit Time, and even the whole *System* of *Saturn* is by general *Laws* verging to some great *Catastrophe* or Change

42
That the *Spirit*, as being a Ray of the Divine *Substance*, or a Power emitted from his *necessarily* existent Nature, is immortal in its own Nature; but that the *spiritual* or *æthereal* Vehicle is only immortal by the *Divine* Order, and comparatively, as the first Particles of Matter are *indivisible*

43
That the thinner and lighter the *Crust* on this *æthereal* Vehicle is, the natural Powers will be elicited more readily and freely, and the moral Powers acquir'd more easily and fully, and the necessary Sufferings thereby lessen'd

44
That since the *natural Powers* of the *Spirit* are constant and always the same in their *Root* and *Fund*, it will follow, 1. That our acquir'd Knowledge is but Remembrance. 2. That there is in our spiritual Nature inherent and

innate a *moral Sense*, and a *natural Sagacity*, as well as natural Sensations. 3. That there are innate Ideas of God and Virtue, and of moral *Good* and *Evil* in the Soul, tho' sopited and unelicited, as well as a natural Power to perform the *animal Functions*. 4. That spiritual *Sensation* and *Senses* (justly explain'd) are Realities, and not Figures. 5. That the Soul, in her Operations now, can only use and employ the material Organs of the *æthereal* Vehicle crufted over as they are with *planetary* Clay, which she must endeavour to extend, develope and mundify. 6. That *Culture*, Study and Labour in extending and perfecting the *natural* Powers, is but removeing Superfluities, cutting off Excrefcences, and rendering the *æthereal Vehicles* and their *Organs* pliant and supple, and for the which we are now condemn'd to labour for our Punishment and Purification. 7. That the shortest Way to perfect the *natural* Powers, is to labour at the recovering the *moral* Powers

46

That the *Activity*, *Sensibility* and *Penetration*, the *animal Functions*, the Passions, Sentiments, Memory, Imagination, and the other more material and less abstracted Operations of the *Soul*, and even the *involuntary Functions*, the voluntary Motions of the Body, are more immediatly performed by the *self-moveing*, immaterial, naturally sagacious *Spirit*, on the primitive *æthereal* Vehicle
divinely

divinely organised, but now crufted over with Clay, as Springs and Weights move Clock-works, the first tho' having an *innate* Principle of *Self-action*, the other only an *extraneous* and adventitious one 48

That in this *progressive* endless *Purification* and Perfection of an Animal in Body and Spirit, there may be many Steps, Stations and *Mansions*, and, one finished, another may begin, till the *final* Completion 50

That in this endless *progressive* Purification towards consummat Perfection and Happiness, there may be a particular *Law* of *Attraction*, Fitness and Similarity, proportion'd to the Acquisition of the *moral* Powers, and Extension of the natural Powers, that may draw and determine them to their several *Stations* and *Mansions*, as the Eggs of *Insects* and Seeds of *Plants* are by *Electricity* drawn to their proper *Nidus's* and Leaves, till like the *Asymptots* of Hyperbola's they come at last to meet in their Curve ibid.

That this Sketch of a System is innocent, tho' it should be deem'd a *Romance*, which is all I am answerable for 51

A N
 A B S T R A C T
 O F
 D I S C O U R S E II.

PHILOSOPHICAL CONJECTURES
*about the Preference of Vegetable
 to Animal Food; and of the End
 and Design of Providence in Ap-
 pointing the first, and, on Trial,
 Permitting the latter.*

THAT by our present *Frame*, we are fit-
 ted as for *Vegetable*, so for *Animal*
 Food, at least in the Days of our Vi-
 gour; but that *Animal* Food, on Trial,
 and consequent Miscarriage, under the first
 intended and appointed *Vegetable* Food, was
 permitted by the Author of Nature, as a
pis alle, 1. To let us feel the natural and
 necessary

necessary Effects of our own *Lusts* and *Concupiscence*. 2. To produce naturally and *mechanically* those Pains, Miseries and Distempers, that might create a Horror of inordinat *Lusts* and *Appetites*, and afford Time and Opportunities to ponder and think, and thereby to return to *Order*, *Love of Virtue*, and its *Source*. 3. To shorten the Duration of our natural Lives, that Sin and Misery might not increase, or last *eternally*. 4. To *concentre* our natural Powers to a *Level* with our defaced moral Powers, that, without clashing, they might rise, and be restored, in the same *Progression*. And, 5. Perhaps to connive at what, without committing Violence on Liberty, could not at that Time be prevented. 55

That our present earthly Bodies being compos'd of the now *secondary Sulphur, Salt, Air, Water* and *fine Earth*, only, and it being certain, from *chymical* Experiments, that *Sulphur* and *Salt* are the two most active and destructive *Elements*, and that the *three* last, *Air, Water* and *fine Earth*, are more innocent, the less active and deleterious, and *Animal* Food abounding most in the two first, and *Vegetable* in the three last; consequently *Animal* Food must be more destructive to *Animal Bodies* than *Vegetable* in the same Proportion. 2. Because by *Experiment* the Juice and nourishing *Extract* of *Animal* Food is more *tenacious* and

and *glewy* than that of Vegetable Food.

3. Because *Animal Food* abounding more with *Salts* and *Sulphurs*, and they by their Nature being always in perpetual Motion and Action, must *mechanically* tear *Animal* Substances faster than Vegetables, which abound most with the more *passive* and innocent *Elements*; especially, 4. When *fermented* Liquors are join'd to them, as Dilution, which harden the *solid* Meat, and obstruct its Solution and *Digestibility*. And *lastly*, since, 5. the *Particles* of Animal Food being strain'd through the finer *Tubes*, and stronger *Organs*, of Animal Digestion, must be more minutely divided than the Particles of Vegetables can, by their fewer and grosser Tubes of Preparation, and being destitute of Animal *Heat* and Force, and having only the *Solar* Heat and universal Law of *Attraction* common and equal in both; on these Accounts, the *Particles* of *Animal* must be much finer than the Particles of *Vegetable* Food, and consequently have a *proportional* much greater Degree of *Attraction*; must therefore be united with greater *Force*, and form stronger Obstructions, and being more *delicious*, betray the Feeder more readily into *Excesses*. On all which Accounts, (I say) *Animal* Food must *mechanically* and necessarily create Diseases, and shorten Life more readily than *Vegetable*

That since what is, and *necessarily* is, must be a Part of the *Intention* of the *Creator*, and since *Animal* Food necessarily begets Diseases and Pains more readily than *Vegetable* Food can, there is no accounting for the Permission of *Animal* Food, but by supposing Pain and Suffering here a necessary Mean of *Expiation* and *Purification*, which *GOD*, on *Trial*, finding nothing else could reclaim his *rebellious* Creatures, *unwillingly*, as it were, permitted it, as a *Father* sends his *Son* to the *Correction-house*: And that, as when by *Pride*, *Tyranny*, *Malice*, *Murder* and *Brutal* Commerce, by the more luxuriant and delicious *Vegetable* Food, the *Deluge* came to its *Pitch*, he was forced to destroy both the People and their Food by this *Deluge* 62

That to those to whom *Revelation* is familiar, the like Means of Correction will be evident from the Permission of *Plurality* of Wives to the *Jews*; and that under his immediat and miraculous Government, he, on their Murmurs, *indulged* them in a *Monarchical* Government, as a kind *Father* admonishes his froward giddy Child to beware of too familiar Approaches to Fire, by burning his Fingers 64

That there is no accounting for the *Permission* of *Animal* Food, on the Foot of *Natural* Religion, the wanton Murder of *Animals* for Food, when more salutary *Vegetable* Food

Food can be readily had, showing a Cruelty and Ferocity inconsistent with beneficent Natures; but that the *universal Proprietor* of Life and Happiness might, with great *Wisdom, Justice* and Kindness, knowing when the Term of *Expiation* of a lower Class of probationary, progressive or *lapsed Animals* is accomplish'd, give Leave, in the Course of his Providence, to put an *End* to their present Manner of Living, and advance them thereby sooner to a higher State of Being and Felicity, and at the same time *secretly*, and in Consistence with their *Liberty*, to admonish a higher *Rank* of Intelligences what they merited; for these (to be sure for wise and beneficent) Ends, perhaps unknowable by us, *GOD* might have permitted the killing Animals for our Food, as he certainly did for Sacrifice; for this we have a *Patent* in Revelation, but none for fermented Liquors, but as *Physic, Cordials* and *Stomachicks* or *Bitters*, on Extremities, Sicknes, inclement Seasons, Fatigue or in Festivals

64

That fermented Liquors of any Kind can never, in their Nature, be proper, or the *best*, for *Animal* Health and Life; for they are the spurious Invention of *Art*, and the further Deviation from the *Simplicity* of Nature, which has given us no Intimation of any such Kind of Beverage in the Preparations of pure Nature, and which the
Animals

Animals who follow the *Laws* of *Nature*, will not touch; they are properly *Physic*, *bitter* Draughts, and unnatural *Cordials* on Extremities, in Sickneſs and inclement Seaſons, and only deſign'd for a *temporary* Relief, and occaſionally. *Fermentation* concentrates, condenses and contracts, as it were, to a Point, at leaſt to a much ſmaller Volum, (like a *Burning-glaſs*, which condenses the *solar* Rays, to make them more *fierce*) all the *deleterious* Particles of the *Vegetables*, that is, their *Salts* and *Oils*; and is the true and ſole *Cauſe* of all our great and atrocious Diſtempers, eſpecially of all the Train of the frightful *nervous* Diſeaſes which now rage univerſally in *England*, like a *Plague*; and have been increaſing ſince the *Conqueſt*, and ſince Wine has been familiar to all Ranks; and Water-drinking only, timeouſly begun in Life, is the only ſufficient *Antidote* for theſe moſt wretched *lunatick* Diſtempers

46

That there are many Evidences of the Hurt *fermented*, but eſpecially *ſpirituſous* Liquors, do an *animal* Body; as, 1. That they harden and deſtroy the *Digeſtibility* of animal Food, and indeed of all kinds of Food in the Stomach. 2. Becauſe they *corrugat* and *contract* the *Fibres*, and pin together the Particles of the Food, ſo that they cannot be ſo readily ſeparated and divided into their *integral* nourishing Parts. 3. Becauſe by their

their Heat and Activity, they bring the *Fibres* and *Membrans* of the digestive *Organs*, and all the other Solids, into too violent and frequent *Vibrations* and *Succussions*, and thereby break the *Tone*, and destroy the *Elasticity*, of these *Organs*, dissolve their Continuity, and so wear them out much sooner. And, 4. Because they *stunt* the Ductility and Growth of the animal *Organs* themselves, and thereby hinder their Developement, Extension, Elasticity and natural Strength, by continuing their *linear* or superficial Amplitude folded or rolled up 68

That all *sentient* and *intelligent* Creatures are in an expiatory, perfectioning and progressive State, is evident, because here they must necessarily suffer; and infinit Beneficence could not possibly create any sentient or intelligent Being, merely to suffer; but chiefly, perhaps only, for *Expiation*, and consequent progressive Perfection and Happiness. That probably the early and universal Precept of *Sacrifice*, might first introduce *animal* Food; which *Sacrificeing* might have been intended, 1. Silently and kindly to admonish the *Sinner* to consider what he deserves: In this silent manner possibly, for the preserving Liberty inviolate, all the Animals might, partly, be design'd to read us Lectures of Instruction in Morality, or of the Conveniencies of Life, in the same manner. 2. By a *Prolepsis* to per-

perpetuat the Expectation and Hope of some more *noble Sacrifice*, with such a View as the *Eucharist* was instituted after *that* Sacrifice had been accomplished. But yet this Permission seems to have been against the *Grain*, as may be gather'd from the Caution not to eat the Animal's *Blood*, in which its *Life* and *deleterious* Qualities alone consisted

73

This Aversion in infinit Wisdom and Goodness, to permit the Use of animal Food, which He condescended to, merely for the *Hardness* of the *Hearts* of his *lapsed* Creatures, kindly to give them a forced Permission to do what He found they would presumptuously do, is further shewn by the Distinction between *clean* and *unclean Animals*, which were not to be eaten; which in their Nature are more apt to *madden* the Passions, enrage Distempers, and produce an Aversion to Virtue. And tho' St. *Peter* had a miraculous *Vision*, to tell him nothing was *unclean* under the *Gospel*, yet that was not till the Doctrine of *Self-denial* and Mortification was establish'd, as the Fundamental of *Christianity*

74

That some *Vegetables*, as *Eastern Gums*, *Spices*, *Aromaticks*, pungent *Fætid*s, and *Onion* Tribes, are more destructive to *Animals*, than young white *animal* Food

76

To the Difficulties, that our *blessed Saviour* eat and drank with *Publicans* and *Sinners*:

That

That he wrought his first *Miracle* to produce *Wine*: That he fed a Multitude by miraculous *Animal* Food: That St. *Peter* had a Vision to instruct him, that all Food was equal: It is answer'd, 1. That the Question only is, Which of the two Foods, *Animal* or *Vegetable*, was probably first intended by the *Author* of the Universe before the *Lapse*, and the Ruin of the *Planet* we now inhabit? 2. That different Repairs are necessary to different Degrees of Ruin, even in material Habitations. 3. That there is neither *Virtue* nor *Vice* in either kinds of Food, but in their *Quantity*, or as they are commanded by *lawful Superiors*. But that a *low* or vegetable Diet is naturally and mechanically more productive of Health and long Life, and consequently of *Knowledge* and *Virtue*, than a high *animal* Diet. 4. That our *Saviour* came to seek, to save those who were lost, and so was under a Necessity of converseing with the *Voluptuous* and *Sinners*: But that the Preference he gave to a *low Diet*, was implicitly included in his grand Doctrine of *Self-denial*, and taking up the *Cross*. 5. I grant, that in our present Situation on this *ruinous Globe*, it is *impracticable* and *impossible*, for Persons of all Ranks, Conditions and Occupations, to live intirely on *Vegetables*: Their Use *now*, is only to cure, alleviat and lessen the *Distempers*

generated necessarily by *animal* Food, and *fermented* Liquors: And, 6. Even these, and *spirituous* Liquors, are sometimes necessary on Extremities, in some Diseases, as *Filips* and Cordials for temporary Reliefs; and infinit Wisdom foresaw this Mischief of these high Meats and Drinks, and provided an *Antidote* for them, at least for a Time,

1. By making the great Bowel, the *Liver*, to draw off their Poison, and turn it into a *salutary Medicin*. 2. By forming *mineral* Waters of all kinds, with such Profusion and Variety, every-where on the Surface of the *Globe*: And, 3. By creating the Minerals themselves, *Mercury* especially, mechanically adjusted for that Purpose, among many other Uses and Utilities, of ponderous and mineral Medicins, which probably were not in the *same Form*, or so readily at Hand, before the *Flood*

81

That to the Appearances in the present State of Nature, that seem to clash with this Doctrine (which consists only in these *three* Propositions, 1. That *animal* Food, in its own Nature, is more ready to produce Distempers than *vegetable* Food. 2. That therefore infinit Wisdom must have had wise and beneficent Ends in instituteing the *first*, and but probably permitting only the *latter*: And, 3. That therefore the latter must be the proper *Antidote* for Disorders produc'd by the former); it is to be ob-

S

served

served further, that at present our whole *System* is in Disorder, in a purifying, and, as it were, in a *febrile* State, labouring in a *perfectionating Progression* by general Laws, under natural *Liberty*, and the *Harmony* of the Divine Attributes, which must at last terminate in relative Order, Perfection, and universal Happiness. That now there is no such thing as avoiding the destroying of *animal* Life absolutely; but that it should not be done out of mere *Luxury*, *Wantonness* and *Ferocity*, which even the rapacious Animals do not, but from want of any proper Food

86

That on the whole, it is plain from Revelation, that, 1. *Animal* Food was permitted, and *fermented* Liquors not absolutely, but their Excesses, forbidden. 2. That in many Circumstances and Situations, a reasonable Quantity of *animal* Food and *fermented* Liquors is absolutely necessary for a Time. 3. That it is plain from *Philosophy* and *Experience*, that Excesses in high animal Food, and strong fermented Liquors, are the true and adequate Cause of the great and atrocious Distempers. 4. That *animal* Food, and *fermented* Liquors, will necessarily shorten Life (perhaps one half) more readily than *vegetable* Food, and unfermented Liquors, and in the same Proportion cause Distempers. 5. That tho' a moderate Quantity of *animal* Food and *fermented* Liquors will

will naturally warm and strengthen the Blood, and tighten the Solids for a Time, and consequently is necessary in all *eruptive* Distempers, yet they will shorten Life, and produce Distempers, much more readily than *vegetable* Food, and unfermented Liquors. 6. That for bodily and *mechanical* Strength during a Time, and for a transient Occasion, tho' *animal* Food, and *fermented* Liquors, be the most effectual; yet for *intellectual* Purposes, *vegetable* Food, and *unfermented* Liquors, are certainly fittest. But to secure the *golden Mediocrity* between bodily Strength and clear penetrating Heads, about a half Pound of animal Food, and a half Pint of fermented Liquors, in the intirely Healthy and Young, or rather less, seems to bid fairest in Quantity for that Purpose: The Valetudinary must gradually sink below this healthy Standard, till, by Experience, they find their own proper Dose

A N
A B S T R A C T
O F
D I S C O U R S E III.

A PHILOSOPHICAL THEORY,
*founded on Experiments of the Na-
ture and Laws of minute inanimat
Bodies, and their Systems in general.*

PROPOSITION I.

THE least *Particles* of Matter are of
various Sizes, Densities and Figures;
the very *least* are almost *infinitely*
small, hard and elastic, making the *first*
Order; the *second Order* are compos'd of
those; and these combin'd make the *third*
Order

92

SCHOLIUM.

The Quantity of *solid* Matter in the *material*
System of the Universe, may be very small;
and

ABSTRACT of, &c. 261

and yet, if duely divided and arranged,
might answer all the Appearances of *mate-
rial Worlds* 93

PROP. II. The *least Particles* of Bodies are
indivisible by any *finite* or created Powers

94
Analogous to *Gravity* in the great Bodies of
the Universe, there is in the least Particles
of Matter, a Principle of *Attraction* and
Repulsion *ibid.*

SCHOL. I.

What the general Law of *Attraction* and *Re-
pulsion* in the *least* Particles of Matter pre-
cisely is, has not yet been determin'd; only
in receding from the *Contact*, it is demon-
strable that it is greater than the *reciprocal*
Duplicat. 95

SCHOL. II.

If *Particles* attracted each other in the *reci-
procal Triplicat* in their Point of Contact,
the Force of their *Attraction* would be in-
finitely greater, than at any assignable Di-
stance; yet it would not be infinitely greater
than the Force of *Gravity*, since any Body
may be separated by an assignable Force 96

SCHOL. III.

Repulsion begins and goes on, where *Attrac-
tion* ends; and they probably go on accord-
ing to the same *Law* and Progression, but
with contrary *Directions* *ibid.*

PROP. IV. The Force of *Cohesion* in the small Particles of Matter, is in a compound *Proportion*, of the Quantity of their *cohering* Surfaces, and the Quantity of their *attractive* Powers ibid.

COROL. Therefore the less the *cohering* Surfaces are, the less will be the Degree of Cohesion, and the least of all will be in *Spheres* or *Spheriods* 97

PROP. V. The Force of *Attraction* in small Particles increases, as the *Size* of the Particles is diminished ibid.

PROP. VI. The *Gravities* of Particles decrease as the *Cubes* of their *Diameters* ibid.

COROL. Hence, from the Smallness and Divisibility of its Parts, *Mercury* is so easily rais'd; and Bodies may be suspended in *Fluids specifically* lighter than themselves ibid.

PROP. VII. If a *Fluid* attracts the Parts of an immers'd Body more strongly than they do one another, they will be equally diffus'd through it 98

PROP. VIII. *Elastic* Particles suspended in a Fluid after their *Collision*, will resile, and by their *Actions* and *Reactions*, cause *Fermentation* and *Effervescence* ibid.

PROP. IX. *Unelastic* Particles suspended in a *Fluid* attracting each other, will sink and be *precipitated*; the same will be produc'd by diminishing the Gravity of the *Menstruum* 98

PROP. X. The *Figures* of the Particles of all unelastic Fluids must necessarily be *Spherical*; and the *Elements* of all Solids must be of some of the regular Solids, as *Cubes, Triangles, Prisms, &c.* 99

SCHOL. The Figure of the Particles of *elastic* Fluids is of no Consideration, since their *Elasticity* depends only on their *repulsive Force* *ibid.*

PROP. XI. The *Elasticity* of solid Bodies is the Effect of the *attracting Force* of their Particles *ibid.*

PROP. XII. That Bodies under a *Rotation* fly off in the *Tangent*, is the Effect of the *general Law*, by which they continue in their *State*, whatever that be 100

PROP. XIII. The *Figures* of the Particles, and their Actions on one another, arising from the Principles of *Attraction* and *Repulsion*, together with the Motions impress'd on them by *living* and *intelligent Agents*, will probably account for the Appearances of the *material World*, if adjusted according to their Laws *ibid.*

PROP. XIV. *Air* is a *System* of Particles endow'd with a repulsive Force, which being fix'd in all *animal, vegetable* and *mineral* Substances, are by *Fire, Fermentation, Putrefaction, Dissolution*, or any other intestine *Action* and *Reaction*, set at Liberty, and compose our *Atmosphere*; and hence

its *Compression, Weight, Elasticity* and
Density ibid.

SCHOL. The *Density* of the *Air* is proportionat to its *Compression*, and therefore its *expansive* Force must be in the direct *subtriplicat Ratio* thereof 101

PROP. XV. *Earth* is a loose Collection of the different elementary Particles of Matter, of all the *three Orders*, thrown together without any regular Combination ibid.

PROP. XVI. *Water* is a Collection of the *Solution* of tasteless *Salts*, originally *crystalliz'd*, but kept in Fusion by Heat; and different *Salts* are different Combinations of these with the other *Elements* 102

PROP. XVII. *Acids* seem to be very *attractive* Particles of plain Surfaces, and *angular* Points ibid.

SCHOL. Possibly the Figures of *Acids* may be *triangular Prisms*; for all Matter must be figur'd ibid.

PROP. XVIII. *Heat* is the brisk vibrating *Action* and *Reaction* of the *repelling Nitre* of the *Air*, and the *æthereal Fluid* with an attractive acid *Sulphur*; which *Sulphur* yields an inflammable *Oil*, an *acid Salt*, a fix'd *Earth*, and a little *Metal* 163

COROL. Hence the Affinity between *Light* and *sulphureous* Bodies, and the true Nature of *inflammable* Spirits ibid.

SCHOL.

SCHOL. Since a *Thermometer* in an exhausted Receiver will rise and fall in the same manner as in the open *Air*, and since *polish'd* Bodies in the same, *cling* together as strongly as in the *Air*; it seems to follow, that there is some subtle elastic Fluid pervadeing all Bodies, to produce these Appearances 104

PROP. XIX. *Light* seems to be the vibrating Particles of hot Bodies, driven out by the *repelling* Force, with an immense *Velocity*; which is increas'd by the *æthereal* Fluid, and the *Attraction* of Bodies *ibid.*

SCHOL. I. Since *Light* is convertible into *Bodies*, and *Bodies* into *Light*; it would seem, that *Light* is only the Particles of a hot Body thrown off with an immense *Velocity* *ibid.*

SCHOL. II. The Rays of *Light* seem to consist of Particles of different Sizes, and different Degrees of *Refrangibility* *ibid.*

SCHOL. III. The *Sun* and *fixt Stars* are immense *Globes* of Matter, saturated with the Particles of the *second Order*, or of *Light* *ibid.*

SCHOL. IV. It is not impossible this *Earth*, with all the *Planets* and *Comets*, should be intended as temporary *Prisons*, and Places of Correction, for the *Trial*, *Expiation*, or *progressive Purification* of the several Orders of lapsed, *sentient* and *intelligent* Beings 106

PROP. XX. *Flame* is the sulphureous Smoak of
a hot Body 107

PROP. XXI. Bodies are *Transparent*, whose
Pores are sufficiently small and rectilinear
ibid.

E X P E R I M E N T S.

PROP. I. *Mercury* consists of smaller Particles
than any known Fluid. 2. The Particles of
Mercury, the smaller they are, the more
perfect *Spheres* they are. 3. *Mercury* is the
heaviest of all natural Fluids. 4. *Mercurial*
Particles *attract* some Bodies most, and
fly from others the most 108

Philosophical Corollaries. 1. Therefore the
Particles of *Mercury* are most easily rais'd
by Heat. 2. Therefore they have the great-
est *Momentum*. 3. Therefore they will
readily pass through all *animal* Substances,
which are lax and porous 109

Medical Corollaries. 1. Therefore the Par-
ticles of *Mercury* are fittest to break *Vis-*
cosity. 2. Therefore they are the fittest Me-
dicin to open the *Obstructions* of the small
Vessels. 3. Therefore they are fittest to
cure *Palsies*. 4. Therefore they are fittest
to antidot the *Scurvy*. 5. Therefore they
are the best *Antidot* for the *Gout*. 6.
Therefore they are the best Remedy for
chronical Distempers caus'd by Excesses.
7. Therefore the Particles of *Mercury* duely
prepared, are the most probable Mean to
make the Circulation quite round and intire
through

through the whole System of the animal
Tubes; that is, to thin the Juices 110

Medical Cautions. *Mercury*, however prepared, will infallibly burst those Vessels, whose Obstructions cannot be dissolved, and break those whose Sides are very slender, or which are putrified; and therefore *Mercury* is a divine *Antidot*, or *real Poison*, according as it is managed; neither it nor any mineral Medicin being ever design'd by the Creator to enter an animal Body, no more than animal Food, in his first Intention, at least before the Lapse, and perhaps not before the *Deluge*, the *Minerals* being probably then intended for other Uses, and not being perhaps in the *Form* they are now, nor on the mountainous Surfaces of the Earth, nor dissolv'd in Water, as we now find them 111

The Choice of mineral Medicins. The best Preparation of *Mercury* is that wherein its Particles are most minutely divided and separated, and thereby fitted to pervade the smallest *Tubes* ibid.

That Preparation of *Mercury* is best, where its Particles being minutely divided, the Mixture is made with that Body of the most acknowledg'd *specific* Virtue against the Disease 112

Therefore the *Aqua Mercurialis* is the best and most universal of all Deobstruents in very weak Persons; the *Mercurius Alcalisatus*

satus next; then the Cinnabar, *Æthiops*,
Quicksilver, purified with specific Extracts,
&c. ibid.

All *mineral* Medicins ought to be infinitely di-
vided before they are sent into an *animal*
Body ibid.

Mercury, and the *active Salts*, are the very
worst and most prejudicial Preparations to
animal Bodies, and are not to be us'd but in
small Doses, and in Cases that require *Ex-*
pedition 113

General medical Corollaries. As Water,
Blood-warm, is the best Diluent, so purified
Quicksilver is the best Deobstruent. But as
Water alone may be too sluggish, so *Mer-*
cury alone may be too active and ponderous
in delicat Constitutions; therefore the very
best Preparation is where *Mercury*, infinitely
divided, is mix'd with the *specific* Vegetable
or Mineral against a given Distemper ibid.

Therefore a thin cool low Diet of *vegetable*,
or very tender and loose animal Substances,
is the very best Food for delicat and wasted
Constitutions 114

A general medical Scholium. From this *Sy-*
stem, or Philosophical Explication, of the
Nature and Laws of the minute Particles of
Matter, it will follow, 1. That soft, mild,
thin and cool Foods, are fittest to carry on
and continue *animal* Life and *Functions*.
2. That *Spirits*, *Salts*, *chymical Oils*, and
Medicins that have pass'd through the Tor-
tures

tures of the Fire, are most pernicious to animal Bodies. 3. That Food of *Animals* which live on *Animals*, are the worst kind of animal Food for human Bodies. 4. That *Mercury*, duely prepared and combin'd with a *specific* Alterative, is the best *Deobstruent* and *Dissolvent*. 5. That *Milk* and *Vegetables* are the proper Food for young and diseased Animals, and tender Constitutions. 6. That Water *Beverage* is best for preserving the Faculties clear, the Spirits free, and prolonging Life. 7. That, on the whole, *Mercury*, some-how prepared, and Water, *naturally* or *artificially* impregnated, are the two *Antidots* provided by Nature for *animal* Distempers in *chronical* Cases

A N

ABSTRACT

O F

DISCOURSE IV.

PHILOSOPHICAL CONJECTURES
*on Spiritual Nature, the Human
 Spirit in particular.*

THAT the natural Powers of all *Spirits* are these two, *Understanding* and *Willing*, which suppose a third, *viz. Living*, as their Base 119

That all created *Spirits* naturally and philosophically can be conceiv'd only as *infinitesimal Miniatures, Sparkles, Emanations*, or, if I durst use the Words, diminutive analogous *Particles* of that infinitely perfect *spiritual Being*, who is so intirely *One*, that He cannot have Parts; yet have these Miniatures of Him an *infinitesimal* Portion of his spiritual Substance, endow'd with a proportional

tional Share of his *natural Attributes* of *Living, Understanding* and *Willing*; and so are therefore necessarily *immortal*, and cannot be *annihilated* 120

That these *Faculties* or Powers are felt sensibly and perceptibly by duely cultivated Spirits of all Orders, and follow by *Analogy* as to the Substance of the *Soul*, and these *Faculties*, from the necessary Nature and Attributes of the *Deity* 121

That this Meaning is evident in *Revelation*, which says, *Men are God's Images*, and they are there called *Gods*; that is, they were at first made *infinitesimal Divinities*, endow'd with his *natural* and *moral* Attributes, in their Order 122

That all *Pagan* and *Christian* Antiquity believ'd, that all created *Spirits* were cloath'd with some material *Vehicle*, and that *God* alone was *pure, immaterial, infinit Spirit*; and *Revelation* speaks of a *spiritual*, that is, of an infinitely refin'd and sublim'd *Body* 123

That neither *material* nor *spiritual* Substances are knowable by us at present, but by their *sensible* Effects and Acting: But that *Matter* and *Spirit* are *contrary*, tho' not contradictory, in their most *essential* and distinguishing Qualities; Matter being divisible in *infinitum*, and Spirit indivisible: But what infinit Divisibility, Rarity, Elasticity and Velocity in the Particles of Matter, might at
last

last effect on its Substance and Qualities, to give Matter a Nature different from gross porous inert Bodies, none but the *Author of Matter and Spirit* can tell or comprehend: But they will eternally be even thus, like the *Hyperbolic Curve* and its *Asymptot*, probably like *parallel Right Lines* 125

Living is probably actuating, governing and moving a divinely *organiz'd* Vehicle, *primitive, æthereal* or *planetary*; and wherever there is any Degree of *Life, vegetative* (or divinely *organiz'd* Matter only) *sensitive* or *rational*, there of Necessity must be a *spiritual* (so to speak) Body, or an immaterial, immortal and progressive spiritual Substance, actuating, governing and moving a divinely *organiz'd* Body of some Order or Nature or another, or both united 126

That there may possibly be *Orders, Ranks* and *Species* of animated Beings, with divinely *organiz'd* Vehicles of all *Degrees*, gradually rising, from the *Coralline* to the highest *Seraphim*; and an *Angel* is only a *spiritual* Substance actuating a divinely *organiz'd* Body, of an Order and Purity a little higher than that of an *unlaps'd* perfect human Being 127

That we plainly perceive how imperfect and unhappy Beings we are at present, we of the *human* Race; yet cannot possibly think that

that we came thus out of the Hands of our *Creator*; but must conclude we have lost our primitive *Creation* State by some wilful *Mismanagement* of our own 128

That our *primitive* State must necessarily have been, 1. That our organis'd Vehicle was entirely *supple* and pliable to our Spirit; and, 2. That our *Spirit* was entirely *pliable* to the Divine Spirit 129

That all created *Spirits* being naturally *free*, must be necessarily *fallible*: That, on this Globe, there was never a thinking Being, come to any Degree of Maturity, who found not himself, at one time or another, miserable, and wish'd not to be otherwise; this State is called the *Lapse* 130

How this *Lapse* was brought about, is not explicitly revealed, and is not knowable by mere Reason or *Philosophy*; we feel that it is, and that is all we at first know certainly. God's Design being to *restore* us, with the Consent of our own *Liberty*, and the *Harmony* of his Attributes, discourages vain Curiosity in Particulars; all that is revealed to us is general and indefinit; we feel that we are imperfect and unhappy, and that is sufficient to begin the first *Steps* of our Recovery into Order in Body and Soul; we are always certain in the Knowledge of our Recovery, of the *second* Step when we have made the *first*, of the *third* when we have made the second, and soon *in infinitum*; more previous Know-

ledge would but perplex and confound us,
and draw us out of the *shortest* Road of *Re-*
stitution 132

That it is not improbable, that the *Lapse* was
brought about by Steps and Degrees, that Way
of *Lapseing* being most natural to *finite* Crea-
tures, and many of the several *Orders* of Be-
ings might have been concern'd in it 133

That our *Senses* were given us to *commerciat*
with *material* Objects, these of our present
System especially, or others we may pass
into; in which the *Key* and *Logic* of our
Knowledge is *Proportion*. All we can pos-
sibly know of spiritual Natures must be
from *Analogy*, without Violence on our
Liberty, which make us mere *Vegetables*,
and from comparing them with the Faculties
and Operations of our own *Spirits*; and *Ana-*
logy, duly cultivated and cautiously guarded
in spiritual Nature, is answerable to *Algebra*,
or *Analyticks* in Mathematicks 135

That since *God is*, spiritual Nature and material
Nature *is* and exists: All *GOD's* Words and
Works must therefore necessarily have a
literal or *material*, *spiritual* and *divine*
Meaning and Sense; the *literal* for Begin-
ners, the *spiritual* for the Advanced, and
the *divine* for the Perfect. Perhaps it may
be thus in the Account of the *Lapse*, and
all the *Group* of this Affair certainly were
literal, *Paradise* a Place of material Delight,
the *Tree of Life* a Food to perpetuat the
then

then material Vehicle in Health and Liveliness; the *Tree of the Knowledge of Good and Evil*, quite the contrary; the *Serpent*, the highest fallen *Angel*. The spiritual Meaning may refer to the moral Powers of the Soul, as the literal did to the bodily; the *Tree of Life* may refer to the Source of the Divinity, the *Father*; the *Tree of the Knowledge of Good and Evil*, to the *God-Man Jesus Christ*; the *Serpent*, the grand Deceiver; *Paradise*, the natural Powers of the *Soul*, which were contracted and sopited by gross Matter, upon the *Lapse*, after the *moral* Powers were defac'd by Rebellion, Disorder, Selfishness, and inordinat Love of the Creature

137

That by this *Lapse*, from the Principle of *Attraction* establish'd universally in the *spiritual* as well as *material* World, the primitive *æthereal* Vehicle was gradually turn'd to a *planetary* one, such as we now live in; and thereby the *Activity*, *Energy*, and Extension of the *natural* Powers of the Soul were greatly confin'd and stunted, as to their elicited Acts, tho' they could not be so as to their *Fund*, and potential Nature; and now they must rise to Perfection in proportion only to the acquir'd *moral Powers*, and by Labour and *Culture*, under the *Oeconomy* of *Jesus*, and by the Aid of supernatural Grace, be develop'd, extended and purified

139

That

That perhaps all *sentient* and *intelligent* Beings, of all Ranks, must necessarily pass through a State of *Trial*, *Probation* and *Apprenticeship*, before they can be, even by Omnipotence, confirm'd and *eterniz'd* in *Illability* and *Impeccability*, as a *Potter* vitrifies his Ware by Fire; or a *Smith* *steels* his *Iron*. All that is necessary or proper for us to know, or be certain of, in our present State, is, that we are *lapsed Probationers*, and progressive towards Perfection and Happiness; more precise Knowledge of our *pre-existent* or future State might only retard our Progress 143

Whether the ruinous *Planet* we now inhabit, was the primitive Seat of *unlapsed* human Spirits, and by their gradual *Lapse* was insensibly turn'd into its *present Condition*, is impossible for us now to determin. *Paradise*, as described by *Moses*, is now no-where to be found; and most *Climats*, on a Balance of Incommodities with Conveniences, are pretty much upon an Equality to the Natives. We find *Luxury* destroys our *planetary* Vehicles, and *Pestilences* infect the *Atmosphere* and the Earth, as well as its Inhabitants: But it is probable, the Divine Power might suspend or accelerat the *general Laws* of Nature, to turn this *Globe* from its *Paradisiacal* to its present State 145

An *animal* Body being a *System* only of *mechanical* Powers, compos'd of fine *elastic infinitesimal* Lines, or Threads form'd into various

various *Webs* or *Membranes*, and they into *Tubes* or solid Bundles, are, by proper Liquors, kept for a time in due *Elasticity*, having under them the primitive *æthereal* Vehicle, which is the proper Covering of the *Soul*, and its immediat Instrument between it and the *planetary* Plaistering, which, when broken, drops, and perhaps they (*Soul* and *æthereal* Vehicle) pass into others, till its progressive Purification be finish'd into *Illability* and *Impeccability* 147

Matter is capable only of *Division*, *Figure*, *Motion* and *Situation*, and is passive and inert. *Spirit* is *self-motive* and *self-active*, and must be the Principle of *Motion* in Bodies, without which they would continue for ever *inert*, but so far as their Principle of *Attraction* or *Repulsion*, produc'd probably by some *subtile universal Fluid*, sets them into Action: But this Fluid seems confin'd chiefly to *inanimat* Matter; and does nothing in particular or eminently in proper animal Functions, but as the *general Laws* of Nature operate and concur with all *material Operations*; and the Whole of animated Functions seem to be *directly* and *eminently* transacted by the *actuating* immaterial Principle on the *divinely organiz'd æthereal Vehicle*, which communicats its *Energy* to the *planetary* Plaistering. So that the material Spirit of Sir *Isaac*, *Hugens* and *Leibnitz's* rapid Fluid,

and even our common *animal* Spirits, seem to be without any Use, but in inanimat Motions and Appearances: And perhaps *animal* Motions and *Functions* may be better understood and explain'd, by supposing what is *Fact*, that our Solids, the *Nerves* especially, (which are the more immediat Instruments of *animal* Motions, and their Functions) are *membraneous cellular Tubuli*, preserv'd in their proper *Elasticity* and Tone, by a *milky Oil* contain'd in them; and are *mechanically* adjusted at first by the immediat Hand of the *Almighty*, and fitted to convey, from the *immaterial Spirit*, a Beginning of proper *harmonious* Vibrations and *Oscillations* (which may perhaps be promoted and forwarded by the correspondent *Undulations* of an infinitely rare *elastic* Fluid, diffeminated thro' *universal Space*); which being sent, in a proper Direction, by the appropriated *Nerves*, to the peculiar *Muscles*, and divinely *organiz'd* Instruments, conveys proper Action, Energy and Motion to them; and *Bodies*, and their *Effluvia*, (so and so vibrating) may to the same *membranous Tubuli*, communicat peculiar *Vibrations*, fitted to impress a Sensation of their Presence, and of Bodies, and their Qualities, to the *intelligent* naturally *sagacious Spirit*; so that the whole Work may be directly transacted between the *Spirit* and outward Bodies, by the divine *Mechanism* of

of proper bodily *Organs*; and the *æthereal* Fluid may be to *animated* Bodies, in their Motions and Functions, not essential, but accidental or commodious, for a more convenient Propagation; as Air is to *Animals*, or Water to the *Fish* 151

That *Living, Activity* or *Liberty*, and Intelligence, in some Degree, and all their *Modes*, are necessary to all *animated* Beings, of all Orders; and the Difference in the Individuals of the same Order, depends on the *Frame* and Texture of their *Vehicles* in a great measure; so that probably at first there might have been no Difference of *Sexes*, that depending on a design'd different *Configuration* of this *planetary* Crusting. That some Power *analogous* to the original creative Attributes in the *Deity*, arising from his infinite *Self-activity*, might be communicated to all *sentient* and *intelligent* Beings, is not improbable. But how this *infinitesimal creative* Power operated before the *Lapse*, is not known: Perhaps by an intense *Willing* under the Influence of the *Divine Spirit* 153

It is highly probable, from the Necessity of *Suffering*, in the present State, that all the *sentient* and *intelligent* Beings, that shall ever *live* or appear on this *Globe*, were all created at the same Instant, miscarried in their *Probation*, and were all at the same time confin'd into *infinitesimal* Prisons of

this ruinous *Planet*, in the *Miniature*, Seeds, *Ova*, and *Animalculs* of the primitive *Pairs*, or Stock, to be progressively propell'd into sensible Living on this *Planet*, all by general *analogous* Laws, in their Order; and this progressive *Propagation* was kindly design'd, as a Mean of recovering their *moral* Powers, by the Benefits arising from the Acquisition of Virtue and Wisdom in the Parents, tho' the contrary has fallen out 156

There may be *original* Differences in the *Spirits* of the *Individuals* of the same Order of Intelligences, some having one of the essential and natural Attributes of the *Spirit* in a higher Extent than the other, it may be sufficient to constitute the *same Order*, that their *Aggregats* be equal: But the Perfection of the *æthereal Vehicle*, Culture, and the Acquisition of the moral Attributes, makes the most signal Difference in this State; as Air, Exercise and Diet improve the *Health*, so does *Culture* in the Acquisition of the *moral* Powers of the Mind. The natural Powers are constant and invariable, as to their *Fund* and Capacity; but are impeded from *elicit* Acts by the Clumsiness and Want of due *Culture* of the *animal* and *intellectual* material *Organs* 159

The *Mainœuvre* of Providence in the Restoration seems to be thus: The radical *natural* Powers being constant and invariable in their *Fund* and Capacity, but the *moral* Powers

Powers being defac'd by the *Lapse*; infinit Goodness, ever acting by his own *beneficent* Nature, designing to recover these *moral* Powers, tied down the *Energy* and *Elicitation* of the *natural* Powers, by Ligatures of this ruinous *Planet*, at first into that of mere *Living*; and included the whole Mass of *lapsed* human Intelligences, in the *Loins* of *One*, or a *Pair*, who were to be the universal Parents, designing the *self-active* and *self-motive* Principle in each should, under certain *general Laws*, break and work off these *Ligatures*, in their several *Orders*; while they, by other *general Laws*, relating to *spiritual* Nature, (*Prophecy*, to wit, *Miracles*, *Apostolick* Lawgivers, supernatural *Influences* and *Graces*, and at last by the overwhelming *Light* and Love of the *Messiah*, his only begotten *Son*) should recover in them the defac'd *moral* Virtues

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Hence it is evident, the first and initial Steps of this Restoration must, in a great measure, depend on the *Sanity* of the *Adamical* Machine; because, when our earthly Tabernacle is greatly disorder'd, these *elementary* Steps in the *Developement* of the natural, and the Acquisition of the *moral* Powers, cannot be so readily brought about, which depends greatly on the *Parentage*; for the whole Aggregat of all that is connected with the Pa-

Parents, their Bodies, Humors, and *material* or *spiritual* Qualities, are transfus'd and transubstantiated through the whole, and descend to Posterity just as they possess them, and so the Children must fare accordingly

163

It may happen, by Accident, by Disease, by universal Causes, that one Set of *nervous Glands* in the Brain, one Set of *membranous Tubuli* (the material *Organs* of Cogitation) may be more spoil'd, broken, and worn out in some than the others, both in Parents and Children; which will make a great Difference in the *elicit* Acts of the *natural* Powers, and which will make the Difference between a *Lawgiver*, a *Philosopher*, a *Hero*, and an *Artisan*. But this whole Affair is more immediatly under God's special and particular *moral* Government of his World; tho' perhaps by general Laws, only *occasionally*, and on great and worthy Motives, suspended

165

That at present, the *Perfection* of *intellectual* Faculties depends, in a great measure, on the *Sanity* of the bodily Machin, seems evident, because, 1. The *Adamical Machin* was intended only to suspend the *elicit* Acts of the *natural* Powers in their most eminent Degree, to give us Freedom, by developping and throwing off their *Incrustation*, to acquire the *moral* Powers. 2. By Experience

we

we find, that in Disorders and Distempers of the Body, the *intellectual* Operations are either inconstantly, weakly, or unsteadily perform'd. 3. It is *Fact*, that in *seminal Miniatures*, in *Embryo*, and Childhood, and for a long time, the *Soul* does nothing but perform the *living* and *animal Functions*. 4. We find, that *Luxury*, *Leachery*, *Laziness*, strong Passions, *inclement Air*, *Bruises* and Accidents, that injure the Body, hurt and destroy the free and easy Exercise of these Faculties, in the Acquisition of *Science* and *Virtue*. 5. We actually see, that as the Body enlarges, and the Organs of the Senses strengthen, the *intellectual* Faculties and their elicit Acts grow stronger. 6. All *intellectual* as well as vital Operations, are perform'd by the *Intermediation* of *modulated* and *harmonious Vibrations* on *membranous Tubuli*, (the *Nerves*) and they absolutely depend on the State of the Body. 7. As *Luxury*, *Leachery*, and *Laziness*, will spoil these *intellectual* Operations; so, on the other hand, a *low cool Diet*, *Air* and *Exercise*, proper *Evacuation*, and the mild *ponderous* Medicins, will cure and mend them, and bring them often to the same, sometimes to a better State than they were before

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From hence it is evident, that the whole Work of our Restoration, in some measure, depends

pende on *ourselves*, in Co-operation with the Divine Assistance, under his Providence, and the *Oeconomy* of *Jesus*; the whole Creation, from *inert* Matter, up to the highest *Cherubim*, being, as it were, an inverted Cone rising from a Point, and made of *infinitesimal Surfaces*, as it were, continually enlarging, (which makes their *Order*) being all *Pictures*, less or greater, of the *radical* or natural Attributes of their *Creator*; but Men having defac'd their *moral* Attributes, are imprison'd in Gaols of this *ruinous Planet*, that by a progressive Expiation, Purification, and Labour, they may recover these, and so become again *similar* to their Original, in their *moral* as well as *natural* Powers, and so become again *infinitesimal Divinities*, in their *Order*, and perpetually happy

173

The human Soul has innate, constantly and invariably in it, all the *natural* Powers it was first created with, even now in its lapsed State, at least in its *Fund*, *Capacity*, and *Essence*; only they are suspended, chain'd down, and concentred, as to its *elicit* Acts, by the *Adamical* Tabernacle, like a *Felon* in a Dungeon, and will drop at last; and so perhaps passing through various *planetary Gaols*, will progressively recover the Use of their *natural* Powers, as they acquire the *moral* ones

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From

From whence it will follow, that the *Culture* of the natural Powers, the Acquisition of Sciences, and all *intellectual* Exercises, are but *Remembrance*, cutting off *Obstacles*, and removing Impediments, opening Passages, and widening *Apertures*, through this *Adamical* Prison, which is the most readily and effectually brought about by endeavouring to acquire the *moral* Powers 176

That *Memory* is but an Affection of the *Understanding* and *Will*, fixing the Attention and Reflection, like *seeing* in the *Eye* by the Effort of the *Will*. The *Understanding* is passive and *inert*, as every material Organ is. It is the *Will* that is the ruling and commanding Faculty, and Sovereign in the Soul. The *Will* is infinit and unlimited, and may act in Contradiction and Contrariety to the Understanding; is so absolutely unlimited, infinit and unconfined, that it extends to all Distances, without the Intermediation of Body. Being a self-motive and self-active Principle, it is no less real in its Operations, tho' it do not always effect its Volitions. In it lies the true and essential natural *miniature Image of the Deity* 178

Some have thought, the *Will* of all *free Agents* so *infinitely free* in its own Nature, as it was deriv'd from the *creative* Source of Liberty and Power the *Deity*, that He left

left it *free*, hid and imperceptible directly from his own *Penetration*, *Espial* and *Influence*; for so much they think a *self-motive Power* necessarily implies, tho' but an infinitesimal one; and that even *Omniscience* knew not that the *Angels* had lapsed, till the Rebellion actually happen'd; but had, from all Eternity, provided for the Possibility of such an Event: That to ennoble his Creatures, and make them fit to *commerciat* with Himself, He might suspend his *Omniscience* to magnify his *Omnipotence*; and might designedly and *arbitrarily* not foresee (tho' He certainly always might) the contingent and natural Actions of his *intelligent* Creatures, to make them more worthy of Him. But this bold and unwarranted Supposition, tho' it might solve some Difficulties about the *Lapse*, about *Prescience* and *Predestination*, and in the *Oeconomy* of Revelation and the *Restoration*, is perhaps inconsistent with the Perfection of the Divine Nature; and since infinit *Penetration* and *Sagacity* will equally answer the same Difficulties, and is less derogatory from infinit Perfection, the former Supposition is untenable, I think

182

As the *trine* Dimensions of *Matter* and *Space*, and their necessarily being neither fewer nor more, give us, in unanimated Nature, a lively Picture of the *Trinity in Unity*, in the

the Divine Nature; so the three fundamental *natural* and *essential Powers* of all intelligent Creatures, carry up the *analogical* Picture higher; which perhaps passes through all the *celestial Hierarchy*, and all intelligent Nature, up to their Source the *Creator*, who is the last and highest Term of this *Climax*; as He is, so we are, in our spiritual Nature, with the uncomprehensible Difference there is between the lowest *Finite* and absolute *Infinity*. As in our Nature there is *Living, Understanding* and *Willing*; so in his there is *Self-existence, Omniscience* and *Omnipotence*; or, analogous to, in the Revelation Language, *Father, Son*, and *Holy Spirit*. But as *Living, Understanding* and *Willing*, in us and all Creatures, are but, as it were, *Modalities, Qualities, Faculties* and *Powers*; in the Divine Nature, on the contrary, they must be *Realities, Subsistences* and *Beings*; because every essential and radical *Attribute* in *God* must be actually *God*, because of his infinit Simplicity and Perfection. But this Representation of the Divine Nature is here only alledg'd as an Allusion and *analogous* Picture, to take off the Difficulties in this inexplicable *Mystery*; and, in some Degree, to reconcile it to modest guarded *Philosophers*, of honest Hearts, who are conscious of their own *low* Rank in the Scale of Intelligence. The *Arian* and *Sabellian*

bellian Heresies being the two Extremes, are yet widely different in their Influence on Christian Perfection: The first dwindling the *Merit, Dignity, Example* and *Satisfaction* of the Saviour of Men, into a mean low *human Transaction*; the *second* being only too *philosophically* nice and *punctilious* about the *Unity* of the Divine Nature; which tho', I think, this *emblematical miniature* Representation of it, actually existent in all intellectual Nature, fairly reconciles, and makes as clear as our present State will admit

184

The immaterial *Soul* and *æthereal* Vehicle, sopited in a State of mere *vegetable* Life, for perhaps many Ages, in the *seminal Animalcul*, by this *planetary* Incrustation; in time appears on this *Globe*, becomes sensitive, feels Pain and Misery; then begins *Instinct* and *Remembrance* from precedent Suffering, and stores the Mind with *Ideas* or Pictures of absent Actions and Things, and on these the *Understanding* operates to produce a Facility and Habit of Reasoning; as the material Organs and Instruments of these Operations *develope* and strengthen, Reflection and Remembrance of present or past Suffering awakens Conscience (an innate Faculty of the Soul); this Faculty, as the Ideas multiply, Sensations become more intense, Reflection more strong and frequent,

quent, and the intellectual Organs are dispos'd, becomes more anxious and vehement; and providential disposing Accidents, or natural Occurrences, incline us to provide for a durable future Happiness, at least when this *Adamical* Tabernacle shall crumble into Dust; and then perhaps we come to a State to say in earnest, *Lord, what shall I do to be saved?* which seems to be the precise Condition infinit *Love* and *Goodness* intends by this wonderful *Oeconomy* to bring us into

A N
 A B S T R A C T
 O F
 D I S C O U R S E V.

On NATURAL ANALOGY, *its*
 Laws, *and some of its* Consequences.

THINGS may differ in *Degree* as well
 as in *Kind* 193

DEF. 1. Difference in *Degrees* is
 where things having their *essential* Qualities
 the *same*, admit in these Qualities a *More*
 and a *Less* ibid.

DEF. 2. Difference in *Kind*, is where some
 of the *essential* Qualities of things com-
 par'd are *common*, some are *different* ibid.

DEF. 3. By *Ratio*, or Relation, is meant the
Reference or Connexion any two things
 compar'd have with one another, whose
essential Qualities common, admit of a *More*
 or *Less* ibid.

DEF.

DEF. 4. *Similarity* is where there is an Equality or Sameness of *Relations*: In the Substance and essential Qualities of things compar'd, differing only by a *More* or a *Less*: In *abstracted* and *simple Ideas*, this Sameness is commonly called *Similitude* of *Ratio's*: In Things, Substances, or Aggregats of Qualities, it may be called *Similarity* of *Relations*

194

DEF. 5. *Things, Substances, and Qualities*, are meant to be *progressive*, which are constantly increasing or decreasing *similarly*

195

SCHOL. *Space, Time, Motion, and Velocity*, seem to be no *Realities*, or external Things, but mere *Modifications*, different *Situations* and *Circumstances* of Bodies or Matter; and are only our Manner of *conceiving* or considering *these*. A *particular Space*, or the *Locality* of a particular Body, seems to be the *Mathematical* Term, or the Limits of the three Dimensions of a Body, (as a Point is of a Line) or a Body in the Instant of its Evanishing or Generating. And *universal Space* is just such an *Idea* as infinit Number, or an infinitely *great Body*, or a mere *Ens Rationis*. And to shew that they are all but *abstracted Ideas*, and our partial Manner of conceiving Things, from our limited Capacity; if we perform actually the *Arithmetical* Operations, as the Expression points them out, on proper infinit *Series's*, and throw away

all the lesser Quantities, we shall come to all the *Mysteries* in *Fluxions* and *Differentials*, *Ratio's*, and *Series*, commonly known, which are acknowledg'd to be only abstracted *Ideas*, and *technical Arts*, to supply the Defects of our Faculties, which are not intuitive, but progressive; they admit of Degrees, or a *More* and *Less*, only as belonging to and being connected with Body; viz. *Space*, *Time*, *Motion*, and *Velocity*, are Relations or Modifications only of Body or Matter

196

DEF. 6. *Relative Infinit*, is such as is suppos'd to increase or decrease *perpetually*, yet by no finite Power can be brought to, and no finite Capacity can assign or conceive its *limiting Terms*, viz. the *Greatest* or the *Least*

197

DEF. 7. *Absolute Infinitude* is the sole Attribute of the *Deity*, who is infinitely infinit in all *Perfections* and *Realities* *ibid.*

DEF. 8. Things only are *contradictory*, which totally destroy one another, destroy their *Subsistence*, *Substance*, and *Qualities* *ibid.*

SCHOL. It is very doubtful, nay, I think, impossible, there can subsist a full Contradiction among *created* Things, Substances, or Qualities, since they must all be *Effluxes* of the *Deity*, in whom there can subsist no Contradiction. For in created Things, to become totally *contradictory*, there must be an equal *Action* and *Reaction*, to have produced

duced it; but in all Creatures there seems to be a *Subsistence* and Reality, which cannot be totally destroy'd by one another, but by a Power and *Energy* equal to that by which they were created, and infinit *Perfection* cannot be contrary to itself. There may therefore be a *Contrariety* among created Substances and Qualities, but not a full *Contradiction*, or total Annihilation of their Subsistence, Substance, and all their Qualities. For even between *material* and *spiritual* Substances, there will remain still, *Substance*, *Subsistence*, a *Relation*, an Alliance, a Power of Expansion and Remission, both of their Substance and Qualities, which will make them *alliable*, and, as the *Chymists* speak, will make them capable of an Amalgama, (like *Quicksilver* with *Lead*) tho' they will eternally act by Contrariety on one another's Substances and Qualities, and ever counteract one another 200

DEF. 9. *Analogy*, is a *Similarity* in Substances and essential Qualities, differing only by a *More* or a *Less* ibid.

SCHOL. *Analogy* is of two kinds, *perfect* and complete, and *imperfect* and incomplete ibid.

DEF. 10. *Perfect Analogy* is where there is a total *Similarity* of Substances, and essential Qualities, differing only in *Degrees* ibid.

SCHOL. There are, I think, *Substances*, as well as Things and Qualities, of a *middle Nature*, between the *Extremes*, in every

created Reality; and this seems to be necessary, from the Infinitude of the *Divine Nature*, as well as from the Nature of *Finitude* and Creature, which must be various and gradual. And as between any two given *Terms*, there are an Infinity of *mean Proportionals* assignable; and between an *infinitely small*, and an *infinitely great part* of the Diameter of an *infinit Circle*, there is the *Perpendicular* neither infinitely small nor great; so there must be material and spiritual Substances, of all Degrees of Sublimity, Purity, and Perfection, which, tho' similar, may differ in Degrees

201

COROL. Hence it may be possible, there may exist material Substances, continually approaching to the Nature and Qualities of spiritual Substances, which yet they can never arrive at, like the *Asymptots* of an *Hyperbola*

202

COROL. 2. Hence, there may possibly be material Fluids, so infinitely *rare*, *spiritual*, and *elastic*, that they may permit gross, porous, *planetary* Bodies, with only an infinitely little Resistance, tho' that Resistance may be still *somewhat*, and but as the *Sun* diminishes only infinitely little continually, in the Emission of her Light; neither the *spiritual Fluid*, nor the *Sun*, can be design'd to last, in their present Condition, a Duration equal to *GOD's Eternity*

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DEF.

DEF. I. *Complex Analogy* is where there is only a *Similarity* between a certain Number of essential Qualities, common to the Things compared, which differ in Degrees; but are diversified in other Qualities less essential ibid.

PROPOSITION.

All Creation, the whole System of the Universe, with all the particular Systems in Nature, are or can be nothing, but the supreme Being and his Attributes, transubstantiated into Being and Perceptibility; but the Cause will be always different from the Effect, the Artificer from the Work. This may be demonstrated *à priori*, from the Nature and Attributes of the first Cause; but to illustrate it *à posteriori*, some Instances may be proper 204

§. 1. In the *vegetable* World, to explain their Growth and Multiplication, the infinitely rare elastic material Fluid mention'd, judiciously applied, will be sufficient, as also in the Vegetation and Growth of *Minerals* 205

§. 2. The totally *inanimat* Creation, especially our now *secondary Elements* of *Air, Water, Light, Salts, and Mercury*, in the peculiar Fitness of the Size, Figure, Law of Attraction and Gravity, shew the infinite Wisdom of their Contriver; for had they

not been figur'd, so as they are now in Nature, to fit the *Tubes* of *Vegetables*, and to combine them into their now integral Parts, they could not have been proper Materials for the Accretion of these *Vegetables*; and if they had not been so combin'd and *moulded* in the *Vegetables*, there had been no proper Food for *Animals* 206

The Difference between *Vegetables* and *Animals* lies in this, that for the Actuation, Growth and Multiplication of the *first*, there neither is, nor is wanted any other Power or *Energy* than what an infinitely rare and *elastic* material Fluid produces on a divinely *organis'd* material Machin; but in the *latter*, there is a *self-motive* and *self-active* spiritual Substance actuating and governing all their *Functions*, of some Order or Degree, even in the lowest *Brute* and *Insect* 208

§. 4. The *human Powers*, their Degree, Order, and the Nature of their primitive æthereal *Vehicle*, with its now Plaistering, have been sufficiently explain'd 209

§. 5. The *Angelic Hierarchies* must be infinit in their Number, rising in a *harmonious* Progression and Variety, whose Seats may possibly be the *Fixt Stars*, and their *analogous planetary æthereal Systems* and *Apparatus*; and these must be infinit in Number likewise, to preserve the *Equilibrium* in universal Space, and their original Distances from each

each other; they must have one *generical* Nature, which must be that of the *radical Attributes of the Deity, Living, Understanding and Willing*; their *specific* Differences may consist in *Light* and *Love*, that some are more eminently luminous, others more ardently *loving*; and this Difference seems to take Place even on this *ruinous Planet*, in the different Complexions and Talents of Mind in the different *Orders* of Men, which can only account for the odd Diversity in the Children of the same Parents, under the same Education and Example

213

The *Fixt Stars*, which must be infinit in Number, seem to be the material *Mansions* of *unlapsed*, tried and purified angelical *Hierarchies*, and of restor'd, sentient and intelligent *lapsed* Creatures. *God's Throne*, his *Shechina*, is represented as above: *Elijah* went upwards, and *Christ* ascended. Bodies of all Orders, or different Purity, must have an *ubi*, a local Situation, and a parmanent *Mansion*, at last: These *Fixt Stars*, and their *planetary Apparatus*, may be the Seats of the *Unlapsed* and *Restor'd*, and their *æthereal Vehicles* may be of the same Matter with their *Mansions*; and the Matter of these luminous and glorious Seats, and the *Vehicles* made of them, may be *eternis'd* by *harmonious Vibrations*,
and

and a perpetual *Flux* and *Reflux* of their Rays

216

GOD being the Creator of all sentient and intelligent Beings, the efficient Cause, and Object of perfect Felicity, it is a manifest Contradiction he should creat any such without *impressing* in the very Essence of their Nature an ardent and insatiable *Tendency* and Ardor after *Re-union* with him; and accordingly the *Desire of Happiness* in all *sentient* and *intelligent* Beings is invariable and unextinguishable, as we see, however they may mistake the *End* or Means, by being *labile*, and placing it in spurious *Selfishness*, and inordinat Love of the Creatures; and in the Distinction and Contrariety between this *innate* Byass and that *adventitious* one, does the Essence of Misery and *Hell*, in all future States, consist; but this last *Byass* being acquir'd only, and not *innate* and *essential*, the *Love*, *Merits* and *Satisfaction* of the *Son of God*, were contriv'd from all Eternity, to melt down and efface

219

Is it not highly probable that the *System of Saturn*, the *Planets* and their *Satellites*, may be the local *Prisons* and Dungeons, or Correction-houses, of the several Orders of lapsed *probationary* and *progressive sentient and intelligent Beings*? They differ vastly in their Accommodations; they seem to be under

under some *penitential Disciplin* from many obvious Imperfections and *Oddities* not easily otherwise accountable, or reconcileable to the Simplicity, Beauty, Harmony and regular Order of all the Works of an infinitely perfect and powerful Being; but, with infinit Propriety and Wiidom, seem fitted for the Design of Penitence, Correction, and initial Purity and Perfection 220

The *Comets* cannot possibly be the Seats of the *Blessed*; they are too many to supply only our *Decrease* of Water; their Alter-nations of extreme Heat and Cold, Light and Darknefs, are too *violent* for any animated Vehicle in a State of Happiness: They seem more probably to be the Habitations of animated Beings under the Expectation of the *last Sentence*, or to be the Condemn'd Holds of *GOD's* Kingdom 222

The next immediat *Mansions* to this, or the several Stations and Mansions design'd for the respective *Purification* of Soul and Body of lapsed, sentient and intelligent Beings, and all the several Steps, Stations or *Mansions*, in all Probability have a gradual Resemblance or *Analogy* to one another and to this State here, and this *Planet* we now inhabit as the first or initial Term upwards or downwards respectively; in those upwards all the Beauties, Comforts and pure Delights here increasing similarly in Degree, without their Deformity,

mity, Miseries or Pains; in those downwards all the contrary: This Climax seems naturally to flow from the Simplicity and Immutability of the Divine Nature by *Analogy*, and is conform to Revelation. All Bodies or *Vehicles*, *planetary* and *æthereal*, must have an *ubi*, and a fixt *Mansion* at least for a Time; and all sentient and intelligent Beings must have a *Polity*, *Order* and *Laws*, be under a Government and Subordination; else it would not be a *happy State*, but *consummat Misery*. GOD is a *God* of Order, and all his Works are performed with *Order*, *Number*, *Weight* and *Measure*, and must have all a mutual *Analogy*, or as near a Resemblance to one another, as the Nature of Things will admit

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Analogy does not (at least always directly and infallibly) *demonstrat* the real Existence and necessary Production of Things *ad extra*; but it strongly illustrats, explains, and makes them consistent with and consonant to the Things that we know already, see and feel to exist; it makes them different Links only of the same *Chain*, of Effects, and similar Terms of the same Progression, removes Difficulties, and makes Things rational and fit Objects for a rational *supreme Cause* to work by; and this is the solid Foundation of all true *Philosophy*, which can only gather Causes and general Laws by Induction from repeated single *Experiments*,
and

and is as high an Evidence as the Nature of *Finitude* and our Rank of Intelligence will admit in imperceptible Things; and when confirm'd by *Revelation*, rises to the Evidence of a *Demonstration* in the strictest Sense

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We may *err* and *blunder* in it, as we may in *Algebra* and *Geometry*; but often our Errors in the last come but from Want of Culture, Precipitation, or a wrong Head only; but in the *Analogy* that leads us to the Knowledge of the Divine Purity and Nature, and the Necessity of our own Purification and Perfection for *invisible* States, and the Nature of *Spirits*, our Blunders are often owing to a wrong *Heart*, Licentiousness, *Selfishness*, and Independency. If we went on in natural *Analogy* as we do in natural *Philosophy* and *Geometry*, by the *simplest*, *plainest* and most obvious Cases, first collected by *Induction*, laid them up as a *Store* to proceed on to the higher Terms of the *analogical Progression*, and with Attention and Humility went on, from *inanimated* Matter, and its *Laws*, to *Vegetation*, *Animation*, *Spiritual* Being, up to the *supreme Cause*; perhaps great Proficiency might be made in time by such a Method. *Analogy* is the only Mean of Knowledge, that can secure *Liberty* in *lapsed Intelligences*. I will illustrate my Meaning by an *Example* in the *System* of *Saturn*

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I. GOD

1. *GOD* bringing Creatures into Existence, must have made them after the most perfect *Pattern*, and therefore stampt them with his own Image, and so they must bear a Resemblance to him, and to one another, which is *Analogy*.
2. The Number of Qualities added to *Existence*, together with the Degrees of these Qualities, determin their *Order*.
3. The material World is a *Transcript* of the *spiritual*, and there is a more immediat Relation between each *material System*, and the *Intelligences* to which it belongs; and should they lapse and fall into Disorder, their *Mansion* would make a *similar* Change.
4. There are many Evidences of this *Analogy* between the *material* and *spiritual Systems*: The *Sun* is placed in the *Centre* of our *System*, the material *Image* of the *Deity*; the *Planets* revolve about *him*, in different *Times* and *Periods*, to represent the several *Orders* of *lapsed* Intelligences; these *Planets* have no Light in themselves, it is all deriv'd by *Reflection* from *him*.
5. *Heat*, *Light*, and their Consequence *Attraction*, are his chief Properties, and by this *Attraction* the *Planets* are kept in their *Orbits*, which strongly *pictures* out the *Love of God*, continually soliciting all Intelligences to a nearer Approach to *him*.
6. The *Light* of the *Sun* is diffus'd through
the

the whole *System*, representing *that Light which enlightens every Man that comes into the World*, an *Emblem* of him who came forth from the Father of Lights *God-Man*. 7. The *Sun's Light* is always accompanied with *Heat*, which represents the *Holy Spirit* the Principle of spiritual Life. 8. The various Magnitudes, their Distances from the *Sun*, with the *periodical Times* of the *Revolutions* of the *Planets*, will express the different Degrees of the *Lapse*, and the Times allotted for their first Trials and Probation. The *Comets* by their long *elliptical* Orbits are thrown off to the greatest Distance, and again drawn back to the nearest Approach to the *Sun*, to represent the Extremes of *Love* and *Punishment* to the same Intelligences, in order to purify them. 9. The *Planets* are acted upon by two different Forces, *Attraction* and the *projectile Force*, which are contrary to one another. The *projectile* Force makes the *Planet* recede perpetually from the *Sun*, while the Force of *Attraction* prevents this Effect; the *projectile* Force belongs to the *Planet*, the *attractive* to the *Sun*. How wonderfully does all this *Oeconomy* proclaim and speak in a Language truly natural, and proper to the Majesty and Wisdom of the *Deity*, the Nature of the *Lapse*, the Action of Selfishness, and inordinat

dinat Love of Creatures, and the Force of the *Divine Love* in the *Oeconomy* of *Jesus*! For it is suppos'd by the best *Philosophers*, that the *solar Attraction* will at last prevail over the *projectile Force*, and thereby both *Planets* and *Comets* will be swallowed up and transform'd into the Substance of the *Sun*.

FINIS.

MISCELLANEOUS
OBSERVATIONS
ON, AND
EXPLICATIONS
OF, THE
Precedeing DISCOURSES.

§. 1. **T**HERE seems to be something solid, in one Observation *Leibnitz* makes, *viz.* the *Mark* or *Criterion*, between the Works and Operations of *Nature*, or the *GOD* of Nature; and the Works of *Art*, or of *finite* Power and Wisdom, *viz.* That *GOD*, or Nature, works always by *Organs infinit* in Number, or in a perpetual convergent *Progression* of *Organs* or Means towards some one or many wise *Ends*; *Creature*, *Man*, or *Art*, by *Organs finite* in Number, or numerable (by *Organs* is always meant a separable distinct Part of a *Machin*). For Ex-
X *ample*;

ample; we may be able to reckon the *Wheels*, *Springs*, *Pullies*, *Chains*, &c. of any *Watch* or *Clock*, or any *Machin*, how complicated soever, made by *Art*: But who can reckon the *Fibres*, *Tubes*, *Membranes*, *Valves*, *Inosculation*s, *Ligatures*, Degrees of *Curvature*, in the *Tubes*, &c. of a *Pile* of *Grass*, or of a *Feather* of a *Bird*? The further we go by our *Senses*, assisted even by the most perfect *Art*, their *Number* multiplies on us; but then, if we could descend into the *Figure*, *Number*, and *Law* of *Cohesion* of their component *Particles*, we should be intirely lost, and all our *Art* or *Management* would leave us in thick *Darkness*, and utter *Confusion*. In the *Works* of the *GOD* of *Nature*, there is no *Maximum* or *Minimum* assignable, or conceivable by us. *Sir Isaac Newton* has demonstrated the infinit *Tenuity* of the *Particles* of *Light*; and the progressive *Analogy* of *Nature* shews it is possible, that there may be *Fluids* as much more *rare*, and of as much lesser *Particles*, as those of *Sand* are bigger than those of *Light*. *Leuvenhoeck's* Discoveries of the *Minuteness* of some *Animalculs*, and of some *Tubes* of *Animals*, are scarce credible by any one who has not seen some of them, as I have. The ingenious *Dr. Porterfeild* has demonstrated the extreme *Tenuity* of even an *organiz'd* and compounded *nervous Fibre*; and there is no Reason from the *Nature* of *Matter*, from the *Laws* of

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Mechanism, or from the *Divine* Attributes, to stop there; we may descend still lower, or higher in *infinitum*, and be warranted by Reason and *Geometry*. One great Fault in natural *Philosophers* has been, that they have rejected every Account, as incredible, imaginary, and fictitious, which suppos'd *Fluids* extremely or infinitely *rare*, *rapid*, and *elastic*, as is that of *Huygens's*, *Leibnitz*, and Sir *Isaac Newton's*; and yet some such there must infallibly exist in Nature, as the *Phænomena* shew: For if the natural Motions on our Earth, in Bodies, are perform'd by *Air*, *Water*, and *Heat*, since we know sensibly, these are Fluids of a finite and pretty near determinable Size, Figure, and Degree of Gravity in their *Particles*, the *Analogy* of Nature will make it as evident, that the other less known, secret, subtile, and unaccountable Appearances may be perform'd by some other properly condition'd Fluid, (I mean only in the Appearances of the *material World*) I say, as certainly, as if the first Terms of a *Series* $x+x^2+x^3+x^4$, &c. were given, I should certainly conclude the 10th, 11th and 12th Terms of such a *Series* were $x^{10}+x^{11}+x^{12}$.

§. 2. THE *Threads*, (the last and the least) *Fibres*, or *linear Filaments* of all *vegetable* and *animal* Substances, are certainly infinitely small, *elastic* and *ductile*; in separating and *anatomising* them, we can never come to an

End; and fine *Microscopes* will shew, that even the very least our Senses can perceive, or our Art divide, are still *Twists* or *Tubuli*, and compounded of an infinit Number of lesser and lesser *Threads*. They are infinitely *elastic*, for we find no Limits in their *Elasticity*; the smaller and finer they are, we find them growing still more *elastic* in the same Proportion; and here also the *Progression* is without Stop or Limit. *Elasticity* depending on the Degree of *Attraction*, in the component *Particles*, the *Elasticity* can never be stopt, till we arrive at Particles infinitely *hard*, *indivisible*, and *imporose*, which no finite Power can produce, and no finite Intelligence conceive; and even in such, there would be an infinitely small *Renisus*, or *Reaction* of their Particles when compress'd; so that all Fluids of whatever Nature, and of whatever Degree of Rarity, must have some Degree of *Elasticity* or *Reaction*. Of such *Threads*, the *Membranes*, and of *these Membranes* the *Tubes*, and Vessels of all *vegetable* and *animal* Substances, seem compos'd. I say, not *mechanically*, and according to the Laws of Nature, that we see now they are govern'd by, and accounted from, but *supra-mechanically* compos'd, and by the immediat Hand and Power, or Influence, of an *infinitely* wise and powerful *First Cause*. Of these again, I say, are the *Tubuli*, the Coats of the *Pipes*, and all the other *vascular Apparatus*, in fewer or more *Pipes*,
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according to their Use and Necessity, compos'd. The *Fluids* are only design'd to keep them in a proper Degree of *Moisture* and *Glibness*, to continue their necessary *Tone*, and due Degree of *Elasticity*. All the pleasant, easy, and healthful Sensations of *Life*, depend chiefly on these *Fluids*. Little can be effected by *Art* or *Medicin*, on the Solids, and their *linear Fibres*: A temporary Constriction only, a transient *winding up*, a Fit of tolerable Health, and Flow of Spirits, may be gain'd by *astringent* cordial Medicins; but it is *Regimen* alone, by rendering the *Fluids* sweet, soft, cool and *balsamic*, that enable the *Solids* to *play*, according to their *innate* Powers, that can give durable and uniform good Health, and keep these *Solids* as they were at first form'd, in a proper *Tone*, *Glibness*, and *Elasticity*.

§. 3. WE are not to conceive, as if the *Author* of Nature created Things in the Order, and in the Manner we can only now apprehend or explain them: They were, in Him, but *one* single Act of his *Omnipotence* and *Omniscience*; for us, to understand them in any tolerable manner, if at all we can, we must *divide* them into different *Parts* and *Parcels*, and form an *Idea* of them by different *Acts* of our Imagination. For Example: Suppose *Matter* divided into *solid*, *imporose*, *infinitely little Cubes*, *triangular equilateral*

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Prisms and *Spheres*, *harmoniously* rang'd and united at first, by some Law of *Attraction*, and fram'd by a Divine *Mechanism*, into *organical* Bodies, some-how *analogous* and similar to those, which *sentient* and *intelligent* Beings are now cloathed with (with this only Difference, that besides their being now *cas'd* over with the gross porous Matter, of this *ruinous Planet*, several additional temporary *Organs*, to fit them for their changing Situations, may be added, which in other Situations may *drop off*, and dry away; as we see in the *Placenta* and *umbilical* Vessels of the *Fætus*, and the different temporary *Apparatus* of the *Silk-worm*, and other *Insects*); into which the *First Cause* inspired an *infinitesimal Sparkle*, and *Miniature* of his own Substance, and natural and moral *Attributes*, to actuate and govern this *Microcosm*, in the same *analogous*, but in an infinitely lower manner, as He presides over and actuates the *Universe*. This *æthereal* Body, being then supple and pliable to the actuating *spiritual* Substance, as *it* was to the Divine Influence; but being *free* and *fallible*, innumerable Multitudes of them, by *spurious Self-love*, and inordinat Love of the Creatures, and created Pleasures, actually *lapsed*, fell into Rebellion and Disorder, and so brought on the Necessity of this present State, and the gross *penitential* Appearances of this *ruinous Planet* we now inhabit.

§ 4. BODY and *Spirit*, or material and spiritual Substances, will eternally be *disparata*, if not *contradictory*, yet intirely *dis-similar* and contrary, and at an infinit Distance, in their Natures and Substances. Body will be eternally *passive* and inert, *Spirit* eternally *self-active* and *self-moving*, or endow'd with an internal *Principle* of acting on, or moving Matter; all their *Relation* or *Reference* one towards another, can only be known by *Analogy*; and yet not being *contradictory*, they might possibly be conceived of the Nature of *Hyperbola's*, with their *Assymptots*: For tho' the *Passivity* of Body be in Proportion to its *Density*, yet since Body cannot be actually *infinit* in its Quantity or Extent, its *Passivity* or *Inertia* cannot be *infinit*, but lessens as its *Density* does; but still, if its *Density* was suppos'd even *infinitely* small, that will not make it *self-active*; it must actually become *Spirit*, and pass thro' that Term *Not-matter* in its Progression, before it can arrive at *Self-activity*, and then acquire the contrary Qualities, as the Series $+4+3+2+1+0-1-2-3-4$ does; and nothing less than infinit Power can reduce it to that State; that is, it must be actually brought to be *Not-matter*, or an *immaterial* Substance, before it can become active or *spiritual Substance*; and so is, as it were, in the State of *parallel* Lines, and not of an *Hyperbola* with

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its *Assymptot*. But still there is an *Analogy* between their Substances, such an one tho' as is between *finite* and relative *infini*t, or between the *least* and *greatest* Term of an *infini*t *convergent Series*.

§ 5. THE *Persians*, of all the *Antients*, seem to have had the least intolerable Notion, *Idea*, or *analogical* Picture on their Imaginations of *spiritual* Nature, in conceiving it like *Light* or *Fire*. If we suppose an indivisible, infinitely *rare* Substance, and endow it with *infini*t *Elasticity* and *Energy*, with an *internal* Principle of Self-activity, or of *Self-mobility*, we have the essential Attribute of *spiritual* Substance; all its other Qualities will be as *Modifications*, flowing from that *Root*; for then *Understanding* or *Conception* will become only *analogous* to an intimat *Union*, *Contact* and Presence to every individual *Atom* or component Particle as it were, of the *Object* conceived or understood. *Reasoning* will be a progressive Performance of this *intellectual* Operation, and comparing the *analogous* Parts or component *Particles* to one another: *Love* or *Desire* will be a continued *Union* or *Contact* with the *Object*; and so of the other *Modifications* of this internal Principle of *Self-action* in an infinitely *rare* and indivisible *sentient* or *intelligent* Substance: *Fire* or *Light* will then be the most *luminous* Resemblance or *analogical* Picture of *spiritual*

Spiritual Substance and Qualities; especially if we take it as it is, in its uncreated *Source*, the *Divine Nature*, for an infinitely *pure*, perfect, *simple* and *active*, *living* and *intelligent* Substance, then it will become the best *analogical* Resemblance of the *Divine Substance* (however faulty and deficient) we can frame, now as at present we are: And small *Lamps*, *Globes*, or Sparkles of *Light* or *Fire*, kindled up, voluntarily emitted, or flowing, from this infinit *Globe* of *Light* and *Love*, will best represent particular *spiritual* Natures, whose *Rays*, tho' emitted with a *relatively* infinit *Velocity*, will weaken, and terminat in thicker and thicker *Darkness*, *Shade*, or Want of *Fire* and *Light*, which will best represent to us, and furnish out the *Idea* of Body, but still an imperfect one, *Darkness* being only a Negation of *Light*: But as the Rays of *Millions* of different *Flambeaux* may pass really, tho' material, through the *Eye* of a Needle, without Resistance or Interfereing; so *spiritual* Substances, by a proper Penetration, may conceive and comprehend, according to their Capacity and Power, their proper Objects; and in this *analogical* Sense it may be understood, that *universal Nature*, or the *created Universe*, may represent *GOD's* Body, or his *Sensorium*, and he may be called the *Soul* of the *Universe*, as the *Planets* in our *System* may be term'd the Body, the *Tabernacle* and *organical* *Machin*

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Machin of the *Sun*; in all which tho' there will be eternal Impropriety and Disparity: For the one is the *Cause*, the other the *Effect* only; the *One* is the *Artificer*, the other the *Work*; the one is a *living, spiritual* Substance, the other dead Matter; the one is *self-originated*, and necessarily existent, the other is created, deriv'd and dependent; the one is the first and least *Term*, the other, as it were, the greatest, and last *Term*, of an infinit diverging *Series*, but at an infinitely infinit Distance. This is as far, it would seem, as our active Powers can go, in their present State, by themselves, unless it be communicated and imprest by the *Source* from above, by direct Sensation and Feeling on the *Spirit*.

§ 6. As the *self-motive, self-active* Power in spiritual Substance is the Source of *Intelligence*, by its intimat *Penetration, Union*, and Presence with the whole internal Substance of its comprehended *Object*; so it is the sole Principle of *Liberty*, and the true *miniature Image* of the *Deity*; in short, it is the very *Essence* of *spiritual* Nature, and the *Root* of all its Qualities and Operations: It may be limited in its Extent, in its *elicit Acts*, and circumscrib'd in its *Energy*; but in its *Root, Faculty*, and *essential* Nature, in its *self-active Base*, it is infinit and unbounded. A *Farthing* Candle is as truly Light and Heat

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as the Body of the *Sun*; and we may have vehement *Willings*, *Longings*, *Volitions* and *Velleities*, and have an *innate*, inherent Power to intend or remit our Wills *in infinitum*, which no other Power can deprive us of, but that which can *annihilat* us, or turn us into another Nature. It would seem to me, that created *spiritual* Substance of all *Orders* and *Degrees*, were *analogous* to the infinitely pure and perfect Divine *spiritual Substance*, infinitely *diluted* or *rarefied*, as it were, like the Light and Heat of the *Sun* reflected from the *Moon*; and this in an infinit *similar Progression*, becoming rarer and more diluted, till it terminated in *Darkness* or *Shade*, thicker and grosser till it becomes like *Matter*, which is *analogous* to *Shade* or *Darkness*, and which too goes on *in infinitum*, thickning and in-crustating, to become quite inert and passive; so that laying aside created Substance, both *material* and *spiritual*, as quite *unknown* and *unknowable*, and of which we can have no *Idea à priori*, nor be certain of its Existence but *à posteriori*, and from its *Effects*, or the *divine Veracity*, if we conceive *spiritual* Substance *analogous* to *Fire* or *Light*, infinitely *pure*, *rare*, *self-active*, and *self-motive*, and *material* Substance *analogous* to *Shade* or *Darkness*, infinitely *dense*, *compact* and *concentred*, we shall have all that I think can be made of *either*, in this our present State; and as *Darkness* contracts and limits
Light,

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Light, extinguishes or imbibes its *elicit* Rays; so *Body* or *Matter* limits and stops the Self-activity of *spiritual* Nature, and they are an eternal *Bar* and *Obstacle* on one another; as *Matter* of a *proper* Figure and Contexture of Parts, condenses and heightens the Action of *Fire* and *Light*; so *divinely organis'd* and *harmoniously* figur'd *Vehicles* may promote the *elicit* Acts of *spiritual* Natures; and the *Analogy* to *Fire*, *Light* and *Darkness*, will hold good then through all the Degrees of comparing. It may be said, that all this is but *Figure*; but I think all true *Figure* is but remote *Analogy*, and all true *Analogy* is a distant progressive *Approximation* to *Reality*; and both are as real the one as the other, and differ only as the *first* and *last* Terms of a *Series*.

§ 7. THE *Purification* of the *Soul* is perfectly *analogous* to the *Cure* of the *cachymical* and *cadaverous* State of the *Body*; and the *Method* of *Cure* of *spiritual* Nature, taking in the different Subjects, *Matter* and *Spirit*, is perfectly *similar* to the *Methodus metasyncriticus* of the *Ancients* in the *Cure* of a *Cachexy* in the *Body*. The *Analogy* is here perfect and complete; they differ only, as the *first* and subsequent *Terms* of a *geometrical divergent Progression*. *Sin*, *Disorder* and *Rebellion*, is to the *spiritual* Nature of an *intelligent* Being, precisely and really (as much
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as they are both *Realities*) what a *cancerous* and *malignant Ulcer* is to an *animal Body*: The *Cure* of the *last* is by a *low, sweetning* and *thinning Dyet* at first, to enable the *Patient* to bear the *last Operation*, which must be by *Excision* and *Extirpation*, and raising new *sound Flesh* in its Place; *Penitence, Self-denial, calm Passions, a meek Spirit*, and a constant patient Attendance to, and Dependence on, the *Directions* of the *Physician of Souls*, will answer the first Part; and I am of Opinion, *he* (the *Divine Physician of Souls*) by his omnipotent Power, and his being *GOD*, *he*, I say, must perform *supernaturally* and *instantaneously*, as it were, (for a sweetning Cure of such inveterat *Humours* alone, would require *infinite Time*) some *grand Operation*, (in which the Creature is intirely *passive*) *analogous* to *Excision* and *Extirpation*, to divide between the *Joints and Marrow*, to cut out the *Adamical Core* in *lapsed* spiritual Nature, and to raise up, ingraft and implant his own *Nature* and *Substance* in its stead, to perpetuat and *eternise* its Soundness and Integrity, not in a *Figure* or *Metaphor*, as is commonly, tho' I think *barbarously, philosophised*; but at last, and in the *dernier Resort*, and before the *hyperboloid Curve* (to speak so) can meet with its *Assymptot*, as really and truly as *Matter* and *Spirit* are *Realities*, tho' of different Natures. *In the Day thou eatest thereof, thou shalt surely die*: In the
Sense

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Sense that Death came by *Adam*, Death spiritual was completed by one Action of the of the Parentage of Mankind, so by some one miraculous Operation *eternal Life* comes by *Jesus Christ*. I can never apprehend, that the *Oeconomy*, the Operation, the Efficiency of *Jesus*, terminats either in *Example*, *Repair* of the Indignity, confirming the standing *Hierarchies*, co-operating with us in destroying bad Humours and Habits gradually, or making a sufficient, free and full *Atonement* only; but that he must *supernaturally* and really cut out, burn away, and fill up, and supply, as it were, with his own *spiritual* Substance, the *Adamical cadaverous Core* out of lapsed *spiritual* Nature, to sanctify and *eternise* its Purity, Perfection and Happiness; and this as really, tho' not *materially*, but *spiritually*, I say, as really as *Spirit* is real, contradistinguish'd from *Matter*. I choose to speak in the *Mathematical* and *Medical* Language, because the *Analogy*, the *Similarity*, and the *Precision*, is here so just, so close, and so luminous, that I think it must penetrat those who can perfectly understand it, and may by a *Dictionary* be made plain to others, if they think it worth the while to deal in such *abstracted Conjectures*.

§ 8. THE *human Spirit* is literally, and not in a mere Figure, a *Tabula rasa*, a *Sheet of white Paper*, as it comes into the World at present, under its *planetary* Plaistering; and
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it would seem, for this very End the Plaistering itself was design'd, and the gross porous *secondary Elements*, of this *ruinous Planet*, were by infinit Wisdom contriv'd; not but that *spiritual* Nature, in its Order, and in its natural and *essential* Powers, of *living, understanding* and *willing*, and all their Modifications of Sagacity, *Penetration* and *Conduct*, and a Capacity of perceiving outward Things, and of gathering the Materials on which they work, of external Objects, *Ideas*, and Knowledge of Things, are not in their Fund, in the Faculty and Power, unalterably the same, and as it were engrav'd in their Substance according to their Order; for *spiritual* Nature cannot *increase* or *diminish* in its *essential* Powers and Capacity; but their *elicit* Acts, their Appearances *ad extra*, may be intercepted and restrained from *issuing forth* by the gross *planetary Plaistering*; like *Characters* and *Inscriptions* engrav'd in the Substance of *Brass* or *Marble*, and filled up with *Wax*, *Clay* or *Dirt*: or like the imperceptible *Ink*, which leaves no Trace on the white Paper, but shews itself when rubb'd over with *Juice of Lemon*. Thus the immaterial *thinking* Substance is laid asleep, becomes thoughtless, and as it were *stupefied*, a bare polisht *Plain*, and a Sheet of *clean Paper*, (its three natural Powers of *living, understanding* and *willing* are sunk in one of *living* only) a mere *Recipient* or *Continent*, and as it were (without Ridicule)

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a *dark Lanthorn*, in the *Loins* of the Parent, and as it comes first into the World; but still the *self-active* and *self-motive Flame* is alive within in its Seed, and its *Punctum saliens*. External Objects, Pain, natural Instincts and Necessities, rub off some of the improper Plaistering, and break some of the *Ligatures*; these repeated and increas'd, unloose more; and thus the *Organs* of *Sensation*, the *Aper- tures* of the Senses, and the *sentient* and *in- structive* Powers, are gradually set free, and the *Dirt* pickt out of the spiritual Substance; then Memory and Attention awakens, and *Ideas* are form'd and retain'd by Time and Degrees. By the *Animal Functions*, which flow from *living*, more and more of the *membranous Tubuli*, and *medullar* and *cortical Glands* of the Brain, are develop'd; and the self-motive Powers, by repeated Efforts, Strains, and Pushes, (like a Spring in the Box of a Watch) set free more and more of *æthereal Organs* of *Thinking*, according to the Degree of *Culture*, *Exercise*, and Useage, they pass under, and this by a quicker or slower *Progression* and Velocity, as they are cultivated, used and exercis'd, till they come to the highest State they generally arrive at; and thus by Labour and Exercise of the *Organs* of the *intellectual* Faculties, they work off the *Dirt*, that fill'd up the ingrav'd *Characters* on their *spiritual* Substances, and make the *imperceptible Writeing* appearing legible mere-
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ly by filing off and scrapeing away the *Plaistering* on the primitive *æthereal Vehicle*, whereby the *spiritual Substance* is set free directly to enjoy and use all its *inbred Powers*, and has Capacity to perceive all Things *ad extra*, know, understand and possess them; not as a *blind* Man restored to his Sight, or a *deaf* Man to his Hearing, or a *dumb* Man to his *Speech*, who were born so; but as a Man, for a short time shut up in a *Dungeon*, and separated from all things without, and again set at Liberty, knows and enjoys all again, as before. And the *final Cause* of this reducing the spiritual Substance to a *Tabula rasa*, by a gross Plaistering, and a temporary Imprisonment, in the dark, dismal, cadaverous *Dungeon* of this Body, seems to be not only for *Expiation* and *Punishment*, but that the *moral Powers* of the Soul, *Justice*, *Goodness* and *Truth*, or *Faith*, *Hope* and *Charity*, might feel no Interruption from the *Activity*, Extent and Contrariety of these natural Powers; but that they might amicably, gradually, and, by *mutual Assistance* and Support, rise and grow together in similar *Steps*, and a regulated *Progression*, till they were confirm'd into a *Habit*; like sweetning the whole Mass of the Fluids, by a *milk* or *vegetable* Diet; to fit the Subject for the last *passive grand Operation* in the *Oeconomy* of *Jesus*, which may be to cut out, as it were, of our spiritual Substances, that *Core*,

schirrous or *cancerous* Gland, generated by the *Lapse*, and from the *Adamical* Principle, and to heal and fill it up with his own *immaculat Substance*, perhaps really and truly (as the Liturgy of the *Church of England* expresses it) communicated to us in the *worthy* receiveing of the *Sacrament* of the *Body* and *Blood* of *Jesus*, or some-how we cannot explain.— This *Effect* will neither appear absurd nor *unphilosophical* to those who believe *Jesus* to be the *Son of God*, of the same *Substance* and *equal Powers* with the *Father*; the Manner how, is the proper Subject of *Faith*, unconceivable to us, at least as we are at present; but the *Fact*, in general, or something of that kind, highly probable from *Analogy*, and evident from *Revelation*: For, I think, no truly *humble Christian*, let him be in what State of *Perfection* he may, can think himself fit to be *united* and *commerciat* eternally with infinit *Purity* and *Perfection*, till some great Work be done in his *Soul*, more than he feels in himself then.

§. 9. Most, *Christians*, at least, are agreed, that the *Oeconomy* of the *Restoration*, as contriv'd and executed by *Jesus Christ*, (*God-Man*, the eternal Son of *GOD*) as far as it was possible on his Part, and as far as it was consistent with *Liberty*, and the *Harmony* of the Divine Attributes; I say, all *Christians* are agreed, that this was a Work of surprizeing *Wisdom*, *Beauty*, *Goodness*, and worthy of

a *GOD* ; having in it, to the greatest Perfection, every thing that could most effectually answer the *End* proposed : But I know not if many have endeavour'd to shew it to be the τὸ μόνον, and the only *one*, that could possibly answer that *End*, takeing in the whole *Conditions* ; and yet I cannot help thinking, that this may be strictly *demonstrated*. A *Sovereign* may pardon, on his Repentance and Amendment, a *rebellious* Subject, and receive him into *Grace* and Favour ; but it will be eternally true, he has been a *Rebel*, and that there remains the *Cicatrice* of that Sore in his *Heart* and *Soul*, which first produced his *Rebellion*. Now it is as certain, as that *GOD* is, that nothing *impure* and imperfect in its *Order*, can *finally*, invariably and eternally be united and *commerciat* with Him ; that is, be permanently and eternally *happy* ; because of his infinit Purity, Dignity, and Sovereignty ; and the receiving an imperfect, *intelligent* Being into his Favour, Service, and design'd *Post* again permanently, (or one less *similar* to Him in its *Order*) would not only *fully* his Purity, but make Him cheaper, and less intensely the *sovereign Felicity* of the standing *Hierarchies*, and make his Wrath less dreaded, and so not a sufficient Bar on their *Lapse*. Now every *Truth*, and every *Faët*, is in its own Nature as *eternal*, as it is *real*. It will be eternally true, I have been a *Rebel*, if I have been one ; and *GOD* alone, who has the Power of *Crea-*

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tion, has the Power of *Annihilation*; and this *Fact*, as far as a Fact can be, at least as to its Root, must be *annihilated* and done away some-how, before it can be *creaturely* and *relatively* true, that I was not a *Rebel*, or at least that my *Rebellion* is really now, both as to *Him* and *me*, as it never had been; which can only be done, as far as I conceive, by *annihilating*, *burning out*, *consumeing*, the rebellious *Core* of my *spiritual* Substance, and filling it up with something *analogous* to his pure immaculat *Divine Nature* and Substance, or new createing; and nothing less than a *GOD* can do this: So that on Repentance and Amendment, Men might be in the Condition only of *Rebels*, whose Lives conquering *Monarchs* have saved, yet instead of continuing them *Citizens*, had translated them into some remote Corner of an uncultivated Country, as a conquer'd Province, and made them a lower *Order* of Creatures. But as *infini* Perfection is without any possible Change, in its first most perfect Intention, as to its Nature, but not as to its Degree; and can only bring it about less immediatly, and after a longer Time, (by reason of the *Free-wills* of his *intelligent* Creatures, on which He neither can nor will commit Violence) yet still will effect it, with a Perfection at last, beyond even, as it were, the first Intention; accordingly *Jesus Christ* came, to bring *Life*, and to bring it more *abundantly*; and by his *infini Power* and *Love*, being *GOD*, to
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annihilat, melt down, and burn away, the *Adamical Lapse*, *Core*, and *Cicatrice*, of Sin and Rebellion, in spiritual Nature, and new create, and replace, his own *Divine Substance* and Nature in its stead; so that it may then be said, with *philosophick* Propriety, that a truly *regenerat* and *sanctified* Person has the *Divine Nature* and Substance of *Jesus, GOD-Man*, actuating and moving him, that is, *living* in him, as really and substantially as ever before his *Adamical* lapsed *Spirit* lived in him. This may sound *odd* and particular to *little Philosophers*, nay, even to many perhaps virtuous and good Persons; but as I think it is the Language of St. *Paul*, and of *Jesus Christ* himself, I think also, that if there is not some *Reality*, and *philosophic* Propriety in it, as real as is the Distinction between *material* and *spiritual* Substance, and that it is not intirely all *Figure*, there is no forming any *Idea*, either of the $\delta\tau\iota$ or $\delta\iota\omicron\tau\iota$ of it (and even *Figure* in *philosophic* Propriety, is but the first *Term* of an infinit *Series*); nor why it should have been revealed or mentioned: Nor will there be much Difficulty insuperable in it, or unexplicable in *Philosophy*, to those who admit *Jesus* to be *GOD*, and his Words to be *Spirit* and *Truth*, and *GOD* to be infinit in Power and Goodness; the End and Means of all whose *Actings* must be equally perfect in their *Order*, and who suppose that Matter and Spirit must be equal Realities. This *last State* I resemble to the *Hyperbolic Curve's* meeting with

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its *Asymptot* (I hope I shall be forgiven the Particularity of the Expression, because of its Justness and Propriety); and it may be the finishing Operation, to eternize the *Infallibility* and *Impeccability* of all lapsed, sentient and intelligent Beings, to which *few* arrive in this Life, and all must perhaps pass through many *Mansions*, and various *planetary Vehicles*, before they can attain to *it* in its last Perfection, and to which some pass with a quicker Velocity, and a faster converging Progression, like the several Orders of the *Hyperloids*, some of which meet the *Asymptot* infinitely sooner and faster than others *, but through which all must pass sooner or later; for *GOD's* Ways must be equal, uniform and general, to all his Creatures of the same *Order*, with only the Difference their *general* or *particular* Wants or Distempers require; and as He treated the Manhood of *Jesus Christ*, who was made perfect by *Sufferings*, and as He has treated all his *Disciples*, so all lapsed intelligent Beings must pass through *Jesus Christ*, receive his *Revelation*, and go through his *States*, sooner or later, or in some *Mansion* or another, before they arrive at perfect *Infallibility* and *Illability*; that is, they must first or last all be *Jesus Christ-like*, before they can become permanently *GOD-like*, or similar to Him in Perfection and Happiness. This Progression

* *Vide* Philosophical Principles of Reveal'd Religion.

and *final* Perfection, the *Free-wills* of intelligent Beings may retard a finite Time; and they might have retarded it from *Eternity* to *Eternity*, that is, for ever, both in the *eternal* Nature of *Sin*, and the infinit Purity of the *Divine Nature*, without this *sole* and *individual* Mean, *viz.* the *Merits*, *Power* and *Efficacy* of the *Oeconomy* of *Jesus* the *GOD-Man*; who uniteing *human* Nature to Himself, has actually, really, but spiritually, cut out the *Core* and *Cicatrice* of the *Lapse*, and filled up the *discontinuous* Void with his own *spiritual Substance* and Nature, in all those who shall be finally restored; for *He is the Way, the Truth, and the LIFE.*

§. 10. *REASON* and *Faith*, in their true *philosophic* Natures, in their Source and Foundation, are so far from being *contrary*, much less *contradictory*, that they are intirely *similar* and *analogous*, and differ only as the higher and lowest Terms of a *divergeing Series*. *Reason*, in its *Principle* and *Faculty*, in the lowest Intelligence, is like a *Progression*, the first *Term* of which is the *Root*, or *miniature Base*, of all the higher subsequent *Terms*, which are all *similar* and *analogous* to one another, how compounded and elevated soever they may be, and where the superior *Terms* virtually include the inferior, and bring them down to the Simplicity and Plainness of the *lowest Term*; but not without Labour, Atten-

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tion, and Reduction of the *Conditions* to their proper Limits. *GOD* is the *Sovereign* and *Supreme Reason*, involved in Clouds and Darkness, by reason of his infinit *Splendor*, and the infinit Disproportion of our Faculties; and perhaps out of Designs of Love and Goodness, as we are at present in so unfit a State: Our *Reason* and Conception, tho' infinitely disproportion'd to such an *Object*, yet is of a *similar* Nature with his Light, and natural *Attributes*: Our *Reason*, and intelligent Powers, are *analogous* to the lowest and first *Term* of such a Progression; his *Light* and *Splendor*, to the *highest* and *last* great *Term*; which *Term*, in a *Series*, tho' comparatively *infinit*, yet is but a *finite*, compared with his absolute *Infinitude*. The other *Terms* of such a *Series* may be *analogous* to the natural Powers of the several different *Orders* of Intelligences, that may exist in external Nature; and all the several *Orders* of Intelligences, with their respective Powers, from the lowest to the relative highest, may be continually approaching one another, yet never can reach the other *Terms*, much less the last *Term* relative infinit, and least of all to absolute *Infinitude*; for in absolute *Infinitude* there is such Variety of *Objects*, *Mansions*, *Pleasures*, and *Happiness*, as are boundless and without Number or Limits. *GOD* is the sovereign and supreme *Reason*, I say, always consistent, uniform, and invariable: He is *pure, unsullied,*
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and unchangeable. *Creatures*, even the most sublime and perfect, can only know Him by a *progressive* nearer Approach to Him in *Similarity*, which will be gradual, but endless. The Faculties, Powers, and Qualities, both *Natural* and *Moral*, of *Creatures*, are, as it were, but *analogous* (to speak still more plainly) to a *Series*, such as $1+2+3+4+5$, &c. We of the human Race, at least our Fellow *Animals*, of the only *sentient* Race, may be as 1, or 2; the higher *Orders* may be as 10, 100, 1000, &c. to us. At what *Term* we began, or any Order begins, we cannot know, nor, did we know, could we alter it; that depends intirely on the good Pleasure and Wisdom of Him that made us: In this Point we cannot add a *Cubit* to our *Stature*, but we may all press forward to higher Terms and Degrees, and be continually *progressive*, tho' perhaps mostly in our *moral* Powers, and consequently in Perfection and Happiness; which can be done by *Faith* only, that is, by *trusting* to, believing in, and acting according to the Direction given by *one*, whose natural and moral Powers are of a much higher *Order*, or in Proportion to a much higher *Term* than ours are: As if *one*, whose natural and moral Powers are as 1000, should reveal to one whose natural and moral Powers are as 1 only, that in order to raise his natural and moral Powers to 2, he must trust or believe, that is, take his Word for it, *so* and *so*, and do *so* and *so* in Consequence,

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quence, and that this will lead him on gradually to the *Term 2*, and so in all the other *Terms* of the *Progression*. This really seems to be somewhat like the Case of all *sentient* and *intelligent* Beings, in order to advance in this *eternal Progression* of Perfection; the only Method possible for them, is to *trust* and *act* in Consequence of this Trust, and depend on the Veracity and Ability of the Informer; for this trusting is in order to the acting. In *building*, or working or *sailing* a *Ship* to a certain *Port*, the *Seaman* must *trust* and work, according to his Directions: In raising an *Arch*, or measuring a *Distance*, very few Operators understand the abstract *Geometry*, on which the Directions are founded. In short, in this our present *expiatory* and *probatory* State, in all we do to advance towards higher *Terms* of our *progressive* Perfection and Happiness, we must absolutely *trust* and *work*, else we shall never advance in divine *Faith*, and in the progressive Perfection of our natural and moral Powers; and here we have not only *infinite* Power and Wisdom for our *Director*, but infinite *Goodness* for our Assistant, who yet from the Purity and Perfection of his own Nature, cannot *direct* or assist us but in Consistence with the *Harmony* of his own *Attributes*, and our own *Free-wills*, i. e. imperceptibly. Our intellectual Powers are *analogous* to our material *Organs*, our Senses. One with a *Telescope*, or with very strong
Eyes,

Eyes, might see a *City*, or a Dwelling, which another without it, or with weaker *Eyes*, could not perceive. If the *weak-sighted* Person must needs go to this *City* or Dwelling, he could only take the Directions of the stronger-sighted, on what *Point* of the *Compass* to direct his Course, what *Hills*, *Dales*, and *Rivers* to cross, to walk on *Trust* and *Hope*. Our *trusting* is in order to our travelling. *Faith*, or *Trust*, that does not terminat in Action or Travelling, is mere *Painting* and dead Work. *Revelation* discovers the Being, Purity, and Perfection of the *First Cause*, his internal Nature, and the Splendor He dwells in, what is his *Society*, and what their Occupation; that to be happy completely and permanently, we must get thither. We, while our Powers, natural and moral, are but as 1 or 2, cannot see or perceive the Beauty, Perfection of his Nature, and the Place He inhabits, nor the Propriety of the *Directions* and Advices He gives us, in order to get thither. The Nature of things will not admit of any other Evidence, but *Faith* and *Trust*, and consequent working, till our *natural* and *moral* Powers are thereby rais'd higher; and then we shall perfectly comprehend the Beauty, Propriety and Utility of these Directions, and advance gradually, by following the same Method, to higher *Terms* of Powers and Faculties, and higher Degrees of Glory and Felicity, in this infinit endless *Progression*. From all
which

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which it is evident, that *Reason* and *Faith* are so far from being contrary, much less contradictory, that *Reason* is the first *Term* given in this Progression, of created Light or Powers: *Faith* or Trust is, as it were, the *Ratio* of the several *Terms*, which goes through them all, that is, the Ground or Bottom of the subsequent Operation and Working. By the Directions given, and Working, we infallibly pass to the second, third, and higher *Terms*: Or, to express it yet more strongly and clearly, if possible, *Faith* or *Trust* is proceeding as we do in *Algebra*, supposing the second or higher *Term*, tho' *unknown*, yet as *known*; and then working according to the Conditions of the Question, the *Term* unknown becomes thereby infallibly known. I cannot enlighten these Figures, and this Language here, they are so pertinent and cogent to those who understand them.

§ II. *PURE* and disinterested *Love* is *Love* of infinit Perfection for itself *only*, and for its own *Amiableness*, without any other Consideration; but this, as every thing else, admits of infinit Degrees. The great Mistake here, lies in Persons pretending to get to the Top of the Ladder, without ascending by all the Steps; and that some define the *last* Step as it were the *first*. All things belonging to Creatures must be progressive, and confirm'd Habits must be acquired by repeated persevering Acts. *Naked, free and generous Faith*, is trusting, confiding,

fideing, and *believeing* in *Infallibility*, and infinit *Veracity*, upon its own *Word*, its *Nature* only; and on the most slender Intimation of its Orders, the *generous Believer* is determin'd to venture his *Whole* on that Bottom: And from these *two*, flow absolute *Resignation*; and this also admits of *Degrees*: Both these are subject to *Error*, Mistake and Delusion, in feeble *lapsed* Mortals, such as we are; and this cannot be prevented, from the very Nature of Things, as they are now, in our *probatory* and *penitential* State, constituted; but surely there is less Danger in the *Excess*, than the *Defect*: No *good Master* ever rejected or punished his poor good-natur'd, weak *Servant*, for loveing and trusting him too much, or obeying him too *precisely* or literally. I readily grant, *Prudence*, *Order*, *Measure*, *Decency* and *Regularity*, are the first of all the Moral and *Christian* Virtues, and frightful Consequences have ensued upon the Neglect of them; and both *Enthusiasm* and *Infidelity*, I think, equally imply a wrong Head, some *nervous* Disorder, and Want of *common Sense*; but both *Excesses* and *Defects* strongly evidence, that there is a just *Medium* wherein *true* Virtue and sole *Right* consist: And still of the *two* Evils, *Infidelity* and *Tepidity* is infinitely the worst, not only in regard of the *Infidels* and *Tepid* themselves, as it defeats the *sole* Means *Providence* has, or, I think, can contrive, for their *Recovery* and *Restoration*; but as it destroys Numbers of *weak Souls* by its Influence

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and Example, and as *Infidelity* saps the Foundations of all *Morality*, and consequently of all *civil Society*; whereas *Enthusiasm* can but hurt chiefly the Bodies, or outward Fortunes of their Fellow Creatures, by *diabolic* and tyrannical *Persecution*, unless *Hypocrisy* can be join'd to *Enthusiasm*, and then it becomes consummat *Infidelity*. To me it would seem, the whole Conduct and Design of Providence, in this present probationary State, is to produce in the Hearts of his lapsed Creatures, *pure Love* and *naked Faith* only, and that *this* is the sole *Key* of all the Inclosures of his Providence; and that this State of Mind must be that which alone is of any Value in the Sight of God, as being the only Means possible of begetting perfect *Felicity*, and *eternizing* it; even so much, as that *He* in his Providence seems to neglect, or over-look and undervalue, as it were, any thing less than *these*, at least any thing that might retard or interfere with *these*. An Instance or two will make this plain: We see that we, of the lowest *Rank* of Intelligences, are endow'd with a *Capacity* and Power of communicating our *Thoughts*, *Conceptions*, Dispositions, and Sentiments to one another, directly, plainly and intelligibly, by *Language* or Writeing, and by many other *Signs*, *Symbols* and Figures: *Infinite* Wisdom and Power, without all Doubt, had he so pleased, might have contriv'd us so at present, that *he* might have been able some-how to communicate himself

himself *directly, plainly, instantaneously* and intelligibly, to all his *intelligent* Creatures, his Children, the Work of his own Hands, whom he cannot help loving as a tender *Father* does his *Children*. But since this Method not only would have done us no *Good*, but on the contrary, a great deal of *Hurt*, by hindering and interfering with our implicit *Trust*, our *Reliance*, our *Resignation*, our *Faith*, and absolute Dependence on him, so necessary to the Production, and *eternizeing* of perfect Happiness; we see he hides himself in *Clouds* and *Darkness*, and is literally a *Deus absconditus* as to us, and does only approach to, or commerciat with us, in *pure Love*, *naked Faith*, and total Abnegation and Resignation, so hard to be acquired. Again, how necessary, how indispensable, would seem the *precise*, the limited, the un mistakeable Nature of natural and moral *Good* and *Evil* to us, in our present probatory State? and yet we are left for the Knowledge of *them*, to *Feeling*, to *Observation*, to *Experience*, to *Culture*, to *Pain* and *Suffering*. The *wisest* of mere Men said, *That no Man knoweth Good or Evil by all that is before him*: We naturally reckon *Health*, *Wealth*, *Honour* and *Success*, the real, the only Goods of this Life; and yet, if *Christianity* is not all a *Farce*, their Contraries are often, nay almost, always the most real, and the most perfect Goods, since they are
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the shortest Road to absolute *Resignation*, the greatest of all *Goods*, and the sole Mean of perfect Happiness. Once more; infinit Wisdom and Power has, as it were, done nothing to gratify our Curiosity, to *polish* our Natures, to advance the *Comforts* and *Gratifications*, the *Conveniencies*, and the honest *Improvements* of *Living*: How many *Nations*, and *Millions* of our own *Species*, of the same Order and Rank of Intelligences, are left all their Lives in the utmost *Brutality*, *Ignorance* and *Savageness*, not only as to the *Endowments* of their Minds, but almost as to the absolute, at least decent *Necessaries* of Life! in which *Cimmerian* Darkness, and execrable bodily Impurity, or Filth, they wallow, live and die, even vastly below many of the *Brute Species*. The most useful, pleasant and instructive *Discoveries* in Life, have, even among the most *polisht* Nations, been discover'd late, by *Chance*, and with great Imperfections at first, I mean, *Writeing*, *Printing*, the *Compass*, and *Glasses*, and even *Philosophical Physic* itself: All this cannot happen by *Chance*, *Fatality*, from Impotence, or without some infinitely wise and gracious *Design*, under the *Oeconomy* and Providence of an infinitely good, *wise* and *powerful Governor*, who alone knows best, *how long*, and what Kind of *Trial* and *Probation* is fittest for his lapsed intelligent Creatures, of such *Tribes*, *Nations* and *Climats*; to what Degree they

they have *lapsed*, what is their most proper Trial, how far *Simplicity* (and even *actual Humiliation* of this *intelligent* Creature, made a little lower than the *Angels* in his natural unalterable *Powers*, and as it were, to *drench* him in Dirt and Nastiness, even below the lowest *Brute*, as *Compost* fructifies Vegetables) is the *Via brevissima*, and Suffering, even *unconscious* Suffering, is sufficient; and knows best what *Mansion* they are design'd to inhabit hereafter; and has fitted *outward* Circumstances accordingly: And as to what is commonly reckon'd *polishing*, and having the decent Necessaries and Conveniencies of Life, he leaves Men to their natural *Liberty* and *Industry*, to employ their natural *Activity* innocently and laudably thereby, which otherwise might run riot in *Turpitude* and *Vice*; and to *general Laws*, which, followed with *Simplicity*, *Attention* and *Sincerity*, would naturally bring them perhaps the shortest Way to *disinterested Love*, *implicit Trust* and *Resignation*; and this he does even with a seeming Neglect of those other Things, as accounting them of no Value, when compar'd with this *pure Love*, and *implicit Trust*, that Disposition of Mind which alone can beget and *eternize* Happiness. Further; of what great Consequence to the Quickness of our *Purification*, and consequently of our *eternal Happiness*, it would appear to us, would be, the certain Knowledge of the precise Time of our *Dissolution* and *Death*? Then, like true penitent and serious *Felons*, we should employ all our last Moments intire-

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ly in cleansing our Vessels, and *trimming our Lamps*; and yet all that is known in this weighty Affair is *general*, and that we once must all die: The *Time*, the *Manner*, and other Circumstances, are all absolutely unknown to us; and why this? but only because infinit Purity and Perfection values nothing about us, but absolute *Trust*, *Dependence*, and *Resignation*, even to venturing our very *Lives*; and, as our *Saviour* expresses it, if we do not *hate*, that is, undervalue, our own Life, in respect of *him*, or love it but in *Subordination* to our Love of Him, we cannot be his *Disciples*. Again; the *Providence* of GOD seems to act *here* solely by *second Causes*, and by *general Laws* only, and in such a manner, that we but seldom *perceptibly* discern the Hand that disposes of *Events*; tho' doubtless, as GOD is an *infinitely free Agent*, He governs by a particular, as well as a general Providence; on proper and particular Occasions He dispenses with his own general Laws for a time, by a particular Interposition, both in *material* and *spiritual* Appearances: But in these particular *Interpositions*, we can have no *physical*, but only a *moral* Certainty, in order to raise and confirm our *Trust* and *Resignation*; for *Faith*, *Trust*, and *Resignation*, always suppose Uncertainty and Doubt; and some time or other, we shall admire and adore that *Wisdom* and *Goodness*, who could in so delicat and kindly a *manner* conceal from us, and hide that Hand, which directs every *Atom* of

of the *Universe*, and disposes of every *Hair of our Heads*, in order to render our *Trust*, *Faith*, and *Resignation*, stronger and more firm: As the Darknefs and Cool of the *Autumn* Nights are what harden and consolidat the now refined and purified Juices, which the stronger *Sun*, and longer Day-light, had rais'd and sublim'd into the *Seeds* and *Fruits*; for the same Reason, the *Operations* and Influences of the Divine *Spirit*, or *Grace* and spiritual Aid and Assistance, are *secret* and *im-perceptible*; and are always to be suspected, when they are *impetuous*, *sensible*, and acting only by *Fits* and *Starts*, as the gross Machin is *in* or *out* of *Tune*, and as the animal Functions play *easily* or *labour*, especially in *young unexperienced* Persons, who have not been *tried* and *purified* in the School of the *Cross*: For these uncommon and *extraordinary*, or even *perceptible* Operations of the *Divine Spirit*, seldom happen *pure*, *sincere*, and *un-mixt*; but to the long and severely *Tried* and *Purified*, and when the Passions, Appetites, and *spiritual Humours* are moderated, calm'd, and subdued, on the Decline of a Life spent in due Retirement, and proper Silence; not in the *Storm* or *Tempest*, but in the *still calm Voice*, does the Divine *Spirit* speak; and a truly humble, and enlighten'd Person, ought to suspect himself, *get above*, and pass over every *Impulse*, *Sweetning*, or *Glance* of Light that comes not thus accompanied. Children, Beginners, and Noviciats in the *spiritual Life*, are often grati-

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fied with such *Sugarings* for their Encouragement; but Bread is for grown Persons, which is got by the *Sweat of the Brow*, and bearing the *Cross*; and a prudent staid Person will have too great a Regard for the Purity and Dignity of the *Divine Spirit*, to bring him down, to account for all the *mechanical* and *animal* Operations of his *volatile* and various *Imagination*. *Nec Deus interfit, nisi sit Deo dignus vindice nodus, & aquila non captat muscas.* But I beg Pardon for this Digression out of my Sphere, Capacity and Experience, to treat justly. But all the Difficulties and Darkness in Providence, and in natural and revealed Religion, seem to be intended by infinite Wisdom with surprizing Justness, *Propriety*, and *Delicacy*, only as the most effectual *Means* to bring us to pure *Love*, and naked *Faith*, *Trust*, and *Resignation*; and are so far from being *Objections* against the Christian Religion, or to weaken its *Credibility*, *Dignity* and *Authority*, that were there no such *Difficulties*, *Doubts*, *Uncertainties* and *Mysteries* in *Revelation*, it would be a strong *Presumption*, and an undeniable Argument, that it came not from *GOD*, who being *infinitely infinit* in all *Perfection*, *Wisdom*, *Knowledge* and *Goodness*, must be incomprehensible to us in our present State, and so they could not be worthy, adequat and proper for such a *Being*, who is equally above Perception, Feeling and Sentiment, as above Comprehension. *These* may be good, useful and real, and his *mediat*, but seldom his *immediat* Operation.

Operation. This pure *Love* and naked *Faith* seems to be the only *Point in View*, of the great and wise *Governor* of the *Universe*, even to such a Contempt of what we commonly think fine *Endowments* and *Polishing*, that in a great many Instances, in *Nations*, *Tribes*, and for *Ages*, he would seem, in the Conduct of his Providence, to prefer their Contraries, as the *shortest Way* to this *End*; tho' still there is a *Choice*, *Perfection*, and *Meliority*, in the *Honestum*, *Utile*, and the *Decorum*; but he only can know when, where, and in what outward Circumstances, lies the τὸ βελτίον, *quoad hos aut hunc*.

§ 12. I TAKE it, in the first original Creation there was but one universal *Salt*, or one Kind of *saline* Particles, and that they were hard, *imporose, triangular, equilateral Prisms*. When Nature came to be confounded, jumbled, and *unharmoniously* combin'd, the other *Elements* of *Air*, *Water*, *Sulphur* and *Earth*, in forming secondary *Elements*, were *incommensurately* and discordantly mixt with these; but still each preserv'd some Degree of its *primitive* Nature, as the compounded *Elements* retain'd more or less of their primitive *Particles* in the Composition; hence our purest *Elements* that *Art* can elicit, are still compounded, and inseparable from the *rest*; the purest, most simple, and most necessary of them all, seems to be our pure *Nitre*, or the universal *Salt* of the *Air*, the Mother of all *Salts*, so necessary to *animal* Life, *Sanguification*, the *Stimulation* of the animal *Fibres*, the Propagation and Action of

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of *Heat* and *Fire*, the Production of *Cold* and Freezing, to *animal Fæcundity* and *Vegetation*, and many other of the *Appearances* of Nature, to which it seems absolutely necessary, and enters into their Substance and Composition. The other *Salts*, *Acids* and *Alcalis*, the *essential*, or lixivial *Salts* of Vegetables, *Plants* and *Minerals*, are only this primitive *nitrous Salt* combin'd with these other *Elements*, and as they predomine and exist in these particular Subjects: These mention'd *Salts* in *Animals*, are *Nitre* mixt with animal *Oils*, *Air*, *Water* and *Earth*, such as their Substances are compounded of; and it is in the same Manner in the *Plants* and *Minerals*. The greatest specific Difference among the *Salts* seems to arise from the Distinction of *Acids* and *Alcalis*; the first, both from *Philosophy* and *Experiment*, seem to be of *acute-angled*, greatly *attractive Particles*; and the Degree of their *Acidity* seems to depend on the *proportional* Degree of the Sharpness of their *Points*, which now may be various, and their Degree of *Attraction* also: *Alcalis* seem to be porous *calcarious* fine Earths; the *testaceous Powders* are among the most simple and perfect of them, and the Model of all the rest, and plainly shew the Nature of the whole *Tribe*. They are, as is evident from the *Microscope*, nothing but Earths of an exceeding fine Grain, and of very small *Particles*, full of large *Pores* and *Cells*, wherein an *acid* Water or Spirit has been contain'd, probably that of *Nitre*. Heat, *solar* or *culinary*, and *Calcr-*
nation,

nation, throws off some Part of this *acid* Water, and leaves the *Cells* partially empty. These empty *Cells*, upon being immersed in any *acid* Spirit or Water, suck it in again with Violence and Velocity, the remaining Part of the *Acid* in the *Cells* attracting the new *Acid* with additional Force; and hence *Fermentation* and *Effervescence*. All the *Alcalis* partake of this one general Nature, and differ only as they are more or less combin'd with the other *Elements*. *Volatility* arises from a light *Oil* united with either Kinds of *Salts*; and this seems to be the true *philosophic* Nature of all *Salts*. *Salts* and *Air* seem absolutely necessary to carry on *animal* Life and Functions; *Air* to rarefy the Juices, separate the *Globules*, which might otherwise be too closely united and compress'd; for the Introduction of which into the Blood and Fluids, the *Lungs* of *Animals* seem chiefly design'd: *Salts* stimulate the Solids into *Actions*, *Vibrations*, and excite their clumsy elastic Force, in order to carry on the *animal Functions*, so absolutely necessary to living. The just and proper Regulation of these *two*, *Air* and *Salts*, the so necessary Instruments of pleasant and easy living, is as fit a Subject to be adjusted by a wise and *philosophic Physician*, (others are but *Empyrics* at the best) as *Diet* and *Exercise*. The *Air* we choose to live in ought to be rather dry and thin in the *Medium*; but even this must be proportion'd to the Nature of the *Distemper*, and the State of the *Juices*, if possible; and they who have acquir'd their Disorders

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Disorders by high Meats and Drinks, which abound in *volatile Salts*, must by *insipid* Foods, and *aqueous* Liquors, lessen the Abundance of such Salts, which is the Case of all the *Rich* and *Wealthy*. They, on the contrary, who have acquir'd their Distempers by too *poor* and *low* a Manner of living, on *vegetable*, insipid and instimulating Food only, which is the Case of most of the Poor or Indigent, must be cured by more *generous* Living, and more stimulating and sapid Meats and Drinks, which excite their Solids into Action, and on which account all *low Livers*, who are driven into this Way of Living, by the Nature of their Distempers, require double the Exercise, of those who can bear *generous* and *active* Foods; and without it Nature will stagnat and sink; which is the Case of many of the *Female Sex*, and of Persons in *Gaols* and *Monasteries*: In a Word, where-ever a low or vegetable Diet is necessary, there *Air* and *Exercise* are in a much higher Degree necessary, than they are in a more generous *Diet*, to make a *low Diet* effectual. But then the *high Feeders* pay in the Shortness of their Lives, and the Sharpness of their Diseases, for their present Pleasure, and idle, indolent, healthy Life.

F I N I S.

E R R A T A.

Page 13, Line 27, dele with. p. 13, l. 2, for gene, read general. p. 33, for affixing, r. of fixing. p. 65, from (higher, to--- for Him) in a Parenthesis. p. 81, l. 16, for Liver, r. Bile. p. 84, l. 30, dele from. p. 95, l. 16, for are, r. is. p. 172, l. 20, for vergeing, r. divergeing. p. 176, l. 7, dele they. p. 177, for ingegious, r. ingenious. p. 196, l. 19, read the Series thus, $x^4 + x^3 + x^2 + x + 1 - x - x^2$, &c. for 0, r. i, and for $\frac{x}{\infty}$ r. $\frac{x}{\infty}$. p. 241, l. 28, dele and. p. 294, l. 23, for permit, r. pervade. l. 28, for her, r. its. p. lxxvi. (the rest are) is transpos'd, and should follow in the next Line after the Word Britain.







